MEMORANDUM

TO: Michael G. Cooke

THRU: Trina Vielhauer

FROM: James K. Pennington

DATE: July 6, 2005

SUBJECT: FINAL Permit No. **0530021-009-AC; PSD-FL-351**
Florida Crushed Stone Company
Brooksville Plant

Attached for approval and signature is a final air construction permit for the Brooksville Plant. This permit allows the construction of a new dry process, pre-heater/calciner cement kiln system at the Florida Crushed Stone Brooksville Facility, located at 10311 Cement Plant Road in Hernando County, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

This project is subject to PSD because there will be emissions changes associated with the construction of the new kiln system. The facility will be subject to the BACT Determination and applicable PSD, SIP, NSPS, and NESHAP standards.

Comments were received from the applicant's consulant, RTP Environmental Associates, concerning the DRAFT Permit that was clerked on May 20, 2005. All comments were addressed in the Final Determination.

I recommend your approval and signature.

Attachment

TV/jkp/rlb

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. Charles Allen

Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crushed Stone Company
P.O. Box 1508
Brooksville, FL

DEP File No. 0530021-009-AC
PSD-FL-351
Brooksville Facility
Hernando County

Enclosed is Final Permit Number 0530021-009-AC, PSD-FL-351. This permit allows the construction of a new dry process, pre-heater/calciner cement kiln system at the Florida Crushed Stone Brooksville Facility, located at 13011 Cement Plant Road in Hernando County, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

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Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crush Stone Company
Post Office Box 1508
Brooksville, Florida 34601

PS Form 3800, June 2002 — See Reverse for Instructions

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7/6/05 to the person(s) listed:

Charles Allen, Rinker Materials of Florida *
Eddie Allsopp, III, Rinker Materials of Florida, Inc.
Barry D. Andrews, P.E., RTP Environmental Associates, Inc.
Don Elias, Principal, RTP Environmental Associates, Inc.
Chair, Hernando County BOCC
Joel Smolen, Florida DEP- SWD
David Zell, Florida DEP- SWD
John Bunyak, NPS
Jim Little, EPA

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 7/6/05 (Date)

FINAL DETERMINATION

FLORIDA CRUSHED STONE COMPANY
BROOKSVILLE PLANT
BROOKSVILLE, HERNANDO COUNTY, FLORIDA

Portland Cement Manufacturing Plant
New Dry Process, Pre-Heater/Calciner Kiln System

DEP File Nos. 0530021-009-AC
PSD-FL-351

Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation

July 6, 2005

I. INTRODUCTION

The Florida Department of Environmental Protection (Department) distributed an "Intent to Issue Permit" package for a proposed dry process pre-heater/calciner cement kiln system at the Brooksville Plant located at 13011 Cement Plant Road, Brooksville, Hernando County, on May 20, 2005. The package included one copy of the Department's draft air construction permit, the "Intent to Issue Air Construction Permit", the "Technical Evaluation and Preliminary Determination, the "Best Available Control Technology" Determination, and the Public Notice of Intent to Issue Air Construction Permit". The applicant published the Public Notice in the Hernando Today on May 30, 2005. The Department received Proof of Publication on June 6, 2005.

The Department did not receive comments on the draft air construction permit from the National Park Service (NPS) nor the Environmental Protection Agency (EPA). Comments were received from RTP Environmental Associates (RTP), the applicant's consultant, on May 29, 2005. The following section includes the comments made by RTP, and the Department's response to the comments.

II. COMMENTS AND RESPONSE

DRAFT PSD PERMIT

1. **Page 2, Facility Description, Paragraph 2**
   The production and processing limits listed at the end of this paragraph should be noted as informational and not as limits, except for the clinker production. The clinker production rate can be checked by an inspector and thus affords the necessary practical enforceability. The other values increase the complexity of the permit without adding additional assurances of compliance with the emission standards. However, if the Department believes the production levels (not limits) should be added for informational purposes, the correct values are as follows:

   Line 2 will have a capacity of 214.9 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 240 tons per hour of cement production (30 day average).

   Daily and annual rates are 1,756,380 tons per year (4,812 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,301,138 tons per year (5,760 tons/day) of cement production.

   The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 165,000 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 276 tons per hour of raw material (2,417,760 tons per year) in any consecutive 12-month period.

   Response: The Facility Description section contents are intended as information only. In addition this information is from the applicant's application and responses to request for additional information. The Department has agreed that a process limit on the cement production will be removed, and the estimated cement production will be included in the description. The cement production is not related to emissions limits which are based on the preheater and clinker production rates. The Department will not increase the limit on

the preheater feed material. This number directly corresponds to the clinker production rate which the emission limits for the kiln system are based upon. The Department will not increase the preheater feed rate. The permitted preheater feed rate will remain 206.3 tons per hour.

2. **Page 3, Section I, Regulatory Classification, Paragraph 4**
It should be stated that the facility is assumed to be a major source of hazardous air pollutants, because the facility is assumed to be a major source of hydrochloric acid (HCl). It should be noted that test data is not available to confirm this assumption. Recent data for similar facilities indicate that Portland cement plants may not be a major source of HCl.

Response: The Department has determined that this plant is a major source of HAPs and has deemed this plant subject to the major source provisions of 40 CFR 63, Subpart LLL, Portland Cement Manufacturing plants. The language will be modified to reflect these changes:

The Department has determined ~~T~~this facility is a major source of hazardous air pollutants (HAPs) and is subject to 40 CFR 63, Subpart LLL, National Emissions Standard for Portland Cement Manufacturing.

3. **Page 6, Section II, Condition 8**
It is requested that the first sentence of the condition be changed to read:
"The permittee shall submit an application to the Department when there is any modification to this facility that would require a permit under State or Federal regulations."

Response: The Department agrees with the change in this language. The revision will be made to this condition.

4. **Page 7, Section II, Condition 11.b**
Because of the large geographical buffer zone between the material storage area and the property boundary, the fugitive emissions from these sources will not significantly affect ambient air quality. In fact, the current ambient PM10 monitoring program has demonstrated that air quality is safely below the standards, and that the current material handling practices are adequate. Therefore, FCS requests that the first bullet in this condition be revised to:
"FCS will utilize material handling precautions similar to those currently used for Kiln 1".

Response: The Department disagrees with the applicant that the condition be changed to the proposed language. A site visit in April of this year revealed very dusty conditions at the facility that were not ameliorated with the present precautions. The additional kiln will about double the facility's potential for fugitive emissions, and the Department believes that more effort in fugitive controls needs to be made by the applicant. The Department did agree to leave the solid fuel piles (i.e. coal and petroleum coke) uncovered as dictated by current conditions at the facility as the areas for solid fuels are not being modified with this project. Current facility controls are in place to control fugitive emissions from the solid piles. The condition will be revised to reflect the change.

5. **Page 11, Section III, Condition 2**
Regarding Condition 2a, the use of SNCR to control NOx emissions will give FCS the option of operating the kiln with oxidizing conditions at the back end of the kiln (the end of the kiln

where the gases exit and the end of the kiln into which whole tire derived fuel will be introduced). The oxidizing condition will likely allow FCS to use more whole tire derived fuel, and FCS requests an upper limit on the heat input provided by whole tire derived fuel of 40 percent.

Regarding condition 2b, it is requested that the sentence "Flyash shall not exceed 15.0 tons/hr." be deleted. The feed rate will depend on the quality (e.g., Btu value) of the ash and may change. If the Department believes that this condition must be included, the value should be revised to 25 tons/hr.

Response: The Department agrees to increase the heat input provided by whole tire derived fuel (WTDF), but will limit the heat input to 30% provided by the WTDF based on previous permitting actions and test data from similar facilities. The Department will delete the requirement for the feed rate of flyash, but the MMBTU for the kiln system shall not exceed the permitted limit.

6. **Page 11, Section III, Condition 3**
"Used oil" and "oil fuels" should be deleted to be consistent with Specific Condition 2, which allows on-spec oil and distillate oil to be used as fuel.

Response: The Department disagrees with the applicant. Condition 2 defines which oils may be used. Condition 3 defines all other oils as fuels not allowed by the permit. A revision will be made to clarify fuels the applicant may not use according to condition 3.

7. **Page 11, Section III, Condition 4**
As noted in Comment 1, FCS believes that these production limits are duplicative and unnecessary for compliance purposes. The clinker production rate affords practical enforceability, while the additional limitations will not provide additional assurance that the facility is complying with its emission limits. If the Department still believes that these Process Rate Limitations are needed, the correct values are presented in Comment 1.

Response: The Department disagrees with the applicant. The production and processing limits will be considered limits in the permit. These limits will be based upon information provided to the Department in the applicant's application and in requests for additional information. The Department believes these new limits being proposed by the applicant may affect the modeling at the facility, and may affect the overall emissions of the facility. However the Department will base the raw material handling and storage on an annual average, the kiln feed rate and clinker production on a 24-hour average. The Department has agreed that a process limit on the cement production will be removed. The cement production is not related to emissions limits which are based on the preheater and clinker production rates. The Department will not increase the limit on the preheater feed material or the clinker production. This number directly corresponds to the clinker production rate which the emission limits for the kiln system are based upon.

8. **Page 12, Section III, Condition 4**
The formula for Clinker Production should read:

Clinker Production = [(Preheater Feed)(Kiln Feed LOI Factor plus kiln feed loss from preheater) + (Fly Ash Injection)(Fly Ash LOI Factor)]

Response: The Department believes the formula in the draft permit for clinker production is the correct formula.

9. **Page 12, Section III, Condition 9**
To be consistent with page 8 of the *Best Available Control Technology Determination* prepared by the Department, the first sentence should read:
"The owner or operator shall install selective noncatalytic reduction (SNCR) and multistage combustion (MSC) or equivalent system as needed to supplement the controls."

Response: The Department agrees to clarify the language, and will revise the language in this condition to two sentences. The new language shall read:

"The owner or operator shall install selective noncatalytic reduction (SNCR). The owner or operator will also install multistage combustion (MSC) or equivalent system and utilize as needed to supplement the controls."

10. **Page 12, Section III, Condition 9**
It is requested that the fifth sentence of the condition be changed to read:
"The owner or operator shall use hydrated lime injection or other control techniques when necessary to achieve the SO_2 emission limits."

Response: The Department agrees, and will revise the language in this condition.

11. **Page 13, Section III, Condition 11**
It is requested that the first two sentences in Specific Condition 11 be changed to read:

> Performance Testing: The owner or operator shall notify the Department at least 60 days prior to initiating a change in feed or fuel that may adversely affect compliance with D/F or PM emission limiting standards, or as soon as practical where 60 days advance notice is not feasible. For purposes of this condition, such change may include a physical or chemical change in feed or fuel or a change in the LOI of the flyash.

This proposed language is consistent with the language of 40 CFR 60.1349(e)(3)(i). In the proposed language, a change in a "supplier of feed or fuel" has been eliminated because a supplier can be changed without affecting the physical or chemical characteristics of feed or fuel, or adversely affecting compliance with D/F or PM limiting standards.

Response: The Department agrees a change should be made to language for clarification. The revised language is as follows:

"The owner or operator shall notify the Department prior to initiating any significant change in the feed or fuel used in the most recent compliant performance test for D/F or PM. For purposes of this condition, significant means any of the following: a physical or chemical change in the feed or fuel; the use of a raw material not previously used; a change in the LOI of the flyash; a change between non-beneficiated flyash and beneficiated flyash. Based on the information provided, the Department will promptly determine if performance testing pursuant to 40 CFR 63.1349 will be required for the new feed or fuel. A significant change shall not include switching to a feed/fuel mix for which the permittee already tested in compliance with the dioxin/furan and PM emission limits." [62-4.070(3), F.A.C.]

12. Page 13, Section III, Condition 12

As requested and discussed in the permit application, the CO and VOC emission limits should be 4.0 and 0.19 lb/ton clinker, respectively, and the averaging period for SO_2 and CO should be a 30-day average. The averaging time for the CO limit should match the VOC and NO_x limits, because these pollutants are interrelated in their formation and control. The SO_2 limit should be 30 days, as is typical for most combustion sources that utilize coal as a fuel.

FCS is proposing an aggressive NOx limit, based on the use of innovative combustion and emissions control systems. Efforts to reduce NOx emissions through combustion controls such as MSC and the application of SNCR typically result in higher CO and VOC emissions. There is little data to show that the Department's proposed CO and VOC limits are consistently achievable with the proposed control systems under all operational conditions. Less than a month of data is available to show whether emissions will increase over time or when the facility is operating under a wider range of conditions. A two year study period is proposed to allow for a variety of operating conditions to be verified by actual plant operation. Consequently, FCS believes there are inadequate data to support the limits for CO and VOC that have been proposed by the Department. Significantly, as noted on BD-19, the 0.12 lb/ton limit as LAER for the St. Lawrence Cement project in New York. The Rinker project is subject to BACT, not LAER.

FCS suggests footnotes similar to that for NO_x, which proposes lower rates after a period of initial operation. It is requested that the footnotes for the table be changed for CO and VOC as follows:

[2] CO emissions shall not exceed 4.0 lb/ton of clinker and 466.7 lb/hr (30-day block average) during the first two years of operation after initial startup. Commencing two years after initial plant startup, emissions of CO shall not exceed the limits shown in the table if these limits are shown to be achievable by actual plant performance.

[3] VOC emissions shall be expressed as propane. VOC emissions shall not exceed 0.19 lb/ton of clinker and 22.17 lb/hr (30-day block average) during the first two years of operation after initial startup. Commencing two years after initial plant startup, emissions of VOC shall not exceed the limits shown in the table if these limits are shown to be achievable by actual plant performance.

Finally, please include the following clarifying language. In the first sentence of the second paragraph, please revised "Emissions from this unit shall not exceed the following limits for the following pollutants" to "Emissions from this unit shall not exceed the following limits for the following pollutants, excluding periods of startup, shutdown and malfunction as defined in Condition 14 below".

Response: The Department disagrees with the applicant. The VOC limit will remain unchanged. Both limits and averaging periods will remain as proposed in the draft. This change would increase emissions. The applicant mentions the limited data for SNCR testing at Florida Rock and Suwannee. However, as stated in the Technical evaluation, BACT determination and additional information provided by tests performed in the industry, the increase in the VOC limit is not warranted. The Department will also allow for a 30-day averaging period on CO emissions for the first 180 days of operation. Because this is the first permit with CEMS and SNCR, the Department will adjust CO averaging time to allow 180

days with a 30-day rolling average. At the end of the initial 180 startup period, the averaging time will revert to the 24-hour average.

In addition, the Department has modified the language in Section III, Condition 16 as follows:

16. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NOx, SO_2, CO and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limit for NOx and the initial 30-day CO limit shall be based on a 30-day calendar rolling average that shall be recomputed daily from the individual hourly averages. Compliance with the emission limit for SO_2 and the 24-hour CO limits shall be based on a rolling 24-hour average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours. Each hourly average shall be computed from a minimum of one measurement every minute. Compliance with the 30 day emission limit for VOC shall be based on a 30 day block average that shall be computed from a minimum of one measurement every minute. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour. [Rule 62-4.070(3), F.A.C., and BACT]

13. Page 13, Section III, Condition 12
In the table, the basis for the mercury limit is not BACT.

Response: the Department agrees and will revise the condition.

14. Page 14, Section III, Condition 12
In the paragraph below the table, the annual emissions presented by the Department do not represent the facility's total potential to emit because they do not include startup and shutdown emissions. Consequently, the annual emissions presented in this paragraph should be considered informational only, not emission limits.

In the same paragraph, the parenthetical statement after NO_x should read "(after 180 days)."

Response: The annual emissions are labeled as "effectively limited", and are not considered emission limits. The limits are based on the shorter term limits. The Department agrees the change to "180" is correct and will make this change. The Department will add the same language based on the 30-day average for CO emission limit granted to the facility for the first 180 days after the initial startup period.

15. Page 14, Section III, Condition 13
In the application, the discussion of malfunctions is based on 7 hours per "event". Therefore, in the third sentence of this Condition; each event should be 7 hours per calendar day, instead of 6 hours.

Response: The Department disagrees with the applicant. Based upon data and information on SNCR operations, the Department believes an increase in the time per event is not warranted.

16. Page 14, Section III, Condition 14

FCS is proposing a new Condition 14 to address startup, shutdown and malfunctions as follows (the addition of this Condition will require the permit Conditions following it to be renumbered; however, in the draft permit there is no Condition 20, therefore only permit Conditions 14-19 in Section III need to be renumbered). The ambient air quality analyses presented in the Application considered higher emissions for these periods (as listed below), and demonstrated compliance with all ambient standards. These additional operating conditions should be specified as allowable in the permit.

POLLUTANT	POTENTIAL EMISSIONS	
SO_2		57.5 lb/hour
NO_x		1000 lb/hour
CO		1000 lb/hour
VOC		71.3 lb/hour

Periods of Startup, Shutdown and Malfunction: The owner or operator shall not cause, permit, or allow the total operating time during periods of startup, shutdown, and malfunction to exceed 336 hours per year on a rolling 365-day total. Within one working day of a malfunction, the permittee shall notify the Department's Southwest District.

Response: The Department disagrees with the applicant and additional emissions will be allowed over the permitted limits proposed in the draft permit. The Department believes the startup shutdown and malfunction language in 62-210.700, F.A.C. adequately covers any startup, shutdown or malfunction the facility may experience during operation. The Department has included conditions for data exclusion for NOx for SNCR malfunctions. After the initial 180 days of startup, the Department will allow the facility to exclude CO data from startups, shutdowns, and malfunctions. The data exclusion will be from the 24-hour average for the CO limit of lb/ton of clinker. The new condition No. 14 shall read as follows:

14. Data Exclusion for CO: In accordance with the limits in condition 12, the exclusion of CO data collected during periods of startup, shutdown, and malfunction of the kiln system is allowed when demonstrating compliance with the 24-hour lb/ton CO standard after the initial 180 day period after initial startup. No more than 7 hours per calendar day and no more than 28 hours in any calendar month may be excluded. Within one working day of the occurrence, the permittee shall notify the Department's Southwest District of any startup, shutdown, or malfunction of the system which an exclusion of data will occur.
[Rules 62-4.070(3), F.A.C.]

17. Page 14, Section III, Condition 15

As mentioned in our comment #11, the averaging period for SO_2 and CO is requested to be a 30-day average.

Response: See response to #11.

18. Page 15, Section III, Condition 19

It is requested that the following be added after the table:
"If all of the secondary fuels listed above are not available at the time of testing, the tests shall be based on the fuels that are available. If another secondary fuel becomes available in

the future, additional tests shall be conducted with that fuel, if such tests are deemed necessary by the Department, before that fuel is used."

Response: The Department agrees and will revise the condition with the above language.

19. **Page 16, Section III, Condition 24, First Paragraph**
It is requested that the second sentence read as follows:
"The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content and heat content of the fuel. For coal, natural gas, fuel oil, and propane, the records also shall include the proximate and ultimate analyses.

Response: The Department agrees and the condition will be revised to reflect the change.

20. **Page 19, Section III, Subsection B, Condition 2, Paragraph 2**
The first sentence should read:
"Initial and annual compliance testing for PM and PM10 emissions from these emission units..."

Response: The Department agrees and will revise the language of this condition.

21. **Page 20, Section III, Subsection C, Condition 2**
The emissions from the coal handling and grinding operations are limited by the baghouse grain loading and baghouse flow rates, and do not depend upon the process rate throughput. Therefore, FCS requests that these process rate limits be deleted, as there are other enforceable limits on these units. However, if the Department believes that this condition must be included, the limits should be revised to 20 tons/hr and 165,000 tons per year.

Response: The Department has issued this limit on a 30-day average. The Department believes these new limits being proposed by the applicant do not affect the emissions or modeling. Therefore, the Department will make the change.

BACT DETERMINATION

22. **Page BD-3, Last Sentence**
The dioxin emissions stated in the Department's BACT determination (0.00105 pounds per year) are based on units with a baghouse inlet temperature >204 C. As noted in the application, FCS's proposed inlet temperature will be < 204 C and the emissions are limited to 0.00236 pounds per year in accordance with the NESHAP requirements in 40 CFR 63.1343.

Response: The MACT language is included in the permit; therefore no change will need to be made to the BACT.

23. **Page BD-8, Particulate Matter (PM and PM_{10})**
Refer to comment number 4.

Response: The Department disagrees with the applicant that the condition be changed to the proposed language. A site visit in April of this year revealed very dusty conditions at the facility that were not ameliorated with the present precautions. The additional kiln will about

double the facility's potential for fugitive emissions, and the Department believes that more effort in fugitive controls needs to be made by the applicant.

III. EMISSION LIMITS

The emission limits proposed in the BACT determination and draft permit are finalized. Table 1 lists the new limits for the new kiln system at the Brooksville Plant:

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	0.136 lb/ton of dry preheater feed; 0.23lb/ton of clinker	28.8 lb/hr	3 hours [3]	BACT
PM_{10}	0.118 lb/ton of dry preheater feed; 0.20 lb/ton of clinker	25.0 lb/hr	3 hours [3]	BACT
SO_2	0.23 lb/ton of clinker	28.8 lb/hour	24 hours [4]	BACT
NOx	1.95 lb/ton of clinker [1]	243.75 lb/hour [1]	30 day	BACT
CO	3.6 lb/ton of clinker	450.0 lb/hour	24 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	15.0 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT
Mercury		122 lb/yr		

[1] NOx emissions shall not exceed 2.4 lb/ton of clinker and 306.25 lb/hour (30 day rolling average) during the first 180 operating day after initial startup. After 180 operating days after initial plant startup, emissions of NOx shall not exceed the limits shown in the table.

[2] VOC emissions shall be expressed as propane.

[3] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

[4] The averaging time for SO_2 shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[5] The CO emissions limit will have a 30-day averaging period for the first 180 days after initial startup; thereafter, the CO limits will be a 24-hour limit. The averaging time for CO

shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[6] The averaging time for VOC shall be a 30-day block average specified in 40 CFR 63.1350(h).

[7] The averaging time for visible emissions shall be a 6-minute block average that shall be computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 117.6; PM_{10}, 102.3; SO_2, 117.6; NO_x, 996.7 (after 180 days); CO, 1840 (including 30-day average for first 180 days); and VOC, 61.3 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. These emission limits are based on 2,800 tons per day and 1,022,000 tons per year of clinker production.

IV. CONCLUSION

The Department approves the construction of the new dry process pre-heater/calciner kiln system for the Florida Crushed Stone's Brooksville Plant. The kiln values are within the ranges of the most recent BACT determinations made in the United States, and have set BACT standards using SNCR technology for cement plants for dry process pre-heater/calciner cement kilns.

The Department has reasonable assurance that the proposed emission rates can be maintained upon construction by Florida Crushed Stone. Conditions are included in the final permit to incorporate the BACT Determination limits as well as applicable SIP, NSPS and NESHAP standards.

V. DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Bobby Bull, Engineering Specialist II
Department of Environmental Protection-Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Trina Vielhauer, Chief
Bureau of Air Regulation

7/6/05
Date

Approved By:

Michael G. Cooke, Director
Division of Air Resources Management

7/6/05
Date

Department of Environmental Protection

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

Jeb Bush
Governor

Colleen M. Castille
Secretary

PERMITTEE

Florida Crushed Stone Company
Brooksville Plant
10311 Cement Plant Road
Brooksville, FL 32669

Permit No.	0530021-009-AC, PSD-FL-351
Project	New Kiln System
SIC No.	3241
Expires:	July 6, 2008

Authorized Representative:

Charles Allen, Director of Operations, Cement Division

PROJECT AND LOCATION

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.0 km E and 3162.5 km N.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix A	BACT Determination
Appendix B	40 CFR 60 Subpart F and 40 CFR 60 General Provisions
Appendix C	40 CFR 63 Subpart LLL and 40 CFR 63 General Provisions
Appendix GC	General Permit Conditions
Appendix D	Technical Evaluation and Final Determination

Michael G. Cooke, Director
Division of Air Resource Management

FACILITY DESCRIPTION

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day, 24-hour average) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day, 24-hour average) of clinker production, and 1,301,138 tons per year (5,760 tons/day) of cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

PROJECT DETAILS

This permitting action is to allow for the construction of a preheater/precalciner kiln with in-line raw mill. Emissions units addressed by this permit are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Fuel Bin

The total annual air pollutant potential emissions in tons per year from the facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1]	MAXIMUM EMISSIONS	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes
Mercury	200 pounds per year	122 pounds per year	No

REGULATORY CLASSIFICATION

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).
The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it is a modification to an existing facility.

The Department has determined this facility is a major source of hazardous air pollutants (HAPs) and is subject to 40 CFR 63, Subpart LLL, National Emissions Standard for Portland Cement Manufacturing.

The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, and Subpart Y Standards of Performance for Coal Preparation Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359) and 40

CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.407, F.A.C., Portland cement plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Permit application and report received on December 20, 2004.
- EPA's comments received December 28, 2004 via email; No comments.
- Department's request for additional information on January 19, 2005.
- Applicant's additional information received March 7, 2005.

The following specific conditions apply to all emissions units at this facility addressed by this permit.

1. Permitting Authority:

   a. For this permit (PSD Permits), the permitting authority is the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and phone number (850)488-0114.

   b. For future permitting actions (Minor Construction or Title V), all documents related to applications for permits to construct or modify an emissions unit should be submitted to the Florida Department of Environmental Protection (FDEP), Southwest District, 3804 Coconut Palm Drive, Tampa, FL 33619-1352 and phone number (813) 744-6100.

2. Compliance Authority: All documents related to operation, reports, tests, and notifications should be submitted to the Department of Environmental Protection's Southwest District Office at
   Department of Environmental Protection
   Southwest District Office
   3804 Coconut Palm Drive
   Tampa, Florida 33619-1352
   Telephone: 813/744-6100 Fax: 813/744-6084

3. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60 and Part 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Expiration: This air construction permit shall expire on (3 years from date of final issuance). The permittee, for good cause, may request that this construction and PSD permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C]

PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

BACT Determination: In conjunction with extension of the 18 month periods to commence or continue construction, or extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [40 CFR 52.21(j)(4)]

8. Modifications: The permittee shall submit an application to the Department when there is any modification to this facility that would require a permit under State or Federal regulations. This application shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such application shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

9. Final Construction Schedule: The permittee shall provide to the Department a final construction schedule after selection of the contractor and before commencement of construction. [Rule 62-212.400(5)(h)2., F.A.C.]

10. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than 20% opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

11. Unconfined Emissions of Particulate Matter:

    a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

    b. Reasonable precautions include the following:

    - Paving and maintenance of roads, parking areas and yards.
    - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
    - Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
    - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
    - Landscaping or planting of vegetation.
    - Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
    - Confining abrasive blasting where possible.
    - Enclosure or covering of conveyor systems.

Additional reasonable precautions applicable to this facility are:

- All materials, except coal and petroleum coke, at the plant shall be stored under roof on compacted clay or concrete, or in enclosed vessels.
- Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles.
- All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of materials, coal and petroleum coke regularly and before handling. If the visual inspections indicate a lack of surface moisture, the materials, coal and petroleum coke shall be wetted with sprinklers. Such wetting shall continue until the potential for unconfined particulate matter emissions are minimized.
- Water spray shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.
- The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.
- Vacuum Sweeper shall be used on paved roads.

c. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rule 62-296.320(4)(c), F.A.C.]

12. General Pollutant Emission Limiting Standards:

a. No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

b. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(1)(a)&(2), F.A.C.]

[Note: An objectionable odor is defined in Rule 62-210.200(203), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

13. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

14. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed

facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

15. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

16. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63.

    Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]

17. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. [Rule 62-297.310(1), F.A.C.]

18. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
    (a) General Compliance Testing.
    3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    a. Did not operate; or
    b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
    4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    a. Visible emissions, if there is an applicable standard;
    [Rule 62-297.310(7), F.A.C.]

19. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum

permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

20. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

21. Applicable Test Procedures

a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]

b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

22. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]

a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

23. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]

24. Test Notification: The owner or operator shall notify the Department's district office at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.]

[Note: The owner or operator shall comply with all applicable timelines stated in 40 CFR 60.7, Notification and recordkeeping and 40 CFR 63.9, Notification Requirements.]

25. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

26. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

27. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

28. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]

29. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report. A quarterly written report is hereby requested by the Department for every quarter that the facility is in operation. If no malfunctions occurred during a quarter, a written report stating that no malfunctions occurred shall be submitted. [Rule 62-210.700(6), F.A.C.]

30. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southwest District office by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION A.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater

This Emission unit is subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. This emission unit also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Emissions unit 044 is subject to Rule 62-296.407, F.A.C., Portland Cement Plants.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: These units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

2. Fuels: Fuels fired in the pyroprocessing system (kiln and calciner) shall not exceed a total maximum heat input of 390 million Btu per hour (MMBtu/hr) and shall consist only of natural gas, coal, distillate oil, petroleum coke, flyash, on-spec oil, and whole tires. Propane may be fired and shall not exceed a maximum hourly rate of 4150 gallons/hr.

   a. Whole tires may be fired directly in the pyroprocessing system at a rate not to exceed a maximum heat input of 30% of the total pyroprocessing heat input, not to exceed 58.5 MMBtu/hr at any time. The remaining 70% of the total pyroprocessing heat input shall be derived from firing coal, flyash, petroleum coke, natural gas, propane or distillate oil. Whole tires fired in this manner shall be fed into the kiln system at the transition section between the base of the precalciner and the point where gases exit the kiln. The tire feeder mechanism shall be designed with a double airlock.

   b. Coal and/or petroleum coke shall not exceed 15.0 tons per hour. Natural gas shall not exceed 432 MMCF/hr. Distillate oil shall not exceed 3080 gallons/hr.

   [Rules 62-4.070(3) and 62-210.200, F.A.C., Definitions -- potential to emit (PTE), F.A.C., and Applicant request, application received 12/20/04.]

3. Fuels and Materials Not Allowed: The owner or operator shall not introduce hazardous wastes, petroleum contaminated soil or materials, used oil, oil fuels, or solid fuels other than those allowed by this permit, or solid wastes other than whole tires into any part of the process or emission control equipment. [Rule 62-4.070(3), F.A.C.]

4. Process Rate Limitations: The kiln shall not process more than 206.3 tons per hour of dry preheater feed and dry flyash and shall not exceed 4,620 tons in any 24-hour period (24 hour average). The kiln shall not produce more than 125 tons of clinker per hour, and 2800 tons in any 24-hr period (24 hour average). Process and production rates shall be further limited to 1,686,300 tons of dry preheater feed and dry flyash in any consecutive 12-month period (4620 tons/day) and 1,022,000 tons of clinker in any consecutive 12-month period (2800 tons/day).

The clinker production rate identified in the above paragraph shall be determined by the following equation:

Clinker Production = [(Feed)(Kiln Feed LOI Factor) + (Fly Ash Injection)(Fly Ash LOI Factor)]

Where:

- Fly ash is determined from the rotary feed system or equivalent.
- LOI for the kiln feed and fly ash is based on a monthly average determined from daily measurements.

[Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

5. Air Heater: The permittee may install an air heater associated with the raw mill, fired only with natural gas and distillate oil with a maximum rated heat input capacity of 32 MMBtu/hr. [Rule 62-4.070(3), F.A.C.]

6. Cement Kiln Dust: Cement kiln dust shall be recirculated in the process and shall not be directly discharged from process or emission control equipment unless authorized by the Department. Cement kiln dust removed from process equipment during maintenance and repair shall be confined and controlled at all times and shall be managed in accordance with the applicable provisions of 40 CFR 261. [Rule 62-4.070(3), F.A.C.]

7. Whole Tire Management: Tires and tire derived fuel shall be stored, handled and managed in accordance with the provisions of Chapter 62-711, F.A.C. [Rule 62-4.070(3), F.A.C.]

8. O&M Plan for Baghouses and ESP: The owner or operator shall prepare an operation and maintenance plan (O&M plan). The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Southwest District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

COMBUSTION AND PROCESS CONTROL TECHNOLOGY

9. Combustion and Process Control Technology: The owner or operator shall install selective noncatalytic reduction (SNCR). The owner or operator will also install multistage combustion (MSC) or equivalent system and utilize as needed to supplement the controls. The owner or operator shall use SNCR and/or MSC for control of NOx emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO_2 through design and control of the clinker production process. The owner or operator shall use hydrated lime injection or other control techniques when necessary to achieve the SO_2 emission limits. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

[Note: The emission limits for particulate matter and visible emissions imposed by Rule 62-212.400 and BACT are as stringent or more stringent than the limits imposed by the applicable NSPS or NESHAP rules. However, the BACT requirements do not waive or vary any monitoring or record keeping requirements of the NSPS and NESHAP rules.]

10. Mercury into the Pyroprocessing System Limited: The total mass of mercury compounds introduced into the pyroprocessing system, expressed as Hg, in raw mill feed and fuels shall not exceed 122 pounds per consecutive 12-month period. [62-4.070(3), F.A.C.]

11. Performance Testing: The owner or operator shall notify the Department prior to initiating any significant change in the feed or fuel used in the most recent compliant performance test for D/F or PM. For purposes of this condition, significant means any of the following: a physical or chemical change in the feed or fuel; the use of a raw material not previously used; a change in the LOI of the flyash; a change between non-beneficiated flyash and beneficiated flyash. Based on the information provided, the Department will promptly determine if performance testing pursuant to 40 CFR 63.1349 will be required for the new feed or fuel. A significant change shall not include switching to a feed/fuel mix for which the permittee already tested in compliance with the dioxin/furan and PM emission limits. [62-4.070(3), F.A.C.]

12. Emissions unit 044 shall have one emission point, the stack of the Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater, designated by the permittee as 2K-06. Particulate matter emissions from this emissions unit shall be controlled by a baghouse.

    Emissions from this unit shall not exceed the following limits for the following pollutants. Emissions from the natural gas fired air heater are included in the limits below.

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	0.136 lb/ton of dry preheater feed; 0.23lb/ton of clinker	28.8 lb/hr	3 hours [3]	BACT
PM_{10}	0.118 lb/ton of dry preheater feed; 0.20 lb/ton of clinker	25.0 lb/hr	3 hours [3]	BACT
SO_2	0.23 lb/ton of clinker	28.8 lb/hour	24 hours [4]	BACT
NOx	1.95 lb/ton of clinker [1]	243.75 lb/hour [1]	30 day	BACT
CO	3.6 lb/ton of clinker	450.0 lb/hour	24 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	15.0 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT
Mercury		122 lb/yr		

[1] NOx emissions shall not exceed 2.4 lb/ton of clinker and 306.25 lb/hour (30 day rolling average) during the first 180 operating day after initial startup. After 180 operating days after initial plant startup, emissions of NOx shall not exceed the limits shown in the table.

[2] VOC emissions shall be expressed as propane.

[3] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

[4] The averaging time for SO_2 shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[5] The CO emissions limit will have a 30-day averaging period for the first 180 days after initial startup; thereafter, the CO limits will be a 24-hour limit. The averaging time for CO shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[6] The averaging time for VOC shall be a 30-day block average specified in 40 CFR 63.1350(h).

[7] The averaging time for visible emissions shall be a 6-minute block average that shall be computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 117.6; PM_{10}, 102.3; SO_2, 117.6; NO_x, 996.7 (after 180 days); CO, 1840 (including 30-day average for first 180 days); and VOC, 61.3 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. These emission limits are based on 2,800 tons per day and 1,022,000 tons per year of clinker production.
[Rules 62-4.070(3), 62-212.400, F.A.C., and BACT]

13. Malfunction of the SNCR System: Malfunction of the SNCR System is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia based solutions into the kiln system. In accordance with the limits in condition 12, the exclusion of NOx data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 30 day NOx standard. No more than 6 hours per calendar day and no more than 30 hours in any 30 day operating block may be excluded. Within one working day of the occurrence, the permittee shall notify the Department's Southwest District of any malfunction of the SNCR system.
[Rules 62-4.070(3), F.A.C.]

14. Data Exclusion for CO: In accordance with the limits in condition 12, the exclusion of CO data collected during periods of startup, shutdown, and malfunction of the kiln system is allowed when demonstrating compliance with the 24-hour lb/ton CO standard after the initial 180 day period after initial startup. No more than 7 hours per calendar day and no more than 28 hours in any calendar month may be excluded. Within one working day of the occurrence, the permittee shall notify the Department's Southwest District of any startup, shutdown, or malfunction of the system which an exclusion of data will occur.
[Rules 62-4.070(3), F.A.C.]

15. No owner or operator of a Portland Cement kiln shall cause, permit, or allow the emission of particulate matter in excess of 0.30 pounds per ton to the kiln (dry basis, excluding fuel), or visible emissions the density of which is greater than 20 percent opacity.
[Rule 62-296.407, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

16. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NOx, SO_2, CO and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limit for NOx and the initial 30-day CO limit shall be based on a 30-day calendar rolling average that shall be recomputed daily from the individual hourly averages. Compliance with the emission limit for SO_2 and the 24-hour CO limits shall be based on a rolling 24-hour average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours. Each hourly average shall be computed from a minimum of one measurement every minute. Compliance with the 30 day emission limit for VOC shall be based on a 30 day block average that shall be computed from a minimum of one measurement every minute. The CEM

system shall express the results in units of pounds per ton of clinker produced, and pounds per hour. [Rule 62-4.070(3), F.A.C., and BACT]

17. Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse stack pursuant to 40 CFR 63.1350. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse is required pursuant to 40 CFR 63.1349 and 63.1350.

18. CEM System Requirements: The selection, installation, calibration, maintenance, operation, record keeping, and reporting of the CEM system shall comply with the requirements of 40 CFR 60.7 and 60.13; 40 CFR 60 Appendix B, Performance Specifications; and, Appendix F, Quality Assurance Procedures. [Rules 62-4.070(3), 62-210.800 and 62-297.520, F.A.C., and BACT]

    [Note: 40 CFR 60 Appendix B and Appendix F have been omitted for brevity. See the Code of Federal Regulations for the text of these sections.]

19. Emission Tests Required: In addition to the continuous monitoring requirements of this permit, the owner or operator shall demonstrate compliance with the emission limits of this permit for emissions unit 044 initially and annually using the test methods of 40 CFR 60 Appendix A and 40 CFR 61 Appendix B specified below. The tests conducted annually for the relative accuracy test audit (RATA) for the CEM system may be used to satisfy this requirement provided the owner or operator satisfies the prior notification requirements and emission testing requirements of this permit for performance and compliance tests.

POLLUTANT	TEST METHOD
PM	Method 5 [1]
PM_{10}	Method 5, assuming all PM measured is PM_{10}
SO_2	Method 6 or 6C
NOx	Method 7 or 7E [2]
VE	Method 9
CO	Method 10 or 10A
VOC	Method 25 or 25A

[1] The minimum sample volume shall be 30 dry standard cubic feet.
[2] NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.

Each test shall be conducted while all continuous monitoring systems are functioning properly, and with all process units operating at their permitted capacity.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

20. Emission tests of emissions unit 044 shall be conducted for the pollutants in condition 18 upon initial operation under the fuel scenario representing the highest potential for generating emissions:

PRIMARY FUEL	SECONDARY FUEL
Coal	Whole tires directly into the pyroprocessing system, petroleum coke, and flyash

Subsequent annual testing under this fuel firing scenario is not required for any firing scenario that is used for less than 400 hours in the previous year, as documented by fuel firing records.

If all of the secondary fuels listed above are not available at the time of testing, the tests shall be based on the fuels that are available. If another secondary fuel becomes available in the future, additional tests shall be conducted with that fuel, if such tests are deemed necessary by the Department, before that fuel is used.

21. Materials Balance testing in condition 22 will be used to determine mercury emissions.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

[Note: 40 CFR 60 Appendix A has been omitted for brevity. See the Code of Federal Regulations for the text of this section.]

22. Material Balance Analysis of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance and making and maintaining records of monthly and rolling 12-month mercury throughput. The owner or operator shall, for each month of sampling required by this condition, perform daily sampling of the raw mill feed, coal, petroleum coke, and tires, and shall composite the daily samples each month, and shall analyze the monthly composite sample to determine mercury content of these materials for the month. The owner or operator shall determine the mass of mercury introduced into the pyroprocessing system (in units of pounds per month) from the total of the product of the mercury content from the monthly composite analysis and the mass of each material or fuel used during the month. The consecutive 12-month record shall be determined from the individual monthly records for the current month and the preceding eleven months and shall be expressed in units of pounds of mercury per consecutive 12-month period. Such records shall be completed no later than 25 days following the month of the records. To determine the mercury content of the feed material and fuels to be used in the monthly calculation, sampling and analysis shall be performed in accordance with the following schedule:

    i. During the first quarter of plant operation, sample each month analyze each month's composite sample.

    ii. After the first quarter, sample for one month of each quarter and analyze that month's composite sample.

[Rule 62-4.070(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

23. Records of Process and Production Rates: The owner or operator shall make and maintain records of the process rate of dry preheater feed in units of tons per hour and tons per consecutive 12-month period, and the production rate of clinker and cement in units of tons per hour and tons per consecutive 12-month period. The owner or operator shall make and maintain records of the production of Portland cement in units of tons per consecutive 12-month period. Records in units of tons per hour shall be based on either hourly averages or daily averages and shall be completed no later than the day following the day of the record. Records in units of tons per consecutive 12-month period shall be made from monthly records of process and production rates for the past 12 months, and shall be completed no later than the 10th day of each following month. [Rule 62-4.070(3), F.A.C. and BACT]

24. Records of Fuels and Heat Input: The owner or operator shall record the fuel firing rate continuously. The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content, heat content and, for coal, petroleum

coke, natural gas, fuel oil, propane, flyash, and whole tires. The records also shall include proximate and ultimate analyses.

The owner or operator shall make and maintain records of heat input to the pyroprocessing system on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel firing rate by the heating value representative of that fuel from the records of fuel analysis. Such records shall be completed for each block-hour, within 15 minutes of the end of each block-hour.

[Rule 62-4.070(3), F.A.C.]

25. Records of Startup, Shutdown and Malfunction: The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Rule 62-4.070(3), F.A.C.]

26. Material Balance Records of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance as required by condition 22 and making and maintaining records of monthly and rolling 12-month mercury throughput [Rule 62-4.070(3), F.A.C.]

27. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION B.
The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.		EMISSIONS UNIT DESCRIPTION
045	2E-22	Filter Dust (2 dust collectors: 2G-08 and 2G-09)
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin

These Emissions units are subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. These emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

[The numbering of the original federal rules in the following conditions has been preserved for ease of reference. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary of the Department or the Secretary's designee.]

1. Emissions from the following emissions units shall not exceed the following limits for the following pollutants:

EMISSIONS UNIT	FACILITY ID NO.	EMISSION LIMIT PM (LB/HR)	EMISSIONS LIMIT PM_{10} (LB/HR)	AVERAGING TIME
045	2E-22 2G-08	0.336 (1.47 tpy)	0.235 (1.03 tpy)	3 hours [1]
	2E-22 2G-09	1.143 (5.01 tpy)	0.80 (3.504 tpy)	3 hours [1]
046	2F-04	0.26 (1.14 tpy)	0.182 (.8 tpy)	3 hours [1]
047	2H-05	0.26 (1.14 tpy)	0.18 (.8 tpy)	3 hours [1]
048	2L-01	0.19 (0.83 tpy)	0.133 (0.58 tpy)	3 hours [1]
049	2L-14	0.320 (1.40 tpy)	0.224 (0.98 tpy)	3 hours [1]
050	2L-05	0.253 (1.11 tpy)	0.177 (0.776 tpy)	3 hours [1]
051	2M-04	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]

052	2N-01	2.31 (10.12 tpy)	1.62 (7.08 tpy)	3 hours [1]
053	2N-03	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
054	2N-04	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
055	2N-06	9.199 (40.29 tpy)	6.44 (28.2 tpy)	3 hours [1]
056	2N-26	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
057	2P-01 Transport A	0.256 (1.12 tpy)	0.18 (0.785 tpy)	3 hours [1]
	2P-01 Transport B	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]
058	2Q-28	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]
059	2Q-31	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]

[1] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

The averaging time for visible emissions shall be a 6-minute block average computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

[Rules 62-4.070(3), 62-210.700(5) and 62-212.400, F.A.C., and BACT]

2. Particulate matter (PM) emissions from these emissions units shall not exceed 0.01 grains/dscf, and PM_{10} emissions shall not exceed 0.007 grains/dscf. Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (No visible emissions). Emissions of NO_x, SO_2, CO and VOC will be controlled by emissions unit 044.

   Initial and annual compliance testing for PM and PM_{10} emissions from these emissions units is waived, and an alternative standard of 5% opacity (No visible emissions) is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.
   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

3. Visible Emission Tests Required –The owner or operator shall demonstrate compliance with the visible emission limits of this subsection annually, using the methods specified in this subsection. [Rule 62-297.310(7)(a)4.a., F.A.C.]

   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

4. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION C.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
060/061	Coal Handling and Grinding operations

Emissions units 060 and 061 are subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants (40 CFR 60.250 – 60.254) and 40 CFR 60 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: This emissions unit may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
2. Process Rate Limitation: The coal mill shall not crush more than 20.0 tons per hour of coal and/or petroleum coke, 30-day average. The coal mill shall not crush more than 165,000 tons annually. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
3. O&M Plan for Baghouses: The owner or operator shall prepare an operation and maintenance plan (O&M Plan) for emissions unit 060. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Southwest District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

4. The emissions units correspond shall have the following emission points:

EMISSIONS UNIT NO.	EMISSION POINT	DESCRIPTION
060	2S-15	Coal mill
061	2S-20	Fuel bin

Particulate matter (PM) emissions from emissions unit 060 shall not exceed 0.01 grains/dscf (1.60 lb/hr; 7.01 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (1.12 lb/hr; 4.91 tpy). Particulate matter (PM) emissions from emissions unit 061 shall not exceed 0.01 grains/dscf (0.145 lb/hr; 0.64 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (0.102 lb/hr; 0.445 tpy). Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (observations for the initial compliance test shall be made for 3 hours (thirty 6-minute averages)).

Initial and annual compliance testing for PM emissions from each emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it

shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.

[Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

5. Emission Tests Required: The owner or operator shall demonstrate compliance with the visible emissions standard for emissions unit 060 annually using EPA Method 9, as described in 40 CFR 60 Appendix A. The owner or operator shall demonstrate initial compliance with the particulate matter (PM) limits of this permit for emissions unit 061 using EPA Method 5, as described in 40 CFR 60 Appendix A. Should subsequent particulate matter (PM) testing be required for both emissions units, compliance shall be demonstrated using EPA Method 5.

[Rules 62-4.070(3), 62-297.310 and 62-297.620(4), F.A.C. and BACT]

REPORTING AND RECORD KEEPING REQUIREMENTS

6. Records of Process Rates: The owner or operator shall make and maintain records showing the monthly processing rate of coal and petroleum coke crushed in the coal mill. Records of the processing rate for each month shall be completed no later than 10 days following the end of the month. [Rule 62-4.070(3), F.A.C.]

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

7. Pursuant to 40 CFR 60.250 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems.
[40 CFR 60.250]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

8. Pursuant to 40 CFR 60.252 Standards for particulate matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any thermal dryer gases which:
(1) Contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf).
(2) Exhibit 20 percent opacity or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.
[40 CFR 60.252(a) and (c)]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

9. Pursuant to 40 CFR 60.253 Monitoring of operations:

(a) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:
(1) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ±3° Fahrenheit.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under 40 CFR 60.13(b).
[40 CFR 60.253(a) and (b)]

10. Pursuant to 40 CFR 60.254 Test methods and procedures:

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particular matter standards in § 60.252 as follows:
(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.
(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.
[40 CFR 60.254(a) and (b)]

FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NOx TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer and Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	CMS performance summary [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions .... ___
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions _ .....
c. Process problems ..... ____	c. Quality assurance calibration ..... ___
d. Other known causes ..... ____	d. Other known causes ..... ___
e. Unknown causes ..... ____	e. Unknown causes ..... ___
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ___
3. [Total duration of excess emissions] x (100) / [Total source operating time] ..... ____ % [2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ % [2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____

Title: _____

Date: _____

1. Pursuant to 40 CFR 60 Subparts F and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 60 Subpart F and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX C. 40 CFR 63 SUBPART LLL AND 40 CFR 63 GENERAL PROVISIONS

1. Pursuant to 40 CFR 63 Subparts LLL and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 63 Subpart LLL and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62-4.160, F.A.C.]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62–4.160, F.A.C.]

G.14 The permittee shall comply with the following:
(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Florida Crushed Stone Company
Brooksville Plant
PSD-FL-351
Air Permit 0530021-009-AC
Hernando County

1. BACKGROUND

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.00 km E and 3162.5 km N. The nearest distance of this site from the Chassahowitzka Class I PSD area is 20 kilometers.

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per

year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs).

Emissions units addressed by this permitting action are:

Emissions Unit ID No.	Facility ID No.	Emissions unit Description
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2:-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Seperator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Pulverized Coal Bin

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) will exceed 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62- 212.400-1, F.A.C. Because emissions will be greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility with a potential emissions increase greater than the PSD significance levels for NO_x, PM, PM_{10},

SO_2, CO, and VOC. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions.

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide, and designated as unclassifiable for PM10.

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs). The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, Subpart Y Standards of Performance for Coal Preparation Plants, and Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

Particulate matter emissions from the in-line kiln/raw mill and from the clinker cooler will be controlled by a baghouse. Particulate matter emissions from other sources will be controlled by baghouses. Sulfur dioxide emissions are inherently limited by the process (Alkali/Sulfur Balance). NOx emissions will be controlled by multi-stage combustion and/or Selective Non-Catalytic Reduction (SNCR). Carbon monoxide and VOC emissions will be limited by combustion control.

The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1] (TPY)	MAXIMUM EMISSIONS (TPY)	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 212.400-2.

Maximum emissions of mercury will be 122 pounds per year. Mercury emissions are below the 200 lb per year threshold and will not subject to PSD review. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the preheater feed and fuels. Dioxin emissions will be controlled by limiting the temperature of the inlet of the baghouse for the in-line kiln/raw mill pursuant to federal NESHAP regulation. Dioxin

is not subject to PSD review. Emissions of PM and PM_{10} from the unenclosed conveying equipment are expected to be insignificant because of inherent moisture and moisture applied to comply with the reasonable precautions for control of unconfined particulate matter emissions.

2. RELEVANT PERMIT PROCESSING DATES OF THE BACT APPLICATION

12/20/2004	Received permit application, report and fee
12/28/2004	Received email from EPA dated 12/09/2004; No comments
01/19/2005	Sent Request for Additional Information
03/07/2005	Received Response for Additional Information
04/06/2005	Application Complete

3. REVIEWERS

James K. Pennington, P.E., Bobby Bull, Engineering Specialist II, and Cleve Holladay, Engineer IV (modeling), prepared the BACT determination.

4. DETAILED PROCESS DESCRIPTION

The Department has a substantial body of information on Portland cement manufacturing and the applicant submitted a very detailed description of the process options with special emphasis on the types of raw materials that are readily available in the area of concern.

Portland cement is a fine powder, usually gray in color, which consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrate, and small amounts of magnesium oxide, sodium, potassium and sulfur, to which one or more forms of calcium sulfate (gypsum) have been added. About 95% of the cement production in the U.S. is Portland cement. Masonry cement represents the balance of the domestic cement production. There are several cement manufacturing processes including wet, dry, dry preheater and dry preheater/precalciner processes. These processes all produce Portland cement from raw materials through pyroprocessing. Each type of process has different characteristics for equipment design, method of operation, and fuel consumption. In the wet and dry processes, all of the pyroprocessing and fuel combustion occurs in the kiln, with the primary difference being that with the wet process, the raw materials are blended and introduced into the kiln as a slurry.

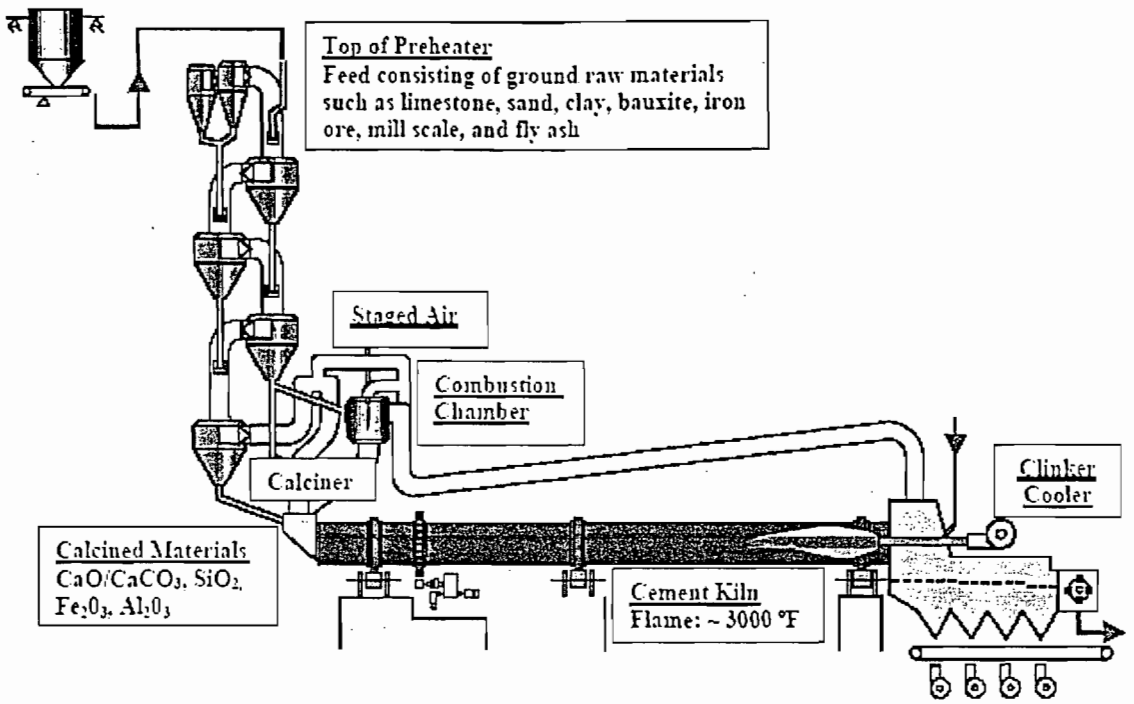


Figure 1: Diagram of Dry Process Cement Kiln with Preheater and Staged Air Calciner[1]

The preheater and preheater/precalciner processes as shown in Figure 1are also dry processes, but in these processes thermal efficiency and production capacity have been improved by adding process vessels arranged vertically before the kiln, wherein the hot gases pass counter to the material flow, effecting heat transfer through the intimate contact between the two streams. The improved heat transfer allows the kiln length to be reduced. This arrangement also allows the hot gases from the preheater tower to be used to dry raw materials in the raw mill. In the preheater/precalciner process, fuel combustion is divided between the kiln and a preheater vessel below the preheater tower. This arrangement provides for greater thermal efficiency than the preheater process. A relatively new innovation is the use of a separate line combustion chamber for the preheater burner, so called because it is installed to the side (separate) of the material flow through the precalciner region. Because of its lower fuel requirements and greater efficiency, most new Portland cement plants use the dry preheater/precalciner process. The applicant proposed to use the dry preheater/precalciner process, with a separate line combustion chamber for the calciner burner, in an in-line arrangement with the raw mill.

The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, used tires, used oil and various kinds of wastes are burned at many plants. The applicant proposed to fire coal, petroleum coke, natural gas, distillate fuel oil, propane, and when available, used tires and flyash. The applicant will not fire or introduce hazardous wastes, petroleum contaminated soil or materials, used oil, other solid fuels, or solid wastes other than tires. Used tires may be fed into the kiln feed end at up to 15% of heat input not to exceed 58.5 million BTU per hour heat input.

[1] Diagram from Department website; http://www.dep.state.fl.us/Air/permitting/construction.htm

The production of Portland cement is generally a four-step process: raw materials acquisition and handling, kiln feed preparation for pyroprocessing, pyroprocessing, and finished cement grinding. The chemical reactions and physical processes that constitute the transformation from raw materials to cement are quite complex, both chemically and physically. The heart of the Portland cement manufacturing process is the pyroprocessing system which includes the rotary kiln and preheater/precalciner as shown in Figure 1.

Pyroprocessing may be divided into four stages, depending on location and temperature of the materials in the system: evaporation of uncombined water from raw materials; dehydration of combined water to form oxides of silicon, aluminum, and iron; calcination (liberation of carbon dioxide); reaction and sintering of the oxides in the kiln to form cement clinker.

Generally the entire process may be summarized as follows. Raw materials, predominantly limestone, but also including sand, clay, iron ore, and coal ash, will be crushed and then blended and milled in the raw mill. The resulting material will be conveyed to the pyroprocessing system in the top stage of the preheater. It will exit the preheater/precalciner and enter the kiln at the elevated end (feed end). The rotation of the kiln causes the solid materials to be slowly transported downward from the front end (discharge end). Fuel will be supplied to the precalciner combustion chamber, optionally at the feed end of the kiln, and at the lower or discharge end of the kiln. The hot, gaseous combustion products will move countercurrent to the material flow, thereby transferring heat to solids in the kiln and preheater/precalciner, and to the raw mill.

The clinker will enter the clinker cooler as shown in Figure 1 where it will be cooled by ambient air. This cooling or quenching serves to "freeze" the clinker, halting the formation chemistry. Hot air from the clinker cooler will be recovered and returned to the pyroprocessing system as combustion air and will also be supplied to the coal mill for drying the coal and petroleum coke. The cooled clinker will be stored in silos before being mixed with gypsum and limestone and ground in a ball mill in the finish milling operation to produce Portland cement. The Portland cement will be stored in silos and loaded in bulk into tanker trailers or in bags which will be palletized.

The process for this plant is discussed in more detail below.

Limestone will be mined primarily below the water table. The overburden, consisting of sand and clay, will be removed from the limestone surface and stockpiled in the vicinity of the crusher. The crusher will be portable, and will be relocated periodically in accordance with the mining plan. The overburden (sand and clay) and the limestone will be fed into the crusher with front end loaders or other material handling devices in the ratios dictated by the target chemical composition of the desired raw mix. The quarry mix will be delivered to a covered storage hall by a conveyor belt system and by haul trucks. The quarry mix will have a moisture content of 10-20%. The storage hall will have space devoted to storage of the other raw materials which include but are not limited to: mill scale, feldspar and flyash. The other raw materials will be transported to the facility by truck.

Fugitive emissions from raw material handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter. Paved and unpaved roads will be sprayed by a water truck and water sprays. Paved roads will be cleaned by vacuum sweeper truck as required to prevent accumulations of unconfined particulate matter and emissions of such. Material stockpiles at the plant will be covered to limit particulate matter emissions generated by wind erosion.

The quarry mix and other raw materials will be conveyed to the raw mill feed bin. Raw materials will be fed from the raw mill feed bin to the raw mill. The raw mill will grind and mix the raw materials, and dry the raw materials with the hot gases from the pyroprocessing system. Emissions from the raw mill (and in-line kiln) will be controlled by a baghouse. The baghouse catches and the raw mill product will be conveyed to the homogenization silo. Other enclosed emission sources will be controlled by baghouses (fabric filters) as well. The captured dust will be recycled into the process unless otherwise authorized by the Department.

The kiln feed from the homogenization silo will be conveyed to the preheater by means of an airlift. The feed will enter the top stage of the preheater or, during wet material conditions, drop into the next lower stage of the preheater as shown in Figure 1 to increase the gas temperature to the raw mill. Gases from the pyroprocessing system will flow counter to the material direction to the raw mill and the baghouse.

Coal, petroleum coke, and flyash will be burned in the precalciner separate line combustion chamber near the inlet to the kiln as well as at the main burner at the discharge end of the kiln. The plant will also burn tires at the transition from the preheater to the kiln feed end. Combustion air for the precalciner will be provided through a tertiary air duct from the clinker cooler.

The pyroprocessing system will transform the raw meal from the homogenization silo into clinker. This amount of clinker will produce 138 tons of Portland cement per hour.

After discharge from the kiln, the clinker will be cooled with ambient air in a reciprocating grate cooler. The exhaust gases from the cooler will be cleaned by an baghouse operating under negative pressure from an ID fan. The cleaned gases will be exhausted through a stack that is shared with the coal mill. A portion of the clinker cooler gases will be ducted to the coal mill to dry the coal. These gases will then exhaust through the coal mill fabric filter (baghouse) into the common stack with the cooler exhaust. A portion of the clinker cooler gases will be ducted to the precalciner and the precalciner combustion chamber.

The clinker will be conveyed to the clinker silos. The clinker will be withdrawn from the silos by vibrating feeders, and discharged onto the finish mill feed belt. Enclosed clinker handling operations and storage silos will be controlled with baghouses.

Gypsum and limestone will be received by truck and stored under cover in stockpiles. Each material will be transferred by a front end loader to feed hoppers, and conveyed to the finish mill. The finish mill can produce up to 138 tons per hour of Portland cement.

All enclosed sources associated with the finish milling operation will be controlled with baghouses. Fugitive emissions from gypsum and limestone handling and conveying associated with the finish milling operation will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter.

Finished Portland cement will be stored in concrete silos. Portland cement will be withdrawn from the silos and loaded into tanker trailers for bulk shipment or into bags which will be cleaned and palletized for shipment. Finished Portland cement will be transported by truck or rail.

All enclosed sources associated with the Portland cement handling operation will be controlled with baghouses.

Coal and petroleum coke will be received by railcar. The bucket elevator will discharge onto a belt and then to a bin. Coal and petroleum coke will be metered from the bin to a vertical mill, for milling and drying with hot gases from the clinker cooler. The milled fuels will be stored in a pulverized fuel storage bin for pneumatic conveyance to the main burner and precalciner burner.

All enclosed sources associated with the coal and petroleum coke handling and milling operation will be controlled with baghouses. Fugitive emissions from coal and petroleum coke handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined fugitive emissions of particulate matter.

5. BACT DETERMINATION REQUESTED BY THE APPLICANT

The following table of emissions estimates was submitted by the applicant for BACT evaluation.

REGULATED AIR POLLUTANTS SIGNIFICANT EMISSION RATES

Pollutant	Significant Emission Rate (Tons/Year)	Modification Emission Rate (Tons/Year)	PSD ?
Carbon monoxide	100	2133.6	YES
Nitrogen oxides	40	1126.2	YES
Sulfur dioxide	40	122.7	YES
Ozone	40 VOC	105.3 VOC	YES
Particulate matter	25/15	256.4	YES
Sulfuric acid mist	7	5.1	NO
Lead	0.6 (1200 lbs)	0.375 (750 lb)	NO
Mercury	0.1 (200 lbs)	0.0751 (150.2 lb)	NO

Reference: Table 62-212.400-2, F.A.C.

The applicant proposed BACT for the PSD pollutants that triggered PSD as follows.

Particulate Matter (PM and PM_{10})
Control equipment (baghouses) was proposed for particulate matter (PM) and particulate matter smaller than 10 microns (PM_{10}) emitted from point sources. The use of wet suppression, paving of roadways, street sweeping, and enclosing stockpiles to reduce wind erosion was proposed to control particulate matter from fugitive sources.

Sulfur Dioxide (SO_2)
The facility proposed Alkali/Sulfur Balance in the process for SO_2 control.

Nitrogen Oxides (NOx)
Selective Non-catalytic reduction (SNCR) was proposed for NOx control with multi-stage combustion as needed to supplement the controls. SNCR alone could be used or in conjunction with multi-stage combustion for maximum operational flexibility. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project.

Carbon Monoxide (CO)
Process control, process design, and combustion unit design were proposed for CO.

Volatile Organic Compounds (VOC)
Clean raw materials and combustion control were proposed for VOC.

6. BACT DETERMINATION PROCEDURE

Rule 62-212.400(6)(a), F.A.C., requires that in making the BACT determination, the Department shall give consideration to:

1. Any Environmental Protection Agency determination of BACT pursuant to Section 169 of the Clean Air Act, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), or 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants).
2. All scientific, engineering, and technical material and other information available to the Department.
3. The emission limiting standards or BACT determination of any other state.
4. The social and economic impact of the application of such technology.

The EPA currently directs that BACT should be determined using the "top-down" approach. In this approach, available control technologies are ranked in order of control effectiveness for the emissions unit under review. The most stringent alternative is evaluated first. That alternative is selected as BACT unless the alternative is found to not be achievable based on technical considerations or energy, environmental or economic impacts. If this alternative is eliminated for these reasons, the next most stringent alternative is considered. This top-down approach is continued until BACT is determined. In general EPA has identified five key steps in the top-down BACT process: Identify alternative control technologies; eliminate technically infeasible options; rank remaining control technologies by control effectiveness; evaluate most effective controls; and select BACT.
BACT evaluation should be performed for each emissions source and pollutant under consideration. All of the combustion emissions from the plant are associated with the in-line kiln/raw mill. BACT for particulate matter can be treated separately for the in-line kiln/raw mill, clinker cooler, the enclosed material handling processes and the unenclosed conveyors.

The Department may consider the control or reduction of "non-regulated" air pollutants when determining the BACT limit for regulated pollutants, and will weigh control of non-regulated air pollutants favorably when considering control technologies for regulated pollutants. The Department will also favorably consider control technologies that utilize pollution prevention strategies. These approaches are consistent with EPA's consideration of environmental impacts.

The EPA has determined that a BACT determination shall not result in a selection of a control technology which would not meet any applicable emission limitation under 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) or 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants). This project is subject to such standards as described above.

7. BACT Pollutant Analysis and Department's Determination

For this project the PSD pollutants of concern are PM, PM_{10}, SO_2, NOx, CO and VOC. The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

Pollutant	PSD Significance Levels [1]	Maximum Emissions	Subject to PSD Review?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 62-212.400-2.

The applicant proposed control strategies for these pollutants for the emission sources at this facility. The applicant's proposal and the Department's BACT for each pollutant and source is discussed below.

Nitrogen Oxides (NOx) [2]

Nitrogen oxides (NOx) emissions from a modern dry process Portland cement plant kiln are the result of fuel combustion in the main kiln burner and the precalciner burner. These emissions can be reduced by minimizing fuel combustion; or conversely, by increasing the thermal efficiency of the kiln system. The most fuel-efficient Portland cement plants are the dry-process plants with a precalciner and preheater. Approximately 40 percent of the fuel utilized in these plants is fired in the kiln to create a clinkering condition while the remainder is fired in the precalciner to preheat the raw meal as it passes through the preheater and to calcine the limestone in the raw meal.

There are three reported mechanisms involved in the formation of NOx: "prompt" NOx, fuel NOx, and thermal NOx. "Prompt" NOx is NOx formed instantaneously at the flame surface during luminous oxidation. This NOx is independent of flame temperature and excess air. The formation of this NOx and the resulting concentration in the gases exhausted from the kiln can be considered as the baseline NOx emissions resulting from the two combustion processes.

The fuel NOx is the NOx formed by the oxidation of nitrogen in the fuel. Approximately 60 percent of the fuel nitrogen is converted to NOx depending upon available oxygen in the flame and the temperature profile of the flame.

The thermal NOx is the most significant source of NOx in cement kilns. This NOx is formed through a reaction between atmospheric nitrogen and oxygen. The rate of formation is a function of both available oxygen in the flame and the temperature of the flame. In general, thermal NOx levels increase sharply above a flame temperature of approximately 1600°F.

The combustion characteristics of various fuels affect the formation of both fuel NOx and thermal NOx. Additionally, the firing location (the main kiln burner or the precalciner burner) affects NOx formation as a result of differing heat release requirements.

[2]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

Natural gas when fired in the main kiln burner has been shown to generate approximately twice the amount of NOx per ton of clinker as coal or oil. This is not intuitive as the adiabatic flame temperatures of coal and oil is higher than for natural gas and both coal and oil have more fuel nitrogen than natural gas. Additionally, coal and oil are generally fired with a higher volume of combustion air which increases the availability of oxygen, and hence the potential for NOx formation. There are other factors associated with coal and oil burning, however, that more than offset the factors leading to higher NOx formation with these fuels. These factors include the flame shape, the luminescence of the flame, and higher levels of carbon monoxide (CO), and various radicals that tend to counter the formation of NOx.

The use of petroleum coke in either the kiln burner or precalciner appears to increase NOx emissions even though the nitrogen content of petroleum coke is lower than coal and it burns with a lower flame temperature. Petroleum coke cannot be burned alone, however, as it does not provide enough volatile matter.

The applicant proposed that NOx emissions at this facility will be controlled through Non-Selective Catalytic Reduction (SNCR), in conjunction with Multi-Stage Combustion, as well as the plant design and operation. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project. The SCR technology is currently being used by only one location in Europe at the Solnhofer Portland Zementwerke AG Plant in Solnhofer, Germany. The facility performed a pilot study, and incorporated the SCR technology in 1999. However, there has been no pilot study conducted in the United States, and there have been no indications that a pilot plant will be constructed to test SCR by any Portland cement facilities in the United States.

The applicant proposed SNCR to further reduce NO_x emissions. The SNCR will operate in conjunction with the multi-stage combustion (including reducing conditions at the precalciner as needed). The applicant proposed SNCR with multi-stage combustion as needed to achieve a NOx emission rate of 1.95 pounds of NOx per ton of clinker (30 day rolling average). The most recent permitting practice has been to issue a limit with a 30-day averaging time rather than a higher limit with a shorter averaging period.

The lowest emission rate in a final permit in the state of Florida is the Suwannee American Cement (SAC) kiln No. 1 that has a limit of 2.4 lb/ton clinker (30 day rolling average) and is actively meeting that limit. The SAC plant relies on staged combustion in the calciner (SCC) in a reducing atmosphere. They recently trial tested and subsequently installed an ammonia-based selective non-catalytic reduction (SNCR) system that they can use as needed to control NOx.

The most recent permit issued outside of the state of Florida is for the Holcim Lee Island Plant that will have the largest cement kiln in the United States. The project was approved by the State of Missouri with a limit of 2.4 lb/ton of clinker (30 day rolling average). This limit will be met by a combination of SCC and SNCR.

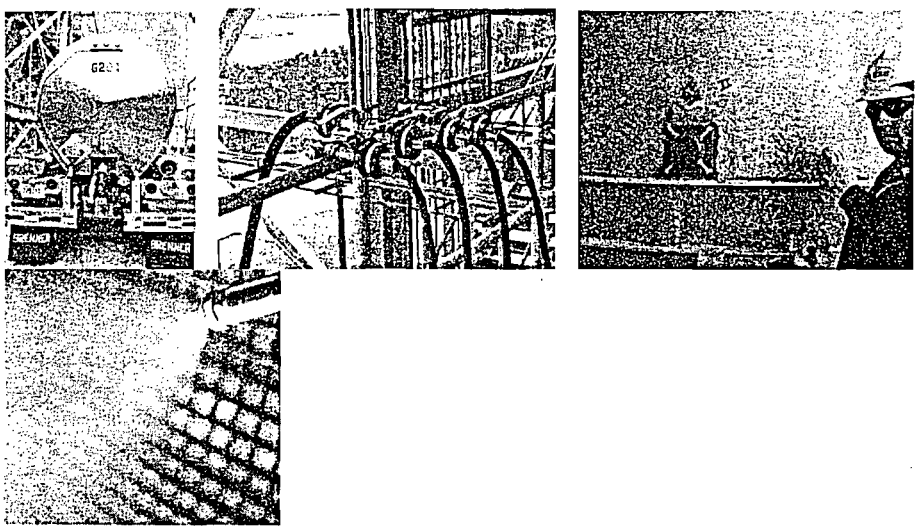
Recent testing conducted at Titan America in Medley, Florida indicated that it is possible to achieve 2.0 lb/ton of clinker (30 day rolling average) by a version of SCC with raw meal catalysis in a high temperature reducing atmosphere. Titan has advised the Department that they plan to apply to increase their annual hours of operation while complying with a limit of 2.1 lb/ton of clinker (30 day rolling average).

Both Suwannee American Cement (SAC) and Florida Rock Industries (FRI) conducted SNCR tests on their existing kilns and demonstrated that this emissions limit can be achieved using SNCR alone or by a combination of SCC and SNCR. In contrast to previous concerns by the cement industry in the United States, no visible secondary plume was observed. The reason is that raw materials in Florida are generally low in sulfur and chlorides and the potential to form ammoniated particulate compounds and the associated secondary plume is minimal.

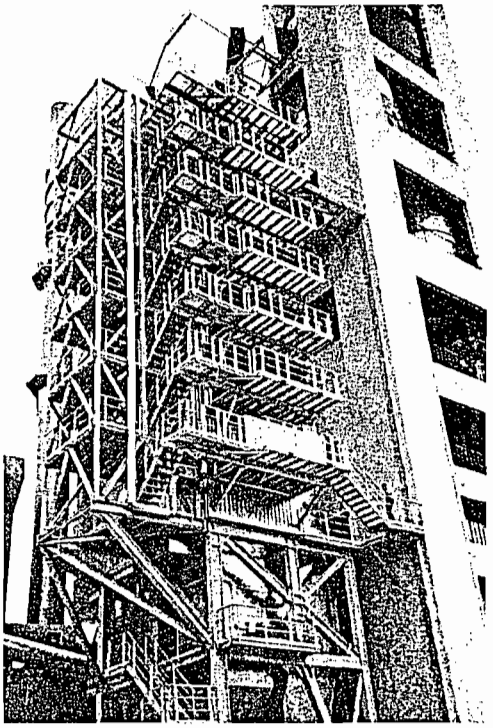
The Department reviewed the applicant's discussion on SCR and rejects the cost estimates. The BACT emission limit can be achieved with SCR or SNCR. Some additional time would be needed to conduct tests to determine the correct catalyst formulation for SCR. The Department does not consider SCR necessary to achieve a BACT level of control in Florida. Substantial sulfur present in the raw materials would make SCR a better choice than SNCR to avoid secondary plume formation, but this is not the case in Florida.

The only known commercial SCR system at a cement plant is at the Solnhofer Portland Cement Plant in Germany. The unit is efficient at NO_X control and helps reduce raw material ammonia, SO_2 and VOC emissions. These conditions (high raw material ammonia, VOC, sulfur) do not exist in Florida thus SNCR is entirely satisfactory as BACT.

The difference in the two technologies can be appreciated by the following pictures. SNCR requires some fairly simple equipment, whereas SCR (the equipment alongside the preheater tower) has a much larger footprint with structural considerations.



SNCR. Aqueous Ammonia, Compressed Air, One of Four Ports at existing duct, Injector(s)



SCR. Substantial Structure for Catalyst Layers.

The Department agrees with the applicant that SNCR is BACT for NOx for this project. Based on SNCR testing conducted at the FRI facility near Newberry and at the SAC facility near Branford, the facility should be able to meet 1.95 pounds of NOx per ton of clinker (30 day rolling average) as proposed by the applicant.

The applicant requested a higher limit for NO_x for one year after startup, and the Department agrees that such a trial period is reasonable. However, a shorter duration is mandated. During the first 180 operating days after startup, the kiln shall not exceed a NOx limit of 2.40 lb/ton clinker (30 day rolling average).

The Department has determined that 1.95 lb NO_X/ton of clinker is BACT and has reasonable assurance that this value can be met by SNCR or a combination of SCC and SNCR. The proposed kiln design is consistent with this conclusion. This BACT determination is the most stringent in the country.

Sulfur Dioxide (SO_2) [2]

Sulfur dioxide is generated from volatilization and subsequent oxidation of sulfur compounds in the raw materials within the preheater and precalciner regions, and by oxidation of sulfur compounds in the fuel during combustion. Sulfur dioxide at this facility will be generated through these mechanisms. The sulfur content of both raw materials and fuels varies based on the raw materials and fuels available at a given location, and consequently sulfur dioxide emissions vary with these factors. As is typical of conditions in Florida, the limestone, which is the principal raw material, will be low in sulfur compounds. Sulfur compounds present in the other

raw materials such as the iron sources, which represent a small proportion of the total raw materials, will most significantly contribute to sulfur dioxide emissions.

Most of the sulfur dioxide formed subsequently reacts with alkaline compounds present in the pyroprocessing environment to form alkali sulfates, which become incorporated in the cement clinker. The amount of sulfur dioxide released in the flue gases will vary with the amount of excess alkali available for absorption. The pyroprocessing system is very alkaline, and will be quite effective at removing sulfur dioxide formed from fuel sulfur. A significant proportion of sulfur dioxide from sulfur in raw materials will be removed through intimate contact with the incoming alkaline raw materials which flow counter to the gas flow. Further contact is achieved in the raw mill where the flue gases are used to dry incoming material feed.

The applicant proposes to limit sulfur dioxide emissions through alkali/sulfur balance. This will be accomplished by taking advantage of the alkaline environment in the kiln, preheater/precalciner, and raw mill to effect substantial removal of sulfur dioxide. Ultimately, the sulfur is incorporated into the clinker, thus minimizing the amount emitted to the atmosphere. The applicant proposed a sulfur dioxide limit of 0.23 pounds per ton of clinker produced (30 day rolling average).

The applicant provided information comparing the use of a wet scrubber and semi-dry scrubber to alkali/sulfur balance, and the use of both controls simultaneously to estimate sulfur dioxide emissions. The applicant rejected the use of the wet scrubber and semi-dry scrubber to reduce SO_2 based on the cost effectiveness analysis.

Whereas the most recent permitting practice throughout the country has been to issue a limit with a relatively long averaging time, the practice in Florida has been to use short averaging times for SO_2.

The lowest SO_2 emission rate in a permit in the state of Florida is at the applicant's existing Kiln No. 1 that has a limit of 0.16 lb SO_2/ton clinker on a 24-hour basis and is actively meeting that limit. The FRI plant relies on:

1. Inherently low sulfur in the raw material to avoid SO_2 emissions from the preheater.
2. Scrubbing of fuel sulfur by finely divided lime in the calciner.

The recent Holcim Lee Island permit was issued with an SO_2 limit of 1.26 lb SO_2/ton of clinker on a 30-day basis relying basically on the same principles of control.

Testing at Florida preheater/calciner cement kilns usually indicates emissions less than 0.05 lb SO_2/ton of clinker.

The Department considers the "Top" technology to be very low sulfur in the raw materials in combination with scrubbing of fuel sulfur by finely divided lime in the calciner. For areas where there are occasional pockets of sulfur laden materials that can not be avoided, then this technology could be augmented by injection of hydrated lime or other methods of control into the preheater, lime mist into the conditioning tower, or pneumatic conveyance of lime from the calciner to the upper preheater.

Usually even these additional measures are not needed when such raw material pockets are encountered with the raw mill in operation. Additional measures are needed when the raw mill is down to insure BACT level control. Hydrated lime injection into the preheater is practiced at Suwannee American Cement when these conditions occur.

A wet scrubber and semi-dry scrubber is not a consideration in Florida because of the efficacy of the described measures in achieving such low emissions. They are suitable when the measures described do not achieve BACT. A wet scrubber is not the "Top" technology for kilns in Florida, but can easily be the top technology where pyritic sulfur is prevalent such as in Texas, South Carolina, and New York (if not Missouri). The Department rejects the submitted cost analysis but does not require a new one.

FCS proposed a BACT limit of 0.23 lb/ton of clinker on a 30-day basis.

The Department does not believe that burning of petroleum coke will cause additional SO_2 emissions compared with coal because of the virtually complete scrubbing that occurs in the calciner. Also the raw material characteristics are not likely to change such that SO_2 is emitted from the preheater. If fly ash from the power industry has high sulfur content, it can be injected directly into the calciner where it too can be scrubbed.

The Department believes that process control is the appropriate technology for control of sulfur dioxide emissions for this project and is BACT. The Department considered imposing limitations on the sulfur content of the fuels and the raw materials used, but determined that such limits are not required due to the inherent low sulfur of the raw materials. Fuel sulfur is largely irrelevant because of the substantial exposure and contact between sulfur dioxide formed from fuel sulfur and the alkaline materials. Sulfur limits on the raw materials are not needed because the primary raw material, limestone, will be naturally low in sulfur. The other raw materials will be obtained by the applicant, which will acquire materials with regard to the alkali available in the process for control of sulfur dioxide formed from volatilization and oxidation of sulfur compounds in these materials. The Department will require hydrated lime injection or other methods of control as needed to reduce emissions. The Department will require a continuous emission monitor system for sulfur dioxide, which will offer a continuous demonstration of compliance with the emission limit, as well as process control data for the plant operators. The use of a CEM system ensures that process control will be effective, and eliminates the need for a limit on sulfur in raw materials.

Process control will allow for sulfur dioxide emissions to be minimized by maintaining a sufficient alkaline environment in the pyroprocessing system and by intimate contact between raw materials and exhaust gases. The sulfur dioxide that would result from fuel sulfur, as well as that resulting from volatilization and oxidation of sulfur from raw materials, will be controlled in this manner. Hydrated lime injection and other methods of control will be used to reduce SO_2 emissions as needed.

The BACT sulfur dioxide emission limit for this plant shall be 0.23 pounds/ton of clinker produced, and 28.8 pounds per hour, based on a rolling 24-hour averaging time. The Department has determined that 0.23lb SO_2/ton of clinker on a 24-hour basis is the "Top BACT" and has reasonable assurance that this value can be met by the measures described above. The proposed Kiln 2 design is consistent with this conclusion.

Particulate Matter (PM and PM_{10})[2]

Particulate matter results from the various physical and chemical processes at a cement manufacturing plant such as: quarrying and crushing, material transfer and storage, grinding and blending, clinker production, finish grinding, and packaging and loading. As is typical of cement plants, the largest emission source of particulate matter at this facility will be the pyroprocessing system that includes the inline kiln/raw mill and clinker cooler. At this facility, all cement kiln

dust (CKD) captured in the in-line kiln/raw mill baghouse will be returned to the pyroprocessing system as raw material. Emissions from enclosed fuel and material handling and storage operations represent another significant source of emissions at this facility. Unenclosed sources represent the smallest sources of emissions, given the use of proper controls. The limestone will primarily be mined below the water table and have an average moisture of 10-20%. The quarrying activities and associated crushing and transport will involve moist or wet raw materials with negligible unconfined emissions.

Common control devices for controlling emissions of particulate matter at cement plants are fabric filters (baghouses) and electrostatic precipitators (ESPs). Baghouses and ESPs are generally considered equivalent for particulate control. Both types of devices can achieve removal efficiencies of over 99%. ESPs and baghouses are used extensively as control devices at cement plants. ESPs are generally specified for kiln and clinker cooler exhaust gases because of their ability to operate effectively at varying temperatures, although baghouses are also used at some facilities for this purpose. Both types of control equipment provide for the recovery and recycling of CKD back into the process stream. ESPs offer the advantage of having no fabric filters that will wear and break and require routine replacement, while baghouses offer the advantage of providing for "passive" control in the event of an electrical power failure. A review of the BACT/LAER Clearinghouse shows that baghouses and ESPs are widely used to control particulate matter from process emission units at cement plants. Both offer an essentially equivalent level of control and are commonly accepted as BACT. Baghouses are also generally used to control particulate emissions from most other material processing operations at cement plants.

Common controls to limit particulate emissions from fugitive sources (such as roadways, stockpiles, and material processing and conveying equipment) include application of water for dust suppression, removal of dust, application of other dust suppressants, paving of roads and covering of stockpiles to reduce wind erosion. These methods of controlling fugitive particulate matter emissions are generally considered to be BACT for most material handling operations and paved and unpaved roads.

The applicant proposed the following controls for PM and PM_{10}. Baghouses will be used to control particulate emissions from material storage buildings, enclosures, bins, silos, conveying equipment, kiln/raw mills and clinker coolers. Particulate emissions from mill vents, air separator vents, material handling systems, bins, and silos will be controlled by baghouses. Particulate emissions from milling, transfer points, and storage silos/bins are typically controlled by baghouses.

The Department agrees with the applicant's proposal, but has instituted additional limits for PM and PM_{10} of 0.13 (.23 lb/ton of clinker) and 0.11 (.20 lb/ton clinker) pounds per ton of dry preheater feed, and 28.8 and 25.0 lb/hr for the in-line kiln/raw mill and clinker cooler, respectively. BACT is the use of a baghouse to control particulate matter emissions from the kiln. Visible emissions from these sources shall not exceed 10 percent opacity. BACT for other enclosed emission sources will be control of particulate matter emissions using baghouses to meet respective PM and PM_{10} emission limits of 0.01 and 0.007 grains per dry standard cubic foot. Visible emissions from these sources shall not exceed 5 percent opacity. The department will require the applicant to install continuous opacity monitoring systems (COMS) on the kiln's stack.

BACT for unenclosed sources is generally control of particulate matter emissions by inherent or applied moisture. Unpaved roads will be sprayed with water to prevent unconfined particulate matter emissions. Material and fuel storage piles will be stored under roof or in enclosed vessels. Storage piles shall be shaped, compacted and oriented to minimize wind erosion. Storage piles shall be wetted with devices located near such piles when visual inspection determines wetting is needed. Paving of the manufacturing area and access roadways is required. Sweeping of paved road will be required.

Carbon Monoxide (CO) [2]

Carbon monoxide is a pollutant formed by the incomplete combustion of carbon in the fuels fired during pyroprocessing. When insufficient oxygen is provided or poor combustion conditions occur, more CO and less CO_2 is formed than under ideal conditions. VOC is also a pollutant formed by the incomplete combustion of fuel.

Emissions of CO and VOC are controlled by utilization of proper combustion practices to maximize the oxidation of carbon to CO_2 instead of CO, and by flue gas controls. No add-on controls for CO or VOC have been demonstrated for cement plants. CO and NOx generally show an inverse relationship in cement plants as in many combustion processes, so reduction of NOx results in higher CO emissions. The applicant proposed combustion control as BACT for CO and VOC from this plant, and proposed emission limits of 4.0 and 0.19 pounds per ton of clinker produced for CO and VOC, respectively.

The most recent permitting practice throughout the country has been to issue a limit with a relatively short averaging time, but without a continuous emission monitoring. Emission limits since 1995 at cement kilns in Florida that have actually been built have ranged from 1.77 (later re-permitted at 2.3) lb CO/ton of clinker at Titan America to 3.6 lb/ton at Florida Rock's Kiln 1 and SAC. For reference, previous permits for Florida Crushed Stone Kiln No. 2 (that was not constructed) had limits of 2.0 lb/ton.

The recent Holcim Lee permit in Missouri limited CO to 6 lb/ton of clinker as BACT.

The above mentioned plants rely on the following to reduce CO emissions:

1. Relatively low carbonaceous matter in the raw materials
2. Good combustion at the main kiln burner and calciner
3. Addition of tertiary air from the kiln hood and clinker cooler
4. Varying degrees of calciner sizes and duct lengths to complete burnout

The Titan America Cement Plant actually achieves approximately 0.5 lb CO/ton of clinker. However that plant has an enormous calciner that provides a separate loop to promote maximum burnout. Additionally the calciner's size requires a taller preheater structure with excessive costs for each additional foot of height.

The lowest CO value in a permit (~ 0.37 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTOs.

The Department considers 3.6 lb/ton of clinker to represent BACT due to the use of the SNCR unit to reduce NO_x emissions. This limit allows for consideration of the tendency of CO to

increase when SNCR is used at cement plants to control NO_X. This has been documented during tests conducted at several European cement plants built by the proposed manufacturer of the applicant's Kiln No. 2. The use of a CEMS for CO will provide real time CO measurements. The Department does not consider it cost-effective to construct an excessively large calciner or install RTOs to further control CO. It is still possible that a longer loop between the final branch of tertiary air introduction to the lowest cyclone will be needed.

The Department will require that high carbon fly ash be injected directly into the calciner to avoid CO evolution in the preheater.

The Department agrees with the applicant in that BACT for CO shall be combustion control. The emission limit for CO shall be 3.6 pounds per ton of clinker produced, and 450.0 pounds per hour, based on a 24 hour average. A CEMS will be required for CO. The facility will also install process monitors for CO to provide for the use of CO as a short-term measure of the efficacy of combustion control.

Volatile Organic Compounds (VOC) [3]

The most recent permitting practice throughout the country has been to issue a limit with a 30-day averaging time using a VOC or total hydrocarbons (THC) continuous emission monitoring system (CEMS). The 30 averaging time is consistent with the emissions standards of 40 CFR 63, subpart LLL.

There are no VOC or THC limits for cement plants based on a New Source Performance Standard. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subpart LLL limits THC at "greenfield plants". The FRI Kiln No. 2 project is a new kiln at a "brownfield plant" because the first kiln was permitted prior to the June 1999 applicability date for Subpart LLL.
For reference the Subpart LLL requirement is 50 parts per million by volume, dry of Total Hydrocarbons (THC) at 7 percent oxygen (ppmvd @7% O_2). This value is the maximum achievable control technology (MACT). Though not applicable to FRI, MACT serves as a reference for determinations of best available control technology (BACT). VOC in cement plants is roughly the equivalent of THC minus the sum of methane and ethane. The latter compounds comprise roughly 30 percent of THC. Thus a VOC limit equal to Subpart LLL limit would be approximately 32 ppmvd @7% O_2. The value 32 ppmvd of VOC is roughly 0.32 lb VOC/ton of clinker.

Since 1995, BACT determinations in Florida have ranged from 0.085 to 0.12 lb VOC/ton. The limit issued by the State of Missouri to the recently permitted Holcim Lee Island Plant is 0.33 lb/ton of clinker and is probably equivalent to the mentioned Subpart LLL THC limit.

The proposed FCS kiln and calciner are very effective in controlling VOC from combustion except when overly aggressive reducing conditions are employed to control NO_X. FCS will rely primarily on SNCR to control NO_X and is not likely to produce much VOC from combustion.

Given good combustion, the "Top" control is limitation of organic matter in raw materials. Limestone in Florida is low in organic matter. However care is required when obtaining additives such as mill scale for iron ore to avoid oily substances. FCS proposes a limit of 0.19 lb VOC/ton of clinker. This is equal to approximately 62 tons per year. By contrast, there are parts of the

[3]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

country (such as Michigan) where naturally occurring kerogen in limestone can cause emissions of thousands of tons of VOC and objectionable odor from cement plants.

The lowest VOC value in a permit (~ 0.026 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous and organic matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTO system.

For reference, Holcim installed an RTO at the Dundee, Michigan plant to deal with the VOC and odor problem from that operation. Holcim also installed an activated coke filter at their Siggenthal, Switzerland Plant to control emissions when using dried wastewater treatment sludge as a fuel. The filter aided in VOC, CO, SO_2 heavy metal, and ammonia control. Sludge burning and pollution control was made viable through subsidization by the City of Zurich.

The Department considers 0.12 lb/ton of clinker by low organic compounds in the raw materials to represent BACT based on previously submitted applications. This value is about 1/3 of the recent Holcim Lee determination by the State of Missouri. It is less than half the value issued for the Holcim Holly Hill project in South Carolina and is approximately equal to the 0.11 lb/ton limit proposed as lowest achievable emission rate (LAER) for the St. Lawrence Cement project in New York.

The emission limit for VOC shall be 0.12 pounds per ton of clinker produced, and 15.0 pounds per hour, based on a 30 day averaging time. This averaging time is consistent with the NESHAP requirements. The department will require the applicant to install a CEMS to measure total hydrocarbons emitted from the facility.

Based on the information provided by the applicant, independent research and training of the reviewers and the informed good engineering judgment of the Department's personnel, BACT for PM, PM10, SO2, NOx, CO and VOC for the emission sources at this facility is determined to be the control technologies and emission limits discussed above.

8. COMPLIANCE

The compliance methods are briefly summarized here. Except for PM and PM10, compliance with the emission and process limitations for the in-line kiln/raw mill shall be demonstrated on a regular basis through a variety of continuous monitoring systems, and by record keeping for some production parameters. Compliance with the visible emissions limitation for the clinker cooler shall be regularly demonstrated using COM system clinker cooler stack. With the exception of waived stack tests for baghouses meeting a 5% opacity, annual emission tests will be required for all emission-limited pollutants, including visible emissions, from the in-line kiln/raw mill and the clinker cooler. Tests conducted for the annual RATA can satisfy the annual test requirements for the in-line kiln/raw mill. Initial compliance testing to demonstrate compliance with the emission limits for the three largest process sources controlled by baghouses will be required; thereafter, no subsequent tests will be required if these sources meet a visible emissions limit of 5% opacity. Initial and annual tests for the other process sources controlled by baghouses is not required if these sources meet a visible emissions limit of 5% opacity. The opacity limit for the clinker cooler is 10%.

The Department will require that the data from continuous monitors for emissions be available to the Department.

APPENDIX B: 40 CFR 60 SUBPART F AND GENERAL PROVISIONS

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

Pursuant to 40 CFR 60.60 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to the following affected facilities in Portland cement plants: Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.
[40 CFR 60.60]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

Pursuant to 40 CFR 60.62 Standard for Particulate Matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any kiln any gases which:

(1) Contain particulate matter in excess of 0.15 kg per metric ton of feed (dry basis) to the kiln (0.30 lb per ton).

(2) Exhibit greater than 20 percent opacity.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per metric ton of feed (dry basis) to the kiln (0.10 lb per ton).

(2) Exhibit 10 percent opacity, or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater.
[40 CFR 60.62(a), (b) and (c)]

[Note: Emissions units 009, 012 and 013 are subject to the visible emissions limit of paragraph (c) of this condition. The BACT emission limits of this permit for emissions units 009 and 012 are as stringent or are more stringent than the emission limits imposed by this rule.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

Pursuant to 40 CFR 60.63 Monitoring of Operations:

(a) The owner or operator of any Portland cement plant subject to the provisions of this part shall record the daily production rates and kiln feed rates.

(b) Except as provided in paragraph (c) of this section, each owner or operator of a kiln or clinker cooler that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate in accordance with § 60.13 a continuous opacity monitoring system to measure the opacity of emissions discharged into the atmosphere from any kiln or clinker cooler. Except as provided in paragraph (c) of this section, a continuous opacity monitoring system

(c) Each owner or operator of facilities subject to the provisions of 40 CFR 60.63(c) shall submit semi-annual reports of the malfunction information required to be recorded by 40 CFR 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere.
[40 CFR 60.65(a), (b) and (c)]

Subpart A-General Provisions for 40 CFR 60

40 CFR 60.1 Applicability.

(a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced
after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution controlagency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).
[40 CFR 60.1(a), (b) and (c)]

40 CFR 60.5 Determination of construction or modification.

(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

§ 60.6 Review of plans.

(a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.

(b)(1) A separate request shall be submitted for each construction or modification project.

(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each

reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]

(e) (1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance

(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
[40 CFR 60.7(a), (b), (c), (d), (e), (f), (g), (h)]

40 CFR 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
[40 CFR 60.8(a)]

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
[40 CFR 60.8(b)(1), (2), (3), (4) & (5)]

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
[40 CFR 60.8(c)].

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems , etc) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the perfomance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes

minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e) (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in 40 CFR 60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in 40 CFR 60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The

meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.

(f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.
[40 CFR 60.11(a), (b), (c), (d), (e) and (f)]

40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

40 CFR 60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continuos opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d) (1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. For owners or operators complying with the requirements in Sec. 60.7(f)(1) or (2), data averages must include any data recorded during periods of monitor breakdown or malfunction. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O2 or ng or pollutant per J of heat input). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(h)].

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(5) Alternative methods of converting pollutant concentration measurements to units of the standards.

(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(i)].

(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:

(b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1) . When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(b)].

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(c)].

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(e)].

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

[Rule 62-296.800, F.A.C.; 40 CFR 60.15(b)].

(c) "Fixed capital cost"' means the capital needed to provide all the depreciable components.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(c)].

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(1) Name and address of the owner or operator.

(2) The location of the existing facility.

(3) A brief description of the existing facility and the components which are to be replaced.

(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(6) The estimated life of the existing facility after the replacements.

(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(d)].

(e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(e)].

(f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:

(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and

(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(f)].

(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(g)].

§ 60.18 General control device requirements.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f) (1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Eq. 1

where:

HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, \quad 1.740 \times 10^{-7} \quad \left(\frac{1}{ppm}\right) \left(\frac{g\ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

Eq. 2

Ci=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and

Hi=Net heat of combustion of sample component i, kcal/g mole at 25 °>C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, Vmax, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation. Log10 (Vmax)=(HT+28.8)/31.7

Vmax=Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

HT=The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, Vmax, for air-assisted flares shall be determined by the following equation. Vmax=8.706+0.7084 (HT)

Vmax=Maximum permitted velocity, m/sec

8.706=Constant

0.7084=Constant

HT=The net heating value as determined in paragraph (f)(3).

§ 60.19 General notification and reporting requirements.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

APPENDIX C: 40 CFR 63 SUBPART LLL AND GENERAL PROVISIONS

FEDERAL NESHAP REQUIREMENTS

GENERAL

Pursuant to 40 CFR 63.1340 Applicability and Designation of Affected Sources:

(a) Except as specified in paragraphs (b) and (c) of this section, the provisions of this subpart apply to each new and existing Portland cement plant which is a major source as defined in §63.2.

(b) The affected sources subject to this subpart are:
(1) Each kiln and each in-line kiln/raw mill at any major source, including alkali bypasses, except for kilns and in-line kiln/raw mills that burn hazardous waste and are subject to and regulated under subpart EEE of this part;
(2) Each clinker cooler at any Portland cement plant which is a major source;
(3) Each raw mill at any Portland cement plant which is a major source;
(4) Each finish mill at any Portland cement plant which is a major source;
(5) Each raw material dryer at any Portland cement plant which is a major source and each greenfield raw material dryer at any Portland cement plant which is a major source;
(6) Each raw material, clinker, or finished product storage bin at any Portland cement plant which is a major source;
(7) Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln at any Portland cement plant which is a major source;
(8) Each bagging system at any Portland cement plant which is a major source.

(c) For Portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill. Any equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage is not subject to this subpart. In addition, the primary and secondary crushers of the on-site nonmetallic mineral processing plant, regardless of whether they precede the raw material storage, are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.
(d) The owner or operator of any affected source subject to the provisions of this subpart is subject to title V permitting requirements.

Pursuant to 40 CFR 63.134 Definitions:

The terms used in this rule are defined at 40 CFR 63.1341 Definitions, the text of which is reproduced below.

All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.
Alkali bypass means a duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the "kiln exhaust gas bypass".
Bagging system means the equipment which fills bags with Portland cement.
Bin means a manmade enclosure for storage of raw materials, clinker, or finished product prior to further processing at a Portland cement plant.

(where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.
One-minute average means the average of thermocouple or other sensor responses calculated at least every 60 seconds from responses obtained at least once during each consecutive 15 second period.
Portland cement plant means any facility manufacturing Portland cement.
Raw material dryer means an impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.
Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.
Rolling average means the average of all one-minute averages over the averaging period.
Run average means the average of the one-minute parameter values for a run.
TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[40 CFR 63.1340 and 63.1341]

EMISSION STANDARDS AND OPERATING LIMITS

Pursuant to 40 CFR 63.1342 Standards: General:

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to subpart LLL.

(b) Table 1 of this section provides a summary of emission limits and operating limits of this subpart.

Table 1 §63.1342. Emission Limits and Operating Limits.

Affected Source	Pollutant or Opacity	Emission and Operating Limit
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	PM	0.15 kg/Mg of feed (dry basis)
	Opacity	20 percent
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	D/F	0.20 ng TEQ/dscm or 0.40 ng TEQ/dscm when the average of the performance test run average particulate matter control device (PMCD) inlet temperatures is 204° C or less. [Corrected to 7 percent oxygen] Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test.

[40 CFR 63.1343]

Pursuant to 40 CFR 63.1344 Operating Limits for Kilns and In-line kiln/raw Mills:

(a) The owner or operator of a kiln subject to a D/F emission limitation under §63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under §63.1343 must operate the in-line kiln/raw mill, such that,

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in paragraph (b) of this section and established during the performance test, with or without the raw mill operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with §63.1349(b)(3)(iv).

[40 CFR 63.1344]

Pursuant to 40 CFR 63.1345 Standards for Clinker Coolers:

(a) No owner or operator of clinker cooler shall cause to be discharged into the atmosphere from the clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) Exhibit opacity greater than ten percent.

(b) [Reserved]

[40 CFR 63.1345]

[Note: 40 CFR 63.1346 is not applicable to this project.]

Pursuant to 40 CFR 63.1347 Standards for Raw and Finish Mills:

The owner or operator of each raw mill or finish mill shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent. [40 CFR 63.1347]

[Note: The BACT emission limits of this permit for emissions unit 006 are as stringent or are more stringent than the emission limit of this condition.]

Pursuant to 40 CFR 63.1348 Standards for Affected Sources Other Than Kilns; In-Line Kiln/Raw Mills; Clinker Coolers; New and Reconstructed Raw Material Dryers; and Raw and Finish Mills:

The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading

(ii) Suitable methods shall be used to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (c_s Q_{sd}) / P \qquad \textbf{(Eq 1)}$$

Where: E = emission rate of particulate matter, kg/Mg of kiln feed.
c_s = concentration of PM, kg/dscm.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(iv) When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the main exhaust and alkali bypass of the kiln or in-line kiln/raw mill shall be tested simultaneously and the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and alkali bypass shall be computed for each run using equation 2,

$$E_c = (c_{sk}Q_{sdk} + c_{sb}Q_{sdb})/P \qquad \textbf{(Eq 2)}$$

Where: E_c = the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and bypass stack, kg/Mg of kiln feed.
c_{sk} = concentration of particulate matter in the kiln or in-line kiln/raw mill effluent, kg/dscm.
Q_{sdk} = volumetric flow rate of kiln or in-line kiln/raw mill effluent, dscm/hr.
c_{sb} = concentration of particulate matter in the alkali bypass gas, kg/dscm.
Q_{sdb} = volumetric flow rate of alkali bypass gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(v) Except as provided in paragraph (b)(1)(vi) of this section the opacity exhibited during the period of the Method 5 performance tests required by paragraph (b)(1)(i) of this section shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(vi) Each owner or operator of a kiln, in-line kiln/raw mill, or clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (b)(1)(v) of this section, conduct an opacity test in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of Performance Specification 1 (PS-1) of appendix B to part 60 of this chapter is not feasible, a test shall be conducted in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. The maximum six-minute average opacity shall be determined during the three Method 5 test runs, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(2) The owner or operator of any affected source subject to limitations on opacity under this subpart that is not subject to paragraph (b)(1) of this section shall demonstrate initial

performance test report and will determine the applicable injection rate limit in accordance with §63.1344(c)(1).

(4) The owner or operator of an affected source subject to limitations on emissions of THC shall demonstrate initial compliance with the THC limit by operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 of this chapter. The duration of the performance test shall be three hours, and the average THC concentration (as calculated from the one-minute averages) during the three hour performance test shall be calculated. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraphs (b)(1) and (b)(2) of this section shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.

(d) Performance tests required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) (1) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph (b)(3) of this section.

(2) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

(3) In preparation for and while conducting a performance test required in paragraph (e)(1) of this section, a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in paragraphs (e)(3)(i) through (iv) of this section are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.

(i) The source must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (e)(1) of this section, including when the planned operational change period would begin.

(ii) The performance test results must be documented in a test report according to paragraph (a) of this section.

(iii) A test plan must be made available to the Administrator prior to testing, if requested.

(iv) The performance test must be conducted, and it must be completed within 360 hours after the planned operational change period begins.

(f) Table 1 of this section provides a summary of the performance test requirements of this subpart.

[40 CFR 63.1349]

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to part 60 of this chapter. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. ``Totally enclosed conveying system transfer point'' shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs (a)(4)(i) through (iv) of this section for each such conveying system transfer point located within the building, or for the building itself, according to paragraph (a)(4)(vii) of this section.

(vii) If visible emissions from a building are monitored, the requirements of paragraphs (a)(4)(i) through (iv) of this section apply to the monitoring of the building, and you must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses in accordance with paragraphs (c)(1) through (c)(3) of this section.

(1) Except as provided in paragraph (c)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a continuous opacity monitor (COM) located at the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a kiln or in-line kiln/raw mill subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of appendix A to part 60 of this chapter. The duration of the Method 9 test shall be 30 minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in §63.1349(b)(3)(iv).

(ii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of an affected source subject to a limitation on D/F emissions that employs carbon injection as an emission control technique shall comply with the monitoring requirements of paragraphs (f)(1) through (f)(6) and (g)(1) through (g)(6) of this section to demonstrate continuous compliance with the D/F emission standard.

(1) Install, operate, calibrate and maintain a continuous monitor to record the rate of activated carbon injection. The accuracy of the rate measurement device must be $\pm$ 1 percent of the rate being measured.

(2) Verify the calibration of the device at least once every three months.

(3) The three-hour rolling average activated carbon injection rate shall be calculated as the average of 180 successive one-minute average activated carbon injection rates.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available,

this subpart, except for emission standards for THC, subject to the provisions of paragraphs (l)(1) through (l)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (l)(3)(i) through (l)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(m) The requirements under paragraph (e) of this section to conduct daily Method 22 testing shall not apply to any specific raw mill or finish mill equipped with a continuous opacity monitor COM or bag leak detection system (BLDS). If the owner or operator chooses to install a COM in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, then the COM must be installed at the outlet of the PM control device of the raw mill or finish mill, and the COM must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of this part and according to PS-1 of appendix B to part 60 of this chapter. To remain in compliance, the opacity must be

Table 1 40 CFR 63.1350. Monitoring Requirements.

AFFECTED SOURCE/POLLUTANT OR OPACITY	MONITOR TYPE/ OPERATION/PROCESS	MONITORING REQUIREMENTS
All affected sources	Operations and maintenance plan	Prepare written plan for all affected sources and control devices
All in-line kiln raw mills/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level
In-line kiln raw mills/particulate matter	Particulate matter continuous emission monitoring system	Deferred
In-line kiln raw mills/ D/F	Combustion system inspection	Conduct annual inspection of components of combustion system
	Continuous temperature monitoring at PMCD inlet	Install, operate, calibrate and maintain continuous temperature monitoring and recording system; calculate three-hour rolling averages; verify temperature sensor calibration at least quarterly
In-line kiln raw mills/THC	Total hydrocarbon continuous emission monitor	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration
Clinker coolers/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level.
Finish mills at major sources/opacity	Method 22 visible emissions test	Conduct daily 6-minute Method 22 visible emissions test while mill is operating at highest load or capacity level; if visible emissions are observed, initiate corrective action within one hour and conduct 30-minute Method 9 test within 24 hours

submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

(2) Notification of performance tests, as required by §§63.7 and 63.9(e).

(3) Notification of opacity and visible emission observations required by §63.1349 in accordance with §§63.6(h)(5) and 63.9(f).

(4) Notification, as required by §63.9(g), of the date that the continuous emission monitor performance evaluation required by §63.8(e) of this part is scheduled to begin.

(5) Notification of compliance status, as required by §63.9(h).

[40 CFR 63.1353]

Pursuant to 40 CFR 63.1354 Reporting Requirements:

(a) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in §63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by §63.1349.

(3) As required by §63.10(d)(4), the owner or operator of an affected source who is required to such reports by the dates specified in the written extension of compliance.

(4) As required by §63.10(d)(5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(6) As required by §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

OTHER

Pursuant to 40 CFR 63.1357 Temporary, Conditioned Exemption from Particulate Matter and Opacity Standards:

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from:

(1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The owner or operator must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted. The plan must include:

(1) The number of test conditions and the number of runs for each test condition;

(2) The target particulate matter emission level for each test condition;

(3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and

(4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with §63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in §63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

(e) The PM and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for the purposes of conducting tests to correlate PM CEMS with manual method test results, including all runs and conditions, except as described in this paragraph. Where additional time is required to correlate a PM CEMS device, a source may petition the Administrator for an extension of the 96-hour aggregate waiver of compliance with the PM and opacity standards. An extension of the 96-hour aggregate waiver is renewable at the discretion of the Administrator.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

[40 CFR 63.1357]

Pursuant to 40 CFR 63.1358 Delegation of Authority:

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(iii) The General Provisions in this Subpart A do not apply to regulations developed pursuant to section112(r) of the amended Act., unless otherwise specified in those regulations.

(5) [Reserved]

(6) To obtain the most current list of categories of sources to be regulated under section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD–13), Research Triangle Park, North Carolina 27711.

(7) [Reserved]

(8) [Reserved]

(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in § 63.9(i).

(13) [Reserved]

(14) [Reserved]

(b) *Initial applicability determination for this part.*

(1) The provisions of this part apply to the owner or operator of any stationary source that

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) [Reserved]

(3) An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under this part, must keep a record as specified in § 63.10(b)(3).

(c) *Applicability of this part after a relevant standard has been set under this part.*

(1) If a relevant standard has been established under this part, the owner or operator of an affected source must comply with the provisions of that standard and of this subpart as provided in paragraph (a)(4) of this section.

(2) Except as provided in § 63.10(b)(3), if a relevant standard has been established under this part, the owner or operator of an affected source may be required to obtain

based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term "affected source," as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing title IV of the Act. Affected source may be defined differently for part 63 than affected facility and stationary source in parts 60 and 61, respectively. This definition of "affected source," and the procedures for adopting an alternative definition of "affected source," shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002.

Alternative emission limitation means conditions established pursuant to sections 112(i)(5) or 112(i)(6) of the Act by the Administrator or by a State with an approved permit program.

Alternative emission standard means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a test method in this chapter and that has been demonstrated to the Administrator's satisfaction, using Method 301 in Appendix A of this part, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this part.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

Commenced means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Compliance date means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator (or a State with an approved permit program) pursuant to section 112 of the Act.

Compliance schedule means:

(1) In the case of an affected source that is in compliance with all applicable requirements established under this part, a statement that the source will continue to comply with such requirements; or

(2) In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

(3) In the case of an affected source not in compliance with all applicable requirements established under this part, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established pursuant to section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction non-compliance with, the applicable requirements on which it is based.

(1) Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to section 112 of the Act as amended in 1990;

(2) New source performance standards established pursuant to section 111 of the Act, and emission standards established pursuant to section 112 of the Act before it was amended in 1990;

(3) All terms and conditions in a title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

(4) Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

(5) Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR part 51;

(6) Limitations and conditions that are part of an operating permit where the permit and the permitting program pursuant to which it was issued meet all of the following criteria:

(i) The operating permit program has been submitted to and approved by EPA into a State implementation plan (SIP) under section 110 of the CAA;

(ii) The SIP imposes a legal obligation that operating permit holders adhere to the terms and limitations of such permits and provides that permits which do not conform to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA;

(iii) The operating permit program requires that all emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the SIP or enforceable under the SIP, and that the program may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise "federally enforceable";

(iv) The limitations, controls, and requirements in the permit in question are permanent, quantifiable, and otherwise enforceable as a practical matter; and

(v) The permit in question was issued only after adequate and timely notice and opportunity for comment for EPA and the public.

(7) Limitations and conditions in a State rule or program that has been approved by the EPA under subpart E of this part for the purposes of implementing and enforcing section 112; and

(8) Individual consent agreements that the EPA has legal authority to create.

Fixed capital cost means the capital needed to provide all the depreciable components of an existing source.

Fugitive emissions means those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Hazardous air pollutant means any air pollutant listed in or pursuant to section 112(b) of the Act.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

(5) Incentives for pollution prevention;

(6) Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);

(7) Feasibility and cost of monitoring; and

(8) Other relevant factors.

New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For continuous opacity monitoring systems, opacity means the fraction of incident light that is attenuated by an optical medium.

Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source..

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Permit modification means a change to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permit revision means any permit modification or administrative permit amendment to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

Reconstruction means the replacement of components of an affected or a previously unaffected stationary source to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Test method means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of this chapter, test methods incorporated by reference in this part, or methods validated for an application through procedures in Method 301 of appendix A of this part.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Visible emission means the observation of an emission of opacity or optical density above the threshold of vision.

Working day means any day on which Federal Government offices (or State government offices for a State that has obtained delegation under section 112(l)) are open for normal business. Saturdays, Sundays, and official Federal (or where delegated, State) holidays are not working days.

§ 63.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A = ampere
g = gram
Hz = hertz
J = joule
°K = degree Kelvin
kg = kilogram
l = liter
m = meter
m^3 = cubic meter
mg = milligram = 10^{-3} gram
ml = milliliter.= 10^{-3} liter
mm = millimeter = 10^{-3} meter
Mg = megagram = 10^{6} gram = metric ton
MJ = megajoule
mol = mole
N = newton
ng = nanogram = 10^{-9} gram
nm = nanometer = 10^{-9} meter
Pa = pascal
s = second
V = volt
W = watt
Ω = ohm
μg = microgram = 10^{-6} gram
μl = microliter = 10^{-6} liter

(b) Other units of measure:

Btu = British thermal unit
°C = degree Celsius (centigrade)
cal = calorie
cfm = cubic feet per minute
cc = cubic centimeter

N = normal
O.D. = outside diameter
% = percent

§ 63.4 Prohibited activities and circumvention.

(a) *Prohibited activities.*

(1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(b) *Circumvention.* No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(3) [Reserved]

(c) *Severability.* Notwithstanding any requirement incorporated into a title V permit obtained by an owner or operator subject to the provisions of this part, the provisions of this part are federally enforceable.

§ 63.5 Preconstruction review and notification requirements.

(a) *Applicability.*

(1) This section implements the preconstruction review requirements of section 112(i)(1) for sources subject to a relevant emission standard that has been promulgated in this part. In addition, this section includes other requirements for constructed and reconstructed stationary sources that are or become subject to a relevant promulgated emission standard.

(2) After the effective date of a relevant standard promulgated under this part, the requirements in this section apply to owners or operators who construct a new source or reconstruct a source after the proposal date of that standard. New or reconstructed sources that start up before the standard's effective date are not subject to the preconstruction review requirements specified in paragraphs (b)(3), (d), and (e) of this section.

(b) *Requirements for existing, newly constructed, and reconstructed sources.*

(1) A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources,

(C) The address (i.e., physical location) or proposed address of the source;

(D) An identification of the relevant standard that is the basis of the application;

(E) The expected date of the beginning of actual construction or reconstruction;

(F) The expected completion date of the construction or reconstruction;

(G) [Reserved]

(H) The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

(I) [Reserved]

(J) Other information as specified in paragraphs (d)(2) and (d)(3) of this section.

(iii) An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in paragraphs (d)(1)(ii)(H) and (d)(2) of this section shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the notification of compliance status required in § 63.9(h) (see
§ 63.9(h)(5)).

(2) *Application for approval of construction.* Each application for approval of construction must include, in addition to the information required in paragraph (d)(1)(ii) of this section, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each type of emission point for each type of hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions must include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions must include an estimated control efficiency (percent) for that method. Such technical information must include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

(3) *Application for approval of reconstruction.* Each application for approval of reconstruction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section - (i) A brief description of the affected source and the components that are to be replaced;

(ii) A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

(iii) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

(iv) The estimated life of the affected source after the replacements; and

(4) A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

(5) Neither the submission of an application for approval nor the Administrator's approval of construction or reconstruction shall -

(i) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or (ii) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(f) *Approval of construction or reconstruction based on prior State preconstruction review.*

(1) Preconstruction review procedures that a State utilizes for other purposes may also be utilized for purposes of this section if the procedures are substantially equivalent to those specified in this section. The Administrator will approve an application for construction or reconstruction specified in paragraphs (b)(3) and (d) of this section if the owner or operator of a new affected source or reconstructed affected source, who is subject to such requirement meets the following conditions:

(i) The owner or operator of the new affected source or reconstructed affected source has undergone a preconstruction review and approval process in the State in which the source is (or would be) located and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant promulgated emission standard, if the source is properly built and operated.

(ii) Provide a statement from the State or other evidence (such as State regulations) that it considered the factors specified in paragraph (e)(1) of this section.

(2) The owner or operator must submit to the Administrator the request for approval of construction or reconstruction under this paragraph (f)(2) no later than the application deadline specified in paragraph (d)(1) of this section (see also § 63.9(b)(2)). The owner or operator must include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in paragraph (e) of this section. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction under this paragraph (f)(2).

§ 63.6 Compliance with standards and maintenance requirements.

(a) *Applicability.*

(1) The requirements in this section apply to the owner or operator of affected sources for which any relevant standard has been established pursuant to section 112 of the Act and the applicability of such requirements is set out in accordance with § 63.1(a)(4) unless --

(i) The Administrator (or a State with an approved permit program) has granted an extension of compliance consistent with paragraph (i) of this section; or

(ii) The President has granted an exemption from compliance with any relevant standard in accordance with section 112(i)(4) of the Act.

(2) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

days after the standard's effective date, or by the date specified in an extension granted to the source by the Administrator under paragraph (i)(4)(ii) of this section, whichever is later.

(3)–(4) [Reserved]

(5) Except as provided in paragraph (b)(7) of this section, the owner or operator of an area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source shall be subject to relevant standards for existing sources. Such sources must comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard for existing sources in existence at the time the standard becomes effective.

(d) [Reserved]

(e) *Operation and maintenance requirements.*

(1) (i) At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) [Reserved]

(3) Startup, shutdown, and malfunction plan.

(i)The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard.

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring

or to receive a copy of that plan or portion of a plan. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(1)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by § 63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this

(1) If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under any design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. Any FEDERAL REGISTER notice under this paragraph shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

(2) An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit a proposed test plan or the results of testing and monitoring in accordance with § 63.7 and § 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in § 63.7 and § 63.8.

(3) The Administrator may establish general procedures in an applicable subpart that accomplish the requirements of paragraphs (g)(1) and (g)(2) of this section.

(h) *Compliance with opacity and visible emission standards* -

(1) *Applicability.* The opacity and visible emission standards set forth in this part must apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in this part, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements.

(2) Methods for determining compliance.

(i) The Administrator will determine compliance with opacity and visible emission standards in this part based on the results of the test method specified in an applicable subpart. Whenever a continuous opacity monitoring system (COMS) is required to be installed to determine compliance with numerical opacity emission standards in this part, compliance with opacity emission standards in this part shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards in this part shall be determined by conducting observations in accordance with Test Method 9 in appendix A of part 60 of this chapter or the method specified in paragraph (h)(7)(ii) of this section. Whenever a visible emission test method is not specified, compliance with visible emission standards in this part shall be determined by conducting observations in accordance with Test Method 22 in appendix A of part 60 of this chapter.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(v) Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

(6) *Availability of records.* The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) *Use of a continuous opacity monitoring system.*

(i) The owner or operator of an affected source required to use a continuous opacity monitoring system (COMS) shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results in accordance with the provisions of § 63.10(e)(4).

(ii) Whenever an opacity emission test method has not been specified in an applicable subpart, or an owner or operator of an affected source is required to conduct Test Method 9 observations (see appendix A of part 60 of this chapter), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under § 63.7 in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, he or she shall notify the Administrator of that decision, in writing, simultaneously with the notification under § 63.7(b) of the date the performance test is scheduled to begin. Once the owner or operator of an affected source has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under § 63.7, unless the owner or operator notifies the Administrator in writing to the contrary not later than with the notification under § 63.7(b) of the date the subsequent performance test is scheduled to begin.

(iii) For the purposes of determining compliance with the opacity emission standard during a performance test required under § 63.7 using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test.

(iv) The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of § 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in § 63.8(c) and § 63.8(d), and that the resulting data have not been altered in any way.

(v) Except as provided in paragraph (h)(7)(ii) of this section, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in § 63.8(c), and met Performance Specification 1 in appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.

(8) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required by § 63.7, the results of Test Method 9 or another required opacity or visible emission test method, the observer certification required by paragraph (h)(6) of this section, and the continuous opacity monitoring system results, whichever is/are applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(9) *Adjustment to an opacity emission standard.*

(i) If the Administrator finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under § 63.7, but during the time such performance tests were conducted fails to

grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) Any request under this paragraph for an extension of compliance with a relevant standard must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraphs (b) and (c) of this section), except as provided for in paragraph (i)(4)(i)(C) of this section. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial. Emission standards established under this part may specify alternative dates for the submittal of requests for an extension of compliance if alternatives are appropriate for the source categories affected by those standards.

(C) An owner or operator may submit a compliance extension request after the date specified in paragraph (i)(4)(i)(B) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (i)(6)(i) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(ii) The owner or operator of an existing source unable to comply with a relevant standard established under this part pursuant to section 112(f) of the Act may request that the Administrator grant an extension allowing the source up to 2 years after the standard's effective date to comply with the standard. The Administrator may grant such an extension if he/she finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under this paragraph must be submitted in writing to the Administrator not later than 90 calendar days after the effective date of the relevant standard.

(5) The owner or operator of an existing source that has installed BACT or technology required to meet LAER [as specified in paragraph (i)(2)(ii) of this section] prior to the promulgation of a relevant emission standard in this part may request that the Administrator grant an extension allowing the source 5 years from the date on which such installation was achieved, as determined by the Administrator, to comply with the standard. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 120 days after the promulgation date of the standard. The Administrator may grant such an extension if he or she finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(6) (i) The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(iv) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(13) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(ii) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator will notify the owner or operator in writing of the Administrator's intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator before further action on the request.

(iv) A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(14) The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (i)(10)(iii) or (iv) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(i) Notice of the reason for termination; and

Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) *Quality assurance program.*

(1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2) (i) *Submission of site-specific test plan.* Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) *Approval of site-specific test plan.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with -

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Conduct of performance tests.*

(1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator -

(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in § 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or

(ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in § 63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(f) *Use of an alternative test method* -

(1) *General.* Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator -

(i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;

results of such performance test and other data needed to determine emissions from an affected source.

(h) *Waiver of performance tests.*

(1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) Request to waive a performance test.

(i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(I), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) Approval of request to waive performance test. The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she -

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.8 Monitoring requirements.

(a) *Applicability.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(2) (i) All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under § 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS that is not a CPMS, which is installed in accordance with the provisions of this part and the applicable CMS performance specification(s), must check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (ii) of this section. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases must be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces must be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity. The CPMS must be calibrated prior to use for the purposes of complying with this section. The CPMS must be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results must be recorded and checked daily for proper operation.

(7) (i) A CMS is out of control if -

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(2) *Notification of performance evaluation.* The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under § 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3) (i) *Submission of site-specific performance evaluation test plan.* Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in § 63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator' failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4) (i) *Request to use alternative monitoring procedure.* An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) *Approval of request to use alternative monitoring procedure.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with --

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in § 63.2.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(4) All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed under this part. For the owner or operator complying with the requirements of § 63.10(b)(2)(vii)(A) or (B), data averages must include any data recorded during periods of monitor breakdown or malfunction.

§ 63.9 Notification requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4) (i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

(b) *Initial notifications.*

(1) (i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that

(d) *Notification that source is subject to special compliance requirements.* An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

(e) *Notification of performance test.* The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

(f) *Notification of opacity and visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in § 63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:

(1) A notification of the date the CMS performance evaluation under § 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under § 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under § 63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;

(2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by § 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by § 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by § 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) *Notification of compliance status.*

(1) The requirements of paragraphs (h)(2) through (h)(4)of this section apply when an affected source becomes subject to a relevant standard.

(2) (i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list -

(1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

§ 63.10 Recordkeeping and reporting requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the
State to satisfy the requirements of this section for that report.

(4) (i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this sections, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) *Recordkeeping requirement for applicability determinations.* If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without

requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

(d) *General reporting requirements.*

(1) Not-withstanding the requirements in this paragraph or paragraph (e) of this section, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) *Reporting results of performance tests.* Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) *Reporting results of opacity or visible emission observations.* The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Test Method 9 or Test Method 22, or an alternative to these test methods) along with the results of the performance test required under § 63.7. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under § 63.7, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

(4) *Progress reports.* The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5) (i) Periodic startup, shutdown, and malfunction reports. If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see Sec. 63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Such a report shall identify any instance where any action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports

relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when -

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) [Reserved].

(ii) Request to reduce frequency of excess emissions and continuous monitoring system performance reports. Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in § 63.8(c)(7) and § 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official

(4) Reporting continuous opacity monitoring system data produced during a performance test. The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in paragraph (d)(2) of this section.

(f) *Waiver of recordkeeping or reporting requirements.*

(1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of record-keeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under this part (such as under § 63.6(i) and § 63.9(h)) or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she -

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.11 Control device requirements.

(a) *Applicability.* The applicability of this section is set out in Sec. 63.1(a)(4).

(b) Flares.

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

n = Number of sample components.

(7) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$Log_{10}(V_{max})=(H_T+28.8)/31.7$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
28.8 = Constant.
31.7 = Constant.
H_T = The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$$V_{max} = 8.71 + 0.708(H_T)$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
8.71 = Constant.
0.708 = Constant.
H_T = The net heating value as determined in paragraph (b)(6)(ii) of this section.

§ 63.12 State authority and delegations.

(a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from -

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

(b) The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

(1) ASTM D523-89, Standard Test Method for Specular Gloss, IBR approved for § 63.782.

(2) ASTM D1193-77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 306, Sections 7.1.1 and 7.4.2.

(3) ASTM D1331-89, Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents, IBR approved for Appendix A: Method 306B, Sections 6.2, 11.1, and 12.2.2.

(4) ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for § 63.788, Appendix A.

(5) ASTM D1946-77, 90, 94, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for § 63.11(b)(6).

(6) ASTM D2369-93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for § 63.788, Appendix A.

(7) ASTM D2382-76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for § 63.11(b)(6).

(8) ASTM D2879-83, 96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for § 63.111 of Subpart G.

(9) ASTM D3257-93, Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography, IBR approved for § 63.786(b).

(10) ASTM 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography, IBR approved for § 63.365(e)(1) of Subpart O.

(11) ASTM D3792-91, Standard Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for § 63.788, Appendix A.

(12) ASTM D3912-80, Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(13) ASTM D4017-90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for § 63.788, Appendix A.

(14) ASTM D4082-89, Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(15) ASTM D4256-89, 94, Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(16) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for § 63.11(b)(6).

(17) ASTM E180-93, Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals, IBR approved for § 63.786(b).

(18) ASTM E260-91, 96, General Practice for Packed Column Gas Chromatography, IBR approved for §§ 63.750(b)(2) and 63.786(b)(5).

(19) Reserved

(20) Reserved

(21) ASTM D2099-00, Standard Test Method for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester, IBR approved for § 63.5350.

(24) ASTM D2697-86 (Reapproved 1998), ``Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," IBR approved for Sec. Sec. 63.3161(f)(1), 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(1) *California Regulatory Requirements Applicable to the Air Toxics Program,* January 5, 1999, IBR approved for § 63.99(a)(5)(ii) of subpart E of this part.

(2) New Jersey's *Toxic Catastrophe Prevention Act Program,* (July 20, 1998), Incorporation By Reference approved for § 63.99 (a)(30)(i) of subpart E of this part.

(3) (i) Letter of June 7, 1999 to the U.S. Environmental Protection Agency Region 3 from the Delaware Department of Natural Resources and Environmental Control requesting formal full delegation to take over primary responsibility for implementation and enforcement of the Chemical Accident Prevention Program under Section 112(r) of the Clean Air Act Amendments of 1990.

(ii) Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Accidental Release Prevention Regulation, sections 1 through 5 and sections 7 through 14, effective January 11, 1999, IBR approved for § 63.99(a)(8)(i) of subpart E of this part.

(iii) State of Delaware Regulations Governing the Control of Air Pollution (October 2000), IBR approved for § 63.99(a)(8)(ii)-(v) of subpart E of this part.

(e) The materials listed below are available for purchase from the National Institute of Standards and Technology, Springfield, VA 22161, (800) 553-6847.

(1) Handbook 44, Specificiations, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for § 63.1303(e)(3).

(2) [Reserved]

(f) The following material is available from the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), P. O. Box 133318, Research Triangle Park, NC 27709-3318 or at http://www.ncasi.org: NCASI Method DI/MEOH-94.02, Methanol in Process Liquids GC/FID (Gas Chromatography/Flame Ionization Detection), August 1998, Methods Manual, NCASI, Research Triangle Park, NC, IBR approved for § 63.457(c)(3)(ii) of subpart S of this part.

(g) The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201-3301, Telephone (703) 522-3032, Fax (703) 522-5468.

(1) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(2) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(3) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(4) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(5) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(6) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(7) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(1) Method 9071B, ``n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples," (Revision 2, April 1998) as published in EPA Publication SW-846: ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The incorporation by reference of Method 9071B is approved for Section 63.7824(e) of Subpart FFFFF of this part.

§ 63.15 Availability of information and confidentiality.

(a) *Availability of information.*

(1) With the exception of information protected through part 2 of this chapter, all reports, records, and other information collected by the Administrator under this part are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and title V permit is available to the public, consistent with protections recognized in section 503(e) of the Act.

(2) The availability to the public of information provided to or otherwise obtained by the Administrator under this part shall be governed by part 2 of this chapter.

(b) *Confidentiality.*

(1) If an owner or operator is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of section 114(c) shall apply to such information.

(2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.

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March 3, 2005

James K. Pennington, P.E.
Administrator, North Permitting Section
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Re: Response to Request for Additional Information Dated January 19, 2005
DEP File No. 0530021-009-AC (PSD-FL-351)
Proposed New Kiln (Cement Plant #2) at the Florida Crushed Stone Brooksville Facility , Hernando County, Florida

Dear Mr. Pennington:

Florida Crushed Stone Company (FCS) received the Department's request for additional information dated January 19, 2005. This letter and its attachments contain our responses. When any revisions necessitate changes to the permit application text or forms, we have included the revised pages in Attachment A for replacement in the original application. We are also submitting a revised modeling CD-ROM. For ease of reading, each of the Department's requests is presented in italics first, with our responses following.

1. *Provide manufacturer's certification that will confirm the maximum design capacity of the kiln in tons per hour of dry feed and in tons per hour of clinker produced. Provide a similar certification for heat input for the kiln and precalciner burners. Rule 62-4.070, F.A.C.*

FCS Response: Please see the attached letters from Polysius Corp. included as Attachment B, which contain the requested certifications.

2. *Provide details on the kiln burner and describe where air and fuel will be introduced and how they are staged to minimize NO_X formation. Please indicate the type of burner that will be used. Explain why the flue gas needs reheating for use with an SCR system. Rules 62-212.400 and 62-4.070(1), F.A.C.*

FCS Response: Please refer to Section 4.5.2 of our original application for details on the kiln burner and staged combustion. Additional information follows.

Low NO_x burners are multi-channeled burners. Typically fuel (oil, pulverized coal, or pulverized petroleum coke) is fired with minimal combustion air through a central channel. The pressure of the primary air is controlled to obtain optimum exit momentum and ignition distance. Additional primary air is introduced and controlled through one or more additional channels to produce a fuel rich combustion zone in which the initial fuel combustion occurs.

Because of the fuel-rich characteristics of this zone (i.e., low oxygen), thermal NO_x formation is minimized. The amount and pressure of the primary air controls the flame shape and flame intensity as required for desired heat and flame shape distribution in the kiln. Secondary air from the clinker cooler is introduced downstream to provide sufficient oxygen for the complete burn-out of the fuel.

The staging of the primary and secondary combustion air and the total amount of combustion air controls thermal NO_x formation. To minimize thermal NO_x emissions, cement kilns are typically operated with 1-2 percent oxygen in the gases leaving the kiln. With add-on NO_x control technology such as Selective Noncatalytic Reduction (SNCR), the oxygen in the gases leaving the kiln can be increased to 3-4 percent. This has a tendency to improve kiln stability and reduce material build up in the riser duct and in the calciner.

In SCR, the flue gas requires reheating in order to bring the gas temperature into the effective range of the catalyst. The only Selective Catalytic Reduction (SCR) system at a cement kiln in the world was set up as a "hot side" unit to avoid the reheat costs. Based on best available information, it has achieved only approximately 40% availability. Catalyst vendors have been reluctant to even provide quotes for a "cold side" SCR system for a cement kiln. They have indicated that a "hot side" unit could not be quoted without site specific studies. The record for the LAER determination for St. Lawrence Cement in New York has reinforced this conclusion.

3. *Describe the manner in which the precalciner vessel(s) will operate at the facility. Rules 62-212.400 and 62-4.070(1), F.A.C.*

FCS Response: Please refer to Section 4.5.2 of our original application for details on the precalciner operation. The following additional information is provided for clarity.

The high carbon flyash (up to 50 percent or more carbon) will be introduced directly into the combustion chamber. In the combustion chamber, the carbon content of the flyash will burn, increasing the thermal efficiency of the kiln system. The mineral content will exit with the combustion gases, combine with the raw meal from the preheater, and become a part of the clinkering minerals introduced to the kiln.

The multi-stage combustion process of the Polysius kiln controls the oxidizing and reducing conditions over the entire length of the calciner. Multi-stage combustion will be accomplished by staging combustion air rather than by staging fuel, except in the case when whole tire-derived fuel is used. Due to the ability to create reducing and oxidizing conditions in any given area of the calciner vessel (duct), a kiln inlet burner will not be required. The proposed plant will burn tires introduced into the kiln inlet area, which will reduce the amount of fuel fired in the combustion chamber. Tire-derived fuel, when used, will provide up to 15 percent of the heat input to the pyroprocessing system. The firing of tire-derived fuel will reduce the oxygen content of the gas stream leaving the kiln and entering the calciner, which will have the tendency to reduce NO_x formed in the kiln. Tire-derived fuel results in the staging of fuel, as well as the staging of air, in the Polysius multi-stage combustion design.

4. *Please provide information on CO and VOC control options, and details of both why CO and VOC will require a higher emission limit than has currently been permitted. 62-4.070(1), F.A.C.*

FCS Response: Please refer to Sections 4.6 and 4.7 of our original application for details on CO and VOC control options, respectively. Regarding the control of carbon monoxide emissions, the Polysius design provides the necessary residence time and turbulence following the introduction of combustion air into the calciner and prior to the bottom stage cyclone of the preheater (Stage 1) to assure burnout of the carbon monoxide formed in the pyroprocessing system (kiln and calciner). Ammonia for use with the SNCR system proposed for NO_x control is injected into this same section of the calciner. To reiterate, the CO and VOC rates for Kiln 2 are higher because of the use of SNCR to control NO_x emissions. SNCR (ammonia injection) will result in competing reactions between the reduction of NO_x and the oxidation of carbon monoxide.

Also, high Loss on Ignition (LOI) fly ash can contain significant organic carbon. To assure that the use of high carbon flyash does not cause CO (or hydrocarbon) emission problems, FCS is requesting the option of introducing the high carbon flyash directly into the combustion chamber of the calciner to assure the efficient combustion of this carbon and the oxidation of any resulting CO by the introduction of combustion air downstream of the combustion chamber.

5. *Please provide information justifying a proposed limit of 0.2lb/ton for both PM and PM_{10}. 62-4.070(1), F.A.C.*

FCS Response: The proposed limit for PM_{10} is the same as the proposed limit for PM because the applicant has conservatively assumed that all particulate emissions from the stack will be PM_{10}.

6. *Please assess the use of "high-efficiency bag filter, outfitted with teflon-coated fiberglass bags" and/or HEPA filters as secondary controls of particulate matter from the kiln system. What percentage, if any, of the collected fines will be recycled into the process? Rule 62-212.400, F.A.C.*

FCS Response: Please refer to Section 4.3 of our original application (page 4-8 to 4-9) for the assessment of enhanced bag fabrics. One hundred percent of the collected fines are recycled into the process.

7. *Submit a projected chemical analysis of the raw materials and additives likely to be used at this plant. Provide a proximate and ultimate analysis of the fuels proposed. Rule 62-4.070(1), F.A.C*

FCS Response: Attachment C contains the chemical analysis of raw materials and additives currently in use at the FCS cement plant. Proposed raw materials and additives for the new kiln include, but are not limited to, the materials analyzed. Note that these analyses should not be taken as limitations on suitable raw materials and additives for use at the FCS facility.

Fuel data was presented in Attachment 2 of our original application. For clarity some additional data are presented in Attachment C.

8. *Please indicate if you intend to add any storage tanks meeting the applicability requirements under 40 CFR 60, Subpart Kb. Rule 62-4.070(1), F.A.C.*

FCS Response: No. Rinker proposes two tanks. The proposed 10,000 gallon fuel oil tank is exempt from 40 CFR 60, Subpart Kb because it is less than 19,813 gallon capacity. The proposed storage of aqueous ammonia (24 tons per truck load, approximately 5,600 gallons) is not covered by Subpart Kb because ammonia is not an organic compound. Most likely, the storage tank for aqueous ammonia will have a 10,000 gallon capacity.

9. *Describe the primary fuel firing scenarios and describe the ratio of heat input at various fuel mixtures. Detail why heat input ratios might change under normal operating conditions and emissions. Provide an estimate of pollutant emissions under each scenario. Define the combustion practices that will be used to control CO and VOC. Rule 62-4.070(1), F.A.C.*

FCS Response: Under normal conditions, the fuel fired through the kiln burner will be pulverized bituminous coal or a mixture of coal and petroleum coke. The fuel fired to the calciner will typically be pulverized coal, pulverized petroleum coke, or a mixture of the two. Optional fuels will include natural gas, fuel oil, tire-derived fuel, and (if considered a fuel) fly ash. These fuels may be fired alone or in combination.

Generally the heat released in the kiln and calciner is determined by the feed rate to the calciner and the burnability of the raw materials. The feed rate is dependent upon the design of the kiln system, and increases in the feed rate will require an increase in the heat input to the pyroprocessing system. Burnability is dependent upon the chemistry of the materials mined on site, off site raw materials, and the fineness to which the raw materials are ground in the raw mill. Hard-to-burn raw materials will require an increase in the heat input.

Depending on the physical and chemical properties of the secondary fuel like petroleum coke, it is necessary to maintain the level of the sulfur, heating value, and ash content and the total heat released in the kiln and calciner. In addition, the variation of the raw material and fuel chemistry will require control and variation of the input of fuel. In general the ratio of the heat input between the kiln and calciner is about 50/50%.

Changes in the heat input ratios and/or the types of fuel used could result from changes in the chemistry of raw materials, changes in fuel characteristics, the availability of fuels, and the necessity to maintain a stable operating kiln. Under so called "normal" or "stable" operating conditions it is very possible that kiln feed could change in terms of the physical properties, fineness, or chemistry. These might require changing a fuel rate, feed rate, or other parameters. The same situation could occur with fuel quality. These situations can lead to upset conditions, during this time the operator must do a series of adjustments. The adjustments of the fuel, air control, kiln feed properties, kiln feed rate, and the thermal profile in the system restore the desired conditions. Changes in heat input ratios and/or in fuels fired to the pyroprocessing system are not expected to have significant effects on emissions from the kiln system.

Please refer to Sections 4.6 and 4.7 of our original application for a discussion of the combustion practices to reduce CO and VOC.

10. *Part D [Segment (Process/Fuel) Information] of Section 1 in the application indicates only three segments. However in Section 4.0 of the BACT Determination, other fuels are listed as fuels for the kiln and pre-calciner. Provide a list all fuels the facility intends to use for*

the kiln, pre-calciner and all other emissions units. Explain in what combinations or maximum amounts/percentages these fuels will be used. Explain how the different fuel types/combinations may affect emission rates, operation of control equipment (fabric filter (PM/PM_{10}) and SNCR (NO_x)) and affect control of combustion in the kiln (as Good Combustion Practice is the proposed BACT technology for CO and VOC, and Multistage Combustion is a component of the BACT for NOx). Rule 62-4.070(1), F.A.C.

FCS Response:
Part D [Segment (Process/Fuel) Information] of Section 1 requires that all proposed fuels be listed. The list of fuels was presented in Attachment 2 of Volume II (PSD application), and the form has now been updated to include the following fuels:
Natural Gas
Distillate Oil
Coal
Propane
Petroleum Coke (20% of total heat input)
Tires (15% of total heat input)
High Carbon Fly Ash
On-spec oil

The Kiln II System is designed to use a combination of fuels. The primary fuels for the kiln and pre-calciner are coal and petroleum coke since the system is most efficient using these fuels. Maximum tire heat input will be 15% of the total. The maximum petroleum coke input will be 20% of the total heat input. Other fuels will most likely be used only in the event of coal/coke supply problems.
The processing equipment that is typically installed in a modern cement plant is very flexible when it comes to the fuels. Therefore, changes in fuels fired to the pyroprocessing system are not expected to have significant effects on emission limits for the kiln system. See also Response 9 above.

11. Please explain the SO_2 emissions limit of 0.23 lb/hr. Provide information on the increase of SO_2 by co-firing different fuels with the coal in the kiln, and how this will effect your BACT determination for SO_2. Consider the possibility of hydrated lime injection for added SO_2 control when the raw mill is off, or raw material with higher sulfur is encountered, or if excess SO_2 from burning high sulfur fuel causes a break through in the calciner. Rule 62-4.070(1), F.A.C.

FCS Response: The stated SO_2 emissions limit, 0.23 lb/ton clinker, is the cement plant vendor's (Polysius) performance warranty, taking into account the anticipated range of fuel properties and process conditions. It also accounts for the expected periodic downtime of the raw mill, which acts as a dry contactor and provides modest SO_2 control.

Because there is a substantial amount of alkaline material in the process, the SO_2 emissions are normally more strongly influenced by the properties of the raw material (including the presence of pyrites and organic sulfur compounds), than by sulfur content in the fuel. The vendor has expressed confidence in the facility's ability to maintain the guaranteed emission limit.

In general, the higher the sulfur input to the pyroprocessing system, the higher the potential will be for plugging in the pre-calcining tower. Hypothetically, if higher sulfur fuels were purchased, sulfur compounds will accumulate in the system and lead to blockages and plugging. Therefore, the plant's operators have an incentive to limit the use of higher sulfur fuels and maintain production capacity. The low sulfur levels in the raw materials of the FCS Brooksville site will allow for significant variability in the percentages of sulfur in the fuels as long as the sulfur/alkali balance is achieved. The appropriate amounts and proportions of fuels, with their various sulfur contents, will be determined by the facility's operators as part of their efforts to maintain operational stability and chemical balance in the system.

For example, the kiln can be operated with 100% replacement of solid fuels with natural gas. However, the production rate will fall due to the quantities of combustion products generated by combustion of natural gas. In general, the production rate will fall by about 20% with this scenario. Conversely, the owners may have an economic incentive to burn petroleum coke, but for operational reasons and to maintain compliance, the extensive use of this fuel will be limited.

The use of hydrated lime for SO_2 control has been demonstrated to be technically effective. Suwannee American Cement conducted tests in 2004 and reported to the Department that the introduction of hydrated lime into the preheater feed was effective for reducing SO_2 emissions. Also, F. L. Smidth has reported similar results (*Emissions Audit During Hydrated Lime Addition Trials*, St. Mary Cement Company, Bowmanville, Ontario, Canada, August 10-12, 2004) with the introduction of hydrated lime into the preheater feed.

In our response to Question 16 (below) we have included a new economic analysis for two dry hydrated lime injection options, and two other flue gas desulfurization options. The analysis indicates that none of these processes is cost-effective as BACT.

12. Provide the volume and residence time of material in the calciner with the production rate of 125 tons per hour for the new kiln. Rule 62-4.070(1), F.A.C.

FCS Response: The planned volume of the calciner is estimated to be 326 cubic meters (approximately 11,500 cubic feet). This volume includes the combustion chamber (68 cubic meters) and 258 cubic meters between the combustion chamber and the Stage 1 (bottom) preheater cyclone.

The hot raw meal from the Stage 2 cyclone will be split and introduced tangentially with the combustion air entering the combustion chamber. The tangential inlets are at 180 degrees to one another. The material residence time in the calciner loop will be approximately 4.5 seconds at a clinker production rate of 125 tons per hour. The addition of the separate combustion chamber increases the retention time for the burning fuel by 0.4 seconds compared to a system without a combustion chamber.

13. For NO_x, SO_2, and CO, please justify the significantly higher emission rates for startup, shutdown, and non routine activities. Rule 62-4.070(1), F.A.C.

FCS Response: Please refer to Section 3.1.2 of our original application under the heading "Start-up and Non-routine (Malfunction) Operating Conditions" for details on NO_x emission rates, as well as Sections 3.1.3 and 3.1.4 for SO_2 and CO emission rates, respectively.

The term "startup" and "shutdown" refer to conditions characterized by operation with significantly low (not up to nominal) production rate. During start up of the kiln, the operating parameters of the system are changing continuously. The system requires additional specific heat consumption under elevated oxygen levels. The heat recuperation from the fuel to material is poor therefore the entire thermal profile is shifted. The system is not accumulating sufficient thermal capacity to sustain the burning process. The burning of the fuel is not efficient and overall the efficiency of the system is significantly lower than compared to the stable nominal production rate. Under startup conditions, the Clinker Cooler does not have sufficient hot clinker to recuperate the heat for secondary and tertiary air. The system's main parameters are not in equilibrium until the production level stabilizes. The same conditions occur during malfunctions and shutdown. That is why under these conditions the emissions levels for SO_2, NOx, CO, and VOC will be elevated.

The procedures of the existing Startup, Shutdown, and Malfunction Plan provide details for the various modes of operation. This plan is provided as Attachment D. Because nearly all opacity excursions from the kiln/roller-mill stack occur as a result of startups, shutdowns, and malfunctions of the roller mill or baghouse, actions to minimize excess opacities include adjustments to the operation of the gas-conditioning tower, verifying exhaust-gas damper positions, minimizing the draft through the roller mill, and reducing or stopping feed flows.

14. Estimate the impact of mercury deposition in the vicinity of this facility. Please provide reasonable assurance that the 26 lb/year of mercury emissions will not be exceeded. Also, provide reasonable assurance that the lead PSD significance levels will not be exceeded. Advise of any methods that will be undertaken to minimize mercury emissions such as raw material selection or transferring some baghouse dust straight to product. Rule 62-4.070(1), F.A.C.

FCS Response: The procedures used to estimate the deposition of mercury in the vicinity of the facility were based on the procedures described in Chapter 4.3 of "Mercury Study Report To Congress Volume III: Fate And Transport Of Mercury In The Environment," EPA-452/R-97-005, December, 1997 (herein referred to as the EPA Mercury Report). The form of mercury that is deposited close to the emission source is divalent mercury or Hg(II), therefore this form of mercury was considered in the air dispersion modeling. At the point of stack emissions and during atmospheric transport, Hg(II) is partitioned between vapor and particle phases, and each of these phases can be removed from the atmosphere by both wet and dry deposition processes. For the present analysis, the speciation of emitted divalent mercury was based on data in the EPA Mercury Report for Portland cement manufacturing, with 10% of total mercury emissions assigned to each of the vapor and particle Hg(II) phases. Wet and dry deposition of particle and vapor Hg(II) was then modeled using the ISCST3 model.

For dry deposition of particulate Hg(II), the ISCST3 dry deposition option was used. This option requires data on particle size distribution and density. This data was based on the EPA Mercury Report data, which estimated that approximately 93% and 7% of the total surface area is estimated to be in the 0.3 and 5.7 micron diameter particles, respectively. The particle density value used is 1.8 gr/cm^3.

For dry deposition of vapor Hg(II), the ISCST3 gas deposition option was used. In the EPA Mercury Report and in this analysis, the dry deposition velocity for nitric acid vapor of 2.9 cm/sec was used as a surrogate for Hg vapor based on their similar solubilities in water.

For wet deposition of vapor and particulate Hg(II), the ISCST3 wet deposition option was used. The same data on particle size distribution and particle density was used as in the dry particle deposition runs. For particles, the wet deposition scavenging ratios used were from Figure 4-4 in the EPA Mercury Report (0.8E-4 sec/mm/hr for the 0.3 micron size range and 3.8E-4 sec/mm/hr for the 5.7 micron size range). For vapor phase Hg(II) deposition, a scavenging coefficient of 1.6E-6 sec/mm/hr was also used (based on the nitric acid scavenging ratio as described in the EPA Mercury Report).

Four separate ISCST3 runs were performed, one each for each phase of Hg(II) and for each deposition type, and the results from all four runs were summed to calculate total mercury deposition. Based on the maximum proposed stack emissions of 150 pounds per year of mercury for the new kiln, the estimated average annual total deposition (wet and dry) from Hg(II) particles and vapor at the facility boundary is 6.1 $\mu g/m^2$. This rate can be compared to estimates of the annual background deposition rate at the nearest Mercury Deposition Network monitoring site (site ID FL05 at the Chassahowitzka National Wildlife Refuge) of approximately 20 $\mu g/m^2$. The total deposition of mercury resulting from emissions of the new kiln is approximately 30% of the existing mercury deposition rate in the area, which should be insignificant.

The following information provides reasonable assurance that the mercury emissions and the lead PSD significance emission level will not be exceeded. The mercury emission rates on the forms have been revised from 26 lb/yr to 150 lb/yr, and are based on actual Hg stack test results from the current Brooksville kiln during the period 1990 through 1992[1]. Therefore, these emission rates take into consideration the same feed material and fuels from long-term suppliers that will be used for the proposed new kiln. Based on a review of stack test data from other similar Portland cement kilns and based on best engineering judgement, the lead emissions have been revised from 76 lb/yr to 750 lb/yr (equivalent to $7.34*10^{-4}$ pounds per ton of clinker). Using this factor for the proposed plant, lead emissions are far below the significance level for lead of 1200 pounds per year.

The concept of transferring baghouse dust directly to finished cement would have an affect on cement quality. Because of this, the concept is of limited use until ASTM and/or DOT change their specification limits.

15. *Part D [Segment (Process/Fuel) Information] of Section 1 in the application indicates the kiln will have a maximum of 6 startups lasting 12 hours per year. However, throughout the application and in the BACT Determination, startup/shutdown and non routine emissions estimates vary based on 4 events each month lasting 7 hours for a total of 28 hours a month. Please explain the discrepancy. Explain the NO_x, SO_2, and CO calculations used for startup, shutdown and non routine emissions. The application states 750 hours for these periods, but the calculations are based on the 28 hours a month (336 hours/year). Explain the discrepancy. How many startup and shutdown events will normally occur each year? Describe the nature and duration of emissions, particularly from the in-line kiln/raw*

[1] Conversation between Mike Vardeman of Rinker and John Koogler of Koogler Assoc, 12/14/04.

mill and clinker cooler, during startup and shutdown. Describe procedures used to minimize excess emissions during these events. Rules 62-4.070(1) and 62-210.700, F.A.C.

FCS Response: The estimate of 336 hours/year of startup, shutdown, and non routine operations is correct. The application forms and emission calculations relating to startup, shutdown, and non routine operations have been corrected and are included in Attachment A.

Regarding the nature of emissions during startup and shutdown, please refer to the response for Question 13 above. Startup conditions can last for several hours (ranging anywhere from 7 to more than 24 hours), while in contrast, shutdown conditions take a relatively short time.

In order to minimize emissions during startup conditions (and to operate the facility in a cost effective manner), the duration of the startup will be maintained as short as possible. The plant personnel emphasize scheduling of the heating up of the kiln as quickly as possible to bring the kiln to nominal capacity. As referenced in the response to Question 13, the procedures of the existing Startup, Shutdown, and Malfunction Plan provide details for the various modes of operation (see Attachment D).

16. Provide additional BACT incremental control and economic analysis for controlling SO_2, PM, and CO. Explain cost savings and analysis between different types of controls and the level of each of the controls for these pollutants. Rule 62-4.070, F.A.C.

FCS Response: Average cost-effectiveness and incremental costs were provided for all PSD pollutants in Table 4-4 of our original application. Incremental costs are only calculated when there are several pollution controls being considered. For PM, the top control option was selected (baghouse), so providing additional costs analyses would not provide any useful information. For CO, the only potential control for a cement plant above the baseline (combustion controls) is an add-on RTO and costs are provided for this option. Thus, average and incremental costs are the same.

For SO_2, we have included revised cost analysis tables in Attachment A. The revised Table 4-4 summarizes these new calculations. Tables C-3, C-4, C-5 and C-6 (to add to Appendix C of the original application) are new cost-effectiveness calculations for the following flue gas desulfurization technologies:

1. hydrated lime injection in the proposed Preheater Tower,
2. hydrated lime injection in a separate vendor-supplied dry injection tower,
3. semi-dry (spray dryer absorption with milk of lime slurry), and
4. limestone wet scrubbing.

As suggested by FDEP (Question 11 above), the dry hydrated lime [$Ca(OH)_2$] injection technologies (Options 1 and 2) were considered herein for the purpose of controlling SO_2 when the raw mill is out service. The experience at Suwannee American and St. Mary Cement indicates that Technology 1 is technically feasible; however, absent sufficient generally available performance data, vendors are not yet prepared to offer performance warranties for this option. Suwannee Cement uses hydrated lime injection only if raw meal is off-specification with respect to available alkali for SO_2 absorption. In that circumstance, SO_2 control efficiency attributed to hydrated lime injection is 30-40%.[2] For informational

[2] J. L. Gaines (RTP) telephone conversations with O. Geskin (Polysius), February, 2005.

purposes, we have enclosed a cost analysis for Technology 1, based on an estimated control efficiency of 45% in the raw mill when operating, and 35% control efficiency for dry lime injection in the Preheater Tower (with raw mill out of service).

One vendor has expressed a willingness to offer an emission control efficiency guarantee[3] for Technology 2; therefore, we have also included a cost analysis for this option. Tables C-3 and C-4 each include separate columns showing expected performance parameters under two operating scenarios (with and without the raw mill in service), along with columns comparing long-term average emissions (accounting for raw mill down-time) with and without the respective flue gas desulfurization systems installed. At $22,726/ton and $21,933/ton SO_2 removed, respectively (Tables C-3 and C-4), Technologies 1 and 2 are not cost-effective as BACT.

The semi-dry process (Technology 3) consists of a spray dryer absorber (SDA) system upstream of the proposed baghouse, including storage and slaking of quicklime (CaO) to generate "milk of lime" (aqueous hydrated lime slurry). In this process, lime slurry is spray dried in the SDA, where it absorbs SO_2 and generates calcium sulfate/sulfite reaction products. Suspended particulate matter and spray-dried reaction products are collected in the proposed fabric filter. It is not clear whether this technology is feasible for the proposed cement plant, because we did not evaluate whether the flue gas (200-250 °F at SDA inlet) contains sufficient heat to vaporize and spray dry the quantity of lime slurry required to achieve effective SO_2 absorption. Evaporative cooling of the flue gas will increase the likelihood of a steam plume under some atmospheric conditions, and will also adversely affect modeled ambient concentrations of criteria pollutants. Table C-5 demonstrates that Technology 3 is not cost-effective as BACT ($19,657/ton SO_2 removed).

Table C-6 shows capital and operating costs for Technology 4, wet limestone flue gas desulfurization (wet FGD). The wet FGD system would be installed downstream of the proposed baghouse system. We have not clearly established the feasibility of this technology, since (a) the wet scrubber would create a dense steam plume, and (b) the evaporatively-cooled flue gas will be significantly less buoyant than that modeled in the application and may, therefore, increase modeled ambient concentrations of criteria pollutants. At $26,158/ton SO_2 removed, wet FGD is not cost-effective as BACT.

17. Please provide manufacturer, model numbers and design specifications for the fabric filters, ESPs, continuous monitoring systems used for these systems. Rules 62-4.070 and 62-212.400, F.A.C.

FCS Response: The manufacturer, model number, and design specifications for the fabric filters and continuous monitoring systems have not been determined at this time. This information can be provided when a vendor is selected for this equipment. Note that there are no electrostatic precipitators (ESPs) proposed for the new kiln project.

18. Does Florida Crushed Stone or its parent company have any current violations of Department regulations at any of their facilities? Please provide all documentation in relation to these violations. Rule 62-4.070(5), F.A.C.

[3] J. L. Gaines (RTP) phone conversations with J. Jones (Wheelabrator Air Pollution Control) February, 2005.

FCS Response: To the best of our knowledge, FCS has only one outstanding/unresolved compliance issue pending with the FDEP. In 2002, FCS self reported, to the FDEP, environmental damage that occurred from the crossing of several, intermittent seepage pathways by an exploratory survey/drilling crew at FCS's Cobb Road property in Hernando County, Florida. The impacts have since naturally restored to pre-existing conditions. A formal conclusion to this issue, in the form of a Consent Order, has been in abeyance pending the outcome of permitting activity covering this land parcel.

To the best of our knowledge, FCS's U.S. parent, Rinker Materials Corporation, has no outstanding/unresolved compliance issues pending with the FDEP. In an abundance of caution as to disclosure, we wish to note that Rinker Materials of Florida, Inc., a sister company to FCS (also a subsidiary of Rinker Materials Corporation), has requested an extension of a compliance deadline in a voluntary Consent Order between the FDEP and Rinker Materials of Florida, Inc. due to hurricane related impacts.

19. *Rule 62-212.400(5)(h) 5, F.A.C. requires the applicant to provide information relating to the air quality impact of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Please provide this information. The additional impacts section 7.0 does not adequately address this requirement.*

FCS Response: The area the facility will affect is the area of significant impact described in the air quality analysis report. The only pollutant for which the project will have a significant impact is PM_{10}, and the significant impact area for PM_{10} is within a radius of 4.7 kilometers from the proposed facility. The applicant owns a substantial amount of the property in this area, and there has not been significant general commercial, residential, industrial and other growth related to PM_{10} emissions, which have occurred since August 7, 1977, in this area.

20. *Please update the application with the detailed building structure information used in the modeling to determine downwash impacts. This information should include building dimensions for all buildings used in the modeling analyses. In addition, please provide the detailed facility layout to scale of the facility showing the exact location of the modeling origin in meters and the location from this modeling origin of each building and stack. All stacks and buildings should be labeled. In addition, a grid with 100 meter spacing should be overlaid over this plot plan so that the information on the plot plan can be easily correlated with the information in the BPIP files. Additionally fence lines or physical barriers which preclude access to non-ambient air should be shown. Non-ambient air is the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barrier.*

FCS Response: The following table presents dimensions for all buildings used in the BPIP analysis, and the following figure presents the facility layout showing the location of each building (same numbering system as in the table) and source information.

Dimensions for Buildings used in the Brooksville BPIP Analysis

Building #	Building Name	BPIP ID	Ht (m)	Width (m)	Length (m)
1	Kiln 2 - Precalciner	precalc	80.5	19.8	15.0
2	Kiln 2 Structure	kiln2	21.3	5.4	39.1
3	Kiln 1 - Gepol Preheater	gepol1	80.0	11.0	11.1

Building #	Building Name	BPIP ID	Ht (m)	Width (m)	Length (m)
4	Kiln 2 - Raw Meal Structure	rawmeal2	53.0	11.9	25.0
5	Kiln 2 - Clinker Cooler	clkcool2	11.0	29.0	18.0
6	Coal Mill	coalmill	35.0	21.0	12.0
7	Kiln 1 - Clinker Cooler	clkcool1	9.0	31.0	17.0
8	Iron Ore Bin	irbin	12.0	4.0	4.0
9	Filter Dust Bin	fdbin	31.0	8.0	7.0
10	Boiler room	blrroom	35.0	61.0	75.0
11	Boiler room B	blrroom-b	38.0	34.0	26.0
12	Kiln 2 - Raw Mill	rawmill2	34.0	20.0	16.0
13	Kiln 2 - Main baghouse	mainbag2	25.0	27.7	20.6
14	Raw Material Storage Building	rawmat	34.0	236.3	36.1
15	Kiln 1 - Main baghouse	mainbag1	23.0	27.5	40.5
16	Kiln 2 - Clinker Finish	clkfnsh2	30.0	21.2	15.8
17	Electrical Building	elecrm	5.0	22.1	9.8
18	Kiln 1 - Raw Mill	rawmill1	37.0	29.7	14.9
19	Kiln 1 - Clinker Finish Building	clkfnsh1	33.0	13.0	41.4
20	Kiln 2 - Clinker Finish Building	clkfnsh2	30.0	16.8	33.2
21	Kiln 1 Structure	kiln1	18.0	6.3	65.8
22	Raw Meal Storage Silos	rawmeal1a	65	11.0	11.0
23	Raw Meal Storage Silos	rawmeal1b	65	11.0	11.0
24	Fly Ash Bin	fabin	41	10.0	10.0
25	SILO74A	SILO74A	61	10.0	10.0
26	SILO74B	SILO74B	61	10.0	10.0
27	SILO74C	SILO74C	61	10.0	10.0
28	SILO74D	SILO74D	61	10.0	10.0
29	SILO75	SILO75	62	22.7	22.7
30	SILO76	SILO76	62	22.7	22.7
31	SILO33	SILO33	61	20.4	20.4
32	SILO35A	SILO35A	61	20.4	20.4
33	SILO35B	SILO35B	61	20.4	20.4
34	SILO35C	SILO35C	61	20.4	20.4
35	SILO43	SILO43	61	7.0	7.0

Layout for Buildings used in the Brooksville BPIP Analysis

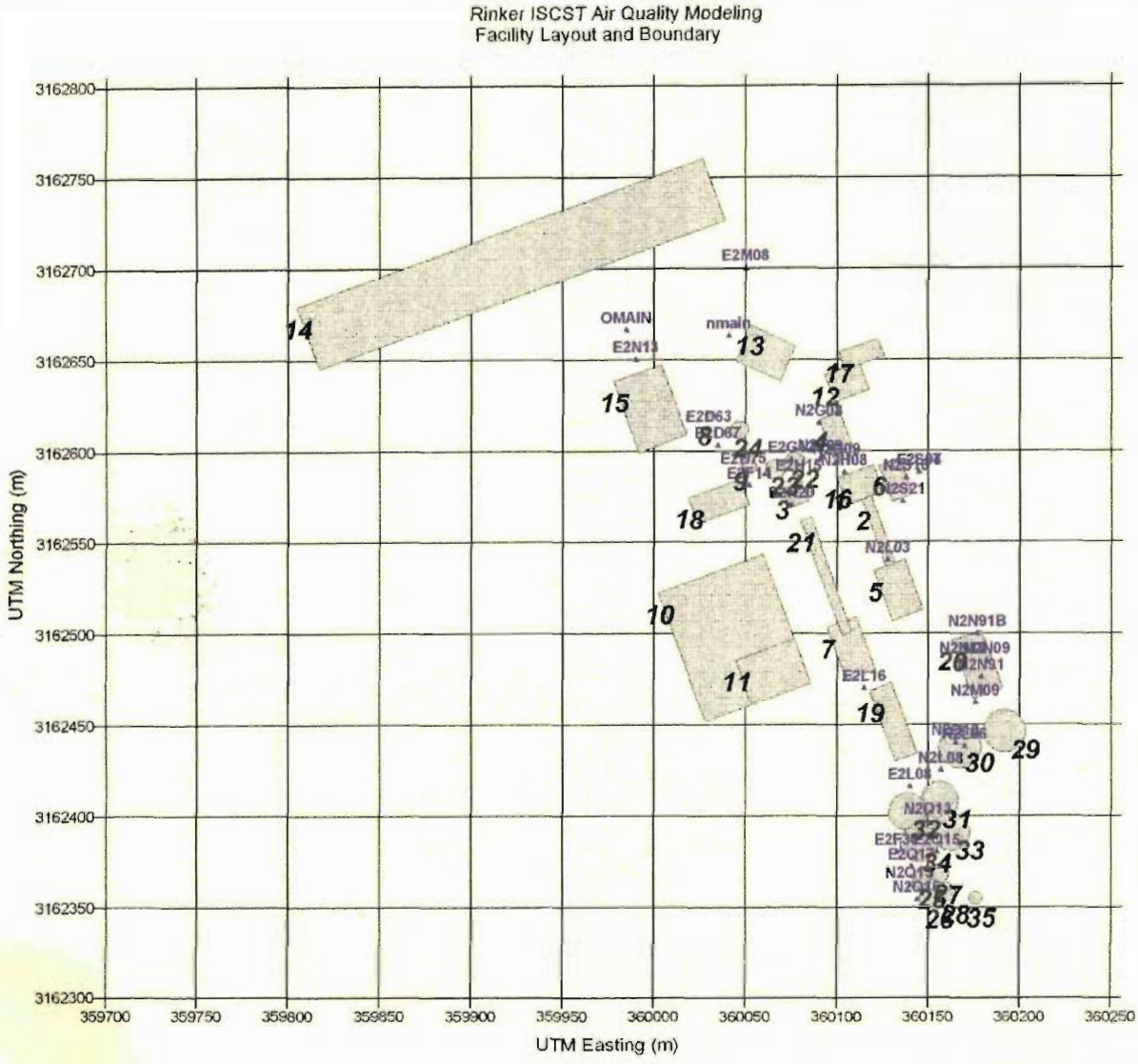
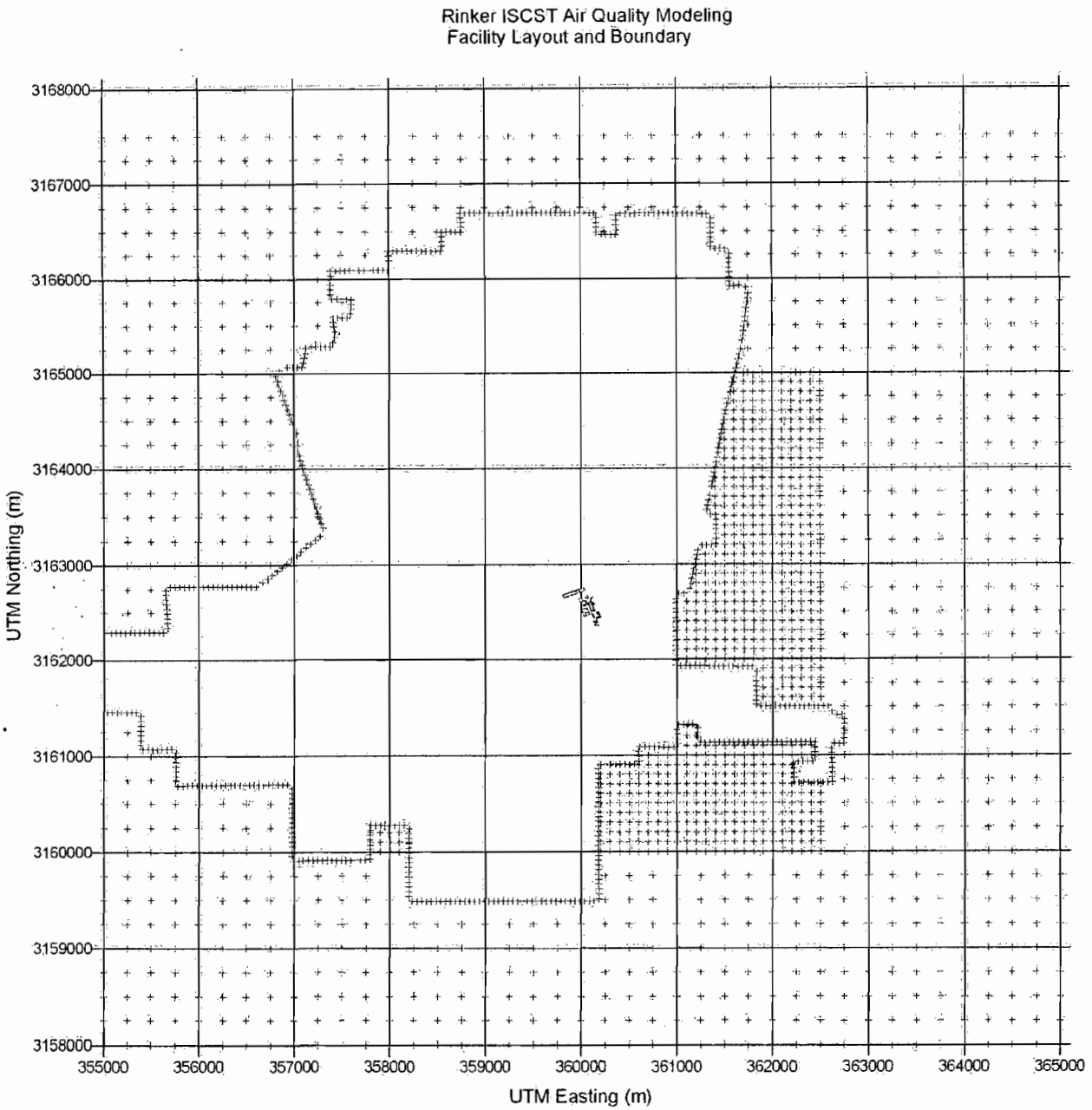


Figure 6-1 in the permit application shows the receptor grid and fencelines, and a close-up of the fenceline and receptor grid is presented in the following figure. Note that the coordinate system used is UTM, so there is no origin relative to the facility; instead, the drawings, BPIP, and ISC files are all geo-referenced to the UTM system.



21. The worst case operational scenarios should be used in the impact modeling. Emissions rates based on a 30 day average limit are not appropriate for evaluating the impacts on short-term standards and increments. Please provide short-term modeling based on the worst case 3 and 24 hour emission rates expected.

FCS Response: The modeling for short-term standards and increments that was submitted with the application did utilize worst-case short-term emission rates, not 30 day averages. Tables 3-1 and 6-1 of the application present the short-term SO_2 and CO emission rates that were modeled, and these are appreciably higher than the BACT 30 day average values. For example, the 30 day average SO_2 BACT limit is equivalent to 26.8 lb/hr, while the 3-hr SO_2 emission rate modeled was 57.5 lb/hr.

21. The worst case operational scenarios should be used in the impact modeling. Emissions rates based on a 30 day average limit are not appropriate for evaluating the impacts on short-term standards and increments. Please provide short-term modeling based on the worst case 3 and 24 hour emission rates expected.

FCS Response: The modeling for short-term standards and increments that was submitted with the application did utilize worst-case short-term emission rates, not 30 day averages. Tables 3-1 and 6-1 of the application present the short-term SO_2 and CO emission rates that were modeled, and these are appreciably higher than the BACT 30 day average values. For example, the 30 day average SO_2 BACT limit is equivalent to 26.8 lb/hr, while the 3-hr SO_2 emission rate modeled was 57.5 lb/hr.

22. The United States Fish and Wildlife Service (FWS) has established a concern threshold for nitrogen deposition in the Chassahowitzka Class I area and requires an evaluation of this deposition. Please provide this evaluation.

FCS Response: Because the distance to the Chassahowitzka National Wildlife Refuge (CNWR) is less than 50 km and the Calpuff model was not used in the modeling analysis, nitrogen deposition at the Class I area has been calculated using the ISCST3 NO_2 modeling results and the procedure described in the "Interagency Workgroup on Air Quality (IWAQM) Modeling Phase 1 report, Inset 2". The following table presents the calculations that convert the average annual NO_2 concentration from the proposed project to a nitrogen deposition rate of 0.28 kg/hectare-yr. This nitrogen deposition rate can be compared to the current total nitrogen deposition rate (based on the 1999-2003 average wet nitrogen deposition at the CNWR, (doubled to take into account dry deposition according to recommendations in "Screening Methodology for Calculating ANC Change to High Elevation Lakes", USFS Rocky Mountain Region, January 2000) of 20 kg/hectare-yr. The project impact is only 3% of the current nitrogen deposition rate.

Maximum Annual NO2 Concentration (ug/m3)	0.059
Molecular Weight Conversion Ratio	1.37
Deposition velocity (m/sec)	0.05
Conversion factor (sec/yr)	31536000
Calculated Project HNO3 Deposition Flux ug/m2/yr	127452.7
Calculated Project HNO3 Deposition Flux kg/ha-yr	1.27
Calculated Project N Deposition Flux kg/ha-yr	0.283
1999-2003 NADP Wet N Deposition Rates (kg/ha/yr)	10
Estimated Existing Total N Deposition rates (kg/ha/yr)	20
Project Impacts as % of Existing Deposition	3%

The National Park Service (NPS) and the U.S. Fish and Wildlife Service (FWS) have developed criteria for evaluating the contribution of additional nitrogen (N) to deposition within Class I areas. The Deposition Analysis Thresholds (DATs) are deposition thresholds that trigger a closer review, but they do not represent the deposition amount that constitutes an adverse impact to the environment. DATs have been calculated based on estimates of natural background deposition, a factor of 50% to account for the range of natural variability for ecosystems, and a "individual source contribution" factor of 4%. The N deposition DAT for the Eastern Class I areas is 0.01 kg/ha/yr. Based on the conservative ISCST3 analysis results presented above, the proposed new kiln will result in N deposition that exceeds the DAT.

Both the NPS and the FWS utilize a case-by-case approach to permit review for modeled deposition values that are higher than the DAT. This approach considers the best scientific information available for each park or refuge to assess existing as well as potential future deposition impacts. This would include evaluating the potential deposition impacts from a source not just in relation to the DAT, but with other factors as well. Given that the N deposition analysis used the conservative ISCST3/IWAQM methodology, that N deposition impacts are a small fraction of existing N deposition levels, and that the NOx BACT being proposed for the new kiln is the lowest rate listed in the RACT/BACT/LAER clearinghouse, the overall conclusion is that the N deposition impacts from the Unit II kiln are acceptable.

23. *The emission sources used for both the NAAQS and PSD compliance modeling were selected based on the 20D rule. This rule does not consider the additive effects of a number of sources located in the same general location. Review of the 20D rule eliminated sources reveals a few PM_{10} sources that may need to be included in the impact modeling emission inventories. In addition, the application of the 20D rule starts at the edge of the significant impact area (5 km in this case) instead of at the center of the facility. This means that all sources within the significant impact area should be modeled. Please provide a detailed table showing how the 20 D rule was applied to the cumulative PM inventory submitted with this application.*

FCS Response: The attached CD provides the 20-D inventory development spreadsheet.

24. *The preferred ambient background concentrations for the NAAQS compliance demonstration should be the maximum annual concentration measured at a representative monitoring location. An average of the highest concentrations over several years is not appropriate for this assessment.*

FCS Response: The only pollutants for which the annual baseline concentrations were based on multi-year averages were PM_{10} and $PM_{2.5}$ due to the form of the standard. When the maximum concentration is selected for any year, the PM_{10} annual baseline is revised from 17.4 to 19.4 ug/m^3, and the $PM_{2.5}$ annual baseline is revised from 12.6 to

15.1 ug/m^3. These new background values have been used in the revised NAAQS impact analysis included in Attachment A.

25. *Please provide a detailed list of the parameters used in the fugitive PM_{10} modeling. Please provide the value and supporting information for the silt loading factor used to estimate the paved road emissions inputs in this modeling. The details of the PM_{10} point, area and volume sources associated with the facility, including existing sources, along with associated stack parameters should be provided. In addition, have all quantifiable fugitive emissions, other than paved road emissions been included in the PM_{10} modeling analysis? Also provide information on the precautions to prevent emissions of unconfined particulate matter.*

FCS Response: The parameters used for the fugitive PM_{10} modeling of truck and auto traffic are presented in the table below.

Fugitive Volume Road Source Parameters used in Rinker Modeling

Number of sources	70
Actual Dimensions	20 m X 20 m
Release Ht	1 m
Sigma Y	9.3 m (20m/ 2.15) per ISC Manual, page 3-27
Sigma Z	3 m (6.5m /2.15) per ISC manual, page 3-27
Hours of operation	16 hours /day
Emissions	.01096 g/s per source - 0.76 g/s total (6.1 lbs/hr) - 97 lbs/day

According to AP-42 Section 13.2.1- Paved Roads, fugitive PM_{10} emissions from paved roads are directly related to the "silt loading" present on the road surface (as well as the average weight of vehicles traveling the road). Silt loading (sL) refers to the mass of silt-size material (equal to or less than 75 μm in physical diameter) per unit area of the road surface. The silt loading factor used for the Brooksville analysis was based on a representative default AP-42 value of 0.4 gr/m^2 (from AP-42 Table 13.2.1-2) for low average daily traffic roads. A control efficiency was then applied, which corresponds to the control practices at Brooksville of water flushing and street sweeping approximately two to three times per day. The control efficiencies for water flushing and street sweeping are based on values from Table 2-4 from EPA's Control of Open Fugitive Dust, assuming that 1/3 of the daily traffic occurs between each flushing/sweeping operation.

It should be noted that the same default AP-42 value of 0.4 gr/m^2 was previously used in the Suwannee American Cement Plant and Florida Rock Cement Plant permit applications. Florida Rock has recently conducted silt loading tests at their Newberry facility (Florida Rock stated that sweeping occurs at Newberry, but not water flushing, so the control measures used at Brooksville should result in even lower silt loading than at Newberry). Florida Rock reported a silt loading factor of 0.14 gr/m^2 (it should be noted that a very conservative assumption was made by the contractor to account for some sample loss, and this reported value represents an upper bound on the actual silt loading). The reported value is similar to the controlled silt loading value of 0.086 used for the Brooksville calculations; therefore these actual tests at a similar cement plant confirm the reasonableness of the silt loading used in the Brooksville calculations.

The details of the PM_{10} point sources associated with the Brooksville facility, including existing sources, were provided in Tables 3-2 and 6-2 of the permit application report. The details of the paved road volume sources associated with the facility, including paved road emissions from existing operations (which were conservatively estimated by doubling the paved road emissions for the proposed Unit II kiln, even though the capacity of the existing kiln is less than the capacity of proposed Unit II kiln), are provided in Table 3-2 of the permit application report. There are no other area or fugitive sources associated with the Brooksville facility (the kiln feed material is inherently wet, and so the covered storage piles for kiln feed materials are not sources of fugitive

PM emissions). There are no other reasonably quantifiable fugitive emissions from the Brooksville facility. It should be noted that the existing fugitive emissions from the Gregg Mine were modeled based on FDEP inventory data, as presented in Table 6-5 of the permit application report. Also, the existing allowable emissions from the Unit I kiln and power plant were included in the cumulative modeling analysis.

Precautions to prevent emissions of unconfined particulate matter are included as Condition 8 of Section II in the Title V permit (No.: 0530021-002-AV) and include "Reasonable precautions to prevent emissions of unconfined particulate matter at this facility during operations include: chemical or water application of dust suppressants on roads and construction sites, landscaping and planting of vegetation."

26. The kiln stack temperature used in the air quality modeling is 560.9 degrees K, which is at least 100 degrees K hotter than the projected temperatures for similar kilns in the area, including the existing kiln at Florida Crushed Stone. Please explain.

FCS Response: Revised stack flow and temperature data has been obtained from the plant engineer for a variety of operating conditions (i.e., direct operation with mill off versus compound operation with mill on at four production levels). Attachment A presents a revised modeling analysis using this revised stack flow and temperature data. The nominal stack flow and temperature for 2800 tpd operations (compound operation with mill on) is 311,700 acfm at 237 degrees F (387 degrees K).

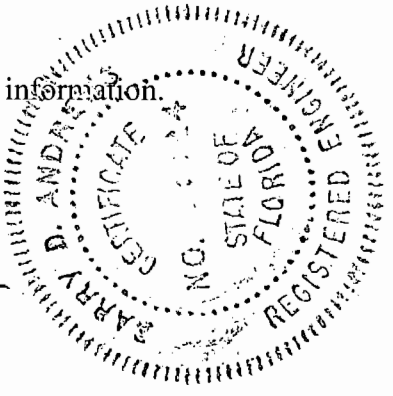
Please do not hesitate to contact me at (732) 968-9600 if you require further information.

Sincerely,

Donald F. Elias
Principal

SEAL

Barry D. Andrews, P.E.



Enclosures: Attachment A: Revised Pages to Replace in Original Application
Attachment B: Letters from Polysius Corp. Regarding Kiln Maximum Design Capacity and Heat Input
Attachment C: Typical Raw Materials and Fuels Analyses
Attachment D: Existing Startup, Shutdown, and Malfunction Plan

Cc: C. Allen
S. Benyon
M. Vardeman
D. Dee, Esq.
J. Varn, Esq.
M. Podrez
D. Taylor
Project File RMBR

Attachment A

Revised Pages to Replace in Original Application

Volume I – Application Text

Revised pages 2-3, 3-1, 3-3, 3-4, 3-7 through 3-11, 4-29, 5-5, 6-2, 6-3, 6-7 through 6-13, 6-15 through 6-19, 7-7 through 7-9

Volume II – Application Forms and Appendices

The permit application forms have been modified as follows:

Kiln System:

- Added a hot gas generator in the raw mill (32 MM Btu/hr) (Part B)
- Added a 10 MM Btu/hour pre-heater (Part B)
- Corrected the burner sizes for the kiln and pre-calciner (Part B and Part D)
- Corrected the stack height to 350 feet (Part C)
- Changed the baghouse ACFM to 324,000 (Part A, Part C)
- Changed the baghouse exhaust temp to 250°F (Part C)
- Removed the shaft dryer (Part D item 1)
- Included five additional fuels: natural gas, petcoke, propane, fly ash, on-spec oil (using #2 heat value).
- Re-calculated the associated emission rates to reflect "normal" operation and added startup, shutdown and non routine emissions to the PTE for SO2, CO, and VOC.
- Revised the emissions for lead and added emissions for dioxin/furan.

Minor Sources (with baghouses):

- Flow rates, throughput rates, and emissions have been corrected for some sources.

Revised Appendices:

- Appendix C-1: Rinker Brooksville Plant Unit II: SNCR Cost Estimates
- Appendix C-2: Rinker Brooksville Plant Unit II: SCR Cost Estimates
- Appendix C-3: Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control (Technology 1)
- Appendix C-4: Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control (Technology 2)
- Appendix C-5: Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control (Technology 3)
- Appendix C-6: Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control (Technology 4)

TABLE 2-1

PSD POLLUTANT APPLICABILITY

POLLUTANT	POTENTIAL INCREASE IN FACILITY EMISSIONS (tons/year)	PSD SIGNIFICANT EMISSION RATES (tons)	SUBJECT TO PSD REVIEW
PM/PM_{10} (including minor and fugitive sources)	256.4	25/15	YES
SO_2	122.7	40	YES
NO_x	1126.2	40	YES
CO	2133.6	100	YES
VOC	105.3	40	YES
H2SO4	5.1	7	NO
Hg	0.0751	0.1	NO
Pb	0.375	0.6	NO

3.0 AIR POLLUTANT EMISSION ESTIMATES

The high temperature combustion process used to produce cement in a kiln results in the emission of air pollutants. The air pollutants that will be emitted from the proposed Unit II kiln above Prevention of Significant Deterioration (PSD) significant levels are particulate matter (PM), particulate matter with a mean aerodynamic diameter less than ten microns (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC). Other pollutants resulting from the production of cement include mercury (Hg), Beryllium (Be), lead (Pb), sulfuric acid mist (H2SO4 mist), and dioxin/furan. The potential to emit for these constituents are less than the PSD significant levels. Other sources of air pollutants include auto and truck traffic, and baghouse PM control devices on various material handling systems. These other sources will result in additional emissions of PM/PM_{10}, and insignificant quantities of SO_2, NO_x, CO, and VOC.

The production capacity of the proposed Unit II cement kiln is based on 2800 tpd clinker production for the daily and annual rate (the annual capacity for 365 days of operation is 1,022,000 tons clinker), and the hourly maximum production rate is 3000 tpd clinker production. Emission rates from all sources associated with the proposed Unit II kiln have been reviewed relative to New Source Performance Standards, National Emission Standards for Hazardous Pollutants, and the proposed Best Available Control Technology (BACT) requirements and meet all applicable emission limitation. Based on the emission rate calculations presented in this section, the addition of the Unit II kiln will result in emission increases of the following criteria pollutants above the PSD significant emission rates: PM/PM_{10}, SO_2, NO_x, VOC, and CO.

Section 3.1 of the permit application describes the emission controls and associated potential emission rates proposed for the Rinker Unit II cement kiln and ancillary equipment. Section 3.2 describes the sources of information used to develop criteria pollutant emission estimates.

TABLE 3-1

SUMMARY OF POLLUTANT EMISSIONS

Pollutant	Emission Factor lb/ton [a]	Max Hourly Emissions (lb/hr)	Annual Emissions including Starup/Shutdown [b] (tons/yr)
PM/PM10 (kiln)	0.2	41.3	168.6
PM/PM10 (minor)	-	-	85.7
PM/PM10 (fugitive) [c]	-	-	2.12
PM/PM10 (total)	-	-	256.4
SO2 [d]	0.23	57.5 3-hr 35.78 24-hr	122.7
NOx [e]	1.95	-	1126.2
CO [f]	4	1000	2133.6
VOC [g]	0.19	71.3	105.3
H2SO4	0.01	1.25	5.1
Hg	1.47E-04	0.018375	0.0751
Be	6.60E-07	0.00008	0.000337
Pb	7.34*10-4	0.0942	0.375
Dioxin/Furan [h]	-	-	1.18E-06
Maximum Hourly Clinker Production Rate (tons/hr)			125.0
Maximum Hourly Kiln Dry Feed Rate (tons/hr)			206.3
Daily and Annual Clinker Production Rate (tons/day)			2800
Daily and Annual Kiln Dry Feed Rate (tons/day)			4620

FOOTNOTES:

a - The lb/ton emission factors are based on lbs/ton of dry kiln feed for PM/PM10 and lbs/ton of clinker production for other pollutants.

b - The annual emission calculations include startup/shutdown/non-routine NOx emissions, based on estimate of 336 hours per year.

c - Fugitive PM/PM10 hourly rate is based on typical 16 hrs/day of trucking operations.

d - After consideration of startup/shutdown and short-term process variations, the maximum 3-hr SO2 emission rate is 57.5 lb/hr, and the maximum 24-hr SO2 rate is 35.78 lb/hr (based on 7hrs @ 57.5 lb/hr plus 17hrs @ "normal rate" of 26.83 lb/hr).

e - The NOx emission factor for startup/shutdown and short-term process variations is 8 lb/ton-clinker.

f - After consideration of startup/shutdown and short-term process variations, the maximum 1-hr CO emission rate is 1000 lb/hr.

g - The VOC emission factor for startup/shutdown and short-term process variations is 0.57 lb/ton-clinker.

h - The Dioxin/Furan emission factor is from 40 CFR 63 Subpart LLL.

SUMMARY: MINOR SOURCES AND ASSOCIATED PARTICULATE MATTER EMISSIONS

EMISSION UNIT LEGEND NUMBER	EMISSION UNIT DESCRIPTION	EMISSION UNIT EQUIPMENT NUMBER	DUST COLLECTOR EQUIPMENT NUMBER	PROCESS RATE	GRAIN LOADING	FLOWRATE	EMISSIONS	
				(tons/hr)	(grains/acf)	(ACFM)	lbs/hr	tons/yr
	Filter Dust A	2E-22 A	2G-08	225	0.01	5,000	0.336	1.47
	Filter Dust B	2E-22 B	2G-09	225	0.01	16,500	1.143	5.01
	Raw Meal Transport	2F-04	2F-09	225	0.01	3,750	0.260	1.14
	Kiln Feed Transport	2H-05	2H-08	210	0.01	3,750	0.260	1.14
	Clinker Transport	2L-01	2L-03	125	0.01	3,000	0.190	0.83
	Gypsum Bin	2L-14	2L-08	150	0.01	4,000	0.320	1.40
	Clinker Storage Silo	2L-05	2L-06	104	0.01	4,000	0.253	1.11
	Finish Mill Collecting Belt	2M-04	2M-09	276	0.01	12,000	0.832	3.64
	Finish Mill	2N-01	2N-12	411	0.01	35,000	2.310	10.12
	Air Slide	2N-03	2N-91	411	0.01	6,000	0.403	1.77
	Bucket Elevator	2N-04	2N-91	411	0.01	6,000	0.403	1.77
	High Efficiency Separator	2N-06	2N-09	411	0.01	128,600	9.199	40.29
	Cement Cooler	2N-26	2N-91	138	0.01	6,000	0.403	1.77
	Cement Transport A	2P-01	2Q-10	138	0.01	3,700	0.256	1.12
	Cement Transport B	2P-01	2Q-13	138	0.01	12,000	0.832	3.64
	Cement Loadout Bin	2Q-28	2Q-15	540	0.01	3,000	0.208	0.91
	Cement Loadout Bin	2Q-31	2Q-16	540	0.01	3,000	0.208	0.91
	Coal Mill	2S-15	2S-16	18	0.01	22,000	1.600	7.01
	Pulverized Fuel Bin	2S-20	2S-21	18	0.01	2,000	0.145	0.64
	Totals						**19.561**	**85.69**

due to the lack of raw feed that "consumes" the heat energy and the fact that the operator will intentionally keep the kiln and pre-heater "hot" such that when feed is restored, the process will be ready to accept the feed again.

Kiln Inlet Buildup – This phenomenon occurs as a normal course of pre-heater tower operations and is particularly prevalent during start-up conditions. This is primarily due to the instability of the system during this period where a coating is formed at the base of the riser duct, in the area of the venturi. In general, the pressure drop in that area increases, due to the restriction, capacity of the system goes down, and hence, the specific volume of air through the system goes up from 1.6 Nm^3/kg to 2.0+Nm^3/kg. In addition, the oxygen content goes from 4% to 6-8%. Consequently, the NO_x emissions will increase to approximately 5 – 7 lb/ton.

Kiln Flush/Avalanche - These events are characterized by a large quantity of raw feed surging through the system so quickly and in such a large mass that the available system heat cannot process the meal, and as such, it flows unprocessed (unburned and with a high free CaO content) through the kiln to the cooler. This situation occurs either due to a feed system malfunction or because material that has settled onto the ledges of the system, breaks free and generally occurs gradually during prolonged operation at low pre-heater feed rates. A kiln flush is usually quick and dramatic and may extinguish the main burner flame. It can generate a tremendous pressure spike in the system and generally "cools" the entire pre-heater and kiln so that a system re-start/re-heat is required. NO_x emission rates may go as high as 8 lb/ton.

The annual NO_x PTE calculations consider both normal operations and start-up, shutdown, and non-routine operations. The start-up, shutdown, and non-routine emissions are based on 336 hours per year of start-up, shutdown, and/or non-routine operations, a conservative assumption of the maximum hourly kiln production rate of 125 tons per hour during these periods, and an emission factor of 8 lbs/ton clinker. The normal operation emissions are based on the BACT emission limit, the annual average kiln production rate, and 8,424 hours per year of operation (8,760 – 336). The annual NO_x PTE from Unit II is calculated as:

Normal Operation: 1.95 lbs/ton clinker X 116.67 tons/hour = 227.5 lbs/hr

227.5 lbs/hour X (8760-336 hrs)/2000 = 958.2 tpy

During startup, shutdown and non-routine activities, NOx emissions will be

8 lbs/ton clinker X max 125 tons/hour = 1000 lb/hr

1000 lbs/hr X 336 hr/yr/2000 = 168.0 tpy

Total Tons/Year = 958.2 + 168.0 = 1126.2 tpy

3.1.3 SO_2 Emissions

The approximate composition of typical raw feed to Unit II will be 50% "high rock" (marly limestone), 39% waste fines (marlaceous lime with high silica content), 10% conditioned fly ash, and the remainder iron mill scale. The raw feed mill grinds moist feed to the desired particle size, and dries the ground feed via direct contact with flue gases. The mill is, therefore, an effective mass transfer device that promotes absorption of SO_2 by limestone in the feed. In addition, there is additional control of acid gases from the un-reacted alkaline by-products in the dust cake, which coats the bags of the fabric filter. The Unit II SO_2 annual emissions are based on the proposed BACT SO_2 emission limit of 0.23 lbs SO_2/ton (30-day average).

During Unit II start-up and non-routine (malfunction) conditions, it is possible that short-term SO_2 emissions may increase due to process variabilities. Therefore, a maximum 1-hour SO_2 emission rate of 57.5 lb/hr (based on 0.46 lbs SO_2/ton clinker) is proposed.

The annual SO_2 PTE calculations consider both normal operations and start-up, shutdown, and non-routine operations. The start-up, shutdown, and non-routine emissions are based on 336 hours per year of start-up, shutdown, and/or non-routine operations, a conservative assumption of the maximum hourly kiln production rate of 125 tons per hour during these periods, and an emission factor of 0.46 lbs/ton clinker. The normal operation emissions are based on the BACT emission limit, the annual average kiln production rate, and 8,424 hours per year of operation (8,760 – 336). The annual SO_2 PTE from Unit II is calculated as:

Normal Operation: 0.23 lbs/ton clinker X 116.67 tons/hour = 26.83 lbs/hr

26.83 lbs/hour X (8760-336 hrs)/2000 = 113.0 tpy

During startup, shutdown and non-routine activities, SO_2 emissions will be

0.46 lbs/ton clinker X max 125 tons/hour = 57.5 lb/hr

57.5 lbs/hr X 336 hr/yr/2000 = 9.66 tpy

Total Tons/Year = 113.0 + 9.66 = 122.7 tpy

3.1.4 CO Emissions

Good combustion practice is proposed as BACT for Unit II, with a CO emission limit of 4.0 lbs CO/ton of clinker produced (30-day average).

During Unit II start-up and non-routine (malfunction) conditions, it is possible that short-term CO emissions may increase due to process variabilities. Therefore, a maximum 1-hour CO emission rate of 1000 lb/hr (based on 8 lbs CO/ton of clinker) is proposed.

The annual CO PTE calculations consider both normal operations and start-up, shutdown, and non-routine operations. The start-up, shutdown, and non-routine emissions are based on 336 hours per year of start-up, shutdown, and/or non-routine operations, a conservative assumption of the maximum hourly kiln production rate of 125 tons per hour during these periods, and an emission factor of 8 lbs/ton clinker. The normal operation emissions are based on the BACT emission limit, the annual average kiln production rate, and 8,424 hours per year of operation (8,760 – 336). The annual CO PTE from Unit II is calculated as:

Normal Operation: 4 lbs/ton clinker X 116.67 tons/hour = 466.7 lbs/hr

466.7 lbs/hour X (8760-336 hrs)/2000 = 1965.6 tpy

During startup, shutdown and non-routine activities, CO emissions will be

8 lbs/ton clinker X max 125 tons/hour = 1000 lb/hr

1000 lbs/hr X 336 hr/yr/2000 = 168.0 tpy

Total Tons/Year = 1965.6 + 168.0 = 2,133.6 tpy

3.1.5 VOC Emissions

Good combustion practice is proposed as BACT for Unit II, with a VOC emission limit of 0.19 lbs VOC/ton of clinker produced (30-day average).

During Unit II start-up and non-routine (malfunction) conditions, it is possible that short-term VOC emissions may increase due to process variabilities.

The annual VOC PTE calculations consider both normal operations and start-up, shutdown, and non-routine operations. The start-up, shutdown, and non-routine emissions are based on 336 hours per year of start-up, shutdown, and/or non-routine operations, a conservative assumption of the maximum hourly kiln production rate of 125 tons per hour during these periods, and an emission factor of 0.57 lbs/ton clinker. The normal operation emissions are based on the BACT emission limit, the annual average kiln production rate, and 8,424 hours per year of operation (8,760 – 336). The annual VOC PTE from Unit II is calculated as:

Normal Operation: 0.19 lbs/ton clinker X 116.67 tons/hour = 22.167 lbs/hr
22.167 lbs/hour X (8760-336 hrs)/2000 = 93.37 tpy
During startup, shutdown and non-routine activities, VOC emissions will be
0.57 lbs/ton clinker X max 125 tons/hour = 71.3 lb/hr
71.3 lbs/hr X 336 hr/yr/2000 = 11.98 tpy
Total Tons/Year = 93.37 + 11.98 = 105.35 tpy

3.1.6 Lead, Mercury, Beryllium, Sulfuric Acid Mist Emissions, and Dioxin/Furan

Emissions of lead (Pb), mercury (Hg), beryllium (Be), sulfuric acid mist (H_2SO_4), and dioxin/furan from cement plants result from the oxidation of these materials in the fuel and raw feed materials. EPA's AP-42 Section 11.6 provides an emission factor for Be from cement kilns (6.6E10-7 pounds per ton clinker) utilizing similar technology. Based on a review of stack test data from other similar Portland cement kilns and based on best engineering judgement, the lead emissions have been estimated at 750 lb/yr (equivalent to $7.34*10^{-4}$ pounds per ton of clinker).

The mercury and H_2SO_4 mist emission factors were based on current stack test data from similar kilns operating in Florida[1], with an added compliance margin. The emission factors are 1.47E-04 pounds per ton clinker for mercury and 0.01 pounds per ton clinker for H_2SO_4 mist.

The dioxin/furan emission factor is based on 40 CFR 63, Subpart LLL. The emission factor is 1.7E-10 gr/dscfm at 7% oxygen. Based on a corrected gas flow of 184,950 dscfm (7% oxygen), this is equivalent to an emission rate of 2.69E-07 lb/hr.

The calculated Unit II emissions for these pollutants are presented in Table 3-1.

3.2 INFORMATION SOURCES

Emissions and operational information reviewed during the emission factor development include:

1) The RACT/BACT/LAER Clearinghouse (RBLC);
2) EPA's AP-42 Emission factor Document;
3) Recent permit actions;
4) Recent stack tests for similar cement kilns;
5) Correspondence with the Florida Department of Environmental Protection and other state agencies; and
6) Correspondence with other cement manufacturers.

[1] Conversation between Mike Vardeman of Rinker and John Koogler of Koogler Assoc, 12/14/04, and email from John Koogler to Andrea Adams of RTP on 12/15/04.

Table 4-4
Rinker Unit II Cement Kiln
Top-Down BACT Impact Analysis Summary

Pollutant	Control Alternative Added to Baseline	Emission Rates					Economic Impacts				Environmental Impacts		Energy Impact Increment Over Baseline (MMBtu/yr)	Selected as BACT?
		Uncontrolled		Controlled		Control Effic. %	Emission Reduction (ton/yr)	Annualized Cost ($/yr)	Cost Effectiveness		Toxics (Yes/No)	Adverse (Yes/No)		
		lb/ton CL	ton/yr*	lb/ton CL	ton/yr*				Average	Incremental				
PM/PM10	"Top" Control Alternative Selected for PM/PM10													
SO_2	Wet Scrubber	0.23	118	0.012	5.9	95%	111.7	$2,920,676	$26,158	$44,361	No	Yes†	Flue gas reheat (natural gas - not quantified)	No
	Semi-Dry Scrubber	0.23	118	0.069	35.3	70%	82.3	$1,617,231	$19,657	$20,048	No	Yes‡	NA	No
	Dry Injection - Vendor-Supplied Contact Tower	0.23	118	0.205	0	10.9%	12.8	$311,435	$24,241	$24,241	No	No	NA	No
	Dry Injection - Preheat Tower	0.23	118	0.205	105	10.9%	12.8	$225,439	$17,547	$17,547	No	No	NA	No
NO_x	SCR**	2.7	1,380	1.70	869	37%	511	$7,709,482	$15,087	$52,916	No	No	89	No
	SNCR**	2.7	1,380	1.95	996	28%	383	$949,455	$2,477	Base	No	No	NA	Yes
CO	RTO	4.0	2,044	0.20	102	95%	1,942	$14,921,000	$7,684	--	No	No	Flue gas reheat (natural gas - not quantified)	No
VOC	RTO	0.15	76.7	0.023	11.8	84.7%	64.9	$14,921,000	$229,918	--	No	No	Flue gas reheat (natural gas - not quantified)	No

*Basis: 2,800 ton CL/day
SCR = Selective Catalytic Reduction
SNCR = Selective Noncatalytic Reduction
RTO = Regenerative Thermal Oxidizer
CL = Clinker
NA = Not available or not calculated
**Refer to Appendix C for NOx cost effectiveness calculation spreadsheets:
Appendix C-1 SNCR Cost Estimates
Appendix C-2 SCR Cost Estimates
Appendices C-3 thru C-6 SO_2 Control Cost Estimates
†Water consumption, solid waste disposal, continuous steam plume
‡Water consumption, intermittent steam plume

TABLE 5-3
AMBIENT AIR QUALITY MONITORING DATA

Pollutant/	-------Hernando County-------			------Pasco Co-------		---Citrus County[a]---		--Pinellas County--	
Avg.Time/Year	053-0005	053-0009	053-0004	101-0005	101-2001	017-0003	017-0005	103-5003	103-5002
PM_{10}/24-hour Second-Highest Concentration (ug/m^3)									
2003	34	26	33	---	---	---	---	---	---
2002	29	38	25	---	---	---	---	---	---
2001	57	**58**	46	---	---	---	---	---	---
PM_{10}/Annual Arithmetic Mean Concentration (ug/m^3)									
2003	16.3	15.5	15.8	---	---	---	---	---	---
2002	16.6	17.0	14.3	---	---	---	---	---	---
2001	**19.4**	18.9	18.8	---	---	---	---	---	---
O_3/1-hour Maximum Concentration, Second-Highest Day (ppb)									
2003	---	---	---	91	99	---	---	---	97
2002	---	---	---	86	87	---	---	---	78
2001	---	---	---	83	91	---	---	---	95
3-year Fourth-highest	---	---	---	90	92	---	---	---	**95**
O_3/8-hour Maximum Concentration, Fourth-Highest Day (ppb)									
2003	---	---	---	77	80	---	---	---	77
2002	---	---	---	69	74	---	---	---	67
2001	---	---	---	74	78	---	---	---	80
3-year Arith. Average	---	---	---	73	77	---	---	---	74
SO_2/3-hour Second-Highest Concentration (ppb)									
2003	---	---	---	---	---	42	74	55	---
2002	---	---	---	---	---	34	80	72	---
2001	---	---	---	---	---	36	**167**	75	---
SO_2/24-hour Second-Highest Concentration (ppb)									
2003	---	---	---	---	---	8	17	10	---
2002	---	---	---	---	---	7	16	15	---
2001	---	---	---	---	---	6	**35**	18	---
SO_2/ Annual Arithmetic Mean Concentration (ppb)									
2003	---	---	---	---	---	0.8	2.0	1.9	---
2002	---	---	---	---	---	0.8	1.8	2.3	---
2001	---	---	---	---	---	0.8	**2.7**	2.5	---

[a]Data missing for 1/1/01-3/31/01 for both Citrus County sites as well as 7/1/02-12/31/02 and 4/1/03-6/30/03 for 017-0003 so annual averages for 2001 (both sites) and 2002-2003 (017-0003) not representative.

TABLE 5-3 (Concluded)
AMBIENT AIR QUALITY MONITORING DATA

Pollutant/	--Citrus--	----------Hillsborough County----------							----------Pinellas County----------			
Avg./Yr	017-0005	057-1075	057-1070	057-1073	057-1066	057-0030	057-1065	057-0081	103-2006	103-2008	103-3005	103-0018
$PM_{2.5}$/24-hour Concentration – 98th Percentile(ug/m^3)												
2003	19.0	21.5	---	---	---	21.4	---	---	---	---	---	---
2002	19.4	24.0	---	---	---	20.6	---	---	---	---	---	---
2001	23.8	29.9	---	---	---	27.0	---	---	---	---	---	---
3-year Avg.	20.7	**25.1**	---	---	---	23.0	---	---	---	---	---	---
$PM_{2.5}$/Annual Arithmetic Mean Concentration (ug/m^3)												
2003	8.7	11.2	---	---	---	11.6	---	---	---	---	---	---
2002	8.6	11.4	---	---	---	10.7	---	---	---	---	---	---
2001	9.8	**15.1**	---	---	---	11.8	---	---	---	---	---	---
NO_2/Annual Arithmetic Mean Concentration (ppb)												
2003	---	---	---	---	---	---	9.7	6.9	---	---	---	9.8
2002	---	---	---	---	---	---	10.6	7.0	---	---	---	11.2
2001	---	---	---	---	---	---	11.1	7.4	---	---	---	**11.5**
CO/1-hour Second-Highest Concentration (ppm)												
2003	---	---	**5.7**	---	---	---	---	---	3.2	3.1	---	---
2002	---	---	5.3	---	---	---	---	---	2.7	3.7	---	---
2001	---	---	5.1	---	---	---	---	---	2.5	4.0	---	---
CO/8-hour Second-Highest Concentration (ppm)												
2003	---	---	3.3	---	---	---	---	---	1.1	1.8	---	---
2002	---	---	**3.8**	---	---	---	---	---	1.7	2.3	---	---
2001	---	---	3.0	---	---	---	---	---	1.5	2.1	---	---
Pb/Maximum Quarterly Arithmetic Mean Concentration (ug/m^3)												
2003	---	---	---	0.25	0.74	---	---	---	---	---	**0.01**	---
2002	---	---	---	0.41	1.27	---	---	---	---	---	0.01	---
2001	---	---	---	0.47	1.29	---	---	---	---	---	0.01	---

Note: The selected baseline concentrations summarized on Table 5-4 are **bolded**.

TABLE 6-1
PROPOSED KILN SOURCE CHARACTERISTICS

Parameter/Operating scenario	Case 1 Kiln 2 Annual Rate	Case 2 Kiln 2 Max Rate	Case 3 Kiln 2 Mid-Load	Case 4 Kiln 2 Low-Load	Case 5 Kiln 2 Startup
Kiln production rate	2800	3000	2500	2370	NA
Stack Height (ft agl)	350				
Stack Height (m agl)	106.7				
Stack Diameter (ft)	13.6				
Stack Diameter (m)	4.15				
Stack Flow (ACFM)	311,700	324,000	290,200	283,200	300,500
Stack Exit Velocity (m/sec)	10.90	11.33	10.15	9.90	10.51
Stack Temperature (F)	237	250	217	210	439
Stack Temperature (K)	387.0	394.3	375.9	372.0	499.3
SO2 Emission rate (lb/hr)	28.01	35.78	35.78	35.78	57.50
NOx Emission rate (lb/hr)	257.1	243.75	203.13	192.56	NA
PM Emission rate (lb/hr)	38.50	41.25	34.38	32.59	NA
CO Emission rate (lb/hr)	487.1	1000.0	1000.0	1000.0	1000.0

TABLE 6-2
SOURCE CHARACTERISTICS FOR MATERIAL HANDLING BAGHOUSE PM_{10} SOURCES

Name	ISC ID #	Vent #	UTM East m	UTM North m	Flow Rate (ACFM)	Temp (F)	PM_{10} Emissions (lbs/hr)	PM_{10} Emissions (tons/yr)	Stack Ht m	Stack Dia m	Temp K	Velocity m/sec
Filter Dust; 2E-22	N2G08	2G-08	360090	3162615	5,000	200	0.336	1.47	59.1	0.52	366.5	11.19
Filter Dust; 2E-22	N2G09	2G-09	360100	3162594	16,500	180	1.143	5.01	59.1	1.01	355.4	9.80
Raw Meal Transport; 2F-04	N2F09	2F-09	360091	3162596	3,750	180	0.260	1.14	9.1	0.43	355.4	12.37
Kiln Feed Transport; 2H-05	N2H08	2H-08	360104	3162588	3,750	180	0.260	1.14	9.1	0.43	355.4	12.37
Clinker Transport; 2L-01	N2L03	2L-03	360128	3162540	3,000	240	0.190	0.83	9.8	0.49	388.7	7.58
Gypsum Bin; 2L-14	N2L08	2L-08	360157	3162425	4,000	95	0.320	1.40	36.6	0.49	308.2	10.11
Clinker Storage; Silo 2L-05	N2L06	2L-06	360170	3162438	4,000	240	0.253	1.11	61.9	0.49	388.7	10.11
Finish Mill Collecting Belt; 2M-04	N2M09	2M-09	360176	3162462	12,000	180	0.832	3.64	4.6	0.70	355.4	14.67
Finish Mill; 2N-01	N2N12	2N-12	360169	3162485	35,000	212	2.310	10.12	39.6	1.22	373.2	14.15
Air Slide 2N-03 & Bucket 2N-04	N2N91	2N-91	360179	3162476	6,000	200	0.403	1.77	14.0	0.55	366.5	11.98
High Efficiency Separator; 2N-06	N2N09	2N-09	360182	3162485	6,000	200	0.403	1.77	39.6	2.29	366.5	11.98
Cement Cooler; 2N-26	N2N91	2N-91	360177	3162500	128,600	160	9.199	40.29	14.0	0.55	344.3	14.79
Cement Transport; 2P-01	N2Q10	2Q-10	360165	3162440	6,000	200	0.403	1.77	61.9	0.49	366.5	11.98
Cement Transport; 2P-01	N2Q13	2Q-13	360150	3162397	3,700	180	0.256	1.12	61.9	0.64	355.4	9.35
Cement Loadout Bin; 2Q-28	N2Q15	2Q-15	360140	3162362	12,000	180	0.832	3.64	9.1	0.43	355.4	17.60
Cement Loadout Bin; 2Q-31	N2Q16	2Q-16	360144	3162354	3,000	180	0.208	0.91	9.1	0.43	355.4	9.90
Coal Mill; 2S-15	N2S16	2S-16	360138	3162585	3,000	180	0.208	0.91	12.2	1.19	355.4	9.90
Pulverized Fuel Bin; 2S-20	N2S21	2S-21	360136	3162572	22,000	150	1.600	7.01	12.2	0.34	338.7	9.35

6.2.2 Load Screening Analysis

In order to determine worst-case source configurations for the proposed kiln, a load screening analysis was performed. The stack volumetric flow rates and emissions for a variety of operating conditions were provided by the kiln vendor, and were used to determine if the lower plume rise associated with low load operations could result in higher short-term ambient impacts, even though the emission rates are lower. For the annual averaging intervals, the normal operating scenario of 2800 stpd production rate and compound operation (mill on) were used.

6.2.3 SIA Modeling Analysis

Once the worst-case configuration for the proposed kiln was determined, the ambient impacts from the proposed kiln, all associated material handling baghouse PM_{10} emissions, and all project related cement truck haul road fugitive PM_{10} emissions were determined. The roadway emissions were modeled as 70 small volume sources, and the source parameters (based on guidance in Table 3-1 of the ISCST3 Users Guide for separated volume sources) included a release height of 1 meter, an initial lateral dimension of 9.3 meters, and an initial vertical dimension of 3 meters.

6.2.4 Cumulative Modeling Analysis

If the ambient impacts of the proposed project alone are greater than the significant impact levels (SIL) for a particular pollutant and averaging interval, then a "multi-source" or cumulative impact analysis must be performed for that particular pollutant and averaging interval. The cumulative analysis considers emissions from existing facility emission units as well as other nearby sources, and consists of separate NAAQS and PSD increment cumulative analyses. For the NAAQS analyses, the modeled impacts from the proposed, existing, and other nearby sources (using maximum allowable emission rates) are added to ambient background concentrations (tabulated in Section 5) and the total concentrations are compared to the NAAQS. For the PSD increment analysis, the appropriate sources and emissions that are modeled are those source changes that have occurred since the applicable baseline date.

6.3 MODELING ANALYSIS RESULTS

6.3.1 Load Screening Modeling Results

Table 6-3 presents the results of the proposed kiln load screening analysis. The analysis was performed with ISCST3 for both the Class II and Class I receptor grids. For the PM_{10} 24-hour impacts, the normal annual operating scenario was equal to any other scenario, and therefore it

Table 6-3
Summary of Proposed Kiln Load Screening Results

Class I

Parameter/Operating scenario	Case 1 Kiln 2 Annual Rate	Case 2 Kiln 2 Max Rate	Case 3 Kiln 2 Mid-Load	Case 4 Kiln 2 Low-Load	Case 5 Kiln 2 Startup	Class I SIL
1-hr X/q (1 lb/hr)	0.0410	0.0375	0.0470	0.0470	0.0290	
3-hr X/q (1 lb/hr)	0.0233	0.0225	0.0238	0.0240	0.0164	
8-hr X/q (1 lb/hr)	0.0098	0.0095	0.0113	0.0113	0.0078	
24-hr X/q (1 lb/hr)	0.0051	0.0049	0.0051	0.0052	NA	
Annual X/q (1 lb/hr)	0.0003	NA	NA	NA	NA	
SO2 Emission rate (lb/hr)	28.01	35.78	35.78	35.78	57.50	
NOx Emission rate (lb/hr)	257.13	243.75	203.13	192.56	NA	
PM Emission rate (lb/hr)	38.50	41.25	34.38	32.59	NA	
CO Emission rate (lb/hr)	487.12	1000.00	1000.00	1000.00	1000.00	
PM 24-hr ug/m3	0.20	0.20	0.18	0.17	NA	0.3
PM Annual ug/m3	0.013	NA	NA	NA	NA	0.2
SO2 3-hr ug/m3	0.65	0.80	0.85	0.86	0.94	1
SO2 24-hr ug/m3	0.14	0.18	0.18	0.19	NA	0.2
SO2 Annual ug/m3	0.010	NA	NA	NA	NA	0.1
NOx Annual ug/m3	0.087	NA	NA	NA	NA	0.1

PSD CLASS II

Parameter/Operating scenario	Case 1 Kiln 2 Annual Rate	Case 2 Kiln 2 Max Rate	Case 3 Kiln 2 Mid-Load	Case 4 Kiln 2 Low-Load	Case 5 Kiln 2 Startup	Class II SIL
1-hr X/q (1 lb/hr)	0.2620	0.2480	0.2910	0.3020	0.2000	
3-hr X/q (1 lb/hr)	0.2220	0.2120	0.2430	0.2500	0.1780	
8-hr X/q (1 lb/hr)	0.1220	0.1150	0.1360	0.1410	0.0980	
24-hr X/q (1 lb/hr)	0.0540	0.0510	0.0610	0.0630	NA	
Annual X/q (1 lb/hr)	0.0036	NA	NA	NA	NA	
SO2 Emission rate (lb/hr)	28.01	35.78	35.78	35.78	57.50	
NOx Emission rate (lb/hr)	257.13	243.75	203.13	192.56	NA	
PM Emission rate (lb/hr)	38.50	41.25	34.38	32.59	NA	
CO Emission rate (lb/hr)	487.12	1000.00	1000.00	1000.00	1000.00	
CO 1-hr ug/m3	128	248	291	302	200	2000
CO 8-hr ug/m3	59	115	136	141	98	500
PM 24-hr ug/m3	2.1	2.1	2.1	2.1	na	5
PM Annual ug/m3	0.14	NA	NA	NA	NA	1
SO2 3-hr ug/m3	6.2	7.6	8.7	8.9	10.2	25
SO2 24-hr ug/m3	1.5	1.8	2.2	2.3	na	5
SO2 Annual ug/m3	0.10	NA	NA	NA	NA	1
NOx Annual ug/m3	0.93	NA	NA	NA	NA	1

was used for all subsequent PM10 cumulative modeling.

6.3.2 Significant Impact Analysis

Table 6-4 presents the results of the project significant impact analysis. For all pollutants besides PM_{10}, the maximum kiln load screening results were used for the the project significant impact analysis. For PM_{10}, the significant impact analysis considered project emissions from the proposed kiln, material handling baghouse PM_{10} emissions, and all project related cement truck haul road fugitive PM_{10} emissions.

The only pollutants and averaging intervals that have significant impacts were PM_{10} annual and PM_{10} 24-hour averages, therefore cumulative NAAQ and PSD increment analyses were performed for this pollutant. The PM_{10} significant impact area was determined to be 4.7 km. Figures 6-2 and 6-3 present isopleth plots for the 24-hr and annual project PM_{10} impacts. The maximum impact locations occur near the eastern facility boundary.

6.3.3 De Minimis Monitoring Levels

The project significant impact results presented in Table 6-4 also compare project ambient impacts to the de minimis monitoring thresholds. The maximum impacts from the proposed project are less than the de minimis monitoring levels for all pollutants except PM_{10}. Ambient air quality background data were reviewed and summarized in Section 5.0 for use in the NAAQS analyses. The PM_{10} background concentrations were compiled from three PM_{10} monitoring sites currently being operated in Hernando County for Rinker Materials. Therefore, the applicant has collected PM_{10} data that meets the de minimis monitoring requirements. For all other pollutants, the applicant is requesting an exemption from pre- or post-construction PSD monitoring requirements for this modification as allowed for under 62-212.400(2)(f) FAC on the basis the project modeled impacts are below the thresholds.

6.3.4 Cumulative Modeling Emission Inventory

Cumulative NAAQ and PSD increment analyses were required for PM_{10}. A PM_{10} emission inventory was obtained from the Department's Bureau of Information Systems of all permitted air emission sources within 55 km of the proposed project (this represents the 5.2 km PM_{10} SIA plus an additional 50 km distance). The modeling inventory for PSD increments and NAAQS analyses were developed from the master inventory. Small, insignificant sources were removed from the master inventory on the basis of the 20-D methodology. The 20-D methodology multiplies the

Table 6-4
Summary of Significant Impact Modeling

Pollutant	Avg. Period	Maximum Project Impact ($\mu g/m^3$)	Class II SIL ($\mu g/m^3$)	Class II Cumulative Analysis (Yes/No)	SIA Extent (km)	De Minimis Monitoring Level ($\mu g/m^3$)	Triggers Monitoring Data Requirement (Yes/No)
NO_2	Annual	0.9	1	NO	--	14	No
SO_2	3-Hr	10.2	25	NO	--	NA	NA
	24-Hr	2.3	5	NO	--	13	No
	Annual	0.1	1	NO	--	NA	NA
CO	1-Hr	302	2000	NO	--	NA	NA
	8-Hr	141	500	NO	--	575	No
PM_{10}	24-Hr	13.7	5	YES	4.7	10	Yes
	Annual	1.8	1	YES	1.4	NA	NA

The extent of the SIA is measured from the location of the proposed kiln stack.

Figure 6-2 PM_{10} 24-hr Project Impacts Plot

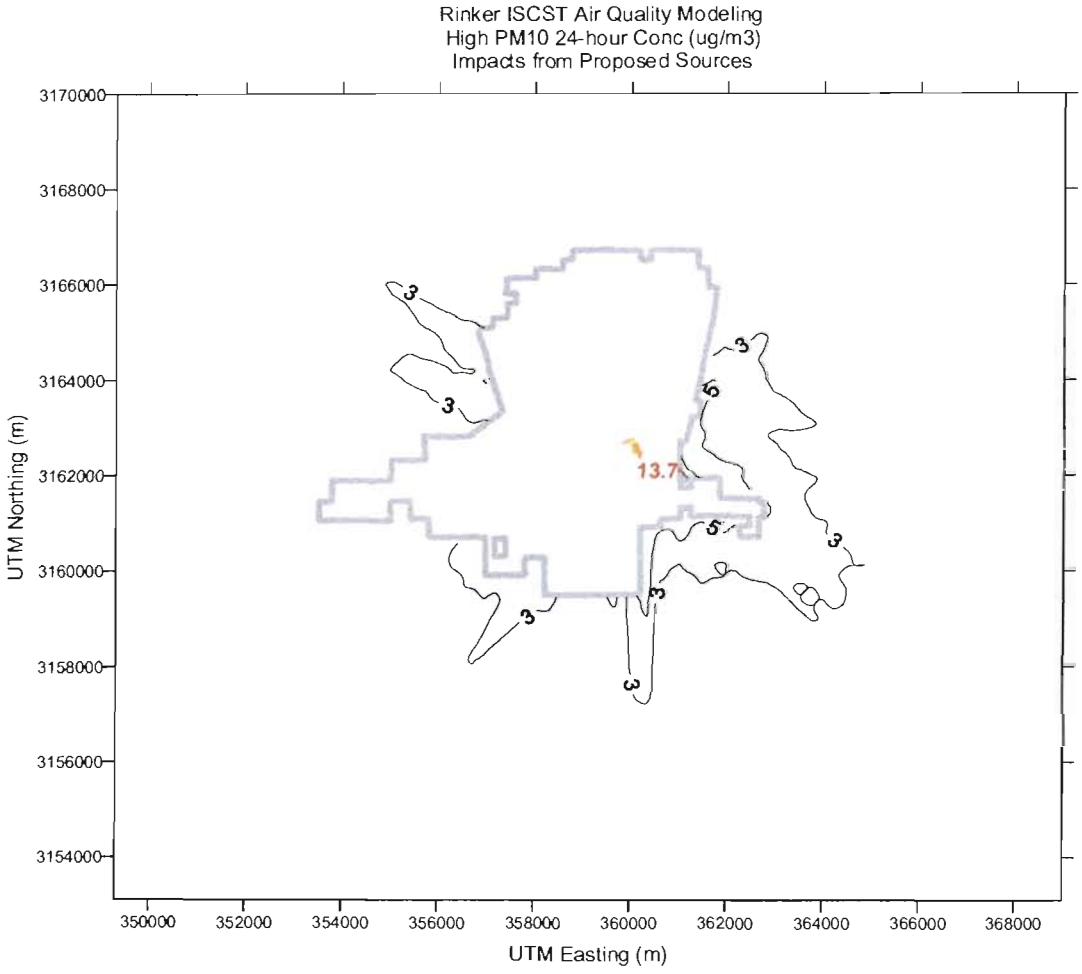
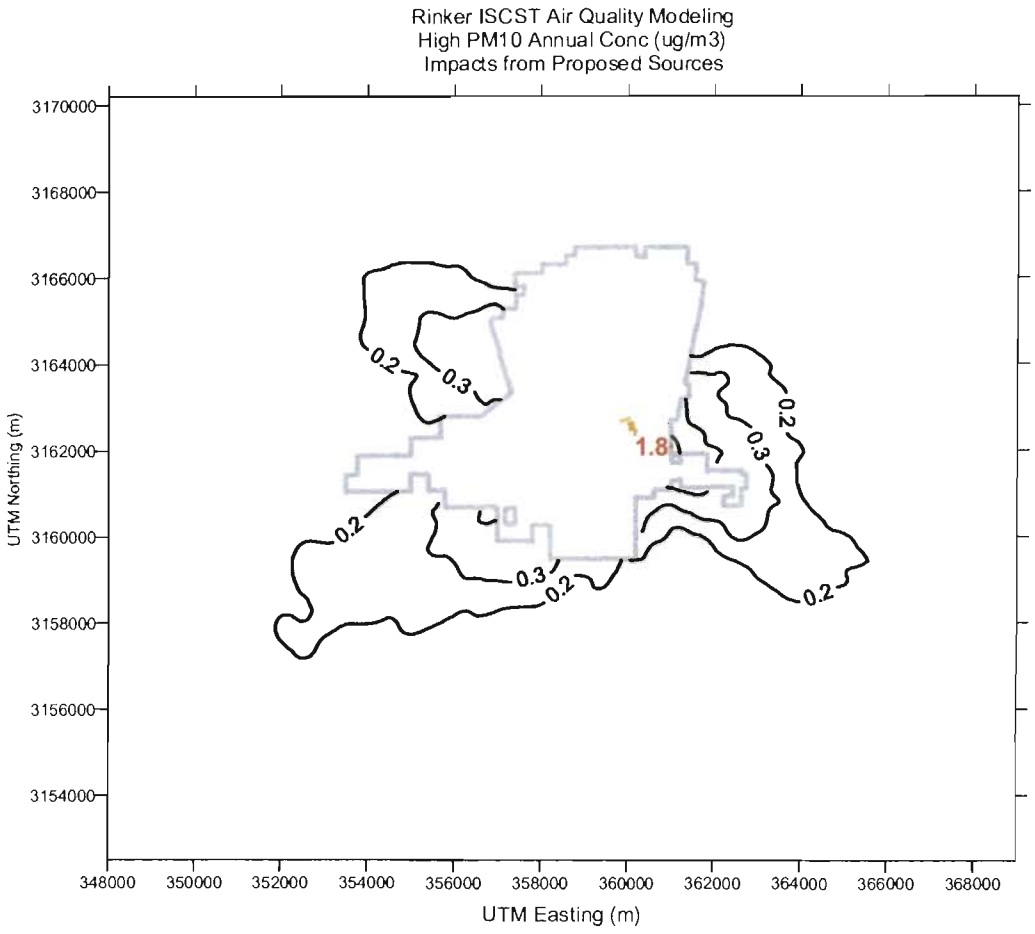


Figure 6-3 PM_{10} Annual Project Impacts Plot



distance between the facility and the proposed project in kilometers (D) by 20, and compares this value to the facility's emissions in tons per year. Any facility where the 20-D value was greater than the emission value is assumed to have a negligible effect on the ambient air concentrations,and was removed from the cumulative inventory. One inventory was developed for use in the Class II area based on the distance to the proposed project, and another inventory was developed for use in the Class I area based on the distance to the Class I area.

Table 6-5 presents the sources that remain after 20-D editing of the inventory, along with the modeling parameters (the complete inventory is submitted in Excel format on the modeling CD-ROM). The sources used in the cumulative analysis include the Crystal River and Anclote power plants, and the Cemex and Gregg Mine sources. Out of these sources included in the cumulative modeling, only the Crystal River 3 and 4 boilers are PSD increment affecting sources (these units were built in the 1980s).

In addition to these other sources, the existing Brooksville cement kiln Unit I, the power plant, the material handling baghouse point sources, and the existing cement haul truck traffic emission sources were also included in the modeling analysis. The maximum permitted emission rates for the existing sources were used. The existing truck traffic PM_{10} emissions were assumed to be equal to the proposed Unit 2 project truck traffic emissions (this is conservative, as the capacity of the existing kiln is lower than the proposed Unit II kiln), effectively doubling the rate for the cumulative analyses. The same 70 volume sources were used to model the existing road emissions. Based on previous modeling of the existing kiln and power plant stack, the worst-case stack temperature and flow conditions were used for the existing stack in the modeling analysis.

6.3.5 Cumulative NAAQS Analysis

Table 6-6 presents the results of the cumulative NAAQS PM_{10} analysis. The maximum 24-hr impact, including background concentrations, is 70% of the 24-hr NAAQS, and the annual impact is 53% of the annual NAAQS. Therefore, compliance with the NAAQS is demonstrated.

6.3.6 Cumulative Class II PSD Increment Analysis

Table 6-7 presents the cumulative Class II PM_{10} increment analysis results. The 24-hr impact is 83% of the 24-hr PSD increment, and the annual impact is 22% of the annual PSD increment. Therefore, compliance with the Class II increments is demonstrated. Figure 6-4 presents the

Table 6-6

Summary of Cumulative NAAQS Modeling

Pollutant/Avg.Period	PM_{10} 24-Hr	PM_{10} Annual
Max. Modeled Impact (mg/m^3)	46.8	7.1
DateTime	1/6/1991	1991
X Coord.(UTM E km)	356.5	356
Y Coord.(UTM N km)	3169	3168.5
Background Conc. (mg/m^3)	58	19.4
Total Conc. (mg/m^3)	104.8	26.5
NAAQS (mg/m^3)	150	50
Percent of NAAQS (%)	70%	53%

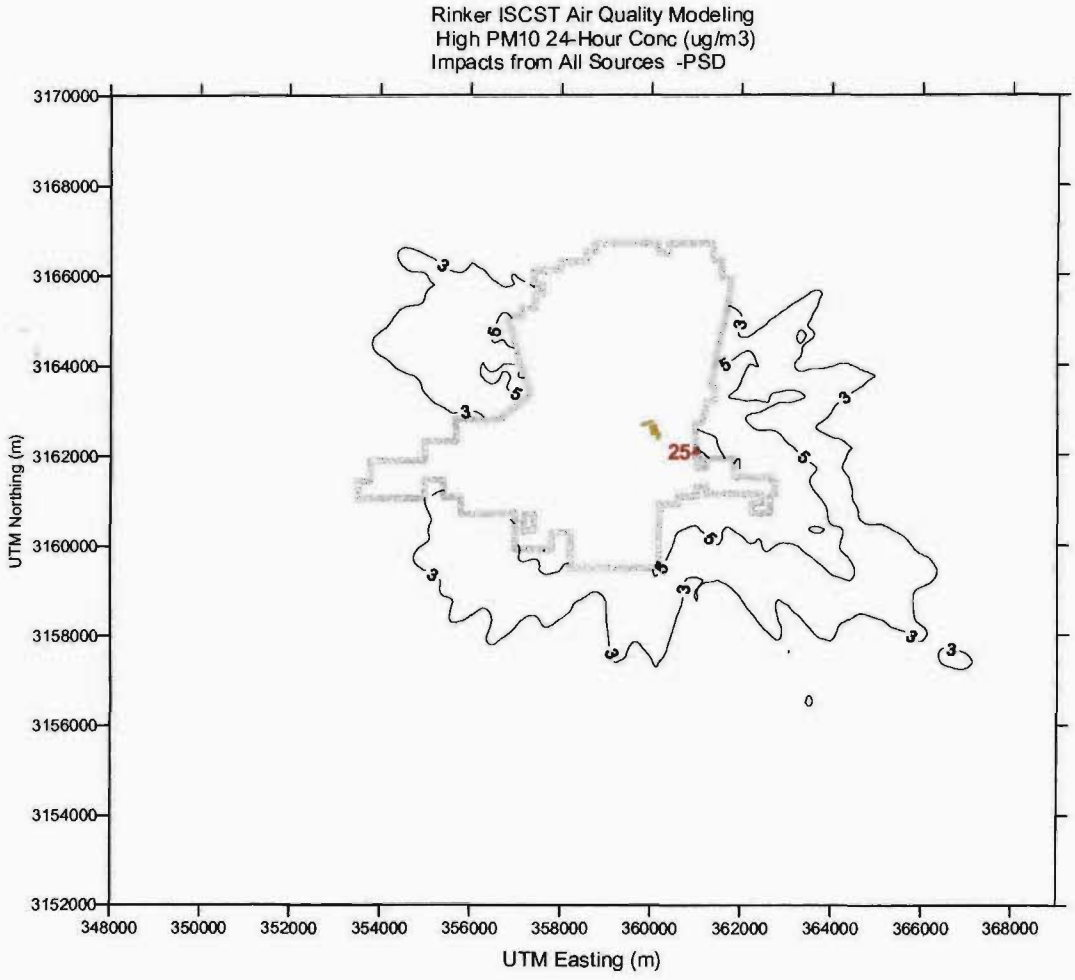
Table 6-7

Summary of Cumulative PSD Increment Impacts – Class II

Pollutant	Avg. Period	Maximum Modeled Impact ($\mu g/m^3$)	Date Time	X Coord. (UTM E km)	Y Coord. (UTM N km)	Class II PSD Increment ($\mu g/m^3$)	Percent of Increment (%)
PM_{10}	24-Hr	25.0	09/17/95	360.987	3162.087	30	83.3%
	Annual	3.5	1992	361.000	3162.100	17	22.4%

NOTE – All short-term concentrations are highest-second-high.

Figure 6-4 PM_{10} 24-hr PSD Increment Impacts Plot



isopleth plot for the 24-hr PSD increment impacts. The maximum impact locations occur near the eastern facility boundary

6.3.7 Class I PSD Increment Analysis

This section presents the Class I PSD increment analysis (Section 7 presents the Class I visibility analysis). The first step in the Class I PSD increment analysis is to determine if project impacts are greater than the EPA Class I SILs. If the project impacts are greater than the SILs for a particular pollutant and averaging interval, then a "multi-source" or cumulative impact analysis must be performed for that particular pollutant and averaging interval.

Table 6-8 presents the Class I area significant impact analysis results. All project impacts are below the Class I SILs with the exception of the 24-hr PM_{10} impact. Therefore, a cumulative class I PSD increment analysis was performed for this pollutant and averaging interval. Section 6.3.4 describes the cumulative inventory developed for this project. The only sources determined to be increment consuming were the proposed Brooksville kiln 2 project, the existing Brooksville facility, and the Crystal River power plant number 3 and 4 boilers.

Table 6-9 presents the results of the cumulative Class I PM_{10} increment analysis. The maximum 24-hr impact is 13% of the Class I 24-hr PSD increment. Therefore, compliance with the Class I increments is demonstrated.

6.4 REFERENCES

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Code of Federal Regulations (CFR), Title 40, Protection of the Environment.

Florida Administrative Code (FAC), Title 62, Rules of the Dept. of Environmental Protection.

USEPA, 1995. User's Guide for the Industrial Source Complex (ISC3) Dispersion Models. EPA-454/B-95-003, September 1995.

USEPA, 1990. New Source Review Workshop Manual (Draft). October 1990.

Table 6-8

Summary of Class I Significant Impact Modeling

Pollutant	Avg. Period	Maximum Project Impact ($\mu g/m^3$)	Class I SIL ($\mu g/m^3$)	Class II Cumulative Analysis (Yes/No)
NO_2	Annual	0.09	0.1	NO
SO_2	3-Hr	0.94	1.0	NO
	24-Hr	0.19	0.2	NO
	Annual	0.009	0.1	NO
PM_{10}	24-Hr	0.8	0.3	YES
	Annual	0.05	0.2	NO

Table 6-9

Summary of Cumulative PSD Increment Impacts – Class I

Pollutant	Avg. Period	Maximum Modeled Impact ($\mu g/m^3$)	Date Time	X Coord. (UTM E km)	Y Coord. (UTM N km)	Class I PSD Increment ($\mu g/m^3$)	Percent of Increment (%)
PM_{10}	24-Hr	1.31	12/10/1995	331.350	3175.000	10	13.1%

NOTE – All short-term concentrations are highest-second-high.

worst-case meteorological data occurs for the period 00:00 to 06:00, and consists of a wind speed of 2 m/sec and F stability (note that the period 19:00 to 24:00 also has a worst-case condition of 2 m/sec and F stability, but this period occurs after sunset and is of less concern).

The visibility analyses for the project was performed using the latest version of PLUVUE-II (version 96170). Only sky backgrounds were considered since there is no significant terrain in the study area (i.e., views of the plume with terrain in the background would not occur; so white, gray, or black backgrounds were not considered). PLUVUE-II input parameters were generally set equal to the model defaults or recommended values and are shown on Table 7-2. Analyses were performed for spring, summer, and winter seasons (these dates are included on Table 7-2). Appropriate temperatures and relative humidities were selected based on Tampa International Airport data as shown on Table 7-2. Based on the fact that the worst-case meteorology occurs for the period 00:00 to 06:00, and that previous PLUVUE modeling conducted for the proposed second kiln in 1996 demonstrated that the maximum visibility impacts occurred during the hours around sunrise, the PLUVUE simulations were performed for sunrise (or as soon after sunrise as PLUVUE would perform a valid calculation), and for two additional hours after sunrise (using 30 minute increments), for a total of 5 simulations for each season. The time of sunrise was determined using NOAA's Sunrise/Sunset calculation program, and were calculated as 06:30, 05:30, and 07:17 for the spring equinox, summer solstice, and winter solstice, respectively.

Results of the PLUVUE-II analysis are presented in Table 7-3, and are summarized below. Maximum impacts occurred during the summer just after sunrise for an observer within the plume with 110 degrees wind direction. Since the maximum impacts are less than the critical values, it can be concluded that there is little potential for a visible plume as viewed from the CNWR due to the proposed project.

Visibility Impact	Critical Values	Maximum Impact
Delta-E	1.0	0.98
Plume Contrast	$> \pm 0.02$	0.008

TABLE 7-2 PLUVUE-II INPUT DATA

Emissions/Miscellaneous Data	Meteorological/Air Quality Data
Site elevation (feet msl) 0	Worst case Wind speed (mps) 2.0
Number of units 1	Wind meas.ht index for 10 m 1
Stack height (feet) 350	Pasquill-Gifford stability F
Flue gas flowrate (Max rate) (ACFM) 324,000	Lapse rate (F/1000 ft) 13.83
Flue gas exit velocity (m/s) 11.33	Mixing depth (m) 10,000
Flue gas temperature (F) 250	Ambient pressure (atm) 1.0
SO2 emission rate (tons/day) 0.69	Background NO_x conc (ppm) 0.000
NOx emission rate (tons/day) 2.73	Background NO_2 conc (ppm) 0.000
PM emission rate (tons/day) 0.73	Background O_3 conc (ppm) 0.040
Source UTM Coor (km) 360.0,3162.5	Background SO_2 conc (ppm) 0.000
UTM Zone 17	Background coarse conc (ug/m^3) 35.0
Time Zone (relative to GMT) 5	Background visual range (km) 177.0
Model Options based on PLUVUE Defaults	SO_2 deposition velocity (cm/s) 1.0
Aerosol Inputs based on PLUVUE Defaults	NO_x deposition velocity (cm/s) 1.0
	Coarse PM dep. velocity (cm/s) 0.10
	Fine PM dep. velocity (cm/s) 0.10

Observer Data	Direction of 110.5	Direction of 127
South Observer E/N UTM (km)	340.3, 3165.7	
South Observer elevation (ft-msl)	0	
South Critical Plume Distance (km)	19.6	
North Observer E/N UTM (km)	341.84, 3173.74	
North Observer elevation (ft-msl)	0	
North Critical Plume Distance (km)	21.0	
Plume Observer E/N UTM (km)	339.25, 3167.67	
Plume Observer elevation (ft-msl)	0	
Plume Critical Plume Distance (km)	21.0	

TABLE 7-3 PLUVUE-II MODELING RESULTS

Case	Spring			Summer			Winter		
	Time	Delta E	Contrast	Time	Delta E	Contrast	Time	Delta E	Contrast
WD = 110.5 & Observer (1) South of Plume	700	0.80	-0.005	600	0.91	-0.004	745	0.82	-0.007
	730	0.74	-0.006	630	0.81	-0.004	815	0.73	-0.007
	800	0.69	-0.006	700	0.75	-0.004	845	0.71	-0.007
	830	0.68	-0.005	730	0.73	-0.004	915	0.70	-0.007
	900	0.67	-0.005	800	0.70	-0.004	945	0.70	-0.007
WD = 110.5 & Observer (2) North of Plume	700	0.80	-0.006	600	0.80	-0.008	745	0.81	-0.006
	730	0.75	-0.006	630	0.75	-0.008	815	0.72	-0.005
	800	0.71	-0.006	700	0.71	-0.008	845	0.69	-0.005
	830	0.70	-0.005	730	0.69	-0.007	915	0.68	-0.005
	900	0.70	-0.005	800	0.68	-0.007	945	0.69	-0.004
WD = 110.5 & Observer (5) Below/Inside Plume	700	0.85	-0.005	600	0.98	-0.003	745	0.85	-0.006
	730	0.76	-0.005	630	0.87	-0.003	815	0.76	-0.007
	800	0.73	-0.005	700	0.80	-0.003	845	0.73	-0.007
	830	0.72	-0.005	730	0.78	-0.003	915	0.72	-0.007
	900	0.70	-0.005	800	0.75	-0.004	945	0.72	-0.007
WD = 127 & Observer (3) South of Plume	700	0.81	-0.005	600	0.98	-0.001	745	0.81	-0.006
	730	0.72	-0.004	630	0.84	-0.001	815	0.71	-0.006
	800	0.70	-0.004	700	0.78	-0.002	845	0.68	-0.006
	830	0.67	-0.005	730	0.75	-0.002	915	0.67	-0.006
	900	0.66	-0.005	800	0.71	-0.003	945	0.66	-0.006
WD = 127 & Observer (4) North of Plume	700	0.75	-0.007	600	0.78	-0.007	745	0.80	-0.006
	730	0.67	-0.007	630	0.72	-0.008	815	0.72	-0.005
	800	0.66	-0.007	700	0.68	-0.007	845	0.70	-0.005
	830	0.64	-0.006	730	0.66	-0.007	915	0.69	-0.005
	900	0.63	-0.006	800	0.65	-0.007	945	0.69	-0.005
WD = 127 & Observer (6) Below/Inside Plume	700	0.76	-0.007	600	0.81	-0.008	745	0.78	-0.006
	730	0.70	-0.007	630	0.77	-0.008	815	0.70	-0.006
	800	0.68	-0.007	700	0.73	-0.008	845	0.67	-0.006
	830	0.67	-0.007	730	0.71	-0.007	915	0.66	-0.005
	900	0.65	-0.006	800	0.69	-0.007	945	0.66	-0.005

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Crushed Stone Company	
2. Site Name:	
3. Facility Identification Number 0530021	
4. Facility Location... Street Address or Other Locator: 13011 Cement Plant Road City: Brooksville County: Hernando Zip Code: 34601	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: Charles Allen
2. Application Contact Mailing Address... Organization/Firm: Rinker Materials Street Address: P.O. Box 1508 City: Brooksville: State: Florida Zip Code: 34605
3. Application Contact Telephone Numbers... Telephone: (352) 799 - 7881 ext. Fax: (352) 799 - 6088
4. Application Contact Email Address: callen@rinker.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

NOx - SNCR control
Particulate Matter – 311,700 acfm baghouse 2E-19 (@ 2800 tons clinker/day – normal operation)

2. Control Device or Method Code(s): 140, 017

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 206.3 short tons/hour	
2. Maximum Production Rate: 125 short tons/hour (clinker production)	
3. Maximum Heat Input Rate: million Btu/hr 432	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year

6. Operating Capacity/Schedule Comment:

Maximum clinker production rate is 125 tons clinker per hour (3,000 tpd). The total heat input is the sum of the heat inputs to three burners. The heat input to the pre-heater is 10 MMBtu/hour. The total heat input to the kiln and pre-calciner is 390 MMBtu/hour. The Raw Mill hot gas generator is rated at 32 MM Btu/hour.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: 89	2. Emission Point Type Code: 1

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:
Emissions from the cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner and shaft dryer all exhaust out of a single stack.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
Cement Kiln – 66; clinker cooler – 67; raw mill system – 58; pre-heater, pre-calciner, shaft dryer - 65

5. Discharge Type Code: V	6. Stack Height: Feet 350	7. Exit Diameter: Feet 13.6
8. Exit Temperature: °F 237	9. Actual Volumetric Flow Rate: Acfm 311,700	10. Water Vapor: % 15.6

11. Maximum Dry Standard Flow Rate: Dscfm 199,288	12. Nonstack Emission Point Height: Feet N/A
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)

15. Emission Point Comment:

Stack exit temperature, flow rate and percent moisture reflect maximum operating conditions with respect to modeling.

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner. Emissions related to tons of cement clinker produced		
2. Source Classification Code (SCC): 30500706	3. SCC Units: Tons produced	
4. Maximum Hourly Rate: 125	5. Maximum Annual Rate: 1,022,000	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment: Maximum hourly production rate = 125 tons clinker/hour Maximum Annual Rate Based on 2,800 tons clinker per day (normal operation) = 116.67 tons/hour 116.67 tons/hour X 8760 hours/year = 1,022,000 tons/year clinker production		

Segment Description and Rate: Segment 2 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, and pre-calciner. Emissions related to tons of coal burned.		
2. Source Classification Code (SCC): 39000201	3. SCC Units: Tons	
4. Maximum Hourly Rate: 15	5. Maximum Annual Rate: 131,400	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 2-4 Expected	8. Maximum % Ash: 5-8 Expected	9. Million Btu per SCC Unit: 26*
10. Segment Comment: * Million BTUs per ton of dry coal based on AP-42 factors. Pre-heater (10MMBtu/hr). Kiln and pre-calciner input 390MMBtu/hr. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner.		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 3 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner. Emissions related to 1000 gallons of oil burned.		
2. Source Classification Code (SCC): 39000502	3. SCC Units: 1000 gallons	
4. Maximum Hourly Rate: 3.08	5. Maximum Annual Rate: 27,031 (100% usage)	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 0.2-1.0	8. Maximum % Ash: negligible	9. Million Btu per SCC Unit: 140
10. Segment Comment: Rinker can utilize a mixture of fuels for start-up of the cement kiln as well as non-routine operation (emergency fuel replacement). Estimated maximum hours of start-ups and non-routine events per year 28 hours per month. Pre-heater (10MMBtu/hr). Kiln and pre-calciner input 390MMBtu/hr. Raw Mill hot gas generator 32 MM Btu/hr total Btu input = 432. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner.		

Segment Description and Rate: Segment 4 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner. Emissions related to tons of petroleum coke burned.		
2. Source Classification Code (SCC):	3. SCC Units: tons	
4. Maximum Hourly Rate: 2.93	5. Maximum Annual Rate: 25,687	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 1.5 - 10	8. Maximum % Ash: 0.05-2.8	9. Million Btu per SCC Unit: 26.6
10. Segment Comment: Coal/Petroleum Coke are primary fuels for kiln/pre-calciner. Petcoke maximum feed percentage = 20% with coal.		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 5 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner. Emissions related to million cubic feet natural gas burned.		
2. Source Classification Code (SCC):	3. SCC Units: Million cubic feet	
4. Maximum Hourly Rate: 0.41 (100%)	5. Maximum Annual Rate: 3604 (100% usage) 475.2 (based on est. max)	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: negligible	8. Maximum % Ash: negligible	9. Million Btu per SCC Unit: 1050
10. Segment Comment: Rinker can utilize a mixture of fuels for start-up of the cement kiln as well as non-routine operation (emergency fuel replacement). Estimated maximum hours of start-ups and non-routine events per year 28 hours per month. Pre-heater (10MMBtu/hr). Kiln and pre-calciner input 390MMBtu/hr. Raw Mill hot gas generator 32 MM Btu/hr total Btu input = 432. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner.		

Segment Description and Rate: Segment 6 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner. Emissions related to tons tires burned.		
2. Source Classification Code (SCC):	3. SCC Units: tons	
4. Maximum Hourly Rate: 1.9	5. Maximum Annual Rate: 16,556	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 1 - 2	8. Maximum % Ash: 1 – 25.2	9. Million Btu per SCC Unit: 31
10. Segment Comment: Maximum tire usage is 15% of total heat input (390 MM Btu/hr X 15% = 58.5 MM Btu/hr		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 7 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, and calciner. Emissions related to 1000 gallons propane burned.		
2. Source Classification Code (SCC):	3. SCC Units: 1000 gallon	
4. Maximum Hourly Rate: 4.15 (kiln/pre-calciner only)	5. Maximum Annual Rate: 36,345 (100% usage)	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: negligible	8. Maximum % Ash: negligible	9. Million Btu per SCC Unit: 94
10. Segment Comment: Rinker can utilize a mixture of fuels for start-up of the cement kiln as well as non-routine operation (emergency fuel replacement). Estimated maximum hours of start-ups and non-routine events per year 28 hours per month. Kiln and pre-calciner input 390MMBtu/hr. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner.		

Segment Description and Rate: Segment 8 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater, pre-calciner and pre-calciner. Emissions related to tons high carbon fly ash burned.		
2. Source Classification Code (SCC):	3. SCC Units: tons	
4. Maximum Hourly Rate: 39	5. Maximum Annual Rate: 341,640 (100% usage)	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 0.9-2	8. Maximum % Ash: 1-2	9. Million Btu per SCC Unit: 10 average (5000-8000 Btu/lb range)
10. Segment Comment: Kiln and pre-calciner input 390MMBtu/hr. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner.		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 9 of 9

1. Segment Description (Process/Fuel Type): Cement kiln, clinker cooler, raw mill system, pre-heater and calciner. Emissions related to 1000 gallons of on-spec oil burned.		
2. Source Classification Code (SCC): 39000502	3. SCC Units: 1000 gallons	
4. Maximum Hourly Rate: 3.08	5. Maximum Annual Rate: 27,031 (100% usage)	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 0.2-1.0	8. Maximum % Ash: negligible	9. Million Btu per SCC Unit: 140
10. Segment Comment: Rinker can utilize a mixture of fuels for start-up of the cement kiln as well as non-routine operation (emergency fuel replacement). Estimated maximum hours of start-ups and non-routine events per year 28 hours per month. Pre-heater (10MMBtu/hr). Kiln and pre-calciner input 390MMBtu/hr. Raw Mill hot gas generator 32 MM Btu/hr total Btu input = 432. Coal/Petroleum Coke are primary fuels for kiln/pre-calciner. Only "on-spec" oil as defined in 40CFR279 will be used. The oil will not be hazardous waste as defined in Rule 62-210.200, F.A.C. or 40CFR part 261		

Segment Description and Rate: Segment __ of _

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x	2. Total Percent Efficiency of Control: See BACT Analysis, Main Report
3.Potential Emissions: 1,126.2 tons/year, 1000 lbs/hr	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operation: 1.95 lbs/ton clinker X 116.67 tons/hour = 227.5 lbs/hr (2,800 tons clinker/day)
227.5 lbs/hour X (8760-336 hrs)/2000 = 958.2 tpy

During startup, shutdown and non-routine activities, NO_x emissions will be:
8 lbs/ton clinker X max 125 tons/hour = 1000 lb/hr. The facility estimates that this may occur 336 hr/yr. The potential tpy associated with these activities are
1000 lbs/hr X 336 hr/yr/2000 = 168.0 tpy

Total Tons/Year = 958.2 + 168.0 = 1126.2 tpy

Please refer to Main Document, Section 3, for detailed description
Maximum clinker production rate = 3,000 tons per day

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Please refer to permit application document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO_2	2. Total Percent Efficiency of Control:
3.Potential Emissions: 122.7 tons per year, 57.5 lb/hr	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: Reference: BACT Analysis	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operation: 0.23 lbs/ton clinker X 116.67 tons/hour = 26.83 lbs/hr (2,800 tons clinker/day)
26.83 lbs/hour X (8760-336 hrs)/2000 = 113.0 tpy

During startup, shutdown and non-routine activities, maximum SO_x hourly emissions will be: 0.46 lbs/ton clinker X max 125 tons/hour = 57.5 lb/hr. The facility estimates this may occur 336 hr/yr. The potential tpy associated with these activities are 57.5 lbs/hr X 336 hr/yr/2000 = 9.66 tpy

Total Tons/Year = 113.0 + 9.66 = 122.7

Please refer to Main Document, Section 3, for detailed description
Maximum clinker production rate = 3,000 tons per day

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
SO_2 controlled by alkaline nature of cement kiln flue gas. See Main document.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 168.6 tons/year, 41.3 lb/hr	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year See Main Document	
6. Emission Factor: Reference: BACT Analysis	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operation:
0.2 lbs/ton kiln feed X 192.55 tons kiln feed/hour = 38.5 lb/hr (based on 4,620 tons feed per day).
38.5 lbs/hour X (8760 hrs)÷2000 = 168.6 tpy

Maximum Hourly Emissions and Feed Rate:
0.2 lbs/ton kiln feed X 206.3 tons kiln feed/hour = 41.3 lb/hr (based on 4,950 tons feed per day).

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See main document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM_{10}	2. Total Percent Efficiency of Control:
3. Potential Emissions: 168.6 tons/year, 41.3 lb/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year See Main Document	
6. Emission Factor: Reference: BACT Analysis	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operations:
0.2 lbs/ton kiln feed X 192.55 tons kiln feed/hour = 38.5 lb/hr (based on 4,620 tons feed per day).
38.5 lbs/hour X (8760 hrs) ÷ 2000 = 168.6 tpy

Maximum Hourly Emissions and Feed Rate:
0.2 lbs/ton kiln feed X 206.3 tons kiln feed/hour = 41.3 lb/hr (based on 4,950 tons feed per day).

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See main document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3.Potential Emissions: 2,133.6 tons per year, 1000 lbs/hr	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: BACT Analysis	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operation: 4 lbs/ton clinker X 116.67 tons/hour = 466.7 lbs/hr (2,800 tons clinker/day)
466.7 lbs/hour X (8760-336 hrs)/2000 = 1,965.6 tpy

During startup, shutdown and non-routine activities, maximum CO hourly emissions will be: 8 lbs/ton clinker X max 125 tons/hour = 1,000 lb/hr.
The facility estimates that this may occur 336 hr/yr. The potential tpy associated with these activities are
1,000 lbs/hr X 336 hr/yr/2000 = 168tpy

Total Tons/Year = 1,965.6 + 168 = 2,133.6
Please refer to Main Document, Section 3, for detailed description

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See main document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 105.35 tons per year, 71.3 lbs/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: BACT Analysis	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal Operation: 0.19 lbs/ton clinker X 116.67 tons/hour = 22.167 lbs/hr (2,800 tons clinker/day)
22.167 lbs/hour X (8760-336 hrs)/2000 = 93.37 tpy

During startup, shutdown and non-routine activities, maximum VOC hourly emissions will be: 0.57 lbs/ton clinker X max 125 tons/hour = 71.3 lb/hr.
The facility estimates that this may occur 336 hr/yr. The potential tpy associated with these activities are
71.3 lbs/hr X 336 hr/yr/2000 = 11.98 tpy

Total Tons/Year = 93.37 + 11.98 = 105.35 tpy
Please refer to Main Document, Section 3, for detailed description

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See main document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Lead (H110)	2. Total Percent Efficiency of Control:
3. Potential Emissions: 750 pounds/year, 0.09 lbs/hr	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: Review of test data from similar sources and best engineering judgment.	7. Emissions Method Code: 0

8. Calculation of Emissions:

Normal clinker production = 2,800 tons/day
7.3 X 10^{-4} lbs/ton clinker X 116.67 tons clinker/hour = 0.086 lbs/hr
0.086 X 8760 hr/yr = 750 pounds/year

Maximum Hourly Clinker Production = 3,000 tons/day
7.3 X 10^{-4} lbs/ton clinker X 125 tons clinker/hour = 0.09 lbs/hour

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See Main document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Mercury (H114)	2. Total Percent Efficiency of Control:
3. Potential Emissions: 150.2 pounds/year, 0.018 lbs/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: AP-42, Section 11.6 (January 1995)	7. Emissions Method Code: 0

8. Calculation of Emissions:

Maximum Hourly Clinker Production = 3,000 tons/day
1.47×10^{-4} lbs/ton clinker X 125 tons clinker/hour = 0.018 lbs/hr

Normal clinker production = 2,800 tons/day
1.47×10^{-4} lbs/ton clinker X 116.67 tons clinker/hour = 0.01715 lbs/hr
0.01715 X 8760 hr/yr = 150.2 pounds/year

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Berylium (H021)	2. Total Percent Efficiency of Control:
3.Potential Emissions: 0.67 pounds/year, 0.00008 lbs/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: AP-42, Section 11.6 (January 1995)	7. Emissions Method Code: 0

8. Calculation of Emissions:

Maximum Clinker Production = 3,000 tons/day
6.6 X 10^{-7} lbs/ton clinker X 125 tons clinker/hour = 0.00008 lbs/hr

Normal clinker production = 2,800 tons/day
6.6 X 10^{-7} lbs/ton clinker X 116.67 tons clinker/hour = 0.000077 lbs/hour
0.000077 X 8760 hr/yr = 0.67 pounds/year

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See Main Document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: H_2SO_4 (SAM)	2. Total Percent Efficiency of Control:
3.Potential Emissions: 5.1 tons per year, 1.25 lbs/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: Main Report, Section 3	7. Emissions Method Code: 0

8. Calculation of Emissions:

Maximum Clinker Production = 3,000 tons/day
0.01 lbs/ton clinker X 125 tons clinker/hour = 1.25 lbs/hour
1.25 lbs/hour X (8760)÷2000 = 5.5 tons/year

Normal clinker production = 2,800 tons/day
0.01 lbs/ton clinker X 116.67 tons clinker/hour = 1.17 lbs/hour
1.17 X 8760 hr/yr÷2000 = 5.1 tons/year

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
See Main Document for additional information.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Dixon/Furan	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.0024 pounds/year, 2.69E-07 lbs/hr	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: $1.7X10^{-10}$ gr/DSCFM @ 7% oxygen 311,700 ACFM Reference: 40 CFR 63 Subpart LLL TEQ	7. Emissions Method Code: 0

8. Calculation of Emissions:

311,700	acf / min	528 / 697	760 / 760	scf / acf	0.844	dscf / scf	=	199,288	dscfm @ 8.0% O2

$$199{,}288 \text{ dscfm} \left[\frac{20.9\% - 8.0\%}{20.9\% - 7.0\%} \right] = 184{,}950 \text{ dscfm adjusted to 7\% } O_2$$

1.70E-10	gr / dscf	184,950	dscf / min	7,000	lb / gr	60	min / hr	=	2.69E-07 lb/hr PCDD 0.0024 Pounds/yr

9. Potential/Estimated Fugitive Emissions Comment:
See Main Document for additional information.

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 225 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A Dust Collector 2G-08		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 194	7. Exit Diameter: Feet 1.7
8. Exit Temperature: °F 200	9. Actual Volumetric Flow Rate: Acfm 5,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 3,920	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A Dust Collector 2G-09		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 194	7. Exit Diameter: Feet 3.3
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 16,500	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 13,340	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 225	5. Maximum Annual Rate: 1,971,000	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	017 (2G-08)	N/A	EL
	017 (2G-09)	N/A	EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.336 lb/hour 1.47 tons/year	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: Dust Collector 2G-08 3,920 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.336 lbs/hr 0.336 lbs/hr X 8760 hrs/2000lbs/ton = 1.47 tons/year	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION
Section [2] of [18] Page

POLLUTANT DETAIL INFORMATION
[1] of [1]

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 1.143 lb/hour 5.01 tons/year	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0

8. Calculation of Emissions:

Dust Collector 2G-09

13,340 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 1.143 lbs/hr

1.143 lbs/hr X 8760 hrs/2000lbs/ton = 5.01 tons/year

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 1.48 lb/hour 6.48 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis Dust Collector 2G-09 13,340 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 1.143 lbs/hr 1.143 lbs/hr X 8760 hrs/2000lbs/ton = 5.01 tons/year Dust Collector 2G-08 3,920 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.336 lbs/hr 0.336 lbs/hr X 8760 hrs/2000lbs/ton = 1.47 tons/year Source Total: 1.14 lbs/hr + 0.336 = 1.476 lbs/hour 5.01 tons/yr + 1.47 tons/yr = 6.48 tons/year	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 225 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 30	7. Exit Diameter: Feet 1.4
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 3,750	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 3,032	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 225	5. Maximum Annual Rate: 1,971,000	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.26 lb/hour 1.14 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 3,032 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.26 0.26 lbs/hr X 4.38 = 1.14 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.26 lb/hour 1.14 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 210 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 30	7. Exit Diameter: Feet 1.4
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 3,750	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 3,032	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 210	5. Maximum Annual Rate: 1,839,600	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.0.26 lb/hour 1.14 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 3,032 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.26 0.26 lbs/hr X 4.38 = 1.14 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.26 lb/hour 1.14 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 125 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 32	7. Exit Diameter: Feet 1.6
8. Exit Temperature: °F 240	9. Actual Volumetric Flow Rate: Acfm 3,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 2,218	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 125	5. Maximum Annual Rate: 1,095,000	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.19 lb/hour 0.83 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 2,218 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.19 0.19 lbs/hr X 4.38 = 0.83 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.19 lb/hour 0.83 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 150 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 120	7. Exit Diameter: Feet 1.6
8. Exit Temperature: °F 95	9. Actual Volumetric Flow Rate: Acfm 4,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 3,729	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 150	5. Maximum Annual Rate: 1,314,000	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.32 lb/hour 1.4 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 3,729 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.32 0.32 lbs/hr X 4.38 = 1.4 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.32 lb/hour 1.40 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 18	5. Maximum Annual Rate: 157,680	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.15 lb/hour 0.64 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,697 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.145 0.145 lbs/hr X 4.38 = 0.64 typy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.15 lb/hour 0.64 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 104 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 203	7. Exit Diameter: Feet 1.6
8. Exit Temperature: °F 240	9. Actual Volumetric Flow Rate: Acfm 4,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 2,957	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 104	5. Maximum Annual Rate: 911,040	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.25 lb/hour 1.11 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 2,957 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.25 0.25 lbs/hr X 4.38 = 1.11 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.25 lb/hour 1.11 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 276 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 15	7. Exit Diameter: Feet 2.3
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 12,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 9,702	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 276	5. Maximum Annual Rate: 2,417,760	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.83 lb/hour 3.64 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 9702 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.83 0.83 lbs/hr X 4.38 = 3.64 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.83 lb/hour 3.64 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 411 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 130	7. Exit Diameter: Feet 4
8. Exit Temperature: °F 212	9. Actual Volumetric Flow Rate: Acfm 35,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 26,950	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 411	5. Maximum Annual Rate: 3,600,360	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 2.31 lb/hour 10.12 tons/year	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 26,950 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 2.31 2.31 lbs/hr X 4.38 = 10.12 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 2.31 lb/hour 10.12 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Particulate Matter –Vents to Dust Collector 2N-91. 2N-91 is shared with the Air Slide (2N-03) and Bucket Elevator (2N-04) and Cement Cooler (2N-26)

2. Control Device or Method Code(s): 017

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 411 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: This source shares Dust Collector 2N-91 with Air Slide (2N-03) and Bucket Elevator (2N-04) and Cement Cooler (2N-26)		
5. Discharge Type Code: V	6. Stack Height: Feet 46	7. Exit Diameter: Feet 1.8
8. Exit Temperature: °F 200	9. Actual Volumetric Flow Rate: Acfm 6,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 4,704	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions. The Air Slide (source 2N-03) shares this dust collector		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 411	5. Maximum Annual Rate: 3,600,360	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: See 2N-04 Bucket Elevator tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: See 2N-04 Bucket Elevator Baghouse	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: See Bucket Elevator Baghouse 2N-91
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Particulate Matter –Vents to Dust Collector 2N-91. 2N-91 is shared with Air Slide (2N-03) and Bucket Elevator (2N-04) and Cement Cooler (2N-26)

2. Control Device or Method Code(s): 017

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 411 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Air Slide (2N-03) and Bucket Elevator (2N-04) and Cement Cooler (2N-26)		
5. Discharge Type Code: V	6. Stack Height: Feet 46	7. Exit Diameter: Feet 1.8
8. Exit Temperature: °F 200	9. Actual Volumetric Flow Rate: Acfm 6,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 4,704	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 411	5. Maximum Annual Rate: 3,600,360	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.40 lb/hour 1.77 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 4,704 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.403 lbs/hr 0.403 lbs/hr X 4.38 = 1.77 tpy Air Slide 2N03 and Cement Cooler 2N-26 also vent to baghouse 2N-91	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.40 lb/hour 1.77 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 411 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	 7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 130	7. Exit Diameter: Feet 7.5
8. Exit Temperature: °F 160	9. Actual Volumetric Flow Rate: Acfm 128,600	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 107,327	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 411	5. Maximum Annual Rate: 3,600,360	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 9.20 lb/hour 40.29 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 107,327 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 9.20 9.199 lbs/hr X 4.38 = 40.29 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 9.20 lb/hour 40.29 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 138 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Air Slide (2N-03) and Bucket Elevator (2N-04) and Cement Cooler (2N-26)		
5. Discharge Type Code: V	6. Stack Height: Feet 46	7. Exit Diameter: Feet 1.8
8. Exit Temperature: °F 200	9. Actual Volumetric Flow Rate: Acfm 6,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 4,704	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	

15. Emission Point Comment:

Stack characteristics are at typical conditions.

This source vents through baghouse 2N-91 along with sources Air Slide (2N-03) and Bucket Elevator (2N-04)

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 138	5. Maximum Annual Rate: 1,208,880	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: See Bucket Elevator 2N-04 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: See Bucket Elevator 2N-04 with baghouse 2N-91	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: See Bucket Elevator 2N-04
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 138 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Dust Collector 2Q-10		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Cement Transport; 2P-01		
5. Discharge Type Code: V	6. Stack Height: 203	7. Exit Diameter: Feet 1.6
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 3,700	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 2,991	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Dust Collector 2Q-13		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Cement Transport; 2P-01		
5. Discharge Type Code: V	6. Stack Height: Feet 203	7. Exit Diameter: Feet 2.1
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 12,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 9,702	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 138	5. Maximum Annual Rate: 1,208,880	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	017 Dust Collector 2Q-10	N/A	EL
PM	017 Dust Collector 2Q-13	N/A	EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM (Dust Collector 2Q-10)	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.26 lb/hour 1.12 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 2,991 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.26 2Q-10 0.26 lbs/hr X 4.38 = 1.12 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM (Dust Collector 2Q-13)	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.83 lb/hour 3.64 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 9,702 DSCFM X 12,000 X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.83 2Q-13 0.83 lbs/hr X 4.38 = 3.64 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION
Section [14] of [18]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.26 lb/hour 1.12 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis Dust Collector 2Q-10	

EMISSIONS UNIT INFORMATION
Section [14] of [18]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.83 lb/hour 3.64 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis Dust Collector 2Q-13	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 540 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 30	7. Exit Diameter: Feet 1.4
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 3,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 2,426	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 540	5. Maximum Annual Rate: 4,730,400	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.21 lb/hour 0.91 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 2,426 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.208 0.208 lbs/hr X 4.38= 0.91	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.21 lb/hour 0.91 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 540 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 30	7. Exit Diameter: Feet 1.4
8. Exit Temperature: °F 180	9. Actual Volumetric Flow Rate: Acfm 3,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 2,426	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 540	5. Maximum Annual Rate: 4,730,400	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.21 lb/hour 0.91 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 2,426 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.21 0.208 lbs/hr X 4.38 = 0.91 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.21 lb/hour 0.91 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 18 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 40	7. Exit Diameter: Feet 3.9
8. Exit Temperature: °F 150	9. Actual Volumetric Flow Rate: Acfm 22,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 18,662	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 18	5. Maximum Annual Rate: 157,680	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 1.60 lb/hour 7.01 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 18,662 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 1.60 1.6 lbs/hr X 4.38 = 7.01 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 1.60 lb/hour 7.01 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 18 short tons/hour	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: N/A		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: Feet 40	7. Exit Diameter: Feet 1.1
8. Exit Temperature: °F 150	9. Actual Volumetric Flow Rate: Acfm 2,000	10. Water Vapor: % 2
11. Maximum Dry Standard Flow Rate: Dscfm 1,697	12. Nonstack Emission Point Height: Feet N/A	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 360 North (km): 3162.5	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack characteristics are at typical conditions.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Cement manufacturing, tons of material handled		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: Tons transferred or handled	
4. Maximum Hourly Rate: 18	5. Maximum Annual Rate: 157,680	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.15 lb/hour 0.64 tons/year	4. Synthetically Limited? ☐ Yes [X] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year N/A	
6. Emission Factor: BACT Reference: Main Report	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,697 DSCFM X 60 X 0.01 grains/DSCFM X 1 lb/7,000 grains = 0.145 0.145 lbs/hr X 4.38 = 0.64 typy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1 PM

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 grains/DSCF	4. Equivalent Allowable Emissions: 0.15 lb/hour 0.64 tons/year
5. Method of Compliance: Visual observations	
6. Allowable Emissions Comment (Description of Operating Method): Based on BACT Analysis	

Appendix C-1

Rinker Brooksville Plant Unit II:
SNCR Cost Estimates

Appendix C-1

Rinker Brooksville Plant Unit II: SNCR Cost Estimates

(All costs are in 2004 dollars, unless noted otherwise)

	GAS STREAM and EMISSION PARAMETERS	
-- Precalciner capacity (tons clinker/day):	2,800	[Rinker]
-- Uncont.NOx--coal comb. (lb/ton clinker)	2.7	[Polysius]
-- Uncont.NOx--coal comb. (lb/day):	7,560	[calculated]
-- Uncont.NOx--coal comb. (tons/year):	1,380	[calculated]
-- Control efficiency (%):	27.8	[calculated]
-- Controlled NOx (lb/ton clinker):	1.95	[Polysius]
-- Controlled NOx (tons/year):	996	[calculated]
-- NOx removed (tons/year):	383	[calculated]
-- Flue gas flow, post-baghouse (acfm):	324,000	[Polysius]
-- Flue gas temperature, post-baghouse (°F):	350	[Polysius]
-- Supplemental coal requirement (tons/day):	0.5	[Polysius - thermal efficiency reduction attributable to NOx controls - coal equivalent]
-- Ammonia requirement (tons/day):	5.58	[Polysius]
-- Electricity - NH_3 injection (kW)	75.0	[Polysius]

Direct Capital Costs

Equipment Costs		$460,000	Vendor Estimate
Instrumentation		$60,000	Vendor Estimate
Taxes	6%	$31,200	State Sales Tax
Freight	10%	$52,000	EPA, Control Cost Manual, % of Equipment Cost
Total Direct Capital Costs:		$603,200	

Direct Installation Costs

Foundation and Supports	$48,256	8% of TDCC, EPA, Control Cost Manual
Handling and Erection	$84,448	14% of TDCC, EPA, Control Cost Manual
Electrical	$60,320	10% of TDCC, EPA, Control Cost Manual
Piping	$90,480	15% of TDCC, EPA, Control Cost Manual
Painting	$6,032	1% of TDCC, EPA, Control Cost Manual
Site Prep	$25,000	Engineering Estimate
Buildings	$50,000	Engineering Estimate
Total Direct Costs:	$364,536	

Indirect Costs

Engineering Services Package+Startup	$90,000	Vendor Estimate
Construction and Field Expenses	$50,000	Vendor Estimate
Contractor Fees	$10,000	Vendor Estimate
Performance Test	$3,645	1% of TDC, EPA, Control Cost Manual
Contingencies	$145,160	15% of TDCC+TDC, EPA, Control Cost Manual, SNCR Section
Total Indirect Costs:	$298,806	
Total Capital Investment (TCI)	$1,266,542	

ANNUAL COSTS

Inputs:

Operating factor (hours/year):	8,760	
Ammonia price ($/ton):	$176	[Polysius]
Electricity price ($/kWh):	$0.050	[DOE/EIA "Monthly Energy Review," Sept. 2004]
Coal price ($/ton):	$53.67	[DOE/EIA "Quarterly Coal Consumption and Quality Report--Mfg Plants," 10/4/04]
Annual interest rate (REAL,fractional):	0.07	[OMB Circular, 1992]
Control equipment life (years):	20	
Capital recovery factor:	0.0944	[calculated]

Costs:

Operating Labor	$75,000	2,000 man-hr @ $37.5 /man-hr
Supervisory	$11,250	15% of Operating Costs, EPA, Control Cost Manual
Maintenance Labor:	$75,000	2,000 man-hr @ $37.5 /man-hr
Maintenance Materials:	$75,000	100% of Maintenance Labor, EPA, Control Cost Manual
Ammonia:	$358,596	[calculated]
Electricity (aqueous NH_3 injection):	$32,850	[calculated]
Supplemental coal:	$9,795	[calculated - 0.5 tons coal/day x $53.67/ton coal x 365 day/yr]
Overhead	$141,750	60% of total labor and maintenance materials, EPA, Control Cost Manual
Taxes, insurance, & administration:	$50,662	4% of TCI, EPA, Control Cost Manual
Capital recovery:	$119,553	9.44% of TCI, EPA, Control Cost Manual
TOTAL ANNUAL COST:	$949,455	[calculated]

AVG. COST-EFFECTIVENESS ($/ton NOx): $ 2,477 [calculated] Tons Removed = 383

NOTE: [1] Source of each number appears in brackets.

Appendix C-2

Rinker Brooksville Plant Unit II:
SCR Cost Estimates

Appendix C-2

Rinker Brooksville Plant Unit II: SCR Cost Estimates

(All costs are in 2004 dollars, unless noted otherwise)

GAS STREAM and EMISSION PARAMETERS

-- Precalciner capacity (tons clinker/day):	2,800	[Rinker]
-- Uncont.NOx--coal comb. (lb/ton clinker)	2.7	[Polysius]
-- Uncont.NOx--coal comb. (lb/day):	7,560	[calculated]
-- Uncont.NOx--coal comb. (tons/year):	1,380	[calculated]
-- Control efficiency (%):	37	[calculated]
-- Controlled NOx (lb/ton clinker):	1.7	[Polysius]
-- Controlled NOx (tons/year):	869	[calculated]
-- NOx removed (tons/year):	511	[calculated]
-- Flue gas flow, post-baghouse (acfm):	324,000	[Polysius]
-- Flue gas temperature, post-baghouse (°F):	350	[Polysius]
-- Supplemental coal requirement (tons/day):	0.50	[Polysius - thermal efficiency reduction attributable to NOx
-- Ammonia requirement (tons/day):	5.58	[Polysius]
-- Electricity - NH_3 injection (kW)	75.0	[Polysius]

Direct Capital Costs

Equipment Costs	$2,000,000	Vendor Estimate
Instrumentation	$100,000	Vendor Estimate
Taxes 6%	$126,000	State Sales Tax
Freight 10%	$210,000	EPA, Control Cost Manual, % of Equipment Cost
Total Direct Capital Costs:	$2,436,000	

Direct Installation Costs

Foundation and Supports	$194,880	8%	of TDCC, EPA, Control Cost Manual
Handling and Erection	$341,040	14%	of TDCC, EPA, Control Cost Manual
Electrical	$243,600	10%	of TDCC, EPA, Control Cost Manual
Piping	$365,400	15%	of TDCC, EPA, Control Cost Manual
Painting	$24,360	1%	of TDCC, EPA, Control Cost Manual
Site Prep	$50,000	Engineering Estimate	
Buildings	$75,000	Engineering Estimate	
Total Direct Costs:	$1,294,280		

Indirect Costs

Engineering Services Package+Startup	$180,000	Vendor Estimate	
Construction and Field Expenses	$100,000	Vendor Estimate	
Contractor Fees	$50,000	Vendor Estimate	
Performance Test	$12,943	1 %	of TDC, EPA, Control Cost Manual
Contingencies	$559,542	15 %	of TDCC+TDC, EPA, Control Cost Manual, SCR Section
Total Indirect Costs:	$902,485		
Total Capital Investment (TCI)	$4,632,765		

ANNUAL COSTS

Inputs:		
Operating factor (hours/year):	8,760	
Ammonia price ($/ton):	$176	[Polysius]
Electricity price ($/kWh):	$0.05	[DOE/EIA "Monthly Energy Review," Sept. 2004]
Coal price ($/ton):	$53.67	[DOE/EIA "Quarterly Coal Consumption and Quality Report--Mfg Plants," 10/4/04]
Annual interest rate (REAL,fractional):	0.07	[OMB Circular, 1992]
Control equipment life (years):	20.0	[engineering judgment]
Capital recovery factor:	0.0944	[calculated]

Costs:			
Operating Labor	$75,000	2000 man-hr $37.5 /man-hr	
Supervisory	$11,250	15%	of Operating Costs, EPA, Control Cost Manual
Maintenance Labor:	$37,500	1000 man-hr $37.5 /man-hr	
Maintenance Materials:	$37,500	100%	of Maintenance Labor, EPA, Control Cost Manual
Catalyst Replacement	$602,912	67 % of equip cost = (Cost + Taxes + Freight) * CRF, CRF = 0.3813 (catalyst life = 3 years, i = 7%)	
Ammonia	$358,596	[calculated]	
Electricity:	$7,641	[calculated]	
Supplemental coal:	$9,795	[calculated - kiln thermal efficiency reduction attributable to NOx controls]	
Reheater Fuel	$5,849,928	$7.50 /decatherm	89 MMBtu/hr (reheat from 350 to 750 °F)*
Overhead	$96,750	60%	% total labor and maintenance materials, EPA, Control Cost Manual
Taxes, insurance, & administration:	$185,311	4%	of TCI, EPA, Control Cost Manual
Capital recovery:	$437,300	9.44 %	of TCI, EPA, Control Cost Manual
TOTAL ANNUAL COST:	$7,709,482	[calculated]	
AVG. COST-EFFECTIVENESS ($/ton NOx):	$15,087	[calculated]	Tons removed = 511
INCREMENTAL COST-EFFECTIVENESS OVER SNCR ($/ton NOx)		$52,916	[calculated]

NOTE: [1] Source of each number appears in brackets.

*Reheat calculation:

324,000	acf	530	scf	0.070	lb	0.25	Btu	60	min			400	°F rise	=	89 MMBtu/
	min	810	acf		scf		lb-°F		hr	1E+06	Btu				hr

Appendix C-3

Rinker Brooksville Plant Unit II:
Cost Estimates for SO_2 Control
(Technology 1)

Appendix C-3

Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control

(Technology 1: Dry Injection of Hydrated Lime into Preheat Tower)

	SO_2 Control Device When Operating		Time-Weighted Facility Averages		
	Raw Mill	Dry Injection	w/o Dry Injection	with Dry Injection	Source/Explanation
Gas Stream and Performance Parameters					
-- Operating time as % of calendar year	85%	15%	100%	100%	
-- Precalciner capacity (tons clinker/day)	2,800	2,800	2,800	2,800	[Rinker]
--Uncontrolled emission (lb/ton clinker)	0.372	0.372	0.372	0.372	[Polysius]
--Uncontrolled emission (ton/day)	0.521	0.521	0.521	0.521	[Calculated]
-- Uncontrolled emission (ton/yr):	162	28.5	190	190	[Calculated]
-- Control efficiency (%):	45%	45%	38.3%	45.0%	[Calculated]
-- Controlled SO_2 (lb/ton clinker):	0.205	0.205	0.230	0.205	[Polysius]
-- Controlled SO_2 (ton/yr):	89.0	15.7	118	105	[Calculated]
-- SO_2 removed (ton/yr):	72.8	12.8	72.8	85.6	[Calculated]
-- Flue gas flow, pre-baghouse (acfm):	324,000	324,000	324,000	324,000	[Polysius]
-- Hydrated lime requirement (tons/day):	0	0.90			[Calculated @ 1.5 stoich. ratio to uncontr. SO_2]
-- Electricity - I. D. fan pressure loss (kW)	Base	190			[Calculated @ 3.0 in. w.c. loss in dry injection tower]
Direct Capital Costs					
Equipment Costs	Base	$300,000			RTP Estimate
Instrumentation & Ancillary Equip.	Base	Included			RTP Estimate
Taxes 6%	Base	$18,000			State Sales Tax
Freight 5%	Base	$15,000			EPA, Control Cost Manual, % of Equipment Cost
Total Direct Capital Costs:	Base	$333,000			
Direct Installation Costs					
Foundation and Supports	Base	$39,960			12% of TDCC, EPA, Control Cost Manual
Handling and Erection	Base	$133,200			40% of TDCC, EPA, Control Cost Manual
Electrical	Base	$3,330			1% of TDCC, EPA, Control Cost Manual
Piping	Base	$99,900			30% of TDCC, EPA, Control Cost Manual
Painting	Base	$3,330			1% of TDCC, EPA, Control Cost Manual
Site Prep	Base	$20,000			Engineering Estimate
Buildings	Base	$25,000			Engineering Estimate
Total Direct Installation Costs:	Base	$324,720			
Indirect Costs					
Engineering	Base	$33,300			10% of TDCC, EPA, Control Cost Manual
Construction and Field Expenses	Base	$33,300			10% of TDCC, EPA, Control Cost Manual
Contractor Fees	Base	$33,300			10% of TDCC, EPA, Control Cost Manual
Startup & Performance Test	Base	$6,660			2% of TDCC, EPA, Control Cost Manual
Contingencies	Base	$9,990			3% of TDCC, EPA, Control Cost Manual
Total Indirect Costs:	Base	$116,550			
Total Capital Investment (TCI)	Base	$774,270	Base	$774,270	
ANNUAL COSTS					
Inputs:					
Operating factor (hours/year):	7,446	1,314	8,760	8,760	
Hydrated lime price ($/ton):	$100	$100			[Polysius]
Electricity price ($/kWh):	$0.05	$0.05			[DOE/EIA "Monthly Energy Review," Sept. 2004]
Annual interest rate (REAL,fractional):	0.07	0.07			[OMB Circular, 1992]
Control equipment life (years):	20.0	20.0			[Engineering Judgment]
Capital recovery factor:	0.0944	0.0944			[Calculated]
Costs:					
Operating Labor	Base	$20,625			550 man-hr $37.5 /man-hr
Supervisory	Base	$3,094			15% of Operating Costs, EPA, Control Cost Manual
Maintenance Labor:	Base	$20,625			550 man-hr $37.5 /man-hr
Maintenance Materials:	Base	$20,625			100% of Maintenance Labor, EPA, Control Cost Manual
Hydrated Lime	Base	$4,953			[Calculated]
Electricity:	Base	$12,480			[Calculated]
Overhead	Base	$38,981			60% % total labor & maint. mat'ls, EPA, Control Cost Manual
Taxes, insurance, & administration:	Base	$30,971			4% of TCI, EPA, Control Cost Manual
Capital recovery:	Base	$73,086			9.44% of TCI, EPA, Control Cost Manual
TOTAL ANNUAL COST:	Base	$225,439	Base	$225,439	[Calculated]

AVG. & INCR. COST-EFFECTIVENESS ($/ton SO_2): **$17,547** Annual tons removed by dry lime injection tower = 12.8

*"Raw Mill" = SO_2 controlled via gas contact with alkaline raw materials in raw mill. "Tower" = Raw mill bypassed; SO_2 controlled via hydrated lime dry injection tower.

Appendix C-4

Rinker Brooksville Plant Unit II:
Cost Estimates for SO_2 Control
(Technology 2)

Appendix C-4

Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control

(Technology 2: Dry Injection of Hydrated Lime into Vendor-Supplied Dry Injection Tower)

	SO_2 Control Device When Operating		Time-Weighted Facility Averages		
	Raw Mill	Dry Injection	w/o Dry Injection	with Dry Injection	
Gas Stream and Performance Parameters					
-- Operating time as % of calendar year	85%	15%	100%	100%	
-- Precalciner capacity (tons clinker/day)	2,800	2,800	2,800	2,800	[Rinker]
--Uncontrolled emission (lb/ton clinker)	0.372	0.372	0.372	0.372	[Polysius]
--Uncontrolled emission (ton/day)	0.521	0.521	0.521	0.521	[Calculated]
-- Uncontrolled emission (ton/yr):	162	28.5	190	190	[Calculated]
-- Control efficiency (%):	45%	45%	38.3%	45.0%	[Calculated]
-- Controlled SO_2 (lb/ton clinker):	0.205	0.205	0.230	0.205	[Polysius]
-- Controlled SO_2 (ton/yr):	89.0	15.7	118	105	[Calculated]
-- SO_2 removed (ton/yr):	72.8	12.8	72.8	85.6	[Calculated]
-- Flue gas flow, pre-baghouse (acfm):	324,000	324,000	324,000	324,000	[Polysius]
-- Hydrated lime requirement (tons/day):	0	0.90			[Calculated @ 1.5 stoich. ratio to uncontr. SO_2]
-- Electricity - I. D. fan pressure loss (kW)	Base	190			[Calculated @ 3.0 in. w.c. across dry injection tower]
Direct Capital Costs					
Equipment Costs	Base	$405,000			Vendor Estimate (WAPC)
Instrumentation & Ancillary Equip.	Base	$150,000			Vendor Estimate (WAPC)
Taxes 6%	Base	$33,300			State Sales Tax
Freight 5%	Base	$27,750			EPA, Control Cost Manual, % of Equipment Cost
Total Direct Capital Costs:	Base	$616,050			
Direct Installation Costs					
Foundation and Supports	Base	$73,926			12% of TDCC, EPA, Control Cost Manual
Handling and Erection	Base	$246,420			40% of TDCC, EPA, Control Cost Manual
Electrical	Base	$6,161			1% of TDCC, EPA, Control Cost Manual
Piping	Base	$184,815			30% of TDCC, EPA, Control Cost Manual
Painting	Base	$6,161			1% of TDCC, EPA, Control Cost Manual
Site Prep	Base	$40,000			Engineering Estimate
Buildings	Base	$25,000			Engineering Estimate
Total Direct Costs:	Base	$582,482			
Indirect Costs					
Engineering	Base	$61,605			10% of TDCC, EPA, Control Cost Manual
Construction and Field Expenses	Base	$61,605			10% of TDCC, EPA, Control Cost Manual
Contractor Fees	Base	$61,605			10% of TDCC, EPA, Control Cost Manual
Performance Test	Base	$12,321			2% of TDCC, EPA, Control Cost Manual
Contingencies	Base	$18,482			3% of TDCC+TDC, EPA Control Cost Manual
Total Indirect Costs:	Base	$215,618			
Total Capital Investment (TCI)	Base	$1,414,150	Base	$1,414,150	
ANNUAL COSTS					
Inputs:					
Operating factor (hours/year):	7,446	1,314	8,760	8,760	
Hydrated lime price ($/ton):	$100	$100			[Polysius]
Electricity price ($/kWh):	$0.05	$0.05			[DOE/EIA "Monthly Energy Review," Sept. 2004]
Annual interest rate (REAL,fractional):	0.07	0.07			[OMB Circular, 1992]
Control equipment life (years):	20.0	20.0			[Engineering Judgment]
Capital recovery factor:	0.0944	0.0944			[Calculated]
Costs:					
Operating Labor	Base	$20,625			550 man-hr $37.5 /man-hr
Supervisory	Base	$3,094			15% of Operating Costs, EPA, Control Cost Manual
Maintenance Labor:	Base	$20,625			550 man-hr $37.5 /man-hr
Maintenance Materials:	Base	$20,625			100% of Maint. Labor, EPA Control Cost Manual
Hydrated Lime	Base	$4,953			[Calculated]
Electricity:	Base	$12,480			[Calculated]
Overhead	Base	$38,981			60% % total labor and maint. mat'ls, EPA, Control Cost Manual
Taxes, insurance, & administration:	Base	$56,566			4% of TCI, EPA, Control Cost Manual
Capital recovery:	Base	$133,486			9.44 % of TCI, EPA, Control Cost Manual
TOTAL ANNUAL COST:	**Base**	**$311,435**	**Base**	**$311,435**	[Calculated]

AVG. & INCR. COST-EFFECTIVENESS ($/ton SO_2): **$24,241** Annual tons removed by dry lime injection tower = 12.8

*"Raw Mill" = SO_2 controlled via gas contact with alkaline raw materials in raw mill. "Tower" = Raw mill bypassed; SO_2 controlled via hydrated lime dry injection tower.

Appendix C-5

Rinker Brooksville Plant Unit II:
Cost Estimates for SO_2 Control
(Technology 3)

Appendix C-5

Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control

(Technology 3: Vendor-Supplied Spray Dryer Absorption System)

Gas Stream and Performance Parameters

-- Operating time as % of calendar year	100%	[Assumed for Calculation]		
-- Precalciner capacity (tons clinker/day)	2,800	[Rinker]		
--Uncontrolled emiss. (ton/day)	0.322	[Calculated]		
--Uncontrolled Emiss. (lb/ton clinker)	0.23	[Polysius]		
-- Uncontrolled Emiss. at FGD inlet (ton/yr):	118	[Calculated]		
-- FGD control efficiency (%):	70%	[Vendor Estimate]		
-- FGD controlled SO_2 (lb/ton clinker):	0.069	[Polysius]		
-- Controlled SO_2 (ton/yr):	35.3	[Calculated]		
-- SO_2 removed (ton/yr):	82.3	[Calculated]		
-- Flue gas flow, pre-baghouse (acfm):	324,000	[Polysius]		
-- Quicklime requirement (tons/day):	0.423	[Calculated @	1.5	stoichiometric ratio to uncontr. SO_2]
-- Electricity - I. D. fan pressure loss (kW)	380	[Calculated @	6.0	in. w.c. loss across FGD system]

Direct Capital Costs

Equipment Costs	$3,200,000	RTP Estimate; does not include fabric filters (included elsewhere in Polysius cost estimate)
Instrumentation & Ancillary Equip.	Included	RTP Estimate
Taxes 6%	$192,000	State Sales Tax
Freight 5%	$160,000	EPA, Control Cost Manual, % of Equipment Cost
Total Direct Capital Costs:	$3,552,000	

Direct Installation Costs

Foundation and Supports	$426,240	12%	of TDCC, EPA, Control Cost Manual
Handling and Erection	$1,420,800	40%	of TDCC, EPA, Control Cost Manual
Electrical	$35,520	1%	of TDCC, EPA, Control Cost Manual
Piping	$1,065,600	30%	of TDCC, EPA, Control Cost Manual
Painting	$35,520	1%	of TDCC, EPA, Control Cost Manual
Site Prep	$40,000	Engineering Estimate	
Buildings	$25,000	Engineering Estimate	
Total Direct Costs:	$3,048,680		

Indirect Costs

Engineering	$355,200	10%	of TDCC, EPA, Control Cost Manual
Construction and Field Expenses	$355,200	10%	of TDCC, EPA, Control Cost Manual
Contractor Fees	$355,200	10%	of TDCC, EPA, Control Cost Manual
Startup & Performance Test	$71,040	2%	of TDCC, EPA, Control Cost Manual
Contingencies	$106,560	3%	of TDCC+TDC, EPA Control Cost Manual, SCR Section
Total Indirect Costs:	$1,243,200		
Total Capital Investment (TCI)	$7,843,880		

ANNUAL COSTS

Inputs:

Operating factor (hours/year):	8,760	
Quicklime price ($/ton):	$121	[Feb. 2005 negotiated price Tampa Bay Water]
Electricity price ($/kWh):	$0.05	[DOE/EIA "Monthly Energy Review," Sept. 2004]
Annual interest rate (REAL,fractional):	0.07	[OMB Circular, 1992]
Control equipment life (years):	20.0	[Engineering Judgment]
Capital recovery factor:	0.0944	[Calculated]

Costs:

Operating Labor	$75,000	2,000	man-hr	$37.5	/man-hr
Supervisory	$11,250	15%	of Operating Costs, EPA, Control Cost Manual		
Maintenance Labor:	$75,000	2,000	man-hr	$37.5	/man-hr
Maintenance Materials:	$75,000	100%	of Maintenance Labor, EPA, Control Cost Manual		
Hydrated Lime	$18,665	[Calculated]			
Electricity:	$166,404	[Calculated]			
Overhead	$141,750	60%	of total labor & maint. mat'ls, EPA, Control Cost Manual		
Taxes, insurance, & administration:	$313,755	4%	of TCI, EPA, Control Cost Manual		
Capital recovery:	$740,407	9.44	% of TCI, EPA, Control Cost Manual		
TOTAL ANNUAL COST:	$1,617,231	[Calculated]			

AVG. COST-EFFECTIVENESS ($/ton SO_2): **$19,657** Ton/yr SO_2 removed = 82

Appendix C-6

Rinker Brooksville Plant Unit II:
Cost Estimates for SO_2 Control
(Technology 4)

Appendix C-6

Rinker Brooksville Plant Unit II: Cost Estimates for SO_2 Control

(Technology 4: Wet Limestone Flue Gas Desulfurization System)

Gas Stream and Performance Parameters

-- Operating time as % of calendar year	100%	[Assumed for Calculation]		
-- Precalciner capacity (tons clinker/day)	2,800	[Rinker]		
--Uncontrolled emiss. (ton/day)	0.322	[Calculated]		
--Uncontrolled Emiss. (lb/ton clinker)	0.23	[Calculated]		
-- Uncontrolled Emiss. at FGD inlet (ton/yr):	118	[Calculated]		
-- FGD control efficiency (%):	95%	[vendor estimate]		
-- FGD controlled SO_2 (lb/ton clinker):	0.012	[Calculated]		
-- Controlled SO_2 (ton/yr):	5.88	[Calculated]		
-- SO_2 removed (ton/yr):	112	[Calculated]		
-- Flue gas flow (acfm):	324,000	[Polysius]		
-- Limestone requirement (tons/day):	0.50	[Calculated @	1.0	stoichiometric ratio to uncontr. SO_2]
--FGD byproduct; $CaSO_4 \cdot 2H_2O$/water (ton/yr)	442	[Calculated]		
-- Electricity - I. D. fan pressure loss (kW)	380	[Calculated @	6.0	in. w.c. loss across FGD system]

Direct Capital Costs

Equipment Costs	$6,000,000	RTP Estimate	
Instrumentation & Ancillary Equip.	Included	RTP Estimate	
Taxes 6%	$360,000	State Sales Tax	
Freight 5%	$300,000	EPA, Control Cost Manual, % of Equipment Cost	
Total Direct Capital Costs:	$6,660,000		

Direct Installation Costs

Foundation and Supports	$799,200	12%	of TDCC, EPA, Control Cost Manual
Handling and Erection	$2,664,000	40%	of TDCC, EPA, Control Cost Manual
Electrical	$66,600	1%	of TDCC, EPA, Control Cost Manual
Piping	$1,998,000	30%	of TDCC, EPA, Control Cost Manual
Painting	$66,600	1%	of TDCC, EPA, Control Cost Manual
Site Prep	$100,000	Engineering Estimate	
Buildings	$100,000	Engineering Estimate	
Total Direct Costs:	$5,794,400		

Indirect Costs

Engineering	$666,000	10%	of TDCC, EPA, Control Cost Manual
Construction and Field Expenses	$666,000	10%	of TDCC, EPA, Control Cost Manual
Contractor Fees	$666,000	10%	of TDCC, EPA, Control Cost Manual
Startup & Performance Test	$133,200	2%	of TDCC, EPA, Control Cost Manual
Contingencies	$199,800	3%	of TDCC+TDC, EPA Control Cost Manual, SCR Section
Total Indirect Costs:	$2,331,000		
Total Capital Investment (TCI)	$14,785,400		

ANNUAL COSTS

Inputs:

Operating factor (hours/year):	8,760	
Limestone price ($/ton):	$25	[RTP Estimate]
Wet sludge byproduct disposal ($/ton)	$15	[RTP Estimate]
Electricity price ($/kWh):	$0.05	[DOE/EIA "Monthly Energy Review," Sept. 2004]
Annual interest rate (REAL,fractional):	0.07	[OMB Circular, 1992]
Control equipment life (years):	20.0	[engineering judgment]
Capital recovery factor:	0.0944	[Calculated]

Costs:

Operating Labor	$150,000	4,000	man-hr $37.5 /man-hr	
Supervisory	$22,500	15%	of Operating Costs, EPA, Control Cost Manual	
Maintenance Labor:	$150,000	4,000	man-hr $37.5 /man-hr	
Maintenance Materials:	$150,000	100%	of Maintenance Labor, EPA, Control Cost Manual	
Limestone	$4,591	[Calculated]		
Wet sludge byproduct disposal	$6,628	[Calculated]		
Electricity:	$166,404	[Calculated]		
Overhead	$283,500	60%	% total labor and maint. mat'ls, EPA, Control Cost Manual	
Taxes, insurance, & administration:	$591,416	4%	of TCI, EPA, Control Cost Manual	
Capital recovery:	$1,395,637	9.44	% of TCI, EPA, Control Cost Manual	
TOTAL ANNUAL COST:	**$2,920,676**	[Calculated]		
AVG. COST-EFFECTIVENESS ($/ton SO_2):	**$26,158**	Ton/yr SO_2 removed =	112	

Attachment B

Letters from Polysius Corp. Regarding
Kiln Maximum Design Capacity and Heat Input

Polysius Corp.
A **ThyssenKrupp** Technologies Company

180 Interstate North Parkway
Atlanta, Georgia 30339-2194
Phone: (770) 955-3660 Fax: (770) 955-8789

Mark S. Terry
President

December 14, 2004

Rinker Materials Corporation
1501 Belevedere Road
West Palm Beach, Florida 33406

Attention: Mr. Charles Allen
Vice President Cement

Dear Charles:

Pursuant to our telecon yesterday, I would like to address your concerns regarding the maximum design capacity of the proposed new line at your Brooksville facility. At Polysius, we are quite conservative in our system sizing and design. This is essential in our business as we must achieve our guaranteed figures quickly. As you are well aware, we must achieve several values at the rated capacity; i.e. power, heat consumption, etc. This leaves further system reserve which is inevitably exploited by our clientele once we have handed over the facility. In fact, our clients often produce up to 20% above our guaranteed capacity within five years of takeover. By optimizing mix designs, fuel specifics and operating parameters, your plant personnel should be able to process as much as 3,000 stpd clinker (5,000 stpd raw feed) through the new line. Sustainability and product quality will be your primary concerns at the higher capacities, especially as you approach the 3,000 stpd mark.

With regard to the main equipment, you are mechanically protected at these higher throughput rates. Structurally, the preheater tower is designed for catastrophic process conditions, whereby the normal cyclone loads are considered, plus the possible plugging of the largest cyclone. Your system is also protected by gamma level detectors in the lower stages. The cyclones and gas ducts themselves are designed for low pressure drop at nominal capacity so you will have to relinquish that benefit in order to force more material and gas flow through these vessels. The same applies somewhat to the calciner, but to a lesser extent. In the calciner, the concern is more related to the maximum thermal load in that reactor. The calciner is designed to handle, albeit as a maximum, the maximum heat input from the fuel system. That work that cannot be completed in the calciner is handled by the kiln anyway, which is good news. Since you have a two-support, conventional roller station kiln, the diameter is generous in relation to the length; thus the cross-sectional thermal load will still be well within acceptable limits at maximum throughput.

Mechanically, the kiln is stout enough to handle up to a 10% fill level in the inlet zone and up to 15% in the hotter sections. Of course, this is a function of density and kiln speed (revolutions/min.), but you have ample flexibility in that drive arrangement to achieve kiln speeds in excess of 4.0 rpm, if need be.

The clinker cooler is also mechanically capable of handling 3,000 stpd clinker throughput, but even with the extra reserve in the cooling air fans you will have to contend with elevated outlet temperatures. The specific grate loading is quite high at maximum production rates.

As previously mentioned, sustainability and product quality will be your primary concerns at maximum throughput rates. Initially, we feel that 3,000 stpd clinker (approximately 205-209 stph preheater feed rates) should be seen as your short-term maximum – for periods of an hour or so. 2,850 stpd clinker should be sustainable for periods of approximately three hours. 2,800 stpd clinker is a reasonable goal for your 24-hour "catch-up period", when you come up after an unplanned outage.

Based on my experience in working with you in the past, and having seen what you have done at the plants in Brooksville and Miami, I suspect that you will find a way to accomplish these objectives much sooner than we expect. Given the flexibility of our system there are numerous ways for you to optimize your mix, fuels, operation and plant availability to sustain these higher production rates over the long term.

Should you have any further questions regard this or any other matter, please contact me directly.

Best regards,

POLYSIUS CORP.

Mark S. Terry
President

MT/pw

Polysius Corp.
A **ThyssenKrupp** Technologies Company

180 Interstate North Parkway
Atlanta, Georgia 30339-2194
Phone: (770) 955-3660 Fax: (770) 955-8789

January 06, 2005

Rinker Materials Corporation
1501 Belevedere Road
West Palm Beach, Florida 33406

Attention: Mr. Charles Allen
Director of Operation

Dear Charles,

Further to Polysius Corp's. statement, dated December 14, 2004, regarding request for additional information on Permit Processing, the following clarification can be made:

For processing maximum amount of clinker of 3000 stph through the new line it will be required to handle about 206 -210 stph dry feed (less then 1% moisture). This corresponds to Raw material to clinker ratio from 1.65 to 1.66.

Regarding the heat input for the Kiln and the Calciner burner it will be required to burn the equivalent of 15 stph of coal total for the system. To maintain the split between the kiln and Calciner burner of 50/50 each firing point will be processed 7.5 stph into the system.

Sincerely Yours,

Oleg

Oleg Geskin

Pyro Process Operation

Attachment C

Typical Raw Materials and Fuels Analyses

Raw Materials for New Rinker Cement Plant

1/20/05

	High Rock	Low Rock	Bauxite	Mill Scale
SiO2	3.70	10.72	4.70	1.59
Al2O3	0.41	0.56	53.03	0.32
Fe2O3	0.20	0.24	11.22	95.89
CaO	50.88	45.72	0.17	0.75
MgO	0.16	0.21	0.09	0.17
SO3	0.10	0.08	0.10	0.11
Na2O	0.01	0.01	0.01	0.05
K2O	0.06	0.09	0.05	0.01
TIO2	0.03	0.04	0.72	0.03
P2O5	0.05	0.07	0.04	0.04
Mn2O3	0.02	0.02	0.05	0.74
Cl	0.00	0.00	0.00	0.00
LOI / GOI	43.38	41.37	28.63	-2.33

Proposed Fuel for New Kiln

Ultimate Analysis of Coal	
	% Dry Basis
Ash	7.87
Hydrogen	5.45
Carbon	80.36
Nitrogen	1.45
Sulfur	0.71
Oxygen	4.16

Proximate Analysis of Coal		
	As Rec'd	Dry Basis
Moisture	8.00	
Ash	7.24	7.87
Volatile	31.91	34.68
Fixed Carbon	52.85	57.45
Total	100.00	100.00

Condition F.11 from Title V Permit 0530021-007-AV regarding the use of "On-Specification" used oil:

The burning of "on-specification" used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:

a. Only "on-specification" used oil generated at the Florida Crushed Stone Company's Gregg Mine and the Central Power and Lime Plant can be blended with the purchased fuel oil, which is to be used only as a startup fuel for preheating the cement kiln I. "On-specification" used oil is defined as each used oil delivery that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired.

Constituent/Property*	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash point	140 °F minimum

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

b. Permittee agrees that the used oil to be blended and burned at the facility shall not be a hazardous waste as defined in Rule 62-210.200, F.A.C., or 40 CFR Part 261, and will not include fuels or blended fuels consisting in whole or part of hazardous waste or which include mixtures of any solid waste generated from the treatment, storage, or disposal or hazardous waste, and such burning shall be in compliance with Section 403.769(3), F.S.

Attachment D

Existing Startup, Shutdown, and Malfunction Plan

FCS FLORIDA CRUSHED STONE COMPANY

BROOKSVILLE CEMENT PLANT

OPERATION & MAINTENANCE PLAN
STARTUP, SHUTDOWN & MALFUNCTION PLAN

INITIAL PLAN PREPARATION DATE: March 3, 2005
PLAN REVISION NUMBER & DATE: REV. 0, March 3, 2005

Table of Contents

Attachments

This plan provides Standard Operating Procedures (SOP), maintenance schedules, maintenance checklists, monitoring procedures, monitoring schedules, and corrective actions in attachments to the plan.

Introduction

The National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (40 CFR 63, Subpart LLL) require the owner or operator of each Portland cement plant to prepare for each affected source a written operations and maintenance plan. The plan must include the following information:

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR 63.1343 through 63.1348;

(2) Corrective actions to be taken when required by paragraph 40 CFR 63.1350(e);

(3) Procedures to be used during an inspection of the components of the combustion system of each in-line kiln and raw mill located at the facility at least once per year; and

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under 40 CFR 63.1346 and 63.1348.

The affected sources covered by this plan are designated by 40 CFR 63.1340:

(1) Each in-line kiln/raw mill
(2) Each clinker cooler
(3) Each raw mill
(4) Each finish mill
(5) Each raw material dryer
(6) Each raw material, clinker, or finished product storage bin
(7) Each conveying system transfer point
(8) Each bagging system; and
(9) Each bulk loading or unloading system.

The affected sources and air pollution control devices are specifically described by the Florida Department of Environmental Protection Title V Air Permit No. 0530021-002-AV.

Brooksville Cement Plant I	
E.U. ID No./Facility ID No.	Brief Description
-001/D-75	Filter Dust Bin with Baghouse
-002/D-67	Fly Ash/Equilibrium Catalyst Bin with Baghouse
-004/F-14	Raw Meal Transfer with Baghouse
-006/G-12A & B	Two Blend Silos with Baghouse
-007/H-15	Kiln Feed Surge Bin with Baghouse
-008/S-04	Clinker Receiving/Handling System
-010/L-06 & L-07	Clinker Storage Silo and Finish Mill Storage Silo with Baghouse
-011/L-08	Gypsum and Limestone Bins with Baghouse
-012/M-08	Silo Discharge with Baghouse
No ID/L-03	Clinker Cooler Discharge with Baghouse
-013/N-13	Finish Mill with Baghouse
-014/Q-17	Cement Storage Silos #1 & #2 Discharge System with Baghouse
-015/Q-15	Cement Storage Silos #1 & #2 with Baghouse
-017/D-63	Iron Ore Bin with Baghouse
-019/M-05	Finish Mill Feed Belt with Baghouse
-020/	In-Line Kiln I/Raw Mill and Clinker Cooler I with Baghouse
-021/Z-17	Cement Storage Silo #3 Discharge System with Baghouse
-022/Z-15	Cement Storage Silo #3 with Baghouse
-023/	Cement Storage Silo #4 and Truck Loadout System with Baghouse
-024/Z-18	Cement Storage Silo and Railcar Loadout System with Baghouses

This plan provides Standard Operating Procedures (SOP), maintenance schedules, maintenance checklists, monitoring procedures, monitoring schedules, and corrective actions. This plan also provides a Startup, Shutdown and Malfunction plan, as required by 40 CFR 63.6.

Procedures for Proper Operation and Maintenance of the Affected Source and Air Pollution Control Devices

This section provides procedures for proper operation and maintenance of the affected sources and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR 63.1343 through 63.1348.

At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

Appropriate parameters of processing or materials handling systems provide a measure of the rate of operations. The operation and maintenance plan includes performance parameters which indicate the rate of operation, process weight throughput, the fuel or other energy source, the materials being processed or other physical or chemical characteristics, as applicable.

The plan includes schedules for the maintenance and inspection of each control device and collection system and a schedule for recording performance parameters of the control devices, collection systems and auxiliary equipment. The performance parameters include such physical, chemical or electrical characteristics as are applicable to the particular emissions unit and which are indicators of the condition, operating rates and efficiencies. The plan contains inspection and maintenance schedules including periodic assessments of the condition of manholes, ducting, breaching, hoods, conveyor and elevator housings, loading sheds and other equipment. Records of inspections, maintenance and performance data of control devices and auxiliary equipment shall be retained by the emissions unit for a minimum of five years and shall be made available to the Department upon request.

Safety is a critical component of plant operation and maintenance, and is not specifically addressed in this plan. Existing site-specific safety procedures supersede any general guidance within this plan.

EU 001/D-75 Filter Dust Bin with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is a storage bin for fines (dust). Dust from the kiln is collected and either:

1. recycled into the kiln to produce clinker,
2. used as an additive in the production of special cement products, or
3. sold to third parties as a waste stabilizer.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	45 TPH
Process temperature or pressure	475 deg. F (max)
Chemical or physical data on product or raw materials	Filter dust

The material is transferred to the elevated storage bin pneumatically. From the elevated bin, the material is fed by gravity or screw conveyor. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The level of the material in the bin is measured daily to prevent overfilling. When the bin level approaches full, filling is stopped by the control room operator.

Maintenance of Affected Source

Bins are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a bin for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Bins with supports and/or walls that show any signs of having been over-stressed during previous use, or that have been badly deteriorated by corrosion, should be repaired before further use. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the bin's life. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low

temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	D-75
Type of control device	Baghouse
Stack height	125 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	6800 acfm
Maximum dry standard flow rate	6686 dscfm
Gas temperature	77° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 002/D-67 Fly Ash/Equilibrium Catalyst Bin with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is a storage bin for fly ash/equilibrium catalyst.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	25 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Fly ash/Equilibrium catalyst

The material is transferred to the elevated storage bin pneumatically. From the elevated bin, the material is fed by gravity or screw conveyor. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The level of the material in the bin is measured at least daily to prevent overfilling. When the level of the material in the bin approaches full, filling is stopped by the control room operator.

Maintenance of Affected Source

Bins are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a bin for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Bins with supports and/or walls that show any signs of having been over-stressed during previous use, or that have been badly deteriorated by corrosion, should be repaired before further use. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the bin's life. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	D-67
Type of control device	Baghouse
Stack height	125 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	4200 acfm
Maximum dry standard flow rate	4130 dscfm
Gas temperature	77° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 004/F-14 Raw Meal Transfer with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of raw meal being transferred from the raw mill collection cyclones, to an air lift system.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	138 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Raw materials

From the raw mill cyclones, the material is fed by air gravity conveyor to an air lift system, which in turn lifts the material to the top of and into the blend silos. This baghouse provides ventilation and dust collection for the air gravity conveyors. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

☐ Inspect and repair air gravity conveyor housings to prevent leakage.
☐ Inspect and repair vent ducts to dust collector to prevent leakage.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	F-14
Type of control device	Baghouse
Stack height	70 feet
Exit diameter	1.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	1200 acfm
Maximum dry standard flow rate	970 dscfm
Gas temperature	180° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 006/G-12A & B Two Blend Silos with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is two blending silos for the raw meal being transferred from the raw mill.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	138 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Raw meal

The material is transferred to the silos pneumatically. From the silos, the material is fed by air gravity conveyors. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The silos are equipped with high level probes and associated alarms to warn of overfilling. The high-level indicators are interlocked with the material filling system such that in the event of a silo approaching an overfilling condition, the material filling system will be automatically shut down.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames should be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage capacity in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the

vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for Portland cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning a plugged silo, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	G-12
Type of control device	Baghouse
Stack height	240 feet
Exit diameter	3.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	17,000 acfm
Maximum dry standard flow rate	13,745 dscfm
Gas temperature	180° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

Initial Preparation Date: 03/03/05
Revision Date: 03/03/05

EU 007/H-15 Kiln Feed Surge Bin with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of raw meal being transferred from the kiln feed storage silos to the kiln feed surge bin, and then on to the kiln preheater.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	138 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Kiln feed

The material is transferred to the elevated kiln feed surge bin by air gravity conveyor and bucket elevator. From the elevated bin, the material is fed by air gravity conveyor, to an air lift system, which lifts the material pneumatically to the kiln preheater. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The bin is equipped with load cells that continually weigh the bin and its contents. If the bin reaches a high level, an alarm flashes and the filling control valves close automatically. This prevents overfilling.

Maintenance of Affected Source

Bins are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a bin for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Bins with supports and/or walls that show any signs of having been over-stressed during previous use, or that have been badly deteriorated by corrosion, shall be repaired before further use. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the bin's life. At least annually, a thorough inspection of the entire structure is to be performed, and repairs are to be made where necessary.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a medium temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	H-15
Type of control device	Baghouse
Stack height	50 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	6000 acfm
Maximum dry standard flow rate	4704 dscfm
Gas temperature	200° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 008/S-04 Clinker Receiving/Handling System

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an integrated system for handling clinker that includes a below-grade truck unloading hopper, a belt conveyor, and a deep-bucket conveyor. The fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent or water, as necessary, to enhance the wettability of the clinker.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	100 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Clinker

The loading, unloading, handling, transfer or storage of clinker, which may generate airborne dust emissions, will be carried out in such a manner to prevent or minimize dust emissions. The materials mentioned above shall be adequately wetted prior to and during the loading, unloading and handling operations. Manual or automatic water spraying system shall be provided at all unloading areas, stock piles and material discharge points.

Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. All receiving hoppers for unloading materials shall be enclosed on three sides above the unloading point. The belt conveyors for handling materials shall be enclosed on top and 2 sides with to eliminate any dust emission due to wind erosion.

Maintenance of Affected Source

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Inspect belt covers and repair or replace as required
- ☐ Replace torn or defective conveyor belts to prevent leakage
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components

Operation of Air Pollution Control Device

An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a wet suppression system. The system is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started.

The spray discharge should be proportional with dust emission. The Dust Suppression System is meant to suppress the dust generated during transfer at feed/discharge points of conveyors. Wetting Agents are chemicals that are added to water to improve the rate at which spray droplets wet dust particles.

This system consists of three main parts.
1. Proportioner units.
2. Spray headers with pipe lines & pumping system.
3. Control units with electrical systems.

Proportioner units include a feed water pump, metering pump, feed water tank, and solutions tanks. The water required for the system is supplied by a feed water pump. The wetting agent, which is in liquid form, is dosed by metering pump as per requirement. Spray headers with pipe lines are provided. The pumping system includes solution pumps, isolating valves, spray nozzles, and pipe lines. The solution pumps are used to supply pressurized water to spray headers. The required quantities of nozzles are used to spray water. Control units with electrical systems consist of sensing units and control panels. The control panels consist of various relays and transformers.

Auto control or manual control governs the system. The water is pumped and at the same time the metering pump doses the proper quantity of chemical. Its inherent design features also make it extremely reliable from a maintenance standpoint. The nozzles have no moving parts.

OPERATIONAL PARAMETERS FOR WET SUPPRESSION

Identification of control device	S-04
Type of control device	Wet suppression
Manufacturer	Johnson-Marsh
Type of chemical used	Water or dust suppressant
Frequency of application	Continuous when operating
Schedule for maintenance and inspection	Semiannually

Maintenance of Air Pollution Control Device

- ☐ Check proportioner units.
- ☐ Check spray headers with pipe lines & pumping system.
- ☐ Check control units with electrical systems.
- ☐ Check solutions tanks.
- ☐ Check feed water supply.
- ☐ Check spray nozzles
- ☐ Check nozzles and system components for wear and corrosion.

EU 010/L-06 & L-07 Clinker Storage Silo and Finish Mill Storage Silo with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of clinker being transferred into the clinker storage silos.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	83 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Clinker

The material is transferred to the silos by a deep bucket conveyor. From the silos, the material is fed by gravity to belt conveyors. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to a fabric filtering system to meet the emission limits stipulated above.

The silos are measured at least daily to prevent overfilling. If the manual measurements indicate overfilling is imminent, measures are taken by the operations group to prevent overfilling.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames shall be repaired to prevent possible air leakage. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage capacity in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the

vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a medium temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	L-06/L-07
Type of control device	Baghouse
Stack height	200 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	2600 acfm
Maximum dry standard flow rate	2038 dscfm
Gas temperature	200° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 011/L-08 Gypsum and Limestone Bins with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of gypsum and limestone being stored and transferred.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	75 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Gypsum & limestone

The material is transferred to the elevated storage bins mechanically by bucket elevator and belt conveyor. From the elevated bin, the material is fed by gravity onto belt feeders. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The bins are measured at least daily and the inventory levels controlled by the control room operator to prevent overfilling.

Maintenance of Affected Source

Bins are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a bin for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Bins with supports and/or walls that show any signs of having been over-stressed during previous use, or that have been badly deteriorated by corrosion, should be repaired before further use. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the bin's life. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a medium temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	L-08
Type of control device	Baghouse
Stack height	135 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	5000 acfm
Maximum dry standard flow rate	3920 dscfm
Gas temperature	200° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 012/M-08 Silo Discharge with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of clinker, gypsum or limestone being transferred from their silos, to the finish mill feed belt.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	122 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Clinker, gypsum, & limestone

From the silos, the material is fed by gravity onto belt feeders. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. The opening between the silos and weigh belt of the materials is fully enclosed. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Replace torn or defective conveyor belts to prevent leakage
- ☐ Inspect and repair belt covers and enclosures as required to prevent leakage
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	M-08
Type of control device	Baghouse
Stack height	135 feet
Exit diameter	2.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	9000 acfm
Maximum dry standard flow rate	8316 dscfm
Gas temperature	100° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU TBA/L-03 Clinker Cooler Discharge with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of clinker being transferred from the clinker cooler.

From the clinker cooler, the clinker is transported by gravity or drag chain conveyor to a deep bucket conveyor. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Conveyors are arranged to minimize free fall as far as practicable. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	83 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Clinker

Maintenance of Affected Source

- ☐ Inspect drag chain housing and deep bucket conveyor covers and repair as required to prevent leakage
- ☐ Inspect material transfer chutes and repair as required to prevent leakage
- ☐ Inspect dust collector vent ducts and repair as required
- ☐ Inspect deep bucket conveyor buckets for holes and repair as required

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a high temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	L-03
Type of control device	Baghouse
Stack height	10 feet
Exit diameter	1.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	5100 acfm
Maximum dry standard flow rate	3717 dscfm
Gas temperature	250° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 013/N-13 Finish Mill with Baghouse

Emission Limits and Operating Limits

The owner or operator of each new or existing raw mill or finish mill shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent.
[40 CFR 63.1347]

Operation of Affected Source

The final process stage includes grinding the clinker and gypsum to produce cement. Grinding mills are equipped with alloy steel grinding balls. The ball mill grinds the clinker into the final product, for distribution and packaging. The mill works in a closed circuit with a dynamic separator which separates cement of the required fineness from that which needs further grinding. The coarse fraction is returned to the mill.

The accuracy and reliability of metering and proportioning of the mill feed components by weight is critical for maintaining product quality and the high energy efficiency of a grinding system. The metering and proportioning equipment for the material feed to the mill is belt weigh feeders.

The plant uses a pulse-jet fabric filter with a high-efficiency separator. The cement dust collected by the fabric filter is restored to the system.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	125 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Clinker, gypsum & limestone

Maintenance of Affected Source

Preventive maintenance provides for more productivity through increased uptime. The mill maintenance program reflects the fact that long lead times are required to procure and deliver materials to the site. A target is to maintain a three-month inventory of wear parts and common failure components on-site, to carry a large inventory of spare parts, and to stock two years of certain mechanical, electrical and instrumentation spares.

The inspection and maintenance program includes periodic assessments of the condition of ducting, hoods, conveyors, elevator housings, and other equipment.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a high temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	N-13
Type of control device	Baghouse
Stack height	70 feet
Exit diameter	5.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	40000 acfm
Maximum dry standard flow rate	30892 dscfm
Gas temperature	210° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 014/Q-17 Cement Storage Silos #1 & #2 Discharge System with Baghouses

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being transferred from silos. This emissions unit includes systems for in-plant distribution to loading areas and to packaging systems.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	300 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Cement

From the silos, the material is fed by gravity and air gravity conveyors. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

- ☐ Inspect air gravity conveyor housings and repair as required to prevent leakage
- ☐ Inspect loading spouts for holes and repair as required
- ☐ Inspect material transfer chutes for holes and repair as required to prevent leakage
- ☐ Inspect dust collector ducting for holes and repair as required
- ☐ Inspect control valves for holes and seal deterioration and repair as required to prevent leakage
- ☐ Inspect all pneumatic lines for cracks

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	Q-17
Type of control device	Baghouse
Stack height	50 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	3200 acfm
Maximum dry standard flow rate	2671 dscfm
Gas temperature	160° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 015/Q-15 Cement Storage Silos #1 & #2 with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being pneumatically transferred to two storage silos from the finish mill.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	125 TPH each
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Cement

The material is transferred to the silos pneumatically. From the silos, the material is fed by gravity to trucks, or pneumatically to railcar loading or to bagging. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The silos are measured at least daily. The control room operator controls the inventory levels to prevent overfilling.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage capacity in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a medium temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	Q-15
Type of control device	Baghouse
Stack height	200 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	7400 acfm
Maximum dry standard flow rate	5983 dscfm
Gas temperature	180° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 017/D-63 Iron Ore Bin with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of iron ore being stored in a bin.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	100 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Iron ore

The material is transferred to the elevated storage bin by bucket elevator. From the elevated bin, the material is fed by a belt feeder. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The bin is equipped with a high level probe and a flashing alarm to warn of overfilling. The high-level alarm indicators are interlocked with the material filling line such that in the event of the bin approaching an overfilling condition, an alarm will operate, and the material filling feeder will be stopped.

Maintenance of Affected Source

Bins are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a bin for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Bins with supports and/or walls that show any signs of having been over-stressed during previous use, or that have been badly deteriorated by corrosion, shall be repaired before further use. Deteriorated doors and door frames shall be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the bin's life. At least annually, a thorough inspection of the entire structure is performed, and repairs are made where necessary.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	D-63
Type of control device	Baghouse
Stack height	51 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	3600 acfm
Maximum dry standard flow rate	2911 dscfm
Gas temperature	180° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 019/M-05 Finish Mill Feed Belt with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of transferring clinker, gypsum and limestone to the finish mill.

The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	120 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Clinker

Maintenance of Affected Source

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Inspect belt conveyor covers and repair as required
- ☐ Replace torn or defective conveyor belts to prevent spillage
- ☐ Inspect material transfer chutes for holes and repair as required to prevent leakage
- ☐ Inspect dust collector vent ducts for holes
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	M-05
Type of control device	Baghouse
Stack height	29 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	9000 acfm
Maximum dry standard flow rate	8820 dscfm
Gas temperature	85° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 020/ In-Line Kiln I/Raw Mill and Clinker Cooler I with Baghouse

Emission Limits and Operating Limits

40 CFR 63.1343 Standards for kilns and in-line kiln/raw mills.

(a) *General.* The provisions in this section apply to each kiln, each in-line kiln/raw mill, and any alkali bypass associated with that kiln or in-line kiln/raw mill.

(b) *Existing, reconstructed, or new brownfield/major sources.* No owner or operator of an existing, reconstructed or new brownfield kiln or an existing, reconstructed or new brownfield in-line kiln/raw mill at a facility that is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources, any gases which:

(1) Contain particulate matter (PM) in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the alkali bypass are subject to this emission limit.

(2) Exhibit opacity greater than 20 percent.

(3) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf) (TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-10} gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 deg.C (400 deg.F) or less.

(c) *Greenfield/major sources.* Not applicable at time of initial O&M Plan preparation.

(d) *Existing, reconstructed, or new brownfield/area sources.* Not applicable at time of initial O&M Plan preparation.

(e) *Greenfield/area sources.* Not applicable at time of initial O&M Plan preparation.

40 CFR 63.1344 Operating limits for kilns and in-line kiln/raw mills.

(a) The owner or operator of a kiln subject to a D/F emission limitation under 40 CFR 63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under 40 CFR 63.1343 must operate the in-line kiln/raw mill, such that:

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with 40 CFR 63.1349(b)(3)(iv).

(c) Carbon injection – Not applicable at time of initial O&M Plan preparation.
(d) Carbon injection – Not applicable at time of initial O&M Plan preparation.
(e) Carbon injection – Not applicable at time of initial O&M Plan preparation.

40 CFR 63.1345 Standards for clinker coolers.
(a) No owner or operator of a new or existing clinker cooler at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the clinker cooler any gases which:
(1) Contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.
(2) Exhibit opacity greater than ten percent.
(b) [Reserved].

40 CFR 63.1347 Standards for raw and finish mills.
The owner or operator of each new or existing raw mill or finish mill at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent.

Operation of Affected Source
The cement plant is designed for 1800 tons/day of cement clinker product. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. The movement of raw materials, recycled materials, and product will be through enclosed transfer systems. All gas streams from the various transfer systems will vent through a single baghouse system into the ambient air. The existing site is zoned for mining, so limestone and clay used in the production of cement will be supplied on site. The kiln is allowed to fire bituminous coal, distillate and residual fuel oil, on-specification used oil, and shredded and whole tires. Continuous monitors are operated for opacity, NOx, SO_2, and O_2.

In addition to meeting environmental standards, kiln burning stability increases such things as the kiln brick life, refractory life, requires less frequent warm-up times and lowers fuel consumption.

The kiln product (clinker) discharges from the kiln into the clinker cooler. Cooled clinker is then discharged into a conveyor system and carried to storage.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	138 TPH: Raw mill 127 TPH: Kiln preheater 83 TPH: Clinker cooler
Process temperature or pressure	>Ambient
Fuel or fuel mixture	bituminous coal, distillate and residual fuel oil, on-specification used oil, and shredded and whole tires
Chemical or physical data on product	Clinker

Maintenance of Affected Source

The kiln is the main machine in the cement manufacturing process. Kiln repair and maintenance are critical components in assuring the efficiency of the cement manufacturing plant. If not maintained properly, kiln run-time will be reduced, causing substantial economic losses. Maintenance procedures performed according to prescribed instructions will significantly improve the performance of the kiln and increase plant efficiency.

Proper kiln maintenance techniques ensure desirable operating efficiency. Alignment and ovality measurements can help prevent breakdowns. Inspection and maintenance of the clinker cooler are also important.

Plant availability is critical in a continuous process such as cement production, and an important part is implementing maintenance based on predictive maintenance information. High kiln availability can impact the stability of auxiliary equipment – shutdowns can have a "domino effect" on auxiliary equipment.

Vibration analysis and monitoring is a part of the preventive maintenance program. Unplanned maintenance on a continuous process line can result in higher costs per ton of clinker. The use of predictive maintenance techniques allows one planned shutdown per year, with four or five minor stops and starts. Vibration analysis identifies potential problems and corrective actions can be initiated to eliminate the influence on the component from other sources, such as imbalance or misalignment.

Mechanical personnel are aware of the importance of setting up a machine within certain criteria to enable a long, trouble-free mechanical life. When setting up a machine after repairs or installation, ensure that imbalance or pulley wobbles are eliminated. Evaluate clinker cooler fans, simple, inexpensive adjustments can lower the overall vibration levels.

Predictive maintenance can reduce the systematic replacement of components, regardless of their condition. Individual job requests are initiated when there is evidence that a component is deteriorating. This information is used to determine a plan of action to carry out repairs at the most convenient time, allowing lead time for planning and ordering of parts, labor resources.

An effective predictive maintenance program looks at the rate of change over a period of time with a set of machinery components, using specific criteria to asses the various individual components that make up a particular machine. Another benefit of predictive maintenance is inventory stock control of mechanical components.

- ☐ Inspect preheater system
- ☐ Inspect kiln shell
- ☐ Inspect kiln supports
- ☐ Inspect kiln drive
- ☐ Evaluate alignment and mechanical balance of kiln
- ☐ Inspect clinker cooler
- ☐ Inspect kiln lining at regular intervals
- ☐ Check the kiln shell temperature. Special attention must be focused on the covered areas in the burning zone where high surface temperatures may occur
- ☐ The clearance between the kiln shell and kiln riding-rings must be checked at regular intervals

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions are controlled by a high temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Type of control device	Baghouse
Stack height	300 feet
Exit diameter	16.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	577,700 acfm
Maximum dry standard flow rate	376,796 dscfm
Gas temperature	220° F
Percent water vapor	Ambient
Bag cleaning method	Reverse air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 021/Z-17 Cement Storage Silo #3 Discharge System with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being transferred from silos. This emissions unit includes systems for in-plant distribution to loading areas and to packaging systems.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	300 TPH
Process temperature or pressure	Ambient
Chemical or physical data on product or raw materials	Cement

From the silos, the material is fed by gravity. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. The opening between the silos and weigh belt of the materials is fully enclosed. Loading to trucks and railcars is through a flexible rubber boot. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Check the speed of belt conveyors and slow then down, if possible, to reduce dust circulation and spillage
- ☐ Replace torn or defective conveyor belts
- ☐ Inspect belt conveyor idlers and nonmoving idlers
- ☐ Remove and replace missing or broken idlers
- ☐ Inspect all belt conveyor training idlers, adjust as necessary so the conveyor belt does not travel laterally
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components
- ☐ Inspect all pneumatic lines and pumps for cracks
- ☐ Inspect rubber boots for cracks and tears

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low

temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	Z-17
Type of control device	Baghouse
Stack height	50 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	10000 acfm
Maximum dry standard flow rate	8346 dscfm
Gas temperature	160° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 022/Z-15 Cement Storage Silo #3 with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being pneumatically transferred to the storage silo from the finish mill.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	125 TPH
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Cement

The material is transferred to the silos pneumatically. From the silo, the material is fed by gravity to trucks or railcars, or pneumatically to bagging. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The silo is equipped with audible high level alarms to warn of overfilling. The high-level alarm indicators are interlocked with the material filling line such that in the event of a silo approaching an overfilling condition, an audible alarm will operate, and the material filling line will be closed.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames should be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning. Each year, preferably when the silo is empty, a thorough inspection of the entire structure is to be performed, and repairs are to be made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage systems in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the

vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight. Cleaning from the top would cause the removed material to fall on top of the lower accumulation with no place to go until the entire mass is cut away; when the entire section falls, then, the risk of damage to the bottom of the vessel or discharge is considerable.

If a vessel is choked, that is, still running but nearly closed down, it will most likely get worse. As material falls through the vessel, it will build up on the accumulations, gradually restricting the flow path until blockage is total. Consequently, as soon as a partial blockage is noticed, scheduling a cleaning from a service is recommended. Time is then available to work the cleaning into the schedule of the plant and the cleaning contractor. Hung up, clogged, or slow running silos will interfere with the efficiency and profitability of a plant. Remove buildup from silo walls regularly, effectively, and safely.

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a medium temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	Z-15
Type of control device	Baghouse
Stack height	200 feet
Exit diameter	2.0 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	5300 acfm
Maximum dry standard flow rate	4285 dscfm
Gas temperature	180° F
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 023 Cement Storage Silo #4 and Truck Loadout System with Baghouse

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being pneumatically transferred to the storage silo from the finish mill and an activity of cement being transferred from the silo. This emissions unit includes systems for in-plant distribution to loading areas and to packaging systems.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	47 TPH: silo, 390 TPH: trucks
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Cement

The material is transferred to the silos pneumatically. From the silo, the material is fed by gravity to trucks or railcars, or pneumatically to bagging. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The silo is equipped with audible high level alarms to warn of overfilling. The high-level alarm indicators are interlocked with the material filling line such that in the event of a silo approaching an overfilling condition, an audible alarm will operate, and the material filling line will be closed.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. The opening between the silos and weigh belt of the materials is fully enclosed. Loading to trucks and railcars is through a flexible rubber boot. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames should be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning.

Each year, preferably when the silo is empty, a thorough inspection of the entire structure is to be performed, and repairs are to be made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage systems in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning. Do not try to clean a vessel from below. To protect both plant personnel and the structure, the safest method is to clean down from the access opening(s) at the top of the vessel. That opening, however, is not to be used for putting people down into the silo, which likely would constitute a violation of the confined space entry rules.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight. Cleaning from the top would cause the removed material to fall on top of the lower accumulation with no place to go until the entire mass is cut away; when the entire section falls, then, the risk of damage to the bottom of the vessel or discharge is considerable.

If a vessel is choked, that is, still running but nearly closed down, it will most likely get worse. As material falls through the vessel, it will build up on the accumulations, gradually restricting the flow path until blockage is total. Consequently, as soon as a partial blockage is noticed, scheduling a cleaning from a service is recommended. Time is then available to work the cleaning into the schedule of the plant and the cleaning contractor. Hung up, clogged, or slow running silos will interfere with the efficiency and profitability of a plant. Remove buildup from silo walls regularly, effectively, and safely.

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Check the speed of belt conveyors and slow then down, if possible, to reduce dust circulation and spillage
- ☐ Replace torn or defective conveyor belts
- ☐ Inspect belt conveyor idlers and nonmoving idlers
- ☐ Remove and replace missing or broken idlers

- ☐ Inspect all belt conveyor training idlers, adjust as necessary so the conveyor belt does not travel laterally
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components
- ☐ Inspect all pneumatic lines and pumps for cracks
- ☐ Inspect rubber boots for cracks and tears

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Type of control device	Baghouse
Stack height	75 feet
Exit diameter	0.8 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	860 acfm
Maximum dry standard flow rate	829 dscfm
Air to cloth ratio	
Bag weave	
Bag material	
Gas temperature	Ambient
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

EU 024/Z-18 Cement Storage Silo and Railcar Loadout System with Baghouses

Emission Limits and Operating Limits

The owner or operator shall not cause to be discharged any gases from this affected source which exhibit opacity in excess of ten percent.
[40 CFR 63.1348]

Operation of Affected Source

This emissions unit is an activity of cement being pneumatically transferred to the storage silo from the finish mill and an activity of cement being transferred from the silo. This emissions unit includes systems for in-plant distribution to loading areas.

OPERATIONAL PARAMETERS FOR EMISSIONS UNIT

Weight per unit time of raw materials input	30 TPH: silo, 100 TPH: trucks
Process temperature or pressure	>Ambient
Chemical or physical data on product or raw materials	Cement

The material is transferred to the silos pneumatically. From the silo, the material is fed by gravity to trucks or railcars. The loading, unloading, handling, transfer and storage of materials is in a totally enclosed system. All dust-laden air generated by the process operations is extracted and vented to the fabric filtering system to meet the emission limits stipulated above.

The silo is equipped with audible high level alarms to warn of overfilling. The high-level alarm indicators are interlocked with the material filling line such that in the event of a silo approaching an overfilling condition, an audible alarm will operate, and the material filling line will be closed.

All conveyor transfer points are totally enclosed. Openings for the passage of conveyors are fitted with adequate flexible seals. Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface. Conveyors are arranged to minimize free fall as far as practicable. The opening between the silos and weigh belt of the materials is fully enclosed. Loading to trucks and railcars is through a flexible rubber boot. All dust-laden air generated by the material transfer process shall be totally vented to fabric filtering system to meet the emission limits stipulated above.

Maintenance of Affected Source

Silos are prone to internal buildup of material, particularly if material is wet or if aeration is inadequate. Periodic inspection (every 1-2 years) and maintenance are necessary.

In order to use a silo for material storage, it must be structurally sound, with no evidence of major deterioration or over stressing. Deteriorated doors and door frames should be repaired to prevent possible air leakage during aeration. Regular maintenance will help extend the silo's life. Silos need periodic inspection and maintenance, such as cleaning.

Each year, preferably when the silo is empty, a thorough inspection of the entire structure is to be performed, and repairs are to be made where necessary.

Storage silos allow cement plants to stockpile inventory until needed. Buildup on the vessel walls, however, can rob plants of the storage systems in which they have invested. Buildups slow material flow and decrease the "live" capacity of the vessel. Overcoming these flow problems and recovering storage capacity may require silo cleaning.

Several types of equipment can be used for silo cleaning. One of these operates like an industrial-strength "weed whip," rotating a set of "flails" against the material in the vessel. The cleaning head is typically inserted through the access port down into the vessel on a pivoting arm.

Any clean-out activity must be carefully controlled to avoid damage to the inner wall, which can reduce flow and cause continuing problems. Steel chain is commonly used for cement or any compacted material where there is no risk of explosion. Nonsparking brass chain is effective for compacted materials where the risk of fire or explosion is present.

Before the cleaning process is initiated, a path for loosened material to leave the vessel must be secured, and the discharge opening must be clear. A transport mechanism at the bottom — a conveyor, a truck, or a loader — is required to avoid buildup below the discharge and blockage of the opening as large quantities of material are removed. In cleaning, the operator starts at the bottom and progresses upward. Wall accumulations are undercut until they fall by their own weight. Cleaning from the top would cause the removed material to fall on top of the lower accumulation with no place to go until the entire mass is cut away; when the entire section falls, then, the risk of damage to the bottom of the vessel or discharge is considerable.

If a vessel is choked, that is, still running but nearly closed down, it will most likely get worse. As material falls through the vessel, it will build up on the accumulations, gradually restricting the flow path until blockage is total. Consequently, as soon as a partial blockage is noticed, scheduling a cleaning from a service is recommended. Time is then available to work the cleaning into the schedule of the plant and the cleaning contractor. Hung up, clogged, or slow running silos will interfere with the efficiency and profitability of a plant. Remove buildup from silo walls regularly, effectively, and safely.

- ☐ Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- ☐ Check the speed of belt conveyors and slow then down, if possible, to reduce dust circulation and spillage
- ☐ Replace torn or defective conveyor belts
- ☐ Inspect belt conveyor idlers and nonmoving idlers
- ☐ Remove and replace missing or broken idlers
- ☐ Inspect all belt conveyor training idlers, adjust as necessary so the conveyor belt does not travel laterally
- ☐ Inspect belt scrapers on belt conveyors and adjust, replace worn-out components
- ☐ Inspect all pneumatic lines and pumps for cracks

☐ Inspect rubber boots for cracks and tears

Operation of Air Pollution Control Device

The filter equipment will be operated and maintained according to the manufacturer's recommendations. An adequate inventory of spare parts shall be kept. The particulate matter (PM) emissions from the materials being transferred are controlled by a low temperature baghouse fabric filter system. The baghouse is put in operation prior to the start of source operation, and remains in operation while the source is in operation.

Operators are familiar with startup and shutdown procedures of dust control systems. All dust control systems should be in operation before any processing equipment is started. Certain units are equipped with an alarm to sound when a dust collector stops operating.

OPERATIONAL PARAMETERS FOR BAGHOUSE

Identification of control device	Z-18
Type of control device	Baghouse
Stack height	80 feet
Exit diameter	1.5 feet
Bag pressure drop	2-6" H_2O
Actual volumetric flow rate	500 acfm
Maximum dry standard flow rate	490 dscfm
Gas temperature	Ambient
Percent water vapor	Ambient
Bag cleaning method	Pulsed air
Bag cleaning cycle:	Periodic

Maintenance of Air Pollution Control Device

See Attachment 1 – Baghouse Maintenance.

Corrective Actions

The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCDs of these affected sources, in accordance with the procedures of Method 22 of appendix A of 40 CFR 60. The Method 22 test shall be conducted while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 22 test shall be six minutes.

If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in this site specific operating and maintenance plan; and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a visual opacity test of each stack from which visible emissions were observed in accordance with Method 9 of appendix A of 40 CFR 60. The duration of the Method 9 test shall be thirty minutes.

Applicability of Corrective Actions

The requirement for site-specific corrective actions applies to:

☐ EU 013/N-13 Finish Mill with Baghouse

Description of Corrective Actions

- Notify control room that finish mill will be going off-line
- Determine availability of clinker storage volume
- Take kiln off-line only as necessary
- Gradually reduce milling rate and cease milling operation
- Perform complete baghouse and ductwork inspection
- Perform necessary repairs
- Put baghouse in operation
- Resume milling
- If any new bags have been installed, allow bags to form a filter cake before conducting the Method 9 test specified above

Annual Combustion System Inspection

An inspection of the components of the combustion system of the in-line kiln raw mill shall be conducted at least once per year. Optimum combustion conditions in cement kiln systems occur when kiln exit gas oxygen and carbon monoxide emissions are as low as possible. Stated another way, optimum combustion conditions occur when excess air is as low as possible and complete combustion still occurs. A kiln operating with low excess air may cause partial combustion of fuel. A kiln system operating with high excess air

increases the heat loss in the kiln system exit gases. In either case, the net effects are higher specific fuel consumption and lower clinker production.

At a minimum, an inspection shall include the following:

1) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation; clean pilot flame sensor, as necessary;
2) Ensure proper adjustment of primary and secondary combustion air, and adjust as necessary;
3) Inspect hinges and door latches, and lubricate as necessary;
4) Inspect dampers, fans, and blowers for proper operation;
5) Inspect door and door gaskets for proper sealing;
6) Inspect motors for proper operation;
7) Inspect refractory lining; clean and repair/replace lining as necessary;
8) Inspect kiln shell for corrosion and/or hot spots;
9) Inspect kiln, preheater and stack, clean as necessary;
10) Inspect fuel supply systems, for proper operation;
11) For the burning that follows the inspection, document that the combustion system is operating properly and make any necessary adjustments;
12) Inspect air pollution control device(s) for proper operation;
13) Inspect gas conditioning systems to ensure proper operation;
14) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
15) Generally observe that the equipment is maintained in good operating condition.

Within 10 operating days following an equipment inspection all necessary repairs shall be completed unless the owner or operator obtains written approval from the State agency establishing a date whereby all necessary repairs of the designated facility shall be completed.

Periodic Monitoring

This section provides procedures to be used to periodically monitor affected sources subject to opacity standards under 40 CFR 63.1346 and 63.1348.

Applicability of Periodic Monitoring

☐	EU 001/D-75	Filter Dust Bin
☐	EU 002/D-67	Fly Ash/Equilibrium Catalyst Bin
☐	EU 004/F-14	Raw Meal Transfer
☐	EU 006/G-12A & B	Two Blend Silos
☐	EU 007/H-15	Kiln Feed Surge Bin
☐	EU 008/S-04	Clinker Receiving/Handling System
☐	EU 010/L-06 & L-07	Clinker Storage Silo & Finish Mill Storage Silo
☐	EU 011/L-08	Gypsum and Limestone Bins
☐	EU 012/M-08	Silo Discharge
☐	EU 014/Q-17	Cement Storage Silos #1 & #2 Discharge System
☐	EU 015/Q-15	Cement Storage Silos #1 & #2

☐	EU 017/D-63	Iron Ore Bin
☐	EU 019/M-05	Finish Mill Feed Belt
☐	EU 021/Z-17	Cement Storage Silo #3 Discharge System
☐	EU 022/Z-15	Cement Storage Silo #3
☐	EU 023	Cement Storage Silo #4 and Truck Loadout System
☐	EU 024/Z-18	Cement Storage Silo and Railcar Loadout System

Procedures for Periodic Monitoring

The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR 60. The test must be conducted while the affected source is in operation.

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to 40 CFR 60. The Method 9 test must begin within one hour of any observation of visible emissions.

Reporting Requirements

The O&M Plan includes procedures for an annual inspection of the combustion system. Results of this inspection are to be included with annual reporting.

Maintenance and inspection records will be kept for five years and provided upon request.

Startup, Shutdown, and Malfunction Plan

The purpose of the startup, shutdown, and malfunction plan is to—

(A) Ensure that, at all times, owners or operators operate and maintain affected sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

Procedures for Malfunctions

Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan of this section.

The equipment subject to the MACT standards includes equipment such as process equipment (e.g., kiln, raw and finish mills), storage silos, control devices (e.g., baghouses), and continuous monitoring systems (CMS; i.e., monitoring systems used to demonstrate compliance with the MACT standards during normal operation).

Potential malfunctions of the applicable equipment were evaluated to determine whether a particular malfunction could result in excess HAP emissions. Potential malfunctions that may result in excess HAP emissions include:

- broken bags in baghouses
- excess or inadequate combustion air
- high level in a storage vessel
- excessive temperature at inlet of control device

Corrective actions are identified for all malfunctions that have the potential for excess HAP emissions. The standards do not necessarily require facilities to control HAP emissions resulting from malfunctions to the level established in the standard, but to do their best to minimize emissions. The corrective actions are documented in the SSM plan. Operations personnel have reviewed the proposed corrective actions to validate that each will effectively mitigate the malfunction and the resulting excess HAP emissions, while also providing sufficient operational flexibility.

The malfunction scenarios have been identified in the SSM plan and corrective actions have been specified.

broken bags in baghouses	Repair bags as necessary
excess or inadequate combustion air	Adjust combustion O2
high level in a storage vessel	Cease filling, reduce level
excessive temperature at inlet of control device	Repair gas conditioning equipment

The corrective actions allow operators to react to the malfunction to minimize excess HAP emissions, achieve compliance with the standard, and maintain operational flexibility.

Where two (or more) corrective actions are available, both are included in the SSM plan. This prevents the facility from deviating from the plan (and having to report the deviation to the regulatory agency) if one of the alternatives is not available or is not feasible when a malfunction occurs.

Part of an effective SSM plan implementation is to record the time and duration of each malfunction event identified. Compliance management tools, such as monitoring and recordkeeping systems, are essential in order to demonstrate continued compliance with the SSM requirements. Included in the SSM plan are the monitoring instruments (e.g., oxygen sensors, vessel high level alarms) that will be used to record SSM events for each piece of equipment subject to the standard. Where no instrumentation is available, visual inspections of certain equipment will be performed and documented at regular intervals to demonstrate that SSM events are not occurring.

This SSM plan includes startup and shutdown procedures for the equipment subject to the MACT standards. These procedures were discussed with operations personnel to determine whether a particular routine startup or shutdown activity potentially results in excess HAP emissions. Any that do are documented in the SSM plan.

Specific maintenance procedures for the air pollution control devices and the continuous monitoring systems were developed and documented in the O&M plan or the SSM plan, including the frequency of implementation. The plan identifies all routine or otherwise predictable continuous monitoring systems malfunctions. Routine calibration of the continuous monitoring systems is required. An onsite inventory of critical spare parts is maintained. Routine maintenance of all monitoring equipment is documented.

Procedures for Startup and Shutdown

Specific procedures for startup and shutdown are included with this plan as attachments.

Reporting

When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or

operator shall keep records for that event that demonstrate that the procedures specified in the plan were followed. These records may take the form of a ''checklist,'' or other effective form of recordkeeping, that confirms conformance with the startup, shutdown, and malfunction plan for that event.

In addition, the owner or operator shall keep records of these events as specified in 40 CFR 63.10(b) (and elsewhere in this part), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in 40 CFR 63.10(d)(5).

If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall record the actions taken for that event and shall report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with 40 CFR 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator.

Two kinds of reports are required: the immediate SSM deviation report, and the semi-annual SSM report. A deviation report is sent to the regulatory agency each time an SSM event occurs and the facility deviates from its SSM plan. This notification must be made within two days by phone or facsimile, followed by a written letter within seven days.

The semi-annual report summarizes all of the deviations in the six-month reporting period. Customized reports can be designed and incorporated into the SSM CMT to provide both immediate and periodic reports.

The owner or operator shall keep the written startup, shutdown, and malfunction plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if the startup, shutdown, and malfunction plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the startup, shutdown, and malfunction plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

Definitions

Alkali bypass means a duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the ``kiln exhaust gas bypass".

Bagging system means the equipment which fills bags with Portland cement.

Clinker cooler means equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.

Continuous monitor means a device which continuously samples the regulated parameter specified in 40 CFR 63.1350 of this subpart without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the continuous emission monitoring system performance specifications in appendix B to part 60 of this chapter.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include but are not limited to the following: feeders, belt conveyors, bucket elevators and pneumatic systems.

Conveying system transfer point means a point where any material including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.

Dioxins and furans (D/F) means tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans.

Excess HAP Emissions — emissions in excess of those that would have occurred if there were no startup, shutdown or malfunction and the owner or operator complied with the relevant provisions of the regulation.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to the kiln. Feed does not include the fuels used in the kiln to produce heat to form the clinker product.

Finish mill means a roll crusher, ball and tube mill or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and

blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.

Greenfield kiln, in-line kiln/raw mill, or raw material dryer means a kiln, in-line kiln/raw mill, or raw material dryer for which construction is commenced at a plant site (where no kilns and no in-line kiln/raw mills were in operation at any time prior to March 24, 1998) after March 24, 1998.

Hazardous waste is defined in 40 CFR 261.3 of this chapter.

In-line kiln/raw mill means a system in a Portland cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

Kiln means a device, including any associated preheater or precalciner devices, that produces clinker by heating limestone and other materials for subsequent production of Portland cement.

Kiln exhaust gas bypass means alkali bypass.

Malfunction — any sudden, infrequent, and not reasonably preventable failure of air-pollution control equipment, process equipment, or a process to operate in a normal or usual manner.

Monovent means an exhaust configuration of a building or emission control device (e. g. positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i. e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

New brownfield kiln, in-line kiln raw mill, or raw material dryer means a kiln, in-line kiln/raw mill or raw material dryer for which construction is commenced at a plant site (where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.

One-minute average means the average of thermocouple or other sensor responses calculated at least every 60 seconds from responses obtained at least once during each consecutive 15 second period.

Portland cement plant means any facility manufacturing Portland cement.

Raw material dryer means an impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.

Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

Rolling average means the average of all one-minute averages over the averaging period.

Run average means the average of the one-minute parameter values for a run.

Shutdown — the cessation/stopping of operation of an affected source.

Startup — the setting into operation of an affected source.

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

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Attachment 1: Baghouse Maintenance for Affected Sources other than In-line Kiln/Raw Mill/Clinker Cooler

Daily

- ❑ Maintain a written record of the observation and any action resulting from the inspection.

Weekly

- ❑ Check and document the baghouse pressure drop. If the pressure drop falls out of the normal operating range, specified by the manufacturer, corrective action will be taken to return the pressure drop to normal.
- ❑ Check drive components on fan.
- ❑ Maintain a written record of the observation and any action resulting from the inspection.

Monthly

- ❑ Visible emissions shall be observed on a monthly basis to ensure no visible emissions during the material handling operation of the unit. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. If unsuccessful that day due to weather, an observation shall be made the following day.
- ❑ Check the cleaning sequence of the baghouse.
- ❑ Pulse jet baghouse - check the air delivery system.
- ❑ Check compressed air lines including oilers and filters.
- ❑ Check the hopper functions and performance.
- ❑ Check all moving parts on the discharge system and screw-conveyor bearings.
- ❑ If leaks or abnormal conditions are detected the appropriate measures for repair will be implemented within eight (8) hours.
- ❑ Maintain a written record of the inspection and any action resulting from the inspection.

Quarterly

- ❑ Thoroughly inspect bags for leaks and wear. (Look for obvious holes or tears in the bags.) If leaks or abnormal conditions are detected the appropriate measures for repair will be implemented within eight (8) hours. Bag replacement should be documented by identifying the date, time and location of the bag in relationship to the other bags. The location should be identified on an overhead drawing of the bag layout in the baghouse.
- ❑ Check fan for corrosion and blade wear.
- ❑ Inspect baghouse housing for corrosion.
- ❑ Maintain a written record of the inspection and any action resulting from the inspection.

Semiannual

- ❑ Inspect every 6 months all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods.

- ❑ Check duct for dust buildup.
- ❑ Check gaskets on all doors.
- ❑ Inspect paint on baghouse.
- ❑ Maintain a written record of the inspection and any action resulting from the inspection.

Annual

- ❑ Check all welds and bolts.
- ❑ Check hopper for wear.
- ❑ Replace high-wear parts on cleaning system.
- ❑ Maintain a written record of the observation and any action resulting from the inspection.

Inspection of rotary valves

Inspect the condition of the following:

- ☐ check for wear on bearings and shaft
- ☐ check hopper and chute for holes and leaks
- ☐ check sprocket and chain for wear
- ☐ check chain for tightness
- ☐ spray a thin film of oil on chain
- ☐ check the alignment of the sprockets
- ☐ check oil in gear box
- ☐ check bolts for tightness
- ☐ check gear box for oil leaks
- ☐ are all guards in place and bolted down?

Service of separator duct

- ☐ clean the draft duct from the separator to the dust collector
- ☐ open bottom of dust collector
- ☐ clean all hard build-up inside hopper
- ☐ clean and remove all lumps from grates
- ☐ check that all draft pipes are clear, and clean if necessary
- ☐ lightly tap on all duct work to ensure that pipes are open
- ☐ check partition and walls for cracks
- ☐ seal cracks found in partitions
- ☐ check operation of purge valves
- ☐ check dust pipes and air pipes for leaks
- ☐ check door gaskets for leaks
- ☐ replace broken bags
- ☐ tighten all loose bags
- ☐ remove any dust build up from bags
- ☐ check bag clamps, and replace them if defective
- ☐ clean and remove any dust build up from all compartments

Record number of new bags used: _____

Record in the space below any condition that will require major repairs:_____

_____

Service of pressurizing unit

Cleaning of bottom hopper:

- ☐ place dumpster under hopper
- ☐ inspect bottom of hopper slide gate
- ☐ open bottom of dust collector slide gate
- ☐ lightly tap on hopper to insure that all dust is out of hopper.
- ☐ open bottom hopper inspection.
- ☐ clean all hard build-up inside hopper.
- ☐ clean and remove all lumps from grates.
- ☐ inspect operation of hopper door and seal
- ☐ close hopper inspection door

Record in the space below any condition that will require major repairs:_____

_____

Safety note!!! Respirators must be worn when working inside dust collector.

Attachment 2: Baghouse Maintenance for In-line Kiln/Raw Mill/Clinker Cooler

Daily

- ❑ Maintain a written record of the observation and any action resulting from the inspection.

Weekly

- ❑ Check and document the baghouse pressure drop. If the pressure drop falls out of the normal operating range, specified by the manufacturer, corrective action will be taken to return the pressure drop to normal.
- ❑ Check drive components on fan.
- ❑ Maintain a written record of the observation and any action resulting from the inspection.

Monthly

- ❑ Visible emissions shall be observed on a monthly basis to ensure no visible emissions during the material handling operation of the unit. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. If unsuccessful that day due to weather, an observation shall be made the following day.
- ❑ Check the cleaning sequence of the baghouse.
- ❑ Pulse jet baghouse - check the air delivery system.
- ❑ Check compressed air lines including oilers and filters.
- ❑ Check the hopper functions and performance.
- ❑ Check all moving parts on the discharge system and screw-conveyor bearings.
- ❑ If leaks or abnormal conditions are detected the appropriate measures for repair will be implemented within eight (8) hours.
- ❑ Maintain a written record of the inspection and any action resulting from the inspection.

Quarterly

- ❑ Thoroughly inspect bags for leaks and wear. (Look for obvious holes or tears in the bags.) If leaks or abnormal conditions are detected the appropriate measures for repair will be implemented within eight (8) hours. Bag replacement should be documented by identifying the date, time and location of the bag in relationship to the other bags. The location should be identified on an overhead drawing of the bag layout in the baghouse.
- ❑ Check fan for corrosion and blade wear.
- ❑ Inspect baghouse housing for corrosion.
- ❑ Maintain a written record of the inspection and any action resulting from the inspection.

Semiannual

- Inspect every 6 months all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods.
- Check duct for dust buildup.
- Check gaskets on all doors.
- Inspect paint on baghouse.
- Maintain a written record of the inspection and any action resulting from the inspection.

Annual

- Check all welds and bolts.
- Check hopper for wear.
- Replace high-wear parts on cleaning system.
- Maintain a written record of the observation and any action resulting from the inspection.

Attachment 3: Baghouse Startup Procedures

Proper start-up procedures will help extend the life of new filter media in a dust collector. What is generally accepted as start-up procedures is the process designed to intentionally develop a dust cake on the bags. This is referred to as seasoning, or conditioning, the filter media. In a fabric filter dust collector, the filter media is used to support a dust cake. A dust cake is the porous layer of collected particulate that develops during the conditioning period of new collector bags and following each cleaning cycle. The process can be accelerated in many installations by introducing a precoat material, such as agricultural lime, into the system. Commercial precoats also are available. Following installation of the filter bags and inspection of the related auxiliary equipment, the exhaust fan can be started. However, it is extremely important that the new filter bags are not exposed to the full volume (ACFM) of the fan.

First, close the fan damper (or inlet dampers) to one-half open until the monitoring gauge reads about 50% to 65% of the manufacturer's recommended maximum flange-to-flange differential drop. At roughly 75% of the manufacturer's recommended differential pressure, the cleaning system can be initiated. Normal operation and periodic cleaning will bring the pressure drop to a calculable and historically stable level.

Depending on the application, development of this differential pressure may take a number of hours or even days. This is necessary to ensure that the new filter media is exposed to low filtering velocities of dust-laden air. Reducing the volume decreases the airstream's velocity (air-to-cloth ratio), thus protecting the virgin bags from a high velocity impingement of dust. Should the bags be exposed to the fan's full volume, fine particles may embed themselves into the inner fibers of the bags and create a blinding condition. This also can damage the fibers of the media, reducing the life of the bags.

Attachment 4: In-line Kiln/Raw Mill/Clinker Cooler Startup Procedures

Kiln Startup Procedures

It is important that ignition be achieved as soon as fuel is injected and, if the flame fails during warm-up, the kiln should be purged with 5 times the volume of kiln, preheater, ducting, and dust collector before re-ignition is attempted. Volatile hydrocarbons accumulate rapidly in the kiln and, if then re-ignited, will potentially explode.

Warm-up follows agreement by production and maintenance management that all work is completed, that all tools and materials have been removed and that all doors are closed. Work may, with discretion, continue in the cooler during warm-up but no workers should remain in the cooler at the time of ignition.

Commonly, warm-up from cold takes 24 hours from ignition to feed-on, but may be increased if extensive refractory work requires curing. The introduction of feed (usually 50% of full rate), and the increase of fuel, speed and feed to normal operation can take another 8 hours from feed-on. The ID fan should be operated at approximately 10% 0_2 at the back of the kiln to feed-on whereupon the normal 0_2 target is adopted.

For coal fired kilns, warm-up uses gas or oil with switch-over to coal at the time of feed-on. If the coal mill uses hot gas from the cooler, there may be a delay before heat is available from clinker.

Prior to beginning to bring the kiln on-line, the kiln/raw mill I.D. fan and baghouse are powered to normal operating conditions. The kiln is then preheated with unused No. 2 fuel oil for a period of up to 24-36 hours; depending upon how long the kiln has been shut down.

Once the kiln is sufficiently hot and while still firing unused No. 2 fuel oil, raw meal feed is fed to the preheater at about 30-40 percent of normal feed rate. This material will coat the kiln and will produce clinker that is discharged to the clinker cooler. When there is heat in the clinker cooler, the coal mill is brought on-line and coal firing to the kiln main burner is initiated. At this point, raw meal feed to the preheater is incrementally increased. As the kiln stabilizes, the raw meal feed is incrementally increased until the system is operating at full capacity. Typically, the time from feed-on to full capacity is 3-4 hours.

During the startup of the kiln/raw mill, there could be periods when emissions are higher than normal (pounds per ton of clinker) due to imbalances of feed and fuel. These periods will be minimized through good operating practices. The emissions of particulate matter (PM and PM10), are not expected to exceed permit limits (pounds per ton of clinker) during startup.

This start-up procedure assumes the kiln system has been preheated for desired refractory dry-out but the system is cold. In connection with the normal startup procedure where

the linings have been dried out, the heat procedure can be reduced from the stated 72 hours to 24 hours. All fans, conveyors, air purging system, and associated equipment should be run for a minimum of eight hours and all necessary adjustments made prior to start-up.

Kiln Heat-Up

1. Start the main dust collector fan with damper closed.
2. Open the main dust collector fan damper gradually so that a negative pressure is generated at the dust collector inlet.
3. Open the damper of the preheater I.D. fan 10%.
4. Start the primary air fan and open the associated damper 10%.
5. Start the kiln burner.
6. Check that the fuel is ignited and if necessary, adjust primary air, fuel rate and draft through kiln so that a stable flame is obtained.
7. Increase the fuel volume gradually and slowly.
8. Adjust the draft level in kiln by means of the preheater I.D. fan damper, and main baghouse fan.
9. CAUTION: The flame must not cause sooting. Quite often, this will require that the 02 content indicated by the kiln back end analyzer is 6-8%.
10. It will normally be necessary to start clinker cooler fans to provide adequate combustion air.
11. Start the preheater I.D. fan, if necessary to maintain proper combustion.
12. Start rotating the kiln in accordance with the manufacturer's rotation schedule.
13. Check the supporting roller lubrication – the journals must not become dry.
14. Continuous rotation on the auxiliary drive is required if the kiln is exposed to cooling, e.g. heavy rain showers.
15. After 16 hours of preheating the temperature of the kiln lining should be sufficiently high to ensure ignition of the coal from the operation nozzle, which is put into operation as follows:

    A. Turn off the oil flow to the oil burner.
    B. Retract the oil burner completely.
    C. Replace the oil burner by a burner with an operating nozzle that is ready for operation.

16. After 18 - 20 hours when the kiln gets very hot, raw feed should be introduced to the preheater. A raw feed weight equal to 0.1% of the daily clinker output is a good estimate. When this material gets into the kiln it will help protect the refractory by coating the bricks and filling voids.
17. At the end of the kiln heat-up the remaining clinker cooler fans should be started to protect the grate plates.
18. Start the cooler vent fan to maintain the firing hood pressure by automatic control.
19. Regulate the draft (by adjusting the preheater I.D. fan damper) and the fuel flow to attain an oxygen content of 4 – 6% in the kiln inlet.

Kiln Startup

1. Recirculate kiln feed at the desired starting feed rate. It should be a minimum of 50% of feed rate at full production.
2. Start kiln shell cooling fans.
3. Start cooler drives on minimum speed. Increase the air flows on the front fans to normal operating values and put into automatic control. This will provide sufficient combustion air at startup.
4. Start main kiln drive on minimum speed.
5. Perform the following operations in rapid, but correct, sequence:

    A. Start the I.D. fan if not yet started.
    B. Start the feed to the preheater.
    C. Increase the draft when the feed enters the preheater.
    D. Increase the kiln speed to 1 rpm.
    E. Open the primary air fan damper to 40% (approximately).
    F. Gradually increase the fuel to the kiln and simultaneously adjust the draft to obtain proper oxygen level at the inlet to the kiln.
    G. Open the tertiary air damper.
    H. Adjust the draft and tertiary air to balance the oxygen levels at preheater exit and kiln inlet.

6. Personnel must be stationed in the preheater tower in order to monitor the passage of raw meal. If there is any indication of blocking, the control room must be informed immediately and the kiln operation stopped until the blockage is cleared.
7. Increase the feed and speed of kiln as soon as possible. The preheater is more efficient at high feed rates.
8. Increase the cooler undergrate air flow rates.
9. When the material arrives at the burning zone it may be necessary to reduce the kiln speed to prevent the material from passing the burning zone too quickly. It is very important that the initial material charge is well burned so that the visibility in kiln is not lost due to dust formations. The clinker must be well burnt all the time. If not, increase the raw meal temperature by increasing the draft and fuel quantity.
10. Increase the kiln speed and feed gradually so that the exit gas temperature after the preheater does not exceed safe levels.
11. The maximum production rate can generallly be achieved within a few hours after the startup.

Raw Mill Startup

Typically, the raw mill is brought on-line during the preheat of the kiln once there is sufficient heat for the raw mill to operate.

The kiln and raw mill usually operate together in what is referred to as the compound mode of operation. This operating mode occurs approximately 90 percent of the time. The remaining 10 percent of the time, the kiln operates alone in what is referred to as the direct operating mode. The raw mill is a source of particulate matter and a source of

combustion products when the raw mill heater operates. The raw mill exhaust gases are discharged through the kiln baghouse.

With the kiln in the direct operating mode, the raw mill is brought on-line by opening the dampers isolating the raw mill; and as quickly and simultaneously as possible starting the raw mill fan, the raw mill and the raw mill feed.

During the startup of the raw mill while the kiln is operating, there can be a brief imbalance in the airflow through the kiln system resulting in short-term spikes in emissions from the kiln. These short-term emission spikes will be minimized by best operating practices. The raw mill startup is not expected to affect particulate matter (PM or PM10) emissions.

Clinker Cooler Startup

The clinker cooler I.D. fan and baghouse are powered prior to clinker being discharged From the kiln into the clinker cooler. The air flow and clinker flow through The cooler during startup will be controlled to optimize heat recovery. The time to bring the cooler on-line and to full capacity is dependent upon the time required To bring the kiln/raw mill to full capacity. Typically, this time period will be 3-4 hours. Emissions from the cooler are limited to PM and PM10. During the startup period, no excess emissions are expected from the clinker cooler.

It may, from time to time, be necessary to start the grate cooler and the clinker conveying system in order to transport away the materials. In order not to fill up the cooler, the grates should be moved for about 10 minutes every hour at minimum speed. To ensure effective cooling at the cooler inlet, it may at the same time be necessary to start the first fans of the cooler to ensure that there is sufficient air for combustion.

The clinker cooler startup should occur around the same time as the kiln feed startup.

1. Start clinker pan conveyors.
2. Start clinker crusher.
3. Start timer and operation of tipping valves.
4. Start cooler vent fan and adjust draft to maintain a negative pressure in the kiln firing hood.
5. Progressively, start cooler undergrate fans to provide enough combustion air to the kiln, and keep grate plate temperatures down.
6. As clinker begins to discharge into the cooler, the grates should be started to prevent any buildups.
7. Progressively, as the clinker production increases, the fan volumes should be increased, and the grates operated more frequently.

Attachment 5: In-line Kiln/Raw Mill/Clinker Cooler Shutdown Procedures

The kiln/raw mill, clinker cooler and coal mill have normal and emergency shutdown procedures. The emergency procedures will shutdown entire systems immediately and close dampers isolating the systems.

Shut-down may be either:

- Emergency, in which case all equipment upstream of the failure must be stopped immediately, or

- Controlled, in which case the feed bin and coal system should be emptied, the kiln load run out as far as possible, and the cooler emptied. The burner pipe is withdrawn, or cooling air is continued through the burner, and the kiln is rotated on a standard schedule for about 12 hours with the ID fan running at reduced speed.

Suggested inching is as follows:

Duration of Shutdown	Kiln Turning
0 - 2 hours	continuous
2 - 4 hours	1/4 turn every 15 minutes
4 - 12 hours	1/4 turn every hour

If the shut-down is for less than 24 hours and does not involve entering the kiln or preheater, then heat should be retained either by stopping the ID fan immediately and shutting the preheater dampers after 2 hours, or shutting down the fan after 2 hours.

The following procedures are followed for normal (controlled) shutdowns.

Normal Kiln/Raw Mill Shutdown

Shutdown of the kiln and raw mill, while operating in the compound operating mode, is accomplished by first shutting down the raw mill and then shutting down the kiln. The raw mill is shutdown by stopping raw meal feed, stopping the raw mill and stopping the raw mill fan quickly and as simultaneously as possible. The dampers isolating the raw mill are then quickly closed.

The kiln is shutdown by shutting off the kiln feed and cutting back on the fuel to the main kiln burner. The kiln exhaust fan is also cut back. The kiln continues turning as the fuel in the main burner is continually cut back and finally cut off. The kiln continues turning at a prescribed rate until cool. At this time, the kiln can stop being turned. The kiln baghouse remains powered as long as air is drafted through the kiln.

There are no excess emissions expected during kiln shutdown.

Shutdown Sequence

1. Stop the preheater I.D. fan. The following should happen automatically:

A. The kiln feed will stop
B. The kiln and calciner firing will stop
C. The preheater fan damper will close
D. The last two cooler fans will stop and the air flows to all other cooler fans will reduce to preset minimum

2. Stop the kiln drive.
3. Reduce the cooler grate speeds to minimum.
4. Reduce the primary air fan damper.
5. Stop the shell cooling fans.
6. Close the tertiary air damper.
7. Start kiln rotation operation as outlined above.
8. Stop the cooler grates and operate for 5 minutes every 30 minutes.

Extended Shutdowns

Where shutdown of kiln extends over a prolonged period of time, all machinery not required for rotation of kiln and cooling of burner pipe must be stopped

1. Stop the dust conveyance system when the system is empty.
2. Stop the compressors.
3. Prepare plans for subsequent clean-up operation in kiln, preheater, cooler, and baghouse.
4. After the kiln has cooled off, stop the primary air fan.
5. Stop the clinker conveying system.
6. Plan for maintenance and repair work prior to startup.

Normal Raw Mill Shutdown

The shutdown of the raw mill while the kiln continues to operate is accomplished by stopping the raw meal feed, the raw mill fan and the raw mill quickly and as simultaneously as possible. The dampers isolating the raw mill are then quickly closed. The shutdown of the raw mill can create a slight imbalance in the kiln system causing short-term spikes in emissions. The excess emissions will be minimized by good operating practices.

Normal Clinker Cooler Shutdown

The clinker cooler is shutdown following the shutdown of the kiln by cutting back on the airflow through the clinker cooler until any residual clinker in the cooler is sufficiently cool. At that time, the clinker cooler fan can be shut off. The clinker cooler baghouse operates at normal conditions during the entire time the clinker cooler fan operates.

There are no excess emissions associated with the shutdown of the clinker cooler.

Attachment 6: Startup Procedures for other Affected Facilities

Coal Mill Startup

The coal mill is required to operate when the kiln is operating. The coal mill is a source of PM and PM10 emissions and discharges through a baghouse. The coal mill is started as soon as sufficient heat is available from the clinker cooler to dry the coal. The coal is mill is started by opening the dampers isolating the coal mill; and quickly and as simultaneously as possible starting the coal mill fan, the coal mill and the coal mill feed.

No excess emissions are expected as a result of the coal mill startup.

Material Handling Systems Startup

There are fabric filter dust collectors (baghouses) used to control particulate matter (PM and PM10) emissions from emission points associated with the raw mill, clinker handling, the finish mill, cement handling and coal handling. Startup of these systems involves powering the system I.D. exhaust fans and the baghouse cleaning systems prior to commencing process operations. No excess emissions are anticipated during the startup of any of these systems.

Attachment 7: Shutdown Procedures for other Affected Facilities

Normal Coal Mill Shutdown

The shutdown of the coal mill is associated with the shutdown of the kiln. The coal mill is shutdown by shutting off the coal mill feed, the coal mill and the coal mill fan quickly and as simultaneously as possible. The dampers isolating the coal mill are then quickly shut.

There are no excess emissions associated with the shutdown of the coal mill.

Material Handling Systems Shutdown

The dust collectors associated with the material handling emission points are operated until the associated processes are shutdown. Once no material is being processed, the dust collectors are shutdown by turning off power to the I.D. fans and the baghouse cleaning systems.

No excess PM or PM10 emissions are associated with the shutdown of these dust collectors.

Department of Environmental Protection

Duplicate (Intent)

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

P.E. Certification Statement

Permittee: Florida Crushed Stone Company
Brooksville Cement Plant

DRAFT Permit No.: 0530021-009-AC
PSD-FL-351

Project: Air Construction Permit for a second dry process, preheater/precalciner kiln system

This application reviewed is to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone Company's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a co-located 150 MW coal fired power plant and a Portland cement plant and associated quarry, and raw material and cement handling operations. This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and additional coal handling and grinding operations.

I HEREBY CERTIFY *to the best of my knowledge and belief that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).*

This draft permit was prepared under my responsible charge by Mr. Bobby Bull with input from other Bureau of Air Regulation personnel as needed.

James K. Pennington, P.E.
Registration Number: 34536

5/17/05
Date

Permitting Authority:
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0144
Fax: 850/922-6979

Department of
Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

P.E. Certification Statement

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This draft permit was prepared under my responsible charge by Mr. Bobby Bull with input from other Bureau of Air Regulation personnel as needed.

James K. Pennington, P.E.
Registration Number: 34536

5/17/05
Date

Permitting Authority:
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0144
Fax: 850/922-6979

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

May 20, 2005

CERTIFIED MAIL – Return Receipt Requested

Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crushed Stone Company
P.O. Box 1508
Brooksville, Florida 34601

RE: **Draft** Permit for construction of a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone Company, Brooksville Cement Plant. Air Construction Permit 0530021-009-AC; PSD-FL-351.

Dear Mr. Allen:

Attached is one copy of the Draft Permit, 0530021-009-AC, Best Available Control Technology (BACT) Determination, and the Technical Evaluation and Preliminary Determination to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations.

The permitting authority's "INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" and the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" are also included. The "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" must be published as soon as possible. Proof of publication, i.e., newspaper affidavit, must be provided to the permitting authority's office within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to James K. Pennington, P.E. at the above letterhead address. If you have any other questions, please contact Bobby Bull at 850/921-9585.

Sincerely,

Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/jkp/rlb

Enclosures

In the Matter of an
Application for Permit by:

Florida Crushed Stone Company
P.O. Box 1508
Brooksville, Florida 34601

Air Construction Permit No.: 0530021-009-AC; PSD-FL-351
Brooksville Plant
Hernando County

/

INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (permitting authority) gives notice of its intent to issue an air construction permit [copy of the draft permit enclosed] for the facility detailed in the application specified above, to authorize Florida Crushed Stone to construct a new dry process, preheater/precalciner kiln system at Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County.

The permittee, Florida Crushed Stone, applied on December 20, 2004, to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

The permitting authority has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210; and 62.212, F.A.C. This source is not exempt from permitting procedures. The permitting authority has determined that an Air Construction Permit is required for the proposed activity.

The permitting authority intends to issue this Air Construction Permit based on the belief that reasonable assurances have been provided to indicate that operation of the source will not adversely impact air quality, and the source will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.0872, F.S., and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." The notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the permitting authority at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax: 850/922-6979), within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

The permitting authority will issue the Final Air Construction Permit in accordance with the conditions of the enclosed Draft Air Construction Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. Mediation under Section 120.573, F.S., will not be available for this proposed action.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT". Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00 pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 (fourteen) days of receipt of this notice of intent. Petitions filed by any other person must be filed within 14 (fourteen) days of publication of the public notice or within 14 (fourteen) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207, F.A.C.

A petition must contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number, and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the permitting authority's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the permitting authority's action or proposed action;

(d) A statement of the material facts disputed by the petitioner, if any;

(e) A statement of the facts that the petitioner contends warrant reversal or modification of the permitting authority's action or proposed action;

(f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the permitting authority's action or proposed action; and,

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the permitting authority to take with respect to the action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the permitting authority's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the United States Environmental Protection Agency and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Trina L. Vielhauer
Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE and the Draft Permit and all copies were sent by certified mail before the close of business on 5/20/05 to the person(s) listed:

Charles Allen, Director of Operations, Cement Division, Rinker Materials of Florida, Florida Crushed Stone Company, P.O. Box 1508, Brooksville, FL 34601.

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE and the Draft Permit were sent by U.S. mail on the same date to the person(s) listed:

Eddie Allsopp, III, Rinker Materials of Florida, Inc.
Barry D. Andrews, P.E., RTP Environmental Associates, Inc.
Don Elias, Principal, RTP Environmental Associates, Inc.
Chair, Hernando County BOCC
Joel Smolen, Florida DEP- SWD
David Zell, Florida DEP- SWD
John Bunyak, NPS
Jim Little, EPA

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

Mary J. Harvey 5/20/05
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection

Florida Crushed Stone Company
Brooksville Cement Manufacturing Facility - Brooksville
Hernando County

Draft Air Construction Permit No.: 0530021-009-AC; PSD-FL-351

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Crushed Stone Company (FCS) to authorize FCS to construct a new dry process, preheater/precalciner kiln system at the Brooksville Cement Manufacturing Facility Plant located in Brooksville in Hernando County. The applicant's name and address are: Florida Crushed Stone Company, 13011 Cement Plant Road, Brooksville, Florida 34601.

The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with an in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NOx, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. Baghouses will be installed to control PM and PM_{10} emissions. SO2 emissions will be controlled by process control. Process control, process design, and combustion unit will control CO emissions. VOC emissions will be controlled by clean raw materials and combustion control. Mercury emissions will be controlled by material balance with a minimum of quarterly analysis of raw material samples and making and maintaining records of monthly and rolling 12-month mercury throughput.

An air quality impact analysis for PM_{10}, SO_2, NO_X, CO and VOC was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted SO_2 and NO_2 impacts were insignificant in both the PSD Class I Chassahowitzka National Wildlife Refuge and the Class II area in the vicinity of the project, so no PSD Class I or II increment consumption analyses were required for SO_2 and NO_2. The maximum predicted PM_{10} annual impacts were insignificant in the PSD Class I area, so no PSD Class I increment consumption analysis for the annual averaging time was required for PM_{10}. The maximum predicted PM_{10} PSD Class I and II increments consumed by all sources in the area, including this project, will be as follows:

	Increment Consumed ($\mu g/m^3$)	Total From All Sources Allowable Increment ($\mu g/m^3$)	Increment Consumed (Percent)
24-hour Class II	28.0	30	93
Annual Class II	4.8	17	28
24-hour Class I	1.30	10	13

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If

written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00 pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-1352
Telephone: (813) 744-6100
Fax: (813) 744-6084

The complete project file includes the technical evaluation, Draft Air Construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, North Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The technical evaluation and draft permit may be viewed at www.dep.state.fl.us/air/permitting/construct.htm in the Florida Crushed Stone link.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

Florida Crushed Stone Company

Brooksville Facility

Portland Cement Plant

Hernando County

DEP File No. 0530021-009-AC

PSD-FL-351

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

May 20, 2005

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL INFORMATION

1.1 APPLICANT NAME AND ADDRESS

Florida Crushed Stone Company
Brooksville Facility
P.O. Box 1508
Brooksville, FL 34601

Authorized Representative: Charles Allen, Director of Operations, Cement Division

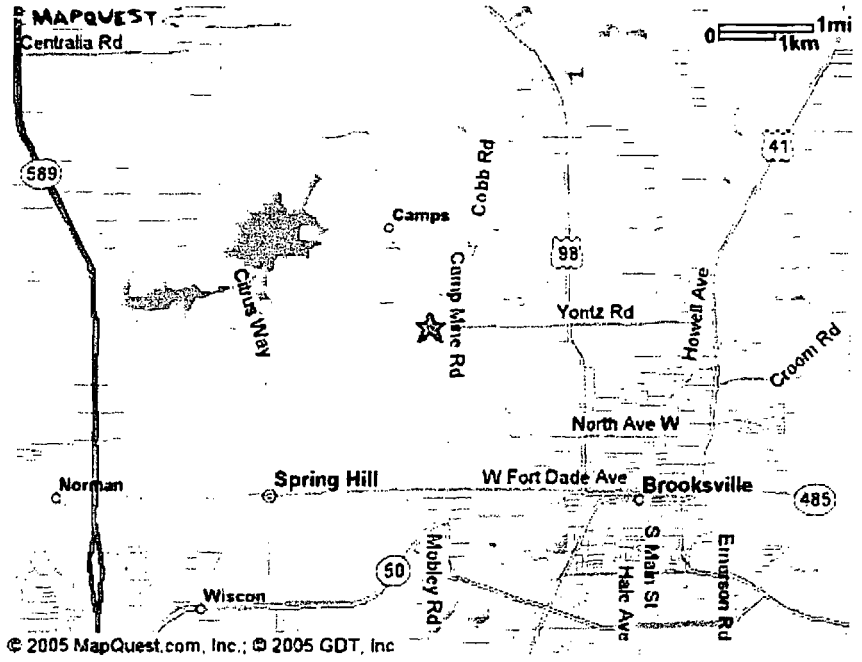
1.2 REVIEWING AND PROCESS SCHEDULE

12/20/2004	Received permit application, report and fee
12/28/2004	Received email from EPA dated 12/28/2004; No comments
01/19/2005	Sent Request for Additional Information
03/07/2005	Received Response to Request for Additional Information
04/06/2005	Application Complete

2. FACILITY INFORMATION

2.1 FACILITY LOCATION

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.00 km E and 3162.5 km N. The nearest distance of this site from the Chassahowitzka Class I PSD areas is 20 kilometers.



2.2 STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)

Industry Group No.	32	Stone, Clay, Glass, and Concrete Products
Industry No.	3241	Cement, Hydraulic

2.3 FACILITY CATEGORY

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

3. PROJECT DESCRIPTION

This permitting action is to allow for the construction of a preheater/precalciner kiln with in-line raw mill and associated equipment. Emissions units addressed by this permit are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2:-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Pulverized Coal Bin

3.1 GENERAL PROCESS DESCRIPTION

Portland cement is a fine powder, usually gray in color, which consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrate, and small amounts of magnesium oxide, sodium, potassium and sulfur, to which one or more forms of calcium sulfate have been added. About 95% of the cement production in the U.S. is Portland cement. Masonry cement represents the balance of the domestic cement production.

There are several cement manufacturing processes including wet, dry, dry preheater and dry preheater/precalciner processes. These processes all produce Portland cement from raw materials through pyroprocessing. Each type of process has different characteristics for equipment design, method of operation, and fuel consumption. In the wet and dry processes, all of the pyroprocessing and fuel combustion occurs in the kiln, with the primary difference being that with the wet process the raw materials are blended and introduced into the kiln as a slurry. The preheater and preheater/precalciner processes are also dry processes, but in these processes thermal efficiency and production capacity have been improved by adding process vessels arranged vertically before the kiln, wherein the hot gases pass counter to the material flow, effecting heat transfer through the intimate contact between the two streams. The improved heat transfer allows the kiln length to be reduced. This arrangement also allows the hot gases from the preheater tower to be used to dry raw materials in the raw mill. In the preheater/precalciner process, fuel combustion is divided between the kiln and a preheater vessel below the preheater tower. This arrangement provides for greater thermal efficiency than the preheater process. A relatively new innovation is the use of a separate line combustion chamber for the preheater burner, so called because it is installed to the side (separate) of the material flow through the precalciner region. Because of its lower fuel requirements and greater efficiency, most new Portland cement plants use the dry preheater/precalciner process. The applicant proposed to use the dry preheater/precalciner process, with a separate line combustion chamber for the calciner burner, in an in-line arrangement with the raw mill.

The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, tires, used oil and various kinds of wastes are burned at many plants. The applicant proposed to fire coal, petroleum coke, tire derived fuels. The applicant will not fire or introduce hazardous wastes, petroleum contaminated soil or materials, used oil, oil fuels, other solid fuels, or solid wastes other than tires. Tire derived fuels may be fed into the kiln feed end at up to 15% of heat input.

The production of Portland cement is generally a four-step process: raw materials acquisition and handling, kiln feed preparation for pyroprocessing, pyroprocessing, and finished cement grinding. The chemical reactions and physical processes that constitute the transformation from raw materials to cement are quite complex. The heart of the Portland cement manufacturing process is the pyroprocessing system which includes the rotary kiln and preheater/precalciner.

Pyroprocessing may be divided into four stages, depending on location and temperature of the materials in the system: evaporation of uncombined water from raw materials; dehydration of combined water to form oxides of silicon, aluminum, and iron; calcination (liberation of carbon dioxide); reaction and sintering of the oxides in the kiln to form cement clinker.

Generally the entire process may be summarized as follows. Raw materials, predominantly limestone, but also including sand, clay, iron ore, and coal ash, will be crushed and then blended and milled in the raw mill. The resulting material will be conveyed to the pyroprocessing system in the top stage of the preheater. It will exit the preheater/precalciner and enter the kiln at the elevated end (feed end). The rotation of the kiln causes the solid materials to be slowly transported downward from the front end (discharge end). Fuel will be supplied to the precalciner combustion chamber, optionally at the feed end of the kiln, and at the lower or discharge end of the kiln. The hot, gaseous combustion products will move countercurrent to the material flow, thereby transferring heat to solids in the kiln and preheater/precalciner, and to the raw mill.

The clinker will enter the clinker cooler where it will be cooled by ambient air. This cooling or quenching serves to "freeze" the clinker, halting the formation chemistry. Hot air from the clinker cooler will be recovered and returned to the pyroprocessing system as combustion air and will also be supplied to the coal mill for drying the coal and petroleum coke. The cooled clinker will be stored in silos before being mixed with gypsum and limestone and ground in a ball mill in the finish milling operation to produce Portland cement. The Portland cement will be stored in silos and loaded in bulk into tanker trailers or in bags which will be palletized. The Portland cement will be hauled by truck for distribution to customers.

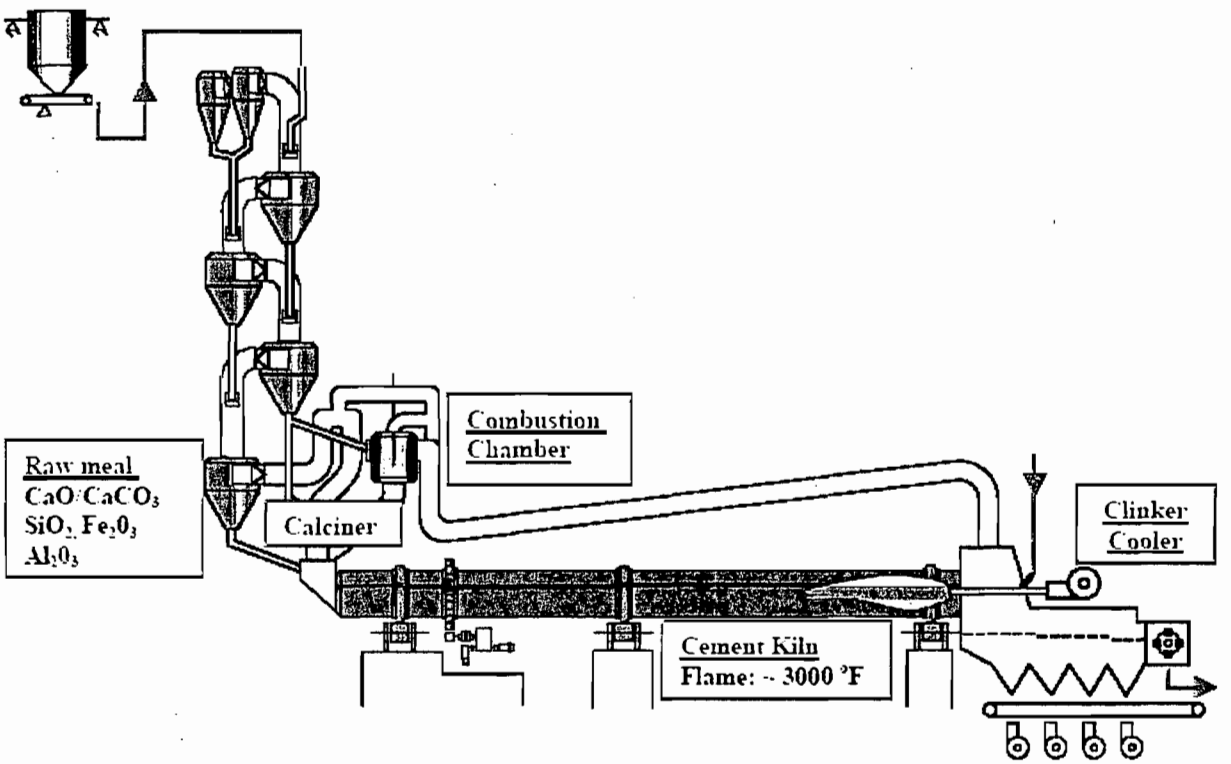


Diagram of Dry Process Cement Kiln with Preheater and Calciner Kiln

3.2 DETAILED PROCESS DESCRIPTION

The process for this plant is discussed in more detail below.

Raw Material Handling

Limestone will be mined primarily below the water table. The overburden, consisting of sand and clay, will be removed from the limestone surface and stockpiled in the vicinity of the crusher. The crusher will be portable, and will be relocated periodically in accordance with the mining plan. The overburden and the limestone will be fed into the crusher typically with front end loaders in the ratios dictated by the target chemical composition of the desired raw mix. The quarry mix will be delivered to a covered storage hall by a conveyor belt system. The quarry mix will have a moisture content of 10-20%. The storage hall will have space devoted to storage of the other raw materials which include but are not limited to: mill scale, feldspar and flyash. The other raw materials will be transported to the facility from offsite by truck.

Fugitive emissions from raw material handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter. Unpaved roads will be sprayed by a water truck. Paved roads will be cleaned by vacuum sweeper truck as required to prevent unconfined particulate matter emissions. Material stockpiles at the plant will be covered to limit particulate matter generated by wind erosion.

Raw Milling Operations

The quarry mix and other raw materials will be conveyed to the raw mill feed bin. Raw materials will be fed from the raw mill feed bin to the raw mill. The raw mill will grind and mix the raw materials, and dry the raw materials with the hot gases from the pyroprocessing system. Emissions from the raw mill are controlled by baghouses. The raw mill air heater will be controlled by the baghouse through the kiln.

Pyroprocessing System

The kiln feed from the homogenization silo will be conveyed to the preheater by means of an airlift. The feed will enter the top stage of the preheater or, during wet material conditions, drop into the next lower stage of the preheater to increase the gas temperature to the raw mill. Gases from the pyroprocessing system will flow counter to the material direction to the raw mill.

Coal, petroleum coke, natural gas, and flyash will be burned in the main burner at the discharge end of the kiln. Natural gas, fuel oil and propane will be used as a startup and supplemental fuel. The plant will also burn tires as available at the transition from the preheater to the kiln feed end. Used tires may be fed into the kiln feed end at up to 15% of heat input not to exceed 58.5 million BTU per hour heat input. Combustion air for the precalciner will be provided through a tertiary air duct from the clinker cooler.

The pyroprocessing system will transform the raw meal from the homogenization silo into clinker. This amount of clinker when mixed with calcium sulfate (gypsum) will produce 138 tons of Portland cement per hour.

Clinker Cooling And Handling

After discharge from the kiln, the clinker will be cooled with ambient air in a reciprocating grate cooler. The exhaust gases from the cooler will be cleaned by the baghouses operating under negative pressure from an ID fan. The cleaned gases will be exhausted through a stack that is shared with the coal mill. A portion of the clinker cooler gases will be ducted to the coal mill to dry the coal. These gases will then exhaust through the coal mill fabric filter into the common stack with the cooler exhaust. A portion of the clinker cooler gases will be ducted to the precalciner and the precalciner combustion chamber.

The clinker will be conveyed to the clinker silos. The clinker will be withdrawn from the silos by vibrating feeders, and discharged onto the finish mill feed belt. Enclosed clinker handling operations and storage silos will be controlled with baghouses.

Finish Mill

Gypsum and limestone will be received by truck and stored under cover in stockpiles. Each material will be transferred by a front end loader to feed hoppers, and conveyed to the finish mill. The finish mill can produce up to 138 tons per hour of Portland cement.

All enclosed sources associated with the finish milling operation will be controlled with baghouses. Fugitive emissions from gypsum and limestone handling and conveying associated with the finish milling operation will be minimized by inherent moisture and by the application of water as necessary for suppression of unconfined emissions of particulate matter.

Cement Handling

Finished Portland cement will be stored in concrete silos. The Portland cement will be withdrawn from the silos and loaded into tanker trailers for bulk shipment or into bags which will be palletized for shipment. Finished Portland cement will be transported by truck or rail.

All enclosed sources associated with the cement handling operation will be controlled with baghouses.

Coal and Petroleum Coke Handling

Coal and petroleum coke will be received by railcar. The bucket elevator will discharge either into a covered storage facility or onto a belt and then to a bin. Coal and petroleum coke in covered storage will be reclaimed by a front end loader through the unloading system. The milled fuels will be stored in a pulverized fuel storage bin for pneumatic conveyance to the main burner and precalciner burner.

All enclosed sources associated with the coal and petroleum coke handling and milling operation will be controlled with baghouses. Fugitive emissions from coal and petroleum coke handling and conveying will be minimized by inherent moisture and by the application of water as necessary for suppression of unconfined emissions of particulate matter.

Cement Kiln Dust

This cement plant will not generate cement kiln dust (CKD) as a waste product. This is consistent with the low alkali characteristics of the raw limestone and the greater opportunity for recycle afforded by the dry preheater/precalciner process. The process equipment utilized to transport the captured dust from the ESP back into the process is all enclosed. Unconfined emissions are not expected from dust handling and conveying activities.

4. PROJECT EMISSIONS

The total annual air pollutant potential emissions in tons per year from the facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1] (TPY)	MAXIMUM EMISSIONS (TPY)	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes
SAM (H2SO4)	7	5.1	No
Mercury (Hg)	0.1	0.061 (122 lbs)	No
Lead (Pb)	0.6	0.375 (750 lbs)	No

[1] Florida Administrative Code 212.400-2.

The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility. The proposed project will result in "significant increases" with respect to Table 62-212.400-2 of emissions of PM and PM_{10}, SO_2, NOx, CO, and VOC. This project will emit less than significant emission rates of the other regulated pollutants of Table 62-212.400-2.

Maximum emissions of mercury will be 122 pounds per year and are limited by the permit below the PSD applicability level (200 lbs/year). Mercury emissions will be determined by raw materials testing. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the raw mill feed and fuels. It will be assumed all mercury going into the system will be emitted through the process. Current testing at Florida Rock's Newberry Plant and Suwannee American Cement's Branford Plant has shown mercury emissions are below detectable levels. Maximum emissions of dioxin will be 0.00105 pounds per year and are limited by the federal MACT rule. Dioxin is not subject to PSD review.

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide, and designated as unclassifiable for PM_{10}.

The proposed project was reviewed under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility. This review consisted

of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions. (The BACT determination is documented separately.)

The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, Subpart Y Standards of Performance for Coal Preparation Plants, and Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359) and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

The emission units affected by this permitting action shall comply with all applicable provisions of the Florida Administrative Code, including applicable portions of the Code of Federal Regulations incorporated therein. This permitting action does not provide a shield from the enforcement of other applicable legal requirements.

6. AIR POLLUTION CONTROL TECHNIQUES

The applicant proposed to control air pollutant emissions through various methods. The applicant proposed the following as BACT for the following PSD pollutants. Control equipment (baghouses) was proposed for particulate matter and the use of wet suppression, paving of roadways, street sweeping on paved roads, and enclosing stockpiles to reduce wind erosion to control particulate matter from fugitive sources. The facility proposed Alkali/Sulfur Balance (i.e. control of natural constituents) for SO_2 control. Selective Non-catalytic reduction (SNCR) was proposed for NOx control. Combustion control and good combustion practices were identified for CO and VOC control. These control techniques and emission limits are discussed in detail in the BACT Determination for this project dated May 20, 2005. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the raw mill feed and fuels. Dioxin emissions will be controlled by limiting the temperature of the inlet of the electrostatic precipitator for the in-line kiln/raw mill pursuant to federal NESHAP regulation as required by 40 CFR 63 subpart LLL.

6.1 COMPLIANCE PROCEDURES

The permit requires annual testing for emissions from the in-line kiln/raw mill of PM_{10}, SO_2, NOx, CO, VOC, mercury and visible emissions. The permit requires annual testing for emissions from the clinker cooler of PM, PM_{10}, and visible emissions. Annual testing is required for visible emissions from all other emission points. Initial testing is required for PM from the emission points controlled by baghouses. Testing for PM_{10} is required for some of the emission points controlled by baghouses only if the tests for PM do not show compliance with the PM limit. Pursuant to federal rule, the permit requires testing for dioxin/furan emissions initially and every 30 months. In addition, a continuous emission monitoring (CEM) system is required for SO_2, NOx, CO, and VOC emissions from the in-line kiln/raw mill and continuous opacity monitoring (COM) systems are required for visible emissions from in-line kiln/raw mill and the clinker cooler. Continuous monitoring of other parameters such as the inlet temperature of the electrostatic precipitator for the in-line kiln/raw mill and the coal mill exit gas temperature is required.

6.2 EXCESS EMISSIONS

Allowable Excess Emissions: Pursuant to Rules 62-4.070(3) and 62-210.700(5), F.A.C., for purposes of this permit, all limits established pursuant to the State Implementation Plan, including those limits

established as BACT, include emissions during periods of startup, shutdown and malfunction. Excess emissions shall not exceed a 2-hour duration in any 24 hour period. This provision can not be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited pursuant to Rule 62-210.700(4), F.A.C.

7. SOURCE IMPACT ANALYSIS

7.1 INTRODUCTION

The proposed project is a major modification to an existing facility and will increase PM_{10}, SO_2, NOx, CO and VOC emissions at levels in excess of PSD significant amounts. PM_{10}, SO_2, and NO_X, are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments and significant impact levels defined for them. CO is a criteria pollutant and has only AAQS and significant impact levels defined for it. Emissions of VOC are related to the formation of ozone and are not generally modeled for individual stationary sources. The air quality impact analyses required by the PSD regulations for these pollutants include:

- An analysis of existing air quality for PM_{10}, SO_2, NO_X, CO and VOC;
- A significant impact analysis for PM_{10}, SO_2, NO_X and CO;
- A PSD increment analysis for PM_{10};
- An Ambient Air Quality Standards (AAQS) analysis for PM_{10} and+;
- An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in the application and this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

7.2 ANALYSIS OF EXISTING AIR QUALITY IN THE VICINITY OF THE PROJECT

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimus ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimus ambient concentration. If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established

AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from the existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling. No de minimus ambient concentration is provided for ozone. Instead the net emissions increase of VOC is compared to a de minimus monitoring emission rate of 100 tons per year.

The table below shows project air quality impacts for comparison to de minimus ambient concentrations.

AIR QUALITY IMPACT DE MINIMUS LEVELS				
Pollutant	**Averaging Time**	**Modeled Concentration ($\mu g/m^3$)**	**Impact Greater than De Minimus (Yes/No)**	**De Minimus Level ($\mu g/m^3$)**
SO_2	24-hr	2	No	13
PM_{10}	24-hr	13	Yes	10
CO	8-hr	70	No	575
NO_2	Annual	0.5	No	14
Ozone	Annual Emission Rate	66 TPY of VOC	No	100 TPY VOC

As shown in the table SO_2, NO_2, VOC and CO impacts from the project are predicted to be less than the de minimus levels; therefore, preconstruction monitoring is not required for these pollutants.

However, the table shows that PM_{10} impacts from the project are predicted to be greater than the corresponding de minimus level. Therefore, the applicant is not exempt from preconstruction monitoring for PM_{10}. The applicant may, instead, satisfy this requirement using previously existing representative data. Previously existing representative monitoring data does exist from PM_{10} monitors located in Hernando County within 3 km of the facility; this data is appropriate for fulfilling the monitoring requirement for this pollutant and for establishing a background concentration for use in the PM_{10} AAQS analysis. PM_{10} background concentrations for the PM_{10} AAQS analysis are shown in the table below.

PM_{10} Monitor Data for Background Concentrations

Years	**Monitor Locations**	**Concentration (ug/m^3) High 2nd high 24-hour average**	**Arithmetic Mean Concentration (ug/m^3) Annual Average**
2001-2003	Hernando County	58	19

7.3 MODELS AND METEOROLOGICAL DATA USED IN SIGNIFICANT IMPACT, PSD INCREMENT AND AAQS ANALYSES

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing facilities in the surrounding Class II Area and the Class I Chassahowitzka National Wildlife Refuge (CNWR) located 20 km away at its closest point. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. It incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfied the good engineering practice (GEP) stack height criteria.

Modeling was performed by both the applicant and the Department. Meteorological data used in the ISCST3 model consisted of a concurrent 5-year period of hourly surface weather observations from the National Weather Service (NWS) station at Tampa, Florida and twice-daily upper air soundings also from Tampa, Florida. The 5-year period of meteorological data was from 1991 through 1995. This NWS station was selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

7.4 SIGNIFICANT IMPACT ANALYSIS

Where predicted concentrations are below the significance levels for a given pollutant, no further modeling is required for that pollutant. A rectangular grid was used with this modeling to evaluate the distance to where highest (high-first-high) short term and long term ambient concentrations fall below the appropriate pollutant significance levels. Modeling to determine significance in the PSD Class II area in the vicinity of the project was conducted using facility fenceline receptors with 50-meter spacing; discrete receptors with 100-meter spacing from the fenceline to 2.5 kilometers; discrete receptors with 250 meter spacing extending out 5 kilometers; discrete receptors with 500 meter spacing extending out 10 kilometers; and discrete receptors with a 1 kilometer spacing extending out 18 kilometers. There are over 4000 receptors in the Class II modeling. In the Class II area, the significant impact distance is the critical distance and determines the significant impact area (SIA) over which any additional multisource modeling is required. The SIA is defined as a circular area centered on the proposed source with a radius equal to the critical distance. The SIA, if any, was established for every averaging period of every applicable pollutant for every year of meteorological data. The SIA, for each applicable pollutant, over which NAAQS and increment compliance modeling is performed, is the largest of these areas.

Modeling to determine significance was also done in the PSD Class I CNWA. Over 800 discrete rectangular receptors were placed in the Class I area for evaluation. If a predicted pollutant concentration is greater than its significance level, then a multisource analysis is also done using these Class I area receptors.

The following table shows maximum predicted impacts and the SIA in the Class II area for each applicable averaging period for each pollutant.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)	SIA (km)
SO_2	Annual	0.1	1	No	None
	24-hr	2.3	5	No	None
	3-hr	10.2	25	No	None
PM_{10}	Annual	2.4	1	Yes	1.4
	24-hr	15.6	5	Yes	3.4
CO	8-hr	141	500	No	None
	1-hr	302	2,000	No	None
NO_2	Annual	0.9	1	No	None

SO_2, NO_2 and CO were determined to have less than significant impacts in the Class II area. This demonstrates compliance with ambient air quality standards and PSD increments for these pollutants. No further dispersion modeling was required to be performed for these pollutants.

PM_{10} was determined to have greater than significant impacts in the Class II area. The SIA based on maximum predicted ambient air concentrations of PM_{10} for all periods was 3.4 km with the maximum predicted impacts located near the eastern facility boundary. Therefore, refined dispersion modeling including other sources in the area was required and conducted for PM_{10} to demonstrate compliance with the PSD increments and the AAQS.

The following table shows the predicted impacts in the Class I area for each applicable averaging period for each pollutant.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO PSD CLASS I SIGNIFICANT IMPACT LEVELS IN THE CNWA

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)
SO_2	Annual	0.009	0.1	No
	24-hr	0.19	0.2	No
	3-hr	0.94	1.0	No
PM_{10}	Annual	0.05	0.2	No
	24-hr	0.8	0.3	Yes
NO_2	Annual	0.09	0.1	No

PM_{10} was determined to have greater than significant impacts in the Class I area for the 24-hour averaging time. Therefore, refined dispersion modeling including other sources in the area was required and conducted for PM_{10} to demonstrate compliance with the PSD Class I 24-hour increment.

7.5 PSD INCREMENT ANALYSIS

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant over a baseline level set in 1977. Refined Class I and II Increment compliance modeling is performed only if the SIA determination modeling indicates that the project would have a significant impact on air quality. The purpose of this increment compliance modeling is to demonstrate that the new sources will not significantly cause or contribute to a violation of a PSD Increment.

This modeling involved the sources under review as well as sources from within and near the SIA in the inventory prepared by the Department and the applicant using approved screening techniques for determining the sources to be included in the modeling analysis.

These runs were to identify regulatory high receptors, high-first-high for each year for PM10 annual average, and high-second-highest over the five years for the 24-hour average.

The results of the PM_{10} Class II increment analysis are given below and show that the maximum predicted impacts are less than the respective allowable increments. The maximum predicted 24-hour impact, which is over 90% of the allowable increment is due mainly to modeled fugitive PM_{10} emissions impacts

along the facility's fenceline. These values drop off rapidly with distance from the fenceline. The maximum predicted impacts due to stack sources are much less and are around 10 ug/m^3.

PSD CLASS II INCREMENT ANALYSIS				
Pollutant	**Averaging Time**	**Maximum Predicted Impact (µg/m^3)**	**Impact Greater than Allowable Increment? (Yes/No)**	**Allowable Increment (µg/m^3)**
PM_{10}	Annual	4.8	No	17
	24-hr	28.0	No	30

The results of the PM_{10} Class I increment analysis is given below and shows that the maximum predicted impacts is less than the allowable increment.

PSD CLASS I INCREMENT ANALYSIS-CNWA				
Pollutant	**Averaging Time**	**Maximum Predicted Impact (µg/m^3)**	**Impact Greater than Allowable Increment? (Yes/No)**	**Allowable Increment (µg/m^3)**
PM_{10}	24-hr	1.3	No	10

7.6 AAQS ANALYSIS

AAQS compliance modeling was performed for PM_{10} because the SIA determination modeling indicated that the new sources would have a significant impact on air quality. The purpose of AAQS compliance modeling is to demonstrate that the new sources will not cause or contribute to a violation of an AAQS.

AAQS compliance modeling addressed all areas within the Significant Impact Area (SIA). These runs identify regulatory high receptors; high-first-high for each year for PM10 annual average, and high-second-highest over the five years for the 24-hour average.

AAQS compliance modeling involved the sources under review as well as sources from within and near the SIA in the inventory prepared by the Department and the applicant using approved screening techniques. The background concentrations developed from the existing monitoring data discussed earlier were added to the modeled concentrations to determine compliance with the AAQS. The table below gives the results and shows that maximum predicted impacts are less than the AAQS.

AMBIENT AIR QUALITY IMPACTS						
Pollutant	**Averaging Time**	**Major Sources Impact (µg/m^3)**	**Background Concentration (µg/m^3)**	**Total Impact (µg/m^3)**	**Total Impact Greater than AAQS**	**Florida AAQS (µg/m^3)**
PM_{10}	Annual	7	19	26	No	50
	24-hr	47	58	105	No	150

7.7 ADDITIONAL IMPACTS ANALYSIS

7.7.1-IMPACTS ON SOILS, VEGETATION, WILDLIFE, AND VISIBILITY

Federal Secondary Ambient Air Quality Standards were established to protect the public welfare including the protection of animal and plant life, property, visibility and atmospheric clarity, and the enjoyment of life and property.

The U. S. Environmental Protection Agency was directed by Congress to develop primary and secondary ambient air quality standards. The primary standards were to protect human health and the secondary standards were to:

"... protect the public welfare from any known or anticipated adverse effects of a pollutant."

The public welfare was to include soils, vegetation and visibility.

The facility will not cause or contribute to any exceedance of established ambient air quality standards. The emissions from the facility will result in ambient impacts that are less than significant and are considered to be de minimus, for all regulated pollutants except for PM_{10}.

The impacts to ambient air resulting from emissions of PM10 are well below the applicable Federal Secondary Ambient Air Quality Standards. Compliance with PSD Class II increments establishes an effective ambient air quality standard that is much more stringent than the ambient air quality standards. It is concluded that there will be no adverse effect to the soils or vegetation of the area. A Class I area visibility analysis was performed for the CNWA using the PLUVUE II visibility model. Maximum predicted impacts are less than the critical values established by the federal land manager.

7.7.2 GROWTH-RELATED AIR QUALITY IMPACTS

No quantifiable air quality impacts are projected for the area as a result of general commercial, residential, industrial and other growth associated with the facility.

The proposed construction will require an increase in personnel at the cement plant. No increase in residential or commercial construction is expected in the area surrounding the plant as a result of this modification. Therefore, no additional growth impacts are expected as a result of the proposed project.

The area the facility will affect is the area of significant impact described in the air quality analysis section of this report. This area is within a radius of 3.4 kilometers from the proposed facility. The applicant owns a substantial amount of this area. General commercial, residential, and other growth within the radius is expected to continue at approximately the current rate.

7.8 GOOD ENGINEERING PRACTICE STACK HEIGHT DETERMINATION

A Good Engineering Practice (GEP) review was conducted for each proposed new source to determine if building downwash effects needed to be included in the modeling and to determine the appropriate stack heights to be used with the models. The new stacks will be lower than GEP height; therefore building downwash effects were included in the modeling analyses

8. ADDITIONAL REQUIREMENTS

The permit has additional requirements that provide reasonable assurance that Department rules can be met. Some of these are conditions that:

Limit fuels and materials to exclude hazardous wastes, contaminated materials and other fuels.

9. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. The Department intends to issue an air construction permit to the applicant based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Department will therefore issue a draft permit to the applicant that allows the applicant to construct a dry process, preheater/precalciner type Portland cement kiln system subject to the conditions of that permit.

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Florida Crushed Stone Company
Brooksville Plant
PSD-FL-351
Air Permit 0530021-009-AC
Hernando County

1. BACKGROUND

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.00 km E and 3162.5 km N. The nearest distance of this site from the Chassahowitzka Class I PSD area is 20 kilometers.

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per

year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs).

Emissions units addressed by this permitting action are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2:-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Seperator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Pulverized Coal Bin

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) will exceed 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62- 212.400-1, F.A.C. Because emissions will be greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility with a potential emissions increase greater than the PSD significance levels for NO_x, PM, PM_{10},

SO_2, CO, and VOC. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions.

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide, and designated as unclassifiable for PM10.

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs). The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, Subpart Y Standards of Performance for Coal Preparation Plants, and Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

Particulate matter emissions from the in-line kiln/raw mill and from the clinker cooler will be controlled by a baghouse. Particulate matter emissions from other sources will be controlled by baghouses. Sulfur dioxide emissions are inherently limited by the process (Alkali/Sulfur Balance). NOx emissions will be controlled by multi-stage combustion and/or Selective Non-Catalytic Reduction (SNCR). Carbon monoxide and VOC emissions will be limited by combustion control.

The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1] (TPY)	MAXIMUM EMISSIONS (TPY)	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 212.400-2.

Maximum emissions of mercury will be 122 pounds per year. Mercury emissions are below the 200 lb per year threshold and will not subject to PSD review. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the preheater feed and fuels. Maximum emissions of dioxin will be 0.00105 pounds per year. Dioxin emissions will be controlled by limiting the temperature of the inlet of the baghouse for the in-

line kiln/raw mill pursuant to federal NESHAP regulation. Dioxin is not subject to PSD review. Emissions of PM and PM_{10} from the unenclosed conveying equipment are expected to be insignificant because of inherent moisture and moisture applied to comply with the reasonable precautions for control of unconfined particulate matter emissions.

2. RELEVANT PERMIT PROCESSING DATES OF THE BACT APPLICATION

12/20/2004	Received permit application, report and fee
12/28/2004	Received email from EPA dated 12/09/2004; No comments
01/19/2005	Sent Request for Additional Information
03/07/2005	Received Response for Additional Information
04/06/2005	Application Complete

3. REVIEWERS

James K. Pennington, P.E., Bobby Bull, Engineering Specialist II, and Cleve Holladay, Engineer IV (modeling), prepared the BACT determination.

4. DETAILED PROCESS DESCRIPTION

The Department has a substantial body of information on Portland cement manufacturing and the applicant submitted a very detailed description of the process options with special emphasis on the types of raw materials that are readily available in the area of concern.

Portland cement is a fine powder, usually gray in color, which consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrate, and small amounts of magnesium oxide, sodium, potassium and sulfur, to which one or more forms of calcium sulfate (gypsum) have been added. About 95% of the cement production in the U.S. is Portland cement. Masonry cement represents the balance of the domestic cement production. There are several cement manufacturing processes including wet, dry, dry preheater and dry preheater/precalciner processes. These processes all produce Portland cement from raw materials through pyroprocessing. Each type of process has different characteristics for equipment design, method of operation, and fuel consumption. In the wet and dry processes, all of the pyroprocessing and fuel combustion occurs in the kiln, with the primary difference being that with the wet process, the raw materials are blended and introduced into the kiln as a slurry.

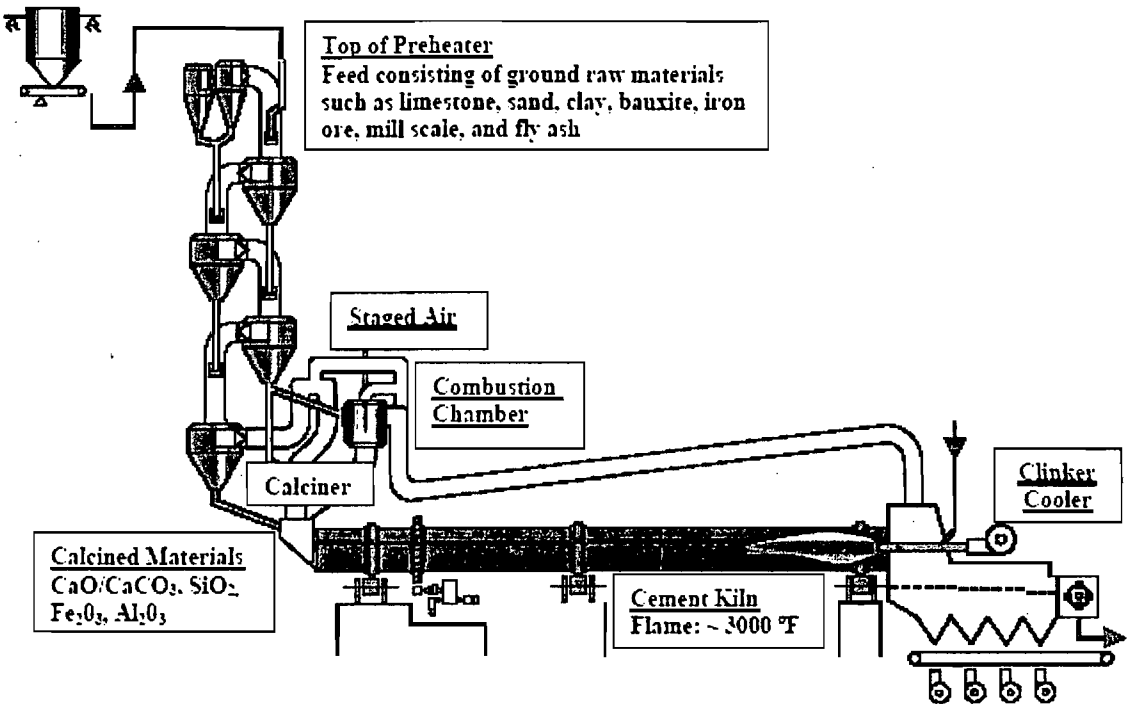


Figure 1: Diagram of Dry Process Cement Kiln with Preheater and Staged Air Calciner[1]

The preheater and preheater/precalciner processes as shown in Figure 1are also dry processes, but in these processes thermal efficiency and production capacity have been improved by adding process vessels arranged vertically before the kiln, wherein the hot gases pass counter to the material flow, effecting heat transfer through the intimate contact between the two streams. The improved heat transfer allows the kiln length to be reduced. This arrangement also allows the hot gases from the preheater tower to be used to dry raw materials in the raw mill. In the preheater/precalciner process, fuel combustion is divided between the kiln and a preheater vessel below the preheater tower. This arrangement provides for greater thermal efficiency than the preheater process. A relatively new innovation is the use of a separate line combustion chamber for the preheater burner, so called because it is installed to the side (separate) of the material flow through the precalciner region. Because of its lower fuel requirements and greater efficiency, most new Portland cement plants use the dry preheater/precalciner process. The applicant proposed to use the dry preheater/precalciner process, with a separate line combustion chamber for the calciner burner, in an in-line arrangement with the raw mill.

The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, used tires, used oil and various kinds of wastes are burned at many plants. The applicant proposed to fire coal, petroleum coke, natural gas, distillate fuel oil, propane, and when available, used tires and flyash. The applicant will not fire or introduce hazardous wastes, petroleum contaminated soil or materials, used oil, other solid fuels, or solid wastes other than tires. Used tires may be fed into the kiln feed end at up to 15% of heat input not to exceed 58.5 million BTU per hour heat input.

[1] Diagram from Department website; http://www.dep.state.fl.us/Air/permitting/construction.htm

The production of Portland cement is generally a four-step process: raw materials acquisition and handling, kiln feed preparation for pyroprocessing, pyroprocessing, and finished cement grinding. The chemical reactions and physical processes that constitute the transformation from raw materials to cement are quite complex, both chemically and physically. The heart of the Portland cement manufacturing process is the pyroprocessing system which includes the rotary kiln and preheater/precalciner as shown in Figure 1.

Pyroprocessing may be divided into four stages, depending on location and temperature of the materials in the system: evaporation of uncombined water from raw materials; dehydration of combined water to form oxides of silicon, aluminum, and iron; calcination (liberation of carbon dioxide); reaction and sintering of the oxides in the kiln to form cement clinker.

Generally the entire process may be summarized as follows. Raw materials, predominantly limestone, but also including sand, clay, iron ore, and coal ash, will be crushed and then blended and milled in the raw mill. The resulting material will be conveyed to the pyroprocessing system in the top stage of the preheater. It will exit the preheater/precalciner and enter the kiln at the elevated end (feed end). The rotation of the kiln causes the solid materials to be slowly transported downward from the front end (discharge end). Fuel will be supplied to the precalciner combustion chamber, optionally at the feed end of the kiln, and at the lower or discharge end of the kiln. The hot, gaseous combustion products will move countercurrent to the material flow, thereby transferring heat to solids in the kiln and preheater/precalciner, and to the raw mill.

The clinker will enter the clinker cooler as shown in Figure 1 where it will be cooled by ambient air. This cooling or quenching serves to "freeze" the clinker, halting the formation chemistry. Hot air from the clinker cooler will be recovered and returned to the pyroprocessing system as combustion air and will also be supplied to the coal mill for drying the coal and petroleum coke. The cooled clinker will be stored in silos before being mixed with gypsum and limestone and ground in a ball mill in the finish milling operation to produce Portland cement. The Portland cement will be stored in silos and loaded in bulk into tanker trailers or in bags which will be palletized.

The process for this plant is discussed in more detail below.

Limestone will be mined primarily below the water table. The overburden, consisting of sand and clay, will be removed from the limestone surface and stockpiled in the vicinity of the crusher. The crusher will be portable, and will be relocated periodically in accordance with the mining plan. The overburden (sand and clay) and the limestone will be fed into the crusher with front end loaders or other material handling devices in the ratios dictated by the target chemical composition of the desired raw mix. The quarry mix will be delivered to a covered storage hall by a conveyor belt system and by haul trucks. The quarry mix will have a moisture content of 10-20%. The storage hall will have space devoted to storage of the other raw materials which include but are not limited to: mill scale, feldspar and flyash. The other raw materials will be transported to the facility by truck.

Fugitive emissions from raw material handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter. Paved and unpaved roads will be sprayed by a water truck and water sprays. Paved roads will be cleaned by vacuum sweeper truck as required to prevent accumulations of unconfined particulate matter and emissions of such. Material stockpiles at the plant will be covered to limit particulate matter emissions generated by wind erosion.

The quarry mix and other raw materials will be conveyed to the raw mill feed bin. Raw materials will be fed from the raw mill feed bin to the raw mill. The raw mill will grind and mix the raw materials, and dry the raw materials with the hot gases from the pyroprocessing system. Emissions from the raw mill (and in-line kiln) will be controlled by a baghouse. The baghouse catches and the raw mill product will be conveyed to the homogenization silo. Other enclosed emission sources will be controlled by baghouses (fabric filters) as well. The captured dust will be recycled into the process unless otherwise authorized by the Department.

The kiln feed from the homogenization silo will be conveyed to the preheater by means of an airlift. The feed will enter the top stage of the preheater or, during wet material conditions, drop into the next lower stage of the preheater as shown in Figure 1 to increase the gas temperature to the raw mill. Gases from the pyroprocessing system will flow counter to the material direction to the raw mill and the baghouse.

Coal, petroleum coke, and flyash will be burned in the precalciner separate line combustion chamber near the inlet to the kiln as well as at the main burner at the discharge end of the kiln. The plant will also burn tires at the transition from the preheater to the kiln feed end. Combustion air for the precalciner will be provided through a tertiary air duct from the clinker cooler.

The pyroprocessing system will transform the raw meal from the homogenization silo into clinker. This amount of clinker will produce 138 tons of Portland cement per hour.

After discharge from the kiln, the clinker will be cooled with ambient air in a reciprocating grate cooler. The exhaust gases from the cooler will be cleaned by an baghouse operating under negative pressure from an ID fan. The cleaned gases will be exhausted through a stack that is shared with the coal mill. A portion of the clinker cooler gases will be ducted to the coal mill to dry the coal. These gases will then exhaust through the coal mill fabric filter (baghouse) into the common stack with the cooler exhaust. A portion of the clinker cooler gases will be ducted to the precalciner and the precalciner combustion chamber.

The clinker will be conveyed to the clinker silos. The clinker will be withdrawn from the silos by vibrating feeders, and discharged onto the finish mill feed belt. Enclosed clinker handling operations and storage silos will be controlled with baghouses.

Gypsum and limestone will be received by truck and stored under cover in stockpiles. Each material will be transferred by a front end loader to feed hoppers, and conveyed to the finish mill. The finish mill can produce up to 138 tons per hour of Portland cement.

All enclosed sources associated with the finish milling operation will be controlled with baghouses. Fugitive emissions from gypsum and limestone handling and conveying associated with the finish milling operation will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter.

Finished Portland cement will be stored in concrete silos. Portland cement will be withdrawn from the silos and loaded into tanker trailers for bulk shipment or into bags which will be cleaned and palletized for shipment. Finished Portland cement will be transported by truck or rail.

All enclosed sources associated with the Portland cement handling operation will be controlled with baghouses.

Coal and petroleum coke will be received by railcar. The bucket elevator will discharge onto a belt and then to a bin. Coal and petroleum coke will be metered from the bin to a vertical mill, for milling and drying with hot gases from the clinker cooler. The milled fuels will be stored in a pulverized fuel storage bin for pneumatic conveyance to the main burner and precalciner burner.

All enclosed sources associated with the coal and petroleum coke handling and milling operation will be controlled with baghouses. Fugitive emissions from coal and petroleum coke handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined fugitive emissions of particulate matter.

5. BACT DETERMINATION REQUESTED BY THE APPLICANT

The following table of emissions estimates was submitted by the applicant for BACT evaluation.

REGULATED AIR POLLUTANTS SIGNIFICANT EMISSION RATES

Pollutant	Significant Emission Rate (Tons/Year)	Modification Emission Rate (Tons/Year)	
			PSD ?
Carbon monoxide	100	2133.6	YES
Nitrogen oxides	40	1126.2	YES
Sulfur dioxide	40	122.7	YES
Ozone	40 VOC	105.3 VOC	YES
Particulate matter	25/15	256.4	YES
Sulfuric acid mist	7	5.1	NO
Lead	0.6 (1200 lbs)	0.375 (750 lb)	NO
Mercury	0.1 (200 lbs)	0.0751 (150.2 lb)	NO

Reference: Table 62-212.400-2, F.A.C.

The applicant proposed BACT for the PSD pollutants that triggered PSD as follows.

Particulate Matter (PM and PM_{10})
Control equipment (baghouses) was proposed for particulate matter (PM) and particulate matter smaller than 10 microns (PM_{10}) emitted from point sources. The use of wet suppression, paving of roadways, street sweeping, and enclosing stockpiles to reduce wind erosion was proposed to control particulate matter from fugitive sources.

Sulfur Dioxide (SO_2)
The facility proposed Alkali/Sulfur Balance in the process for SO_2 control.

Nitrogen Oxides (NOx)
Selective Non-catalytic reduction (SNCR) was proposed for NOx control with multi-stage combustion as needed to supplement the controls. SNCR alone could be used or in conjunction with multi-stage combustion for maximum operational flexibility. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project.

Carbon Monoxide (CO)
Process control, process design, and combustion unit design were proposed for CO.

Volatile Organic Compounds (VOC)
Clean raw materials and combustion control were proposed for VOC.

6. BACT DETERMINATION PROCEDURE

Rule 62-212.400(6)(a), F.A.C., requires that in making the BACT determination, the Department shall give consideration to:

1. Any Environmental Protection Agency determination of BACT pursuant to Section 169 of the Clean Air Act, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), or 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants).
2. All scientific, engineering, and technical material and other information available to the Department.
3. The emission limiting standards or BACT determination of any other state.
4. The social and economic impact of the application of such technology.

The EPA currently directs that BACT should be determined using the "top-down" approach. In this approach, available control technologies are ranked in order of control effectiveness for the emissions unit under review. The most stringent alternative is evaluated first. That alternative is selected as BACT unless the alternative is found to not be achievable based on technical considerations or energy, environmental or economic impacts. If this alternative is eliminated for these reasons, the next most stringent alternative is considered. This top-down approach is continued until BACT is determined. In general EPA has identified five key steps in the top-down BACT process: Identify alternative control technologies; eliminate technically infeasible options; rank remaining control technologies by control effectiveness; evaluate most effective controls; and select BACT.
BACT evaluation should be performed for each emissions source and pollutant under consideration. All of the combustion emissions from the plant are associated with the in-line kiln/raw mill. BACT for particulate matter can be treated separately for the in-line kiln/raw mill, clinker cooler, the enclosed material handling processes and the unenclosed conveyors.

The Department may consider the control or reduction of "non-regulated" air pollutants when determining the BACT limit for regulated pollutants, and will weigh control of non-regulated air pollutants favorably when considering control technologies for regulated pollutants. The Department will also favorably consider control technologies that utilize pollution prevention strategies. These approaches are consistent with EPA's consideration of environmental impacts.

The EPA has determined that a BACT determination shall not result in a selection of a control technology which would not meet any applicable emission limitation under 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) or 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants). This project is subject to such standards as described above.

7. BACT POLLUTANT ANALYSIS AND DEPARTMENT'S DETERMINATION

For this project the PSD pollutants of concern are PM, PM_{10}, SO_2, NOx, CO and VOC. The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1]	MAXIMUM EMISSIONS	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 62-212.400-2.

The applicant proposed control strategies for these pollutants for the emission sources at this facility. The applicant's proposal and the Department's BACT for each pollutant and source is discussed below.

Nitrogen Oxides (NOx) [2]

Nitrogen oxides (NOx) emissions from a modern dry process Portland cement plant kiln are the result of fuel combustion in the main kiln burner and the precalciner burner. These emissions can be reduced by minimizing fuel combustion; or conversely, by increasing the thermal efficiency of the kiln system. The most fuel-efficient Portland cement plants are the dry-process plants with a precalciner and preheater. Approximately 40 percent of the fuel utilized in these plants is fired in the kiln to create a clinkering condition while the remainder is fired in the precalciner to preheat the raw meal as it passes through the preheater and to calcine the limestone in the raw meal.

There are three reported mechanisms involved in the formation of NOx: "prompt" NOx, fuel NOx, and thermal NOx. "Prompt" NOx is NOx formed instantaneously at the flame surface during luminous oxidation. This NOx is independent of flame temperature and excess air. The formation of this NOx and the resulting concentration in the gases exhausted from the kiln can be considered as the baseline NOx emissions resulting from the two combustion processes.

The fuel NOx is the NOx formed by the oxidation of nitrogen in the fuel. Approximately 60 percent of the fuel nitrogen is converted to NOx depending upon available oxygen in the flame and the temperature profile of the flame.

The thermal NOx is the most significant source of NOx in cement kilns. This NOx is formed through a reaction between atmospheric nitrogen and oxygen. The rate of formation is a function of both available oxygen in the flame and the temperature of the flame. In general, thermal NOx levels increase sharply above a flame temperature of approximately 1600°F.

The combustion characteristics of various fuels affect the formation of both fuel NOx and thermal NOx. Additionally, the firing location (the main kiln burner or the precalciner burner) affects NOx formation as a result of differing heat release requirements.

[2]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

Natural gas when fired in the main kiln burner has been shown to generate approximately twice the amount of NOx per ton of clinker as coal or oil. This is not intuitive as the adiabatic flame temperatures of coal and oil is higher than for natural gas and both coal and oil have more fuel nitrogen than natural gas. Additionally, coal and oil are generally fired with a higher volume of combustion air which increases the availability of oxygen, and hence the potential for NOx formation. There are other factors associated with coal and oil burning, however, that more than offset the factors leading to higher NOx formation with these fuels. These factors include the flame shape, the luminescence of the flame, and higher levels of carbon monoxide (CO), and various radicals that tend to counter the formation of NOx.

The use of petroleum coke in either the kiln burner or precalciner appears to increase NOx emissions even though the nitrogen content of petroleum coke is lower than coal and it burns with a lower flame temperature. Petroleum coke cannot be burned alone, however, as it does not provide enough volatile matter.

The applicant proposed that NOx emissions at this facility will be controlled through Non-Selective Catalytic Reduction (SNCR), in conjunction with Multi-Stage Combustion, as well as the plant design and operation. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project. The SCR technology is currently being used by only one location in Europe at the Solnhofer Portland Zementwerke AG Plant in Solnhofer, Germany. The facility performed a pilot study, and incorporated the SCR technology in 1999. However, there has been no pilot study conducted in the United States, and there have been no indications that a pilot plant will be constructed to test SCR by any Portland cement facilities in the United States.

The applicant proposed SNCR to further reduce NO_x emissions. The SNCR will operate in conjunction with the multi-stage combustion (including reducing conditions at the precalciner as needed). The applicant proposed SNCR with multi-stage combustion as needed to achieve a NOx emission rate of 1.95 pounds of NOx per ton of clinker (30 day rolling average). The most recent permitting practice has been to issue a limit with a 30-day averaging time rather than a higher limit with a shorter averaging period.

The lowest emission rate in a final permit in the state of Florida is the Suwannee American Cement (SAC) kiln No. 1 that has a limit of 2.4 lb/ton clinker (30 day rolling average) and is actively meeting that limit. The SAC plant relies on staged combustion in the calciner (SCC) in a reducing atmosphere. They recently trial tested and subsequently installed an ammonia-based selective non-catalytic reduction (SNCR) system that they can use as needed to control NOx.

The most recent permit issued outside of the state of Florida is for the Holcim Lee Island Plant that will have the largest cement kiln in the United States. The project was approved by the State of Missouri with a limit of 2.4 lb/ton of clinker (30 day rolling average). This limit will be met by a combination of SCC and SNCR.

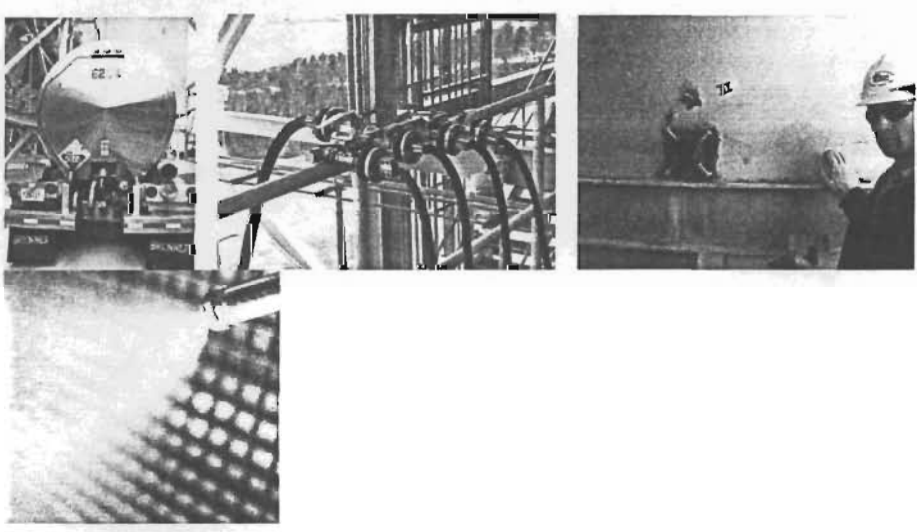
Recent testing conducted at Titan America in Medley, Florida indicated that it is possible to achieve 2.0 lb/ton of clinker (30 day rolling average) by a version of SCC with raw meal catalysis in a high temperature reducing atmosphere. Titan has advised the Department that they plan to apply to increase their annual hours of operation while complying with a limit of 2.1 lb/ton of clinker (30 day rolling average).

Both Suwannee American Cement (SAC) and Florida Rock Industries (FRI) conducted SNCR tests on their existing kilns and demonstrated that this emissions limit can be achieved using SNCR alone or by a combination of SCC and SNCR. In contrast to previous concerns by the cement industry in the United States, no visible secondary plume was observed. The reason is that raw materials in Florida are generally low in sulfur and chlorides and the potential to form ammoniated particulate compounds and the associated secondary plume is minimal.

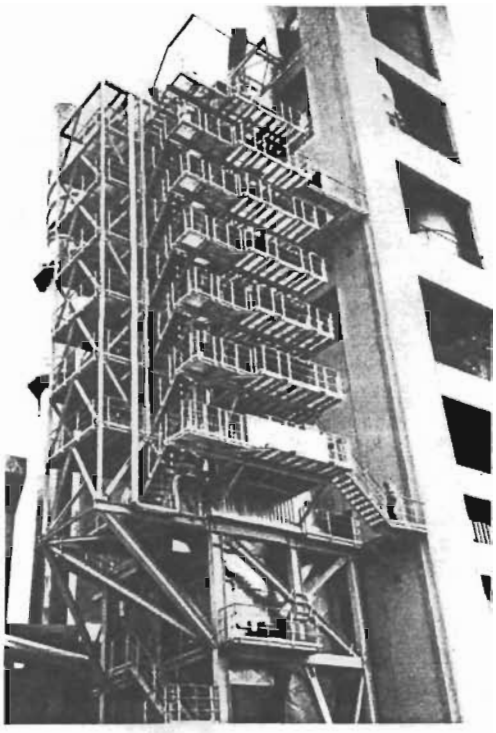
The Department reviewed the applicant's discussion on SCR and rejects the cost estimates. The BACT emission limit can be achieved with SCR or SNCR. Some additional time would be needed to conduct tests to determine the correct catalyst formulation for SCR. The Department does not consider SCR necessary to achieve a BACT level of control in Florida. Substantial sulfur present in the raw materials would make SCR a better choice than SNCR to avoid secondary plume formation, but this is not the case in Florida.

The only known commercial SCR system at a cement plant is at the Solnhofer Portland Cement Plant in Germany. The unit is efficient at NO_X control and helps reduce raw material ammonia, SO_2 and VOC emissions. These conditions (high raw material ammonia, VOC, sulfur) do not exist in Florida thus SNCR is entirely satisfactory as BACT.

The difference in the two technologies can be appreciated by the following pictures. SNCR requires some fairly simple equipment, whereas SCR (the equipment alongside the preheater tower) has a much larger footprint with structural considerations.



SNCR. Aqueous Ammonia, Compressed Air, One of Four Ports at existing duct, Injector(s)



SCR. Substantial Structure for Catalyst Layers.

The Department agrees with the applicant that SNCR is BACT for NOx for this project. Based on SNCR testing conducted at the FRI facility near Newberry and at the SAC facility near Branford, the facility should be able to meet 1.95 pounds of NOx per ton of clinker (30 day rolling average) as proposed by the applicant.

The applicant requested a higher limit for NO_x for one year after startup, and the Department agrees that such a trial period is reasonable. However, a shorter duration is mandated. During the first 180 operating days after startup, the kiln shall not exceed a NOx limit of 2.40 lb/ton clinker (30 day rolling average).

The Department has determined that 1.95 lb NO_X/ton of clinker is BACT and has reasonable assurance that this value can be met by SNCR or a combination of SCC and SNCR. The proposed kiln design is consistent with this conclusion. This BACT determination is the most stringent in the country.

Sulfur Dioxide (SO_2) [2]

Sulfur dioxide is generated from volatilization and subsequent oxidation of sulfur compounds in the raw materials within the preheater and precalciner regions, and by oxidation of sulfur compounds in the fuel during combustion. Sulfur dioxide at this facility will be generated through these mechanisms. The sulfur content of both raw materials and fuels varies based on the raw materials and fuels available at a given location, and consequently sulfur dioxide emissions vary with these factors. As is typical of conditions in Florida, the limestone, which is the principal raw material, will be low in sulfur compounds. Sulfur compounds present in the other

raw materials such as the iron sources, which represent a small proportion of the total raw materials, will most significantly contribute to sulfur dioxide emissions.

Most of the sulfur dioxide formed subsequently reacts with alkaline compounds present in the pyroprocessing environment to form alkali sulfates, which become incorporated in the cement clinker. The amount of sulfur dioxide released in the flue gases will vary with the amount of excess alkali available for absorption. The pyroprocessing system is very alkaline, and will be quite effective at removing sulfur dioxide formed from fuel sulfur. A significant proportion of sulfur dioxide from sulfur in raw materials will be removed through intimate contact with the incoming alkaline raw materials which flow counter to the gas flow. Further contact is achieved in the raw mill where the flue gases are used to dry incoming material feed.

The applicant proposes to limit sulfur dioxide emissions through alkali/sulfur balance. This will be accomplished by taking advantage of the alkaline environment in the kiln, preheater/precalciner, and raw mill to effect substantial removal of sulfur dioxide. Ultimately, the sulfur is incorporated into the clinker, thus minimizing the amount emitted to the atmosphere. The applicant proposed a sulfur dioxide limit of 0.23 pounds per ton of clinker produced (30 day rolling average).

The applicant provided information comparing the use of a wet scrubber and semi-dry scrubber to alkali/sulfur balance, and the use of both controls simultaneously to estimate sulfur dioxide emissions. The applicant rejected the use of the wet scrubber and semi-dry scrubber to reduce SO_2 based on the cost effectiveness analysis.

Whereas the most recent permitting practice throughout the country has been to issue a limit with a relatively long averaging time, the practice in Florida has been to use short averaging times for SO_2.

The lowest SO_2 emission rate in a permit in the state of Florida is at the applicant's existing Kiln No. 1 that has a limit of 0.16 lb SO_2/ton clinker on a 24-hour basis and is actively meeting that limit. The FRI plant relies on:

1. Inherently low sulfur in the raw material to avoid SO_2 emissions from the preheater.
2. Scrubbing of fuel sulfur by finely divided lime in the calciner.

The recent Holcim Lee Island permit was issued with an SO_2 limit of 1.26 lb SO_2/ton of clinker on a 30-day basis relying basically on the same principles of control.

Testing at Florida preheater/calciner cement kilns usually indicates emissions less than 0.05 lb SO_2/ton of clinker.

The Department considers the "Top" technology to be very low sulfur in the raw materials in combination with scrubbing of fuel sulfur by finely divided lime in the calciner. For areas where there are occasional pockets of sulfur laden materials that can not be avoided, then this technology could be augmented by injection of hydrated lime or other methods of control into the preheater, lime mist into the conditioning tower, or pneumatic conveyance of lime from the calciner to the upper preheater.

Usually even these additional measures are not needed when such raw material pockets are encountered with the raw mill in operation. Additional measures are needed when the raw mill is down to insure BACT level control. Hydrated lime injection into the preheater is practiced at Suwannee American Cement when these conditions occur.

A wet scrubber and semi-dry scrubber is not a consideration in Florida because of the efficacy of the described measures in achieving such low emissions. They are suitable when the measures described do not achieve BACT. A wet scrubber is not the "Top" technology for kilns in Florida, but can easily be the top technology where pyritic sulfur is prevalent such as in Texas, South Carolina, and New York (if not Missouri). The Department rejects the submitted cost analysis but does not require a new one.

FCS proposed a BACT limit of 0.23 lb/ton of clinker on a 30-day basis.

The Department does not believe that burning of petroleum coke will cause additional SO_2 emissions compared with coal because of the virtually complete scrubbing that occurs in the calciner. Also the raw material characteristics are not likely to change such that SO_2 is emitted from the preheater. If fly ash from the power industry has high sulfur content, it can be injected directly into the calciner where it too can be scrubbed.

The Department believes that process control is the appropriate technology for control of sulfur dioxide emissions for this project and is BACT. The Department considered imposing limitations on the sulfur content of the fuels and the raw materials used, but determined that such limits are not required due to the inherent low sulfur of the raw materials. Fuel sulfur is largely irrelevant because of the substantial exposure and contact between sulfur dioxide formed from fuel sulfur and the alkaline materials. Sulfur limits on the raw materials are not needed because the primary raw material, limestone, will be naturally low in sulfur. The other raw materials will be obtained by the applicant, which will acquire materials with regard to the alkali available in the process for control of sulfur dioxide formed from volatilization and oxidation of sulfur compounds in these materials. The Department will require hydrated lime injection or other methods of control as needed to reduce emissions. The Department will require a continuous emission monitor system for sulfur dioxide, which will offer a continuous demonstration of compliance with the emission limit, as well as process control data for the plant operators. The use of a CEM system ensures that process control will be effective, and eliminates the need for a limit on sulfur in raw materials.

Process control will allow for sulfur dioxide emissions to be minimized by maintaining a sufficient alkaline environment in the pyroprocessing system and by intimate contact between raw materials and exhaust gases. The sulfur dioxide that would result from fuel sulfur, as well as that resulting from volatilization and oxidation of sulfur from raw materials, will be controlled in this manner. Hydrated lime injection and other methods of control will be used to reduce SO_2 emissions as needed.

The BACT sulfur dioxide emission limit for this plant shall be 0.23 pounds/ton of clinker produced, and 28.8 pounds per hour, based on a rolling 24-hour averaging time. The Department has determined that 0.23lb SO_2/ton of clinker on a 24-hour basis is the "Top BACT" and has reasonable assurance that this value can be met by the measures described above. The proposed Kiln 2 design is consistent with this conclusion.

Particulate Matter (PM and PM_{10})[2]

Particulate matter results from the various physical and chemical processes at a cement manufacturing plant such as: quarrying and crushing, material transfer and storage, grinding and blending, clinker production, finish grinding, and packaging and loading. As is typical of cement plants, the largest emission source of particulate matter at this facility will be the pyroprocessing system that includes the inline kiln/raw mill and clinker cooler. At this facility, all cement kiln

dust (CKD) captured in the in-line kiln/raw mill baghouse will be returned to the pyroprocessing system as raw material. Emissions from enclosed fuel and material handling and storage operations represent another significant source of emissions at this facility. Unenclosed sources represent the smallest sources of emissions, given the use of proper controls. The limestone will primarily be mined below the water table and have an average moisture of 10-20%. The quarrying activities and associated crushing and transport will involve moist or wet raw materials with negligible unconfined emissions.

Common control devices for controlling emissions of particulate matter at cement plants are fabric filters (baghouses) and electrostatic precipitators (ESPs). Baghouses and ESPs are generally considered equivalent for particulate control. Both types of devices can achieve removal efficiencies of over 99%. ESPs and baghouses are used extensively as control devices at cement plants. ESPs are generally specified for kiln and clinker cooler exhaust gases because of their ability to operate effectively at varying temperatures, although baghouses are also used at some facilities for this purpose. Both types of control equipment provide for the recovery and recycling of CKD back into the process stream. ESPs offer the advantage of having no fabric filters that will wear and break and require routine replacement, while baghouses offer the advantage of providing for "passive" control in the event of an electrical power failure. A review of the BACT/LAER Clearinghouse shows that baghouses and ESPs are widely used to control particulate matter from process emission units at cement plants. Both offer an essentially equivalent level of control and are commonly accepted as BACT. Baghouses are also generally used to control particulate emissions from most other material processing operations at cement plants.

Common controls to limit particulate emissions from fugitive sources (such as roadways, stockpiles, and material processing and conveying equipment) include application of water for dust suppression, removal of dust, application of other dust suppressants, paving of roads and covering of stockpiles to reduce wind erosion. These methods of controlling fugitive particulate matter emissions are generally considered to be BACT for most material handling operations and paved and unpaved roads.

The applicant proposed the following controls for PM and PM_{10}. Baghouses will be used to control particulate emissions from material storage buildings, enclosures, bins, silos, conveying equipment, kiln/raw mills and clinker coolers. Particulate emissions from mill vents, air separator vents, material handling systems, bins, and silos will be controlled by baghouses. Particulate emissions from milling, transfer points, and storage silos/bins are typically controlled by baghouses.

The Department agrees with the applicant's proposal, but has instituted additional limits for PM and PM_{10} of 0.13 (.23 lb/ton of clinker) and 0.11 (.20 lb/ton clinker) pounds per ton of dry preheater feed, and 28.8 and 25.0 lb/hr for the in-line kiln/raw mill and clinker cooler, respectively. BACT is the use of a baghouse to control particulate matter emissions from the kiln. Visible emissions from these sources shall not exceed 10 percent opacity. BACT for other enclosed emission sources will be control of particulate matter emissions using baghouses to meet respective PM and PM_{10} emission limits of 0.01 and 0.007 grains per dry standard cubic foot. Visible emissions from these sources shall not exceed 5 percent opacity. The department will require the applicant to install continuous opacity monitoring systems (COMS) on the kiln's stack.

BACT for unenclosed sources is generally control of particulate matter emissions by inherent or applied moisture. Unpaved roads will be sprayed with water to prevent unconfined particulate matter emissions. Material and fuel storage piles will be stored under roof or in enclosed vessels. Storage piles shall be shaped, compacted and oriented to minimize wind erosion. Storage piles shall be wetted with devices located near such piles when visual inspection determines wetting is needed. Paving of the manufacturing area and access roadways is required. Sweeping of paved road will be required.

Carbon Monoxide (CO) [2]

Carbon monoxide is a pollutant formed by the incomplete combustion of carbon in the fuels fired during pyroprocessing. When insufficient oxygen is provided or poor combustion conditions occur, more CO and less CO_2 is formed than under ideal conditions. VOC is also a pollutant formed by the incomplete combustion of fuel.

Emissions of CO and VOC are controlled by utilization of proper combustion practices to maximize the oxidation of carbon to CO_2 instead of CO, and by flue gas controls. No add-on controls for CO or VOC have been demonstrated for cement plants. CO and NOx generally show an inverse relationship in cement plants as in many combustion processes, so reduction of NOx results in higher CO emissions. The applicant proposed combustion control as BACT for CO and VOC from this plant, and proposed emission limits of 4.0 and 0.19 pounds per ton of clinker produced for CO and VOC, respectively.

The most recent permitting practice throughout the country has been to issue a limit with a relatively short averaging time, but without a continuous emission monitoring. Emission limits since 1995 at cement kilns in Florida that have actually been built have ranged from 1.77 (later re-permitted at 2.3) lb CO/ton of clinker at Titan America to 3.6 lb/ton at Florida Rock's Kiln 1 and SAC. For reference, previous permits for Florida Crushed Stone Kiln No. 2 (that was not constructed) had limits of 2.0 lb/ton.

The recent Holcim Lee permit in Missouri limited CO to 6 lb/ton of clinker as BACT.

The above mentioned plants rely on the following to reduce CO emissions:

1. Relatively low carbonaceous matter in the raw materials
2. Good combustion at the main kiln burner and calciner
3. Addition of tertiary air from the kiln hood and clinker cooler
4. Varying degrees of calciner sizes and duct lengths to complete burnout

The Titan America Cement Plant actually achieves approximately 0.5 lb CO/ton of clinker. However that plant has an enormous calciner that provides a separate loop to promote maximum burnout. Additionally the calciner's size requires a taller preheater structure with excessive costs for each additional foot of height.

The lowest CO value in a permit (~ 0.37 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTOs.

The Department considers 3.6 lb/ton of clinker to represent BACT due to the use of the SNCR unit to reduce NO_x emissions. This limit allows for consideration of the tendency of CO to

increase when SNCR is used at cement plants to control NO_X. This has been documented during tests conducted at several European cement plants built by the proposed manufacturer of the applicant's Kiln No. 2. The use of a CEMS for CO will provide real time CO measurements. The Department does not consider it cost-effective to construct an excessively large calciner or install RTOs to further control CO. It is still possible that a longer loop between the final branch of tertiary air introduction to the lowest cyclone will be needed.

The Department will require that high carbon fly ash be injected directly into the calciner to avoid CO evolution in the preheater.

The Department agrees with the applicant in that BACT for CO shall be combustion control. The emission limit for CO shall be 3.6 pounds per ton of clinker produced, and 450.0 pounds per hour, based on a 24 hour average. A CEMS will be required for CO. The facility will also install process monitors for CO to provide for the use of CO as a short-term measure of the efficacy of combustion control.

Volatile Organic Compounds (VOC) [3]

The most recent permitting practice throughout the country has been to issue a limit with a 30-day averaging time using a VOC or total hydrocarbons (THC) continuous emission monitoring system (CEMS). The 30 averaging time is consistent with the emissions standards of 40 CFR 63, subpart LLL.

There are no VOC or THC limits for cement plants based on a New Source Performance Standard. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subpart LLL limits THC at "greenfield plants". The FRI Kiln No. 2 project is a new kiln at a "brownfield plant" because the first kiln was permitted prior to the June 1999 applicability date for Subpart LLL.
For reference the Subpart LLL requirement is 50 parts per million by volume, dry of Total Hydrocarbons (THC) at 7 percent oxygen (ppmvd @7% O_2). This value is the maximum achievable control technology (MACT). Though not applicable to FRI, MACT serves as a reference for determinations of best available control technology (BACT). VOC in cement plants is roughly the equivalent of THC minus the sum of methane and ethane. The latter compounds comprise roughly 30 percent of THC. Thus a VOC limit equal to Subpart LLL limit would be approximately 32 ppmvd @7% O_2. The value 32 ppmvd of VOC is roughly 0.32 lb VOC/ton of clinker.

Since 1995, BACT determinations in Florida have ranged from 0.085 to 0.12 lb VOC/ton. The limit issued by the State of Missouri to the recently permitted Holcim Lee Island Plant is 0.33 lb/ton of clinker and is probably equivalent to the mentioned Subpart LLL THC limit.

The proposed FCS kiln and calciner are very effective in controlling VOC from combustion except when overly aggressive reducing conditions are employed to control NO_X. FCS will rely primarily on SNCR to control NO_X and is not likely to produce much VOC from combustion.

Given good combustion, the "Top" control is limitation of organic matter in raw materials. Limestone in Florida is low in organic matter. However care is required when obtaining additives such as mill scale for iron ore to avoid oily substances. FCS proposes a limit of 0.19 lb VOC/ton of clinker. This is equal to approximately 62 tons per year. By contrast, there are parts of the

[3]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

country (such as Michigan) where naturally occurring kerogen in limestone can cause emissions of thousands of tons of VOC and objectionable odor from cement plants.

The lowest VOC value in a permit (~ 0.026 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous and organic matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTO system.

For reference, Holcim installed an RTO at the Dundee, Michigan plant to deal with the VOC and odor problem from that operation. Holcim also installed an activated coke filter at their Siggenthal, Switzerland Plant to control emissions when using dried wastewater treatment sludge as a fuel. The filter aided in VOC, CO, SO_2 heavy metal, and ammonia control. Sludge burning and pollution control was made viable through subsidization by the City of Zurich.

The Department considers 0.12 lb/ton of clinker by low organic compounds in the raw materials to represent BACT based on previously submitted applications. This value is about 1/3 of the recent Holcim Lee determination by the State of Missouri. It is less than half the value issued for the Holcim Holly Hill project in South Carolina and is approximately equal to the 0.11 lb/ton limit proposed as lowest achievable emission rate (LAER) for the St. Lawrence Cement project in New York.

The emission limit for VOC shall be 0.12 pounds per ton of clinker produced, and 15.0 pounds per hour, based on a 30 day averaging time. This averaging time is consistent with the NESHAP requirements. The department will require the applicant to install a CEMS to measure total hydrocarbons emitted from the facility.

Based on the information provided by the applicant, independent research and training of the reviewers and the informed good engineering judgment of the Department's personnel, BACT for PM, PM10, SO2, NOx, CO and VOC for the emission sources at this facility is determined to be the control technologies and emission limits discussed above.

8. COMPLIANCE

The compliance methods are briefly summarized here. Except for PM and PM10, compliance with the emission and process limitations for the in-line kiln/raw mill shall be demonstrated on a regular basis through a variety of continuous monitoring systems, and by record keeping for some production parameters. Compliance with the visible emissions limitation for the clinker cooler shall be regularly demonstrated using COM system clinker cooler stack. With the exception of waived stack tests for baghouses meeting a 5% opacity, annual emission tests will be required for all emission-limited pollutants, including visible emissions, from the in-line kiln/raw mill and the clinker cooler. Tests conducted for the annual RATA can satisfy the annual test requirements for the in-line kiln/raw mill. Initial compliance testing to demonstrate compliance with the emission limits for the three largest process sources controlled by baghouses will be required; thereafter, no subsequent tests will be required if these sources meet a visible emissions limit of 5% opacity. Initial and annual tests for the other process sources controlled by baghouses is not required if these sources meet a visible emissions limit of 5% opacity. The opacity limit for the clinker cooler is 10%.

The Department will require that the data from continuous monitors for emissions be available to the Department.

Department of Environmental Protection

Jeb Bush
Governor

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Colleen M. Castille
Secretary

PERMITTEE

Florida Crushed Stone Company
Brooksville Plant
10311 Cement Plant Road
Brooksville, FL 32669

Permit No.	0530021-009-AC, PSD-FL-351
Project	New Kiln System
SIC No.	3241
Expires:	^DRAFT (3 years from final issuance)

Authorized Representative:

Charles Allen, Director of Operations, Cement Division

PROJECT AND LOCATION

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.0 km E and 3162.5 km N.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix A	BACT Determination
Appendix B	40 CFR 60 Subpart F and 40 CFR 60 General Provisions
Appendix C	40 CFR 63 Subpart LLL and 40 CFR 63 General Provisions
Appendix GC	General Permit Conditions
Appendix D	Technical Evaluation and Final Determination

Michael G. Cooke, Director
Division of Air Resource Management

FACILITY DESCRIPTION

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

PROJECT DETAILS

This permitting action is to allow for the construction of a preheater/precalciner kiln with in-line raw mill. Emissions units addressed by this permit are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Fuel Bin

The total annual air pollutant potential emissions in tons per year from the facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1]	MAXIMUM EMISSIONS	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes
Mercury	200 pounds per year	122 pounds per year	No

REGULATORY CLASSIFICATION

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).
The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it is a modification to an existing facility.

This facility is a major source of hazardous air pollutants (HAPs) and is subject to 40 CFR 63, Subpart LLL, National Emissions Standard for Portland Cement Manufacturing.

The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, and Subpart Y Standards of Performance for Coal Preparation Plants. Some of these

emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359) and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.407, F.A.C., Portland cement plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Permit application and report received on December 20, 2004.
- EPA's comments received December 28, 2004 via email; No comments.
- Department's request for additional information on January 19, 2005.
- Applicant's additional information received March 7, 2005.

The following specific conditions apply to all emissions units at this facility addressed by this permit.

1. Permitting Authority:

   a. For this permit (PSD Permits), the permitting authority is the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and phone number (850)488-0114.

   b. For future permitting actions (Minor Construction or Title V), all documents related to applications for permits to construct or modify an emissions unit should be submitted to the Florida Department of Environmental Protection (FDEP), Southwest District, 3804 Coconut Palm Drive, Tampa, FL 33619-1352 and phone number (813) 744-6100.

2. Compliance Authority: All documents related to operation, reports, tests, and notifications should be submitted to the Department of Environmental Protection's Southwest District Office at
   Department of Environmental Protection
   Southwest District Office
   3804 Coconut Palm Drive
   Tampa, Florida 33619-1352
   Telephone: 813/744-6100 Fax: 813/744-6084

3. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60 and Part 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Expiration: This air construction permit shall expire on (3 years from date of final issuance). The permittee, for good cause, may request that this construction and PSD permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C]

PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

BACT Determination: In conjunction with extension of the 18 month periods to commence or continue construction, or extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [40 CFR 52.21(j)(4)]

8. Modifications: The permittee shall submit an application to the Department when there is any modification to this facility. This application shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such application shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

9. Final Construction Schedule: The permittee shall provide to the Department a final construction schedule after selection of the contractor and before commencement of construction. [Rule 62-212.400(5)(h)2., F.A.C.]

10. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than 20% opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

11. Unconfined Emissions of Particulate Matter:

    a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement, transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

    b. Reasonable precautions include the following:

    - Paving and maintenance of roads, parking areas and yards.
    - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
    - Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
    - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
    - Landscaping or planting of vegetation.
    - Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
    - Confining abrasive blasting where possible.
    - Enclosure or covering of conveyor systems.

Additional reasonable precautions applicable to this facility are:

- All materials, coal and petroleum coke at the plant shall be stored under roof on compacted clay or concrete, or in enclosed vessels.
- Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles.
- All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of materials, coal and petroleum coke regularly and before handling. If the visual inspections indicate a lack of surface moisture, the materials, coal and petroleum coke shall be wetted with sprinklers. Such wetting shall continue until the potential for unconfined particulate matter emissions are minimized.
- Water spray shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.
- The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.
- Vacuum Sweeper shall be used on paved roads.

c. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rule 62-296.320(4)(c), F.A.C.]

12. General Pollutant Emission Limiting Standards:

a. No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

b. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(1)(a)&(2), F.A.C.]

[Note: An objectionable odor is defined in Rule 62-210.200(203), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

13. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

14. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed

facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

15. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

16. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63.

    Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]

17. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. [Rule 62-297.310(1), F.A.C.]

18. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
    (a) General Compliance Testing.
    3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    a. Did not operate; or
    b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
    4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    a. Visible emissions, if there is an applicable standard;
    [Rule 62-297.310(7), F.A.C.]

19. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum

permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

20. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

21. Applicable Test Procedures

a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]

b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

22. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]

a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

23. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]

24. Test Notification: The owner or operator shall notify the Department's district office at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.]

[Note: The owner or operator shall comply with all applicable timelines stated in 40 CFR 60.7, Notification and recordkeeping and 40 CFR 63.9, Notification Requirements.]

25. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

26. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

27. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

28. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]

29. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report. A quarterly written report is hereby requested by the Department for every quarter that the facility is in operation. If no malfunctions occurred during a quarter, a written report stating that no malfunctions occurred shall be submitted. [Rule 62-210.700(6), F.A.C.]

30. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Northeast District office by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION A.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater

This Emission unit is subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. This emission unit also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Emissions unit 044 is subject to Rule 62-296.407, F.A.C., Portland Cement Plants.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: These units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
2. Fuels: Fuels fired in the pyroprocessing system (kiln and calciner) shall not exceed a total maximum heat input of 390 million Btu per hour (MMBtu/hr) and shall consist only of natural gas, coal, distillate oil, petroleum coke, flyash, on-spec oil, and whole tires. Propane may be fired and shall not exceed a maximum hourly rate of 4150 gallons/hr.
   a. Whole tires may be fired directly in the pyroprocessing system at a rate not to exceed a maximum heat input of 15% of the total pyroprocessing heat input, not to exceed 58.5 MMBtu/hr at any time. The remaining 85% of the total pyroprocessing heat input shall be derived from firing coal, flyash, petroleum coke, natural gas, propane or distillate oil. Whole tires fired in this manner shall be fed into the kiln system at the transition section between the base of the precalciner and the point where gases exit the kiln. The tire feeder mechanism shall be designed with a double airlock.
   b. Coal and/or petroleum coke shall not exceed 15.0 tons per hour. Natural gas shall not exceed 432 MMCF/hr. Distillate oil shall not exceed 3080 gallons/hr. Flyash shall not exceed 15.0 tons/hr.

   [Rules 62-4.070(3) and 62-210.200, F.A.C., Definitions -- potential to emit (PTE), F.A.C., and Applicant request, application received 12/20/04.]
3. Fuels and Materials Not Allowed: The owner or operator shall not introduce hazardous wastes, petroleum contaminated soil or materials, used oil, oil fuels, solid fuels other than those allowed by this permit, or solid wastes other than whole tires into any part of the process or emission control equipment. [Rule 62-4.070(3), F.A.C.]
4. Process Rate Limitations: The kiln shall not process more than 206.3 tons per hour of dry preheater feed and dry flyash and shall not exceed 4,620 tons in any 24-hour period. The kiln shall not produce more than 125 tons of clinker per hour, and 2800 tons in any 24-hr period. The facility shall not produce more than 138 tons of Portland cement per hour, 30-day average. Process and production rates shall be further limited to 1,686,300 tons of dry preheater feed and dry flyash in any consecutive

12-month period (4620 tons/day), 1,022,000 tons of clinker in any consecutive 12-month period (2800 tons/day), and 1,208,880 tons of Portland cement in any consecutive 12-month period.

The clinker production rate identified in the above paragraph shall be determined by the following equation:

Clinker Production = [(Feed)(Kiln Feed LOI Factor) + (Fly Ash Injection)(Fly Ash LOI Factor)]

Where:

- Fly ash is determined from the rotary feed system or equivalent.
- LOI for the kiln feed and fly ash is based on a monthly average determined from daily measurements.

[Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

5. Air Heater: The permittee may install an air heater associated with the raw mill, fired only with natural gas and distillate oil with a maximum rated heat input capacity of 32 MMBtu/hr. [Rule 62-4.070(3), F.A.C.]

6. Cement Kiln Dust: Cement kiln dust shall be recirculated in the process and shall not be directly discharged from process or emission control equipment unless authorized by the Department. Cement kiln dust removed from process equipment during maintenance and repair shall be confined and controlled at all times and shall be managed in accordance with the applicable provisions of 40 CFR 261. [Rule 62-4.070(3), F.A.C.]

7. Whole Tire Management: Tires and tire derived fuel shall be stored, handled and managed in accordance with the provisions of Chapter 62-711, F.A.C. [Rule 62-4.070(3), F.A.C.]

8. O&M Plan for Baghouses and ESP: The owner or operator shall prepare an operation and maintenance plan (O&M plan). The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Southwest District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

COMBUSTION AND PROCESS CONTROL TECHNOLOGY

9. Combustion and Process Control Technology: The owner or operator shall install selective noncatalytic reduction (SNCR) and multistage combustion (MSC) or equivalent system. The owner or operator shall use SNCR and/or MSC for control of NOx emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO_2 through design and control of the clinker production process. The owner or operator shall use hydrated lime injection when necessary to reduce SO_2 emissions. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

[Note: The emission limits for particulate matter and visible emissions imposed by Rule 62-212.400 and BACT are as stringent or more stringent than the limits imposed by the applicable NSPS or NESHAP rules. However, the BACT requirements do not waive or vary any monitoring or record keeping requirements of the NSPS and NESHAP rules.]

10. Mercury into the Pyroprocessing System Limited: The total mass of mercury compounds introduced into the pyroprocessing system, expressed as Hg, in raw mill feed and fuels shall not exceed 122 pounds per consecutive 12-month period. [62-4.070(3), F.A.C.]

11. Performance Testing: The owner or operator shall notify the Department at least 90 days prior to initiating any significant change in the feed or fuel used in the most recent performance test for D/F or PM. For purposes of this condition, significant means any of the following: a change in supplier of feed or fuel; any physical or chemical change in the feed or fuel; and change in the LOI of the flyash. Based on the information provided, the Department will determine if performance testing pursuant to 40 CFR 63.1349 will be required for the new feed or fuel. [62-4.070(3), F.A.C.]

12. Emissions unit 044 shall have one emission point, the stack of the Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater, designated by the permittee as 2K-06. Particulate matter emissions from this emissions unit shall be controlled by a baghouse.

    Emissions from this unit shall not exceed the following limits for the following pollutants. Emissions from the natural gas fired air heater are included in the limits below.

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	0.136 lb/ton of dry preheater feed; 0.23lb/ton of clinker	28.8 lb/hr	3 hours [3]	BACT
PM_{10}	0.118 lb/ton of dry preheater feed; 0.20 lb/ton of clinker	25.0 lb/hr	3 hours [3]	BACT
SO_2	0.23 lb/ton of clinker	28.8 lb/hour	24 hours [4]	BACT
NOx	1.95 lb/ton of clinker [1]	243.75 lb/hour [1]	30 day	BACT
CO	3.6 lb/ton of clinker	450.0 lb/hour	24 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	15.0 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT
Mercury		122 lb/yr		BACT

[1] NOx emissions shall not exceed 2.4 lb/ton of clinker and 306.25 lb/hour (30 day rolling average) during the first 180 operating day after initial startup. After 180 operating days after initial plant startup, emissions of NOx shall not exceed the limits shown in the table.

[2] VOC emissions shall be expressed as propane.

[3] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

[4] The averaging time for SO_2 shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[5] The averaging time for CO shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[6] The averaging time for VOC shall be a 30-day block average specified in 40 CFR 63.1350(h).

[7] The averaging time for visible emissions shall be a 6-minute block average that shall be computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 117.6; PM_{10}, 102.3; SO_2, 117.6; NO_x, 996.7 (after year one); CO, 1840; and VOC, 61.3 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. These emission limits are based on 2,800 tons per day and 1,022,000 tons per year of clinker production. [Rules 62-4.070(3), 62-212.400, F.A.C., and BACT]

13. Malfunction of the SNCR System: Malfunction of the SNCR System is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia based solutions into the kiln system. In accordance with the limits in condition 12, the exclusion of NOx data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 30 day NOx standard. No more than 6 hours per calendar day and no more than 30 hours in any 30 day operating block may be excluded. Within one working day of the occurrence, the permittee shall notify the Department's Southwest District of any malfunction of the SNCR system.
[Rules 62-4.070(3), F.A.C.]

14. No owner or operator of a Portland Cement kiln shall cause, permit, or allow the emission of particulate matter in excess of 0.30 pounds per ton to the kiln (dry basis, excluding fuel), or visible emissions the density of which is greater than 20 percent opacity.
[Rule 62-296.407, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

15. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NOx, SO_2, CO and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limit for NOx shall be based on a 30-day calendar rolling average that shall be recomputed every 24 hours from the individual hourly averages for the current hour and the preceding 23 hours. Compliance with the emission limit for SO_2 shall be based on a rolling 24-hour average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours. Each hourly average shall be computed from a minimum of one measurement every minute. Compliance with the 24 hour emission limit for CO shall be computed from a minimum of one measurement every minute. Compliance with the 30 day emission limit for VOC shall be based on a 30 day block average that shall be computed from a minimum of one measurement every minute. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour. [Rule 62-4.070(3), F.A.C., and BACT]

16. Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse stack pursuant to 40 CFR 63.1350. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse is required pursuant to 40 CFR 63.1349 and 63.1350.

17. CEM System Requirements: The selection, installation, calibration, maintenance, operation, record keeping, and reporting of the CEM system shall comply with the requirements of 40 CFR 60.7 and 60.13; 40 CFR 60 Appendix B, Performance Specifications; and, Appendix F, Quality Assurance Procedures. [Rules 62-4.070(3), 62-210.800 and 62-297.520, F.A.C., and BACT]

[Note: 40 CFR 60 Appendix B and Appendix F have been omitted for brevity. See the Code of Federal Regulations for the text of these sections.]

18. Emission Tests Required: In addition to the continuous monitoring requirements of this permit, the owner or operator shall demonstrate compliance with the emission limits of this permit for emissions unit 044 initially and annually using the test methods of 40 CFR 60 Appendix A and 40 CFR 61 Appendix B specified below. The tests conducted annually for the relative accuracy test audit (RATA) for the CEM system may be used to satisfy this requirement provided the owner or operator satisfies the prior notification requirements and emission testing requirements of this permit for performance and compliance tests.

POLLUTANT	TEST METHOD
PM	Method 5 [1]
PM_{10}	Method 5, assuming all PM measured is PM_{10}
SO_2	Method 6 or 6C
NOx	Method 7 or 7E [2]
VE	Method 9
CO	Method 10 or 10A
VOC	Method 25 or 25A

[1] The minimum sample volume shall be 30 dry standard cubic feet.
[2] NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.

Each test shall be conducted while all continuous monitoring systems are functioning properly, and with all process units operating at their permitted capacity.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

19. Emission tests of emissions unit 044 shall be conducted for the pollutants in condition 18 upon initial operation under the fuel scenario representing the highest potential for generating emissions:

PRIMARY FUEL	SECONDARY FUEL
Coal	Whole tires directly into the pyroprocessing system, petroleum coke, and flyash

Subsequent annual testing under these fuel firing scenarios is not required for any firing scenario that is used for less than 400 hours in the previous year, as documented by fuel firing records.

21. Materials Balance testing in condition 22 will be used to determine mercury emissions.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

[Note: 40 CFR 60 Appendix A has been omitted for brevity. See the Code of Federal Regulations for the text of this section.]

22. Material Balance Analysis of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance and making and maintaining records of monthly and rolling 12-month mercury throughput. The owner or operator shall, for each month of sampling required by this condition, perform daily sampling of the raw mill feed, coal, petroleum coke, and tires, and shall composite the daily samples each month, and shall analyze the monthly composite sample to determine mercury content of these materials for the month. The owner or operator shall

determine the mass of mercury introduced into the pyroprocessing system (in units of pounds per month) from the total of the product of the mercury content from the monthly composite analysis and the mass of each material or fuel used during the month. The consecutive 12-month record shall be determined from the individual monthly records for the current month and the preceding eleven months and shall be expressed in units of pounds of mercury per consecutive 12-month period. Such records shall be completed no later than 25 days following the month of the records. To determine the mercury content of the feed material and fuels to be used in the monthly calculation, sampling and analysis shall be performed in accordance with the following schedule:

i. During the first quarter of plant operation, sample each month analyze each month's composite sample.

ii. After the first quarter, sample for one month of each quarter and analyze that month's composite sample.

[Rule 62-4.070(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

23. Records of Process and Production Rates: The owner or operator shall make and maintain records of the process rate of dry preheater feed in units of tons per hour and tons per consecutive 12-month period, and the production rate of clinker and cement in units of tons per hour and tons per consecutive 12-month period. The owner or operator shall make and maintain records of the production of Portland cement in units of tons per consecutive 12-month period. Records in units of tons per hour shall be based on either hourly averages or daily averages and shall be completed no later than the day following the day of the record. Records in units of tons per consecutive 12-month period shall be made from monthly records of process and production rates for the past 12 months, and shall be completed no later than the 10th day of each following month. [Rule 62-4.070(3), F.A.C. and BACT]

24. Records of Fuels and Heat Input: The owner or operator shall record the fuel firing rate continuously. The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content, heat content and, for coal, petroleum coke, natural gas, fuel oil, propane, flyash, and whole tires, and the proximate and ultimate analyses.

    The owner or operator shall make and maintain records of heat input to the pyroprocessing system on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel firing rate by the heating value representative of that fuel from the records of fuel analysis. Such records shall be completed for each block-hour, within 15 minutes of the end of each block-hour.

    [Rule 62-4.070(3), F.A.C.]

25. Records of Startup, Shutdown and Malfunction: The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Rule 62-4.070(3), F.A.C.]

26. Material Balance Records of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance as required by condition 22 and making and maintaining records of monthly and rolling 12-month mercury throughput [Rule 62-4.070(3), F.A.C.]

27. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION B.
The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.		EMISSIONS UNIT DESCRIPTION
045	2E-22	Filter Dust (2 dust collectors: 2G-08 and 2G-09)
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin

These Emissions units are subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. These emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

[The numbering of the original federal rules in the following conditions has been preserved for ease of reference. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary of the Department or the Secretary's designee.]

1. Emissions from the following emissions units shall not exceed the following limits for the following pollutants:

EMISSIONS UNIT	FACILITY ID NO.	EMISSION LIMIT PM (LB/HR)	EMISSIONS LIMIT PM_{10} (LB/HR)	AVERAGING TIME
045	2E-22 2G-08	0.336 (1.47 tpy)	0.235 (1.03 tpy)	3 hours [1]
	2E-22 2G-09	1.143 (5.01 tpy)	0.80 (3.504 tpy)	3 hours [1]
046	2F-04	0.26 (1.14 tpy)	0.182 (.8 tpy)	3 hours [1]
047	2H-05	0.26 (1.14 tpy)	0.18 (.8 tpy)	3 hours [1]
048	2L-01	0.19 (0.83 tpy)	0.133 (0.58 tpy)	3 hours [1]
049	2L-14	0.320 (1.40 tpy)	0.224 (0.98 tpy)	3 hours [1]
050	2L-05	0.253 (1.11 tpy)	0.177 (0.776 tpy)	3 hours [1]
051	2M-04	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]

052	2N-01	2.31 (10.12 tpy)	1.62 (7.08 tpy)	3 hours [1]
053	2N-03	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
054	2N-04	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
055	2N-06	9.199 (40.29 tpy)	6.44 (28.2 tpy)	3 hours [1]
056	2N-26	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
057	2P-01 Transport A	0.256 (1.12 tpy)	0.18 (0.785 tpy)	3 hours [1]
	2P-01 Transport B	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]
058	2Q-28	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]
059	2Q-31	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]

[1] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

The averaging time for visible emissions shall be a 6-minute block average computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

[Rules 62-4.070(3), 62-210.700(5) and 62-212.400, F.A.C., and BACT]

2. Particulate matter (PM) emissions from these emissions units shall not exceed 0.01 grains/dscf, and PM_{10} emissions shall not exceed 0.007 grains/dscf. Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (No visible emissions). Emissions of NO_x, SO_2, CO and VOC will be controlled by emissions unit 044.

   Initial and annual compliance testing for PM and PM_{10} emissions from this emissions unit is waived, and an alternative standard of 5% opacity (No visible emissions) is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.
   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

3. Visible Emission Tests Required – The owner or operator shall demonstrate compliance with the visible emission limits of this subsection annually, using the methods specified in this subsection. [Rule 62-297.310(7)(a)4.a., F.A.C.]

   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

4. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION C.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
060/061	Coal Handling and Grinding operations

Emissions units 060 and 061 are subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants (40 CFR 60.250 – 60.254) and 40 CFR 60 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: This emissions unit may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
2. Process Rate Limitation: The coal mill shall not crush more than 15.0 tons per hour of coal and/or petroleum coke, 30-day average. The coal mill shall not crush more than 131,400 tons annually. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
3. O&M Plan for Baghouses: The owner or operator shall prepare an operation and maintenance plan (O&M Plan) for emissions unit 060. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Northeast District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

4. The emissions units correspond shall have the following emission points:

EMISSIONS UNIT NO.	EMISSION POINT	DESCRIPTION
060	2S-15	Coal mill
061	2S-20	Fuel bin

Particulate matter (PM) emissions from emissions unit 060 shall not exceed 0.01 grains/dscf (1.60 lb/hr; 7.01 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (1.12 lb/hr; 4.91 tpy). Particulate matter (PM) emissions from emissions unit 061 shall not exceed 0.01 grains/dscf (0.145 lb/hr; 0.64 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (0.102 lb/hr; 0.445 tpy). Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (observations for the initial compliance test shall be made for 3 hours (thirty 6-minute averages)).

Initial and annual compliance testing for PM emissions from each emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it

shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.

[Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

5. Emission Tests Required: The owner or operator shall demonstrate compliance with the visible emissions standard for emissions unit 060 annually using EPA Method 9, as described in 40 CFR 60 Appendix A. The owner or operator shall demonstrate initial compliance with the particulate matter (PM) limits of this permit for emissions unit 061 using EPA Method 5, as described in 40 CFR 60 Appendix A. Should subsequent particulate matter (PM) testing be required for both emissions units, compliance shall be demonstrated using EPA Method 5.

[Rules 62-4.070(3), 62-297.310 and 62-297.620(4), F.A.C. and BACT]

REPORTING AND RECORD KEEPING REQUIREMENTS

6. Records of Process Rates: The owner or operator shall make and maintain records showing the monthly processing rate of coal and petroleum coke crushed in the coal mill. Records of the processing rate for each month shall be completed no later than 10 days following the end of the month. [Rule 62-4.070(3), F.A.C.]

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

7. Pursuant to 40 CFR 60.250 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems.
[40 CFR 60.250]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

8. Pursuant to 40 CFR 60.252 Standards for particulate matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any thermal dryer gases which:
(1) Contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf).
(2) Exhibit 20 percent opacity or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.
[40 CFR 60.252(a) and (c)]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

9. Pursuant to 40 CFR 60.253 Monitoring of operations:

(a) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:
(1) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ±3° Fahrenheit.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under 40 CFR 60.13(b).
[40 CFR 60.253(a) and (b)]

10. Pursuant to 40 CFR 60.254 Test methods and procedures:

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particular matter standards in § 60.252 as follows:
(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.
(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.
[40 CFR 60.254(a) and (b)]

FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NOx TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer and Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	CMS performance summary [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions .... ____
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions _ .....
c. Process problems ..... ____	c. Quality assurance calibration ..... ____
d. Other known causes ..... ____	d. Other known causes ..... ____
e. Unknown causes ..... ____	e. Unknown causes ..... ____
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ____
3. [Total duration of excess emissions] x (100) / [Total source operating time] ..... ____ % [2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ % [2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____

Title: _____

Date: _____

1. Pursuant to 40 CFR 60 Subparts F and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 60 Subpart F and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX C. 40 CFR 63 SUBPART LLL AND 40 CFR 63 GENERAL PROVISIONS

1. Pursuant to 40 CFR 63 Subparts LLL and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 63 Subpart LLL and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62–4.160, F.A.C.]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62–4.160, F.A.C.]

G.14 The permittee shall comply with the following:
(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX B: 40 CFR 60 SUBPART F AND GENERAL PROVISIONS

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

Pursuant to 40 CFR 60.60 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to the following affected facilities in Portland cement plants: Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.
[40 CFR 60.60]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

Pursuant to 40 CFR 60.62 Standard for Particulate Matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any kiln any gases which:

(1) Contain particulate matter in excess of 0.15 kg per metric ton of feed (dry basis) to the kiln (0.30 lb per ton).

(2) Exhibit greater than 20 percent opacity.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per metric ton of feed (dry basis) to the kiln (0.10 lb per ton).

(2) Exhibit 10 percent opacity, or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater.
[40 CFR 60.62(a), (b) and (c)]

[Note: Emissions units 009, 012 and 013 are subject to the visible emissions limit of paragraph (c) of this condition. The BACT emission limits of this permit for emissions units 009 and 012 are as stringent or are more stringent than the emission limits imposed by this rule.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

Pursuant to 40 CFR 60.63 Monitoring of Operations:

(a) The owner or operator of any Portland cement plant subject to the provisions of this part shall record the daily production rates and kiln feed rates.

(b) Except as provided in paragraph (c) of this section, each owner or operator of a kiln or clinker cooler that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate in accordance with § 60.13 a continuous opacity monitoring system to measure the opacity of emissions discharged into the atmosphere from any kiln or clinker cooler. Except as provided in paragraph (c) of this section, a continuous opacity monitoring system

shall be installed on each stack of any multiple stack device controlling emissions from any kiln or clinker cooler. If there is a separate bypass installed, each owner or operator of a kiln or clinker cooler shall also install, calibrate, maintain, and operate a continuous opacity monitoring system on each bypass stack in addition to the main control device stack. Each owner or operator of an affected kiln or clinker cooler for which the performance test required under § 60.8 has been completed on or prior to December 14, 1988, shall install the continuous opacity monitoring system within 180 days after December 14, 1988.

(c) For the purpose of reports under § 60.65, periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity exceeds that allowed by § 60.62(a)(2) or § 60.62(b)(2).
[40 CFR 60.63 (a), (b) and (d)]

Pursuant to 40 CFR 60.64 Test Methods and Procedures:

(a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standard in 40 CFR 60.62 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E = (c_s Q_{sd})/(P K)$

where:
E = emission rate of particulate matter, kg/metric ton (lb/ton) of kiln feed.
c_s = concentration of particulate matter, g/dscm (g/dscf).
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
P = total kiln feed (dry basis) rate, metric ton/hr (ton/hr).
K = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30.0 dscf) for the kiln and at least 60 minutes and 1.15 dscm (40.6 dscf) for the clinker cooler.

(3) Suitable methods shall be used to determine the kiln feed rate (P), except fuels, for each run. Material balance over the production system shall be used to confirm the feed rate.

(4) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
[40 CFR 60.64(a) and (b)]

REPORTING AND RECORD KEEPING REQUIREMENTS

Pursuant to 40 CFR 60.65 Recordkeeping and Reporting:

(a) Each owner or operator required to install a continuous opacity monitoring system under 40 CFR 60.63(b) shall submit reports of excess emissions as defined in 40 CFR 60.63(d). The content of these reports must comply with the requirements in 40 CFR 60.7(c). Notwithstanding the provisions of 40 CFR 60.7(c), such reports shall be submitted semiannually.

(b) Each owner or operator monitoring visible emissions under 40 CFR 60.63(c) shall submit semi-annual reports of observed excess emissions as defined in 40 CFR 60.63(d).

(c) Each owner or operator of facilities subject to the provisions of 40 CFR 60.63(c) shall submit semi-annual reports of the malfunction information required to be recorded by 40 CFR 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere.
[40 CFR 60.65(a), (b) and (c)]

Subpart A-General Provisions for 40 CFR 60

40 CFR 60.1 Applicability.

(a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced
after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution controlagency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).
[40 CFR 60.1(a), (b) and (c)]

40 CFR 60.5 Determination of construction or modification.

(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

§ 60.6 Review of plans.

(a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.

(b)(1) A separate request shall be submitted for each construction or modification project.

(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each

affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.

(c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

40 CFR 60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

1. A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

2. Reserved.

3. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

4. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

5. A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

6. A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

7. A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5) of 40 CFR 60. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

(b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent

reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]

(e) (1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance

history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance re-port (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

(f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:

(1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(g) If notification substantially similar to that in 40 CFR 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR 60.7(a).

(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
[40 CFR 60.7(a), (b), (c), (d), (e), (f), (g), (h)]

40 CFR 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
[40 CFR 60.8(a)]

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
[40 CFR 60.8(b)(1), (2), (3), (4) & (5)]

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
[40 CFR 60.8(c)].

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems , etc) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the perfomance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes

(i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and

(ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)].

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)].

§ 60.9 Availability of information.

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of §§ 60.5 and 60.6 is governed by §§ 2.201 through 2.213 of this chapter and not by § 2.301 of this chapter.)

40 CFR 60.10 State authority.

The provisions of 40 CFR 60 shall not be construed in any manner to preclude any State or political subdivision thereof from:

(a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.

(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

[40 CFR 60.10(a) and (b)].

40 CFR 60.11 Compliance with standards and maintenance requirements.

(a) Compliance with standards in this part, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-

minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e) (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in 40 CFR 60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in 40 CFR 60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The

owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in 40 CFR 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of 40 CFR 60.7(e)(1) shall apply.

(4) The owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by 40 CFR 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and 40 CFR 60.8 performance test results.

(5) The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by 40 CFR 60.8, the opacity observation results and observer certification required by 40 CFR 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by 40 CFR 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with 40 CFR 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, the shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is

meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.

(f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.
[40 CFR 60.11(a), (b), (c), (d), (e) and (f)]

40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

40 CFR 60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continuos opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d) (1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and

20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and
all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All.continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) (1) When more than one continuous monitoring system is used to measure the emissions from only one affected facility (e.g. multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless installation of fewer systems is approved by the Administrator.

(2) When the effluents from two or more affected facilities subject to the same opacity standard are combined before being released to the atmosphere, the owner or operator may either install a continuous opacity monitoring system at a location monitoring the combined effluent or install an opacity combiner system comprised of opacity and flow monitoring systems on each stream, and shall report as per Sec. 60.7(c) on the combined effluent. When the affected facilities are not subject to the same opacity standard applicable, except for documented periods of shutdown of the affected facility, subject to the most stringent opacity standard shall apply

(3) When the effluents from two or more affected facilities subject to the same emissions standard, other than opacity, are combined before released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the continuous monitoring standard, separate continuous monitoring systems shall be installed on each effluent and the owner or operator shall report as required for each affected facility.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. For owners or operators complying with the requirements in Sec. 60.7(f)(1) or (2), data averages must include any data recorded during periods of monitor breakdown or malfunction. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O2 or ng or pollutant per J of heat input). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(h)].

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(5) Alternative methods of converting pollutant concentration measurements to units of the standards.

(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(i)].

(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:

(1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in section 8.4 of Performance Specification 2 and substitute the procedures in section 16.0 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 of this subpart or other tests performed
following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

(2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., 40 CFR 60.45(g)(2) and 40 CFR 60.45(g)(3), 40 CFR 60.73(e), and 40 CFR 60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in section 8.4 of Performance Specification 2.
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(j)].

40 CFR 60.14 Modification.

(a) Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(a)].

(b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1) . When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(b)].

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(c)].

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(e)].

(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(f)].

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(g)].

(h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(j) (1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(2) This exemption shall not apply to any new unit that:

(i) Is designated as a replacement for an existing unit;

(ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(iii) Is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A *temporary clean coal control technology demonstration projec*t, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

40 CFR 60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(a)].

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

[Rule 62-296.800, F.A.C.; 40 CFR 60.15(b)].

(c) "Fixed capital cost"' means the capital needed to provide all the depreciable components.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(c)].

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(1) Name and address of the owner or operator.

(2) The location of the existing facility.

(3) A brief description of the existing facility and the components which are to be replaced.

(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(6) The estimated life of the existing facility after the replacements.

(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(d)].

(e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(e)].

(f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:

(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and

(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(f)].

(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(g)].

§ 60.18 General control device requirements.

(a) *Introduction.* This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, Vmax, as determined by the following equation:

Vmax=(XH2−K1)* K2

Where:

Vmax=Maximum permitted velocity, m/sec.

K1=Constant, 6.0 volume-percent hydrogen.

K2=Constant, 3.9(m/sec)/volume-percent hydrogen.

XH2=The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, Vmax, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, Vmax, as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f) (1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Eq. 1

where:

HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, 1.740 \times 10^{-7} \left(\frac{1}{ppm}\right) \left(\frac{g\ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

Eq. 2

Ci=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and

Hi=Net heat of combustion of sample component i, kcal/g mole at 25 °>C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, Vmax, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation. Log10 (Vmax)=(HT+28.8)/31.7

Vmax=Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

HT=The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, Vmax, for air-assisted flares shall be determined by the following equation. Vmax=8.706+0.7084 (HT)

Vmax=Maximum permitted velocity, m/sec

8.706=Constant

0.7084=Constant

HT=The net heating value as determined in paragraph (f)(3).

§ 60.19 General notification and reporting requirements.

(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word ''calendar'' is absent, unless otherwise specified in an applicable requirement.

(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be post-marked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the post-mark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.

(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f) (1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

APPENDIX C: 40 CFR 63 SUBPART LLL AND GENERAL PROVISIONS

FEDERAL NESHAP REQUIREMENTS

GENERAL

Pursuant to 40 CFR 63.1340 Applicability and Designation of Affected Sources:

(a) Except as specified in paragraphs (b) and (c) of this section, the provisions of this subpart apply to each new and existing Portland cement plant which is a major source as defined in §63.2.

(b) The affected sources subject to this subpart are:
(1) Each kiln and each in-line kiln/raw mill at any major source, including alkali bypasses, except for kilns and in-line kiln/raw mills that burn hazardous waste and are subject to and regulated under subpart EEE of this part;
(2) Each clinker cooler at any Portland cement plant which is a major source;
(3) Each raw mill at any Portland cement plant which is a major source;
(4) Each finish mill at any Portland cement plant which is a major source;
(5) Each raw material dryer at any Portland cement plant which is a major source and each greenfield raw material dryer at any Portland cement plant which is a major source;
(6) Each raw material, clinker, or finished product storage bin at any Portland cement plant which is a major source;
(7) Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln at any Portland cement plant which is a major source;
(8) Each bagging system at any Portland cement plant which is a major source.

(c) For Portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill. Any equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage is not subject to this subpart. In addition, the primary and secondary crushers of the on-site nonmetallic mineral processing plant, regardless of whether they precede the raw material storage, are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.
(d) The owner or operator of any affected source subject to the provisions of this subpart is subject to title V permitting requirements.

Pursuant to 40 CFR 63.134 Definitions:

The terms used in this rule are defined at 40 CFR 63.1341 Definitions, the text of which is reproduced below.

All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.
Alkali bypass means a duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the "kiln exhaust gas bypass".
Bagging system means the equipment which fills bags with Portland cement.
Bin means a manmade enclosure for storage of raw materials, clinker, or finished product prior to further processing at a Portland cement plant.

Clinker cooler means equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.
Continuous monitor means a device which continuously samples the regulated parameter specified in §63.1350 of this subpart without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the continuous emission monitoring system performance specifications in appendix B to part 60 of this chapter.
Conveying system means a device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include but are not limited to the following: feeders, belt conveyors, bucket elevators and pneumatic systems.
Conveying system transfer point means a point where any material including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.
Dioxins and furans (D/F) means tetra-, penta-, hexa-, hepta-, and octa- chlorinated dibenzo dioxins and furans.
Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.
Feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to the kiln. Feed does not include the fuels used in the kiln to produce heat to form the clinker product.
Finish mill means a roll crusher, ball and tube mill or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.
Greenfield kiln, in-line kiln/raw mill, or *raw material dryer* means a kiln, in-line kiln/raw mill, or raw material dryer for which construction is commenced at a plant site (where no kilns and no in-line kiln/raw mills were in operation at any time prior to March 24, 1998) after March 24, 1998.
Hazardous waste is defined in §261.3 of this chapter.
In-line kiln/raw mill means a system in a Portland cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.
Kiln means a device, including any associated preheater or precalciner devices, that produces clinker by heating limestone and other materials for subsequent production of Portland cement.
Kiln exhaust gas bypass means alkali bypass.
Monovent means an exhaust configuration of a building or emission control device (e. g. positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i. e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.
New brownfield kiln, in-line kiln raw mill, or *raw material dryer* means a kiln, in-line kiln/raw mill or raw material dryer for which construction is commenced at a plant site

(where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.

One-minute average means the average of thermocouple or other sensor responses calculated at least every 60 seconds from responses obtained at least once during each consecutive 15 second period.

Portland cement plant means any facility manufacturing Portland cement.

Raw material dryer means an impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.

Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

Rolling average means the average of all one-minute averages over the averaging period.

Run average means the average of the one-minute parameter values for a run.

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

[40 CFR 63.1340 and 63.1341]

EMISSION STANDARDS AND OPERATING LIMITS

Pursuant to 40 CFR 63.1342 Standards: General:

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to subpart LLL.

(b) Table 1 of this section provides a summary of emission limits and operating limits of this subpart.

Table 1 §63.1342. Emission Limits and Operating Limits.

Affected Source	Pollutant or Opacity	Emission and Operating Limit
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	PM	0.15 kg/Mg of feed (dry basis)
	Opacity	20 percent
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	D/F	0.20 ng TEQ/dscm or 0.40 ng TEQ/dscm when the average of the performance test run average particulate matter control device (PMCD) inlet temperatures is 204° C or less. [Corrected to 7 percent oxygen] Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test.

Affected Source	Pollutant or Opacity	Emission and Operating Limit
		If activated carbon injection is used: Operate such that the three-hour rolling average activated carbon injection rate is no less than rate established at performance test. Operate such that either the carrier gas flow rate or carrier gas pressure drop exceeds the value established at performance test. Inject carbon of equivalent specifications to that used at performance test.
New greenfield kilns and in-line kiln/raw mills at major sources	THC	50 ppmvd, as propane, corrected to 7 percent oxygen
All clinker coolers at major sources	PM	0.050 kg/Mg of feed (dry basis)
	Opacity	10 percent
All raw mills and finish mills at major sources	Opacity	10 percent
New greenfield raw material dryers at major sources	THC	50 ppmvd, as propane, corrected to 7 percent oxygen
All raw material dryers and material handling points at major sources	Opacity	10 percent

Pursuant to 40 CFR 63.1343 Standards for Kilns and In-line Kiln/raw Mills:

(a) *General.* The provisions in this section apply to each kiln, each in-line kiln/raw mill, and any alkali bypass associated with that kiln or in-line kiln/raw mill.

(c) *Greenfield/major sources.* No owner or operator that commences construction of a greenfield kiln or greenfield inline kiln/raw mill at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources any gases which:

(1) Contain particulate matter in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the bypass stack are subject to this emission limit.

(2) Exhibit opacity greater than 20 percent.

(3) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf)(TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-10} gr per dscf)(TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204° C (400° F) or less.

(4) Contain total hydrocarbon (THC), from the main exhaust of the kiln or in-line kiln/raw mill, in excess of 50 ppmvd as propane, corrected to seven percent oxygen.

[40 CFR 63.1343]

Pursuant to 40 CFR 63.1344 Operating Limits for Kilns and In-line kiln/raw Mills:

(a) The owner or operator of a kiln subject to a D/F emission limitation under §63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under §63.1343 must operate the in-line kiln/raw mill, such that,

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in paragraph (b) of this section and established during the performance test, with or without the raw mill operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with §63.1349(b)(3)(iv).

[40 CFR 63.1344]

Pursuant to 40 CFR 63.1345 Standards for Clinker Coolers:

(a) No owner or operator of clinker cooler shall cause to be discharged into the atmosphere from the clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) Exhibit opacity greater than ten percent.

(b) [Reserved]

[40 CFR 63.1345]

[Note: 40 CFR 63.1346 is not applicable to this project.]

Pursuant to 40 CFR 63.1347 Standards for Raw and Finish Mills:

The owner or operator of each raw mill or finish mill shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent. [40 CFR 63.1347]

[Note: The BACT emission limits of this permit for emissions unit 006 are as stringent or are more stringent than the emission limit of this condition.]

Pursuant to 40 CFR 63.1348 Standards for Affected Sources Other Than Kilns; In-Line Kiln/Raw Mills; Clinker Coolers; New and Reconstructed Raw Material Dryers; and Raw and Finish Mills:

The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading

system; shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent. [40 CFR 63.1348]

MONITORING AND COMPLIANCE PROVISIONS

Pursuant to 40 CFR 63.1349 Performance Testing Requirements:

(a) The owner or operator of an affected source subject to this subpart shall demonstrate initial compliance with the emission limits of §63.1343 and §§63.1345 through 63.1348 using the test methods and procedures in paragraph (b) of this section and §63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

(1) A brief description of the process and the air pollution control system;
(2) Sampling location description(s);
(3) A description of sampling and analytical procedures and any modifications to standard procedures;
(4) Test results;
(5) Quality assurance procedures and results;
(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(7) Raw data sheets for field sampling and field and laboratory analyses;
(8) Documentation of calculations;
(9) All data recorded and used to establish parameters for compliance monitoring; and
(10) Any other information required by the test method.

(b) Performance tests to demonstrate initial compliance with this subpart shall be conducted as specified in paragraphs (b)(1) through (b)(4) of this section.

(1) The owner or operator of a kiln subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section. The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. The opacity exhibited during the period of the Method 5 of Appendix A to part 60 of this chapter performance tests required by paragraph (b)(1)(i) of this section shall be determined as required in paragraphs (b)(1)(v) through (vi) of this section.

(i) Method 5 of appendix A to part 60 of this chapter shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). Each run shall be conducted for at least 1 hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. A determination of the PM collected in the impingers (``back half'') of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of this subpart. However, this shall not preclude the permitting authority from requiring a determination of the ``back half'' for other purposes.

(ii) Suitable methods shall be used to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (c_s Q_{sd}) / P \qquad \textbf{(Eq 1)}$$

Where: E = emission rate of particulate matter, kg/Mg of kiln feed.
c_s = concentration of PM, kg/dscm.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(iv) When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the main exhaust and alkali bypass of the kiln or in-line kiln/raw mill shall be tested simultaneously and the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and alkali bypass shall be computed for each run using equation 2,

$$E_c = (c_{sk}Q_{sdk} + c_{sb}Q_{sdb})/P \qquad \textbf{(Eq 2)}$$

Where: E_c = the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and bypass stack, kg/Mg of kiln feed.
c_{sk} = concentration of particulate matter in the kiln or in-line kiln/raw mill effluent, kg/dscm.
Q_{sdk} = volumetric flow rate of kiln or in-line kiln/raw mill effluent, dscm/hr.
c_{sb} = concentration of particulate matter in the alkali bypass gas, kg/dscm.
Q_{sdb} = volumetric flow rate of alkali bypass gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(v) Except as provided in paragraph (b)(1)(vi) of this section the opacity exhibited during the period of the Method 5 performance tests required by paragraph (b)(1)(i) of this section shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(vi) Each owner or operator of a kiln, in-line kiln/raw mill, or clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (b)(1)(v) of this section, conduct an opacity test in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of Performance Specification 1 (PS-1) of appendix B to part 60 of this chapter is not feasible, a test shall be conducted in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. The maximum six-minute average opacity shall be determined during the three Method 5 test runs, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(2) The owner or operator of any affected source subject to limitations on opacity under this subpart that is not subject to paragraph (b)(1) of this section shall demonstrate initial

compliance with the affected source opacity limit by conducting a test in accordance with Method 9 of appendix A to part 60 of this chapter. The performance test shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (b)(2)(i) through (ii) of this section apply:

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period.

(3) The owner or operator of an affected source subject to limitations on D/F emissions under this subpart shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of appendix A to part 60 of this chapter. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a kiln or in-line kiln/raw mill equipped with an alkali bypass shall conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. However, the owner or operator of an in-line kiln/raw mill may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run, and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1344(b).

(v) If activated carbon injection is used for D/F control, the rate of activated carbon injection to the kiln or in-line kiln/raw mill exhaust, and where applicable, the rate of activated carbon injection to the alkali bypass exhaust, must be continuously recorded during the period of the Method 23 test, and the continuous injection rate record(s) must be included in the performance test report. In addition, the performance test report must include the brand and type of activated carbon used during the performance test and a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the test. Activated carbon injection rate parameters must be determined in accordance with paragraphs (b)(3)(vi) of this section.

(vi) The run average injection rate must be calculated for each run, and the average of the run average injection rates must be determined and included in the

performance test report and will determine the applicable injection rate limit in accordance with §63.1344(c)(1).

(4) The owner or operator of an affected source subject to limitations on emissions of THC shall demonstrate initial compliance with the THC limit by operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 of this chapter. The duration of the performance test shall be three hours, and the average THC concentration (as calculated from the one-minute averages) during the three hour performance test shall be calculated. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraphs (b)(1) and (b)(2) of this section shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.

(d) Performance tests required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) (1) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph (b)(3) of this section.

(2) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

(3) In preparation for and while conducting a performance test required in paragraph (e)(1) of this section, a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in paragraphs (e)(3)(i) through (iv) of this section are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.

(i) The source must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (e)(1) of this section, including when the planned operational change period would begin.

(ii) The performance test results must be documented in a test report according to paragraph (a) of this section.

(iii) A test plan must be made available to the Administrator prior to testing, if requested.

(iv) The performance test must be conducted, and it must be completed within 360 hours after the planned operational change period begins.

(f) Table 1 of this section provides a summary of the performance test requirements of this subpart.

[40 CFR 63.1349]

Table 1 to 40 CFR 63.1349. Summary of Performance Test Requirements.

AFFECTED SOURCE AND POLLUTANT	PERFORMANCE TEST
In-line kiln/raw mill [b, c] PM	EPA Method 5 [a]
In-line kiln/raw mill [b, c] Opacity	COM [d, e]
In-line kiln/raw mill [b, c, f, g] D/F	EPA Method 23 [h]
In-line kiln/raw mill [c] THC	THC CEM (EPA PS-8A) [i]
Clinker cooler PM	EPA Method 5 [a]
Clinker cooler opacity	COM [d, j]
Raw and finish mill opacity	EPA Method 9[a, j]
Materials handling processes (raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging, and bulk loading and unloading systems) opacity	EPA Method 9[a, j]

[a] Required initially and every 5 years thereafter.
[b] Includes main exhaust.
[c] In-line kiln/raw mill to be tested with and without raw mill in operation.
[d] Must meet COM performance specification criteria.
[e] Opacity limit is 20 percent.
[f] [This note is not applicable to this facility.]
[g] Temperature determined separately with and without the raw mill operating.
[h] Required initially and every 30 months thereafter.
[i] EPA Performance Specification (PS)-8A of appendix B to 40 CFR part 60.
[j] Opacity limit is 10 percent.

[40 CFR 63.1349]

Pursuant to 40 CFR 63.1350 Monitoring Requirements:

(a) The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information:

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of §§63.1343 through 63.1348;

(2) Corrective actions to be taken when required by paragraph (e) of this section;

(3) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year; and

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under §§63.1346 and 63.1348. Such procedures must include the provisions of paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to part 60 of this chapter. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. ``Totally enclosed conveying system transfer point'' shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs (a)(4)(i) through (iv) of this section for each such conveying system transfer point located within the building, or for the building itself, according to paragraph (a)(4)(vii) of this section.

(vii) If visible emissions from a building are monitored, the requirements of paragraphs (a)(4)(i) through (iv) of this section apply to the monitoring of the building, and you must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses in accordance with paragraphs (c)(1) through (c)(3) of this section.

(1) Except as provided in paragraph (c)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a continuous opacity monitor (COM) located at the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a kiln or in-line kiln/raw mill subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with

multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (c)(1) of this section, monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A to part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard.

(d) The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler in accordance with paragraphs (d)(1) through (d)(3) of this section.

(1) Except as provided in paragraph (d)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a COM located at the outlet of the clinker cooler PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (d)(1) of this section, monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A to part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

(e) The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD of these affected sources in accordance with the procedures of Method 22 of appendix A to part 60 of this chapter. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of appendix A to part 60 of this chapter. The duration of the Method 9 test shall be 30 minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in §63.1349(b)(3)(iv).

(ii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of an affected source subject to a limitation on D/F emissions that employs carbon injection as an emission control technique shall comply with the monitoring requirements of paragraphs (f)(1) through (f)(6) and (g)(1) through (g)(6) of this section to demonstrate continuous compliance with the D/F emission standard.

(1) Install, operate, calibrate and maintain a continuous monitor to record the rate of activated carbon injection. The accuracy of the rate measurement device must be $\pm$ 1 percent of the rate being measured.

(2) Verify the calibration of the device at least once every three months.

(3) The three-hour rolling average activated carbon injection rate shall be calculated as the average of 180 successive one-minute average activated carbon injection rates.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available,

the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average activated carbon injection rate must begin anew, without considering previous recordings.

(6) The owner or operator must install, operate, calibrate and maintain a continuous monitor to record the activated carbon injection system carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) established during the D/F performance test in accordance with paragraphs (g)(6)(i) through (g)(6)(iii) of this section.

(i) The owner or operator shall install, calibrate, operate and maintain a device to continuously monitor and record the parameter value.

(ii) The owner or operator must calculate and record three-hour rolling averages of the parameter value.

(iii) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average shall be added to the previous 179 values to calculate the three-hour rolling average.

(h) The owner or operator of an affected source subject to a limitation on THC emissions under this subpart shall comply with the monitoring requirements of paragraphs (h)(1) through (h)(3) of this section to demonstrate continuous compliance with the THC emission standard:

(1) The owner or operator shall install, operate and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A, of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part.

(2) The owner or operator is not required to calculate hourly rolling averages in accordance with section 4.9 of Performance Specification 8A.

(3) Any thirty-day block average THC concentration in any gas discharged from a greenfield raw material dryer, the main exhaust of a greenfield kiln, or the main exhaust of a greenfield in-line kiln/raw mill, exceeding 50 ppmvd, reported as propane, corrected to seven percent oxygen, is a violation of the standard.

(i) The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln raw mill at least once per year.

(j) The owner or operator of an affected source subject to a limitation on opacity under §63.1346 or §63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph (a) of this section.

(k) The owner or operator of an affected source subject to a particulate matter standard under §63.1343 shall install, calibrate, maintain and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.

(l) An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of

this subpart, except for emission standards for THC, subject to the provisions of paragraphs (l)(1) through (l)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (l)(3)(i) through (l)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(m) The requirements under paragraph (e) of this section to conduct daily Method 22 testing shall not apply to any specific raw mill or finish mill equipped with a continuous opacity monitor COM or bag leak detection system (BLDS). If the owner or operator chooses to install a COM in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, then the COM must be installed at the outlet of the PM control device of the raw mill or finish mill, and the COM must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of this part and according to PS-1 of appendix B to part 60 of this chapter. To remain in compliance, the opacity must be

maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. If the owner or operator chooses to install a BLDS in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, the requirements in paragraphs (m)(1) through (9) of this section apply to each BLDS:

(1) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. ``Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.

(4) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(5) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(6) All BLDS must be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations. The EPA recommends that where appropriate, the standard operating procedures manual for each bag leak detection system include concepts from EPA's ``Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997).

(7) The baseline output of the system must be established as follows:

(i) Adjust the range and the averaging period of the device; and

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan required by paragraph (a) of this section. In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in Sec. 63.2 certifies in writing to the Administrator that the fabric filter has been inspected and found to be in good operating condition.

(9) The owner or operator must maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time will be counted. The owner or operator must continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.

(n) A summary of the monitoring requirements of this subpart is given in Table 1 to this section.

Table 1 40 CFR 63.1350. Monitoring Requirements.

AFFECTED SOURCE/POLLUTANT OR OPACITY	MONITOR TYPE/ OPERATION/PROCESS	MONITORING REQUIREMENTS
All affected sources	Operations and maintenance plan	Prepare written plan for all affected sources and control devices
All in-line kiln raw mills/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level
In-line kiln raw mills/particulate matter	Particulate matter continuous emission monitoring system	Deferred
In-line kiln raw mills/ D/F	Combustion system inspection	Conduct annual inspection of components of combustion system
	Continuous temperature monitoring at PMCD inlet	Install, operate, calibrate and maintain continuous temperature monitoring and recording system; calculate three-hour rolling averages; verify temperature sensor calibration at least quarterly
In-line kiln raw mills/THC	Total hydrocarbon continuous emission monitor	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration
Clinker coolers/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level.
Finish mills at major sources/opacity	Method 22 visible emissions test	Conduct daily 6-minute Method 22 visible emissions test while mill is operating at highest load or capacity level; if visible emissions are observed, initiate corrective action within one hour and conduct 30-minute Method 9 test within 24 hours

AFFECTED SOURCE/POLLUTANT OR OPACITY	MONITOR TYPE/ OPERATION/PROCESS	MONITORING REQUIREMENTS
Raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems at major sources/opacity	Method 22 visible emissions test	As specified in operation and maintenance plan

[40 CFR 63.1350]

Pursuant to 40 CFR 63.1351 Compliance Dates:

(b) The compliance date for an owner or operator of an affected source subject to the provisions of this subpart that commences new construction or reconstruction after March 24, 1998 is June 14, 1999 or immediately upon startup of operations, whichever is later. [40 CFR 63.1351]

Pursuant to 63.1352 Additional Test Methods:

(a) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 are permitted to use Method 320 or Method 321 of appendix A of this part.

(b) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 are permitted to use Methods 26 or 26A of appendix A to part 60 of this chapter.

(c) Owners or operators conducting tests to determine the rates of emission of specific organic HAP from raw material dryers, kilns and in-line kiln/raw mills at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 of this subpart are permitted to use Method 320 of appendix A to this part, or Method 18 of appendix A to part 60 of this chapter.
[40 CFR 63.1352]

NOTIFICATION, REPORTING AND RECORDKEEPING

Pursuant to 40 CFR 63.1353 Notification Requirements:

(a) The notification provisions of 40 CFR part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(b) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in §63.9 as follows:

(1) Initial notifications as required by §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been

submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

(2) Notification of performance tests, as required by §§63.7 and 63.9(e).

(3) Notification of opacity and visible emission observations required by §63.1349 in accordance with §§63.6(h)(5) and 63.9(f).

(4) Notification, as required by §63.9(g), of the date that the continuous emission monitor performance evaluation required by §63.8(e) of this part is scheduled to begin.

(5) Notification of compliance status, as required by §63.9(h).

[40 CFR 63.1353]

Pursuant to 40 CFR 63.1354 Reporting Requirements:

(a) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in §63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by §63.1349.

(3) As required by §63.10(d)(4), the owner or operator of an affected source who is required to such reports by the dates specified in the written extension of compliance.

(4) As required by §63.10(d)(5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(6) As required by §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by §63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under §63.7 and described in §63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under §63.8(e).

(8) As required by §63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in §63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in §63.1344(a) and (b);

(ii) All failures to calibrate thermocouples and other temperature sensors as required under §63.1350(f)(7) of this subpart; and

(iii) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under §63.1344(c).

(iv) The results of any combustion system component inspections conducted within the reporting period as required under §63.1350(i).

(v) All failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a).

(10) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.

[40 CFR 63.1354]

Pursuant to 40 CFR 63.1355 Recordkeeping Requirements:

(a) The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

(b) The owner or operator shall maintain records for each affected source as required by §63.10(b)(2) and (b)(3) of this part; and

(1) All documentation supporting initial notifications and notifications of compliance status under §63.9 of this part;

(2) All records of applicability determination, including supporting analyses; and

(3) If the owner or operator has been granted a waiver under §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(c) In addition to the recordkeeping requirements in paragraph (b) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c).

[40 CFR 63.1355]

OTHER

Pursuant to 40 CFR 63.1357 Temporary, Conditioned Exemption from Particulate Matter and Opacity Standards:

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from:

(1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The owner or operator must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted. The plan must include:

(1) The number of test conditions and the number of runs for each test condition;

(2) The target particulate matter emission level for each test condition;

(3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and

(4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with §63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in §63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

(e) The PM and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for the purposes of conducting tests to correlate PM CEMS with manual method test results, including all runs and conditions, except as described in this paragraph. Where additional time is required to correlate a PM CEMS device, a source may petition the Administrator for an extension of the 96-hour aggregate waiver of compliance with the PM and opacity standards. An extension of the 96-hour aggregate waiver is renewable at the discretion of the Administrator.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

[40 CFR 63.1357]

Pursuant to 40 CFR 63.1358 Delegation of Authority:

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in Sec. Sec. 63.1340, 63.1342 through 63.1348, and 63.1351.

(2) Approval of major alternatives to test methods under Sec. 63.7(e)(2)(ii) and (f), as defined in Sec. 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under Sec. 63.8(f), as defined in Sec. 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under Sec. 63.10(f), as defined in Sec. 63.90, and as required in this subpart.

[40 CFR 63.1358]

40 CFR 63 Subpart A - General Provisions

§ 63.1 Applicability.

(a) *General.*

(1) Terms used throughout this part are defined in § 63.2 or in the Clean Air Act (Act) as amended in 1990, except that individual subparts of this part may include specific definitions in addition to or that supersede definitions in § 63.2.

(2) This part contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR part 61. The NESHAP in part 61 promulgated by signature of the Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to this part.

(3) No emission standard or other requirement established under this part shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (section 111, part C or D or any other authority of this Act), or a standard issued under State authority. The Administrator may specify in a specific standard under this part that facilities subject to other provisions under the Act need only comply with the provisions of that standard.

(4) (i) Each relevant standard in this part 63 must identify explicitly whether each provision in this subpart A is or is not included in such relevant standard.

(ii) If a relevant part 63 standard incorporates the requirements of 40 CFR part 60, part 61, or other part 63 standards, the relevant part 63 standard must identify explicitly the applicability of each corresponding part 60,part 61, or other part 63 subpart A (General) Provision.

(iii) The General Provisions in this Subpart A do not apply to regulations developed pursuant to section112(r) of the amended Act., unless otherwise specified in those regulations.

(5) [Reserved]

(6) To obtain the most current list of categories of sources to be regulated under section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD–13), Research Triangle Park, North Carolina 27711.

(7) [Reserved]

(8) [Reserved]

(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in § 63.9(i).

(13) [Reserved]

(14) [Reserved]

(b) *Initial applicability determination for this part.*

(1) The provisions of this part apply to the owner or operator of any stationary source that

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) [Reserved]

(3) An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under this part, must keep a record as specified in § 63.10(b)(3).

(c) *Applicability of this part after a relevant standard has been set under this part.*

(1) If a relevant standard has been established under this part, the owner or operator of an affected source must comply with the provisions of that standard and of this subpart as provided in paragraph (a)(4) of this section.

(2) Except as provided in § 63.10(b)(3), if a relevant standard has been established under this part, the owner or operator of an affected source may be required to obtain

a title V permit from a permitting authority in the State in which the source is located. Emission standards promulgated in this part for area sources pursuant to section 112(c)(3) of the Act will specify whether –

(i) States will have the option to exclude area sources affected by that standard from the requirement to obtain a title V permit (i.e., the standard will exempt the category of area sources altogether from the permitting requirement);

(ii) States will have the option to defer permitting of area sources in that category until the Administrator takes rulemaking action to determine applicability of the permitting requirements; or

(iii) If a standard fails to specify what the permitting requirements will be for area sources affected by such a standard, then area sources that are subject to the standard will be subject to the requirement to obtain a title V permit without any deferral.

(3) [Reserved]

(4) [Reserved]

(5) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of this subpart.

(d) [Reserved]

(e) If the Administrator promulgates an emission standard under section 112(d) or (h) of the Act that is applicable to a source subject to an emission limitation by permit established under section 112(j) of the Act, and the requirements under the section 112(j) emission limitation are substantially as effective as the promulgated emission standard, the owner or operator may request the permitting authority to revise the source's title V permit to reflect that the emission limitation in the permit satisfies the requirements of the promulgated emission standard. The process by which the permitting authority determines whether the section 112(j) emission limitation is substantially as effective as the promulgated emission standard must include, consistent with part 70 or 71 of this chapter, the opportunity for full public, EPA, and affected State review (including the opportunity for EPA's objection) prior to the permit revision being finalized. A negative determination by the permitting authority constitutes final action for purposes of review and appeal under the applicable title V operating permit program.

§ 63.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Pub. L. 101–549, 104 Stat. 2399).

Actual emissions is defined in subpart D of this part for the purpose of granting a compliance extension for an early reduction of hazardous air pollutants.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Affected source, for the purposes of this part, means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory for which a section 112(d) standard or other relevant standard is established pursuant to section 112 of the Act. Each relevant standard will define the "affected source," as defined in this paragraph unless a different definition is warranted

based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term "affected source," as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing title IV of the Act. Affected source may be defined differently for part 63 than affected facility and stationary source in parts 60 and 61, respectively. This definition of "affected source," and the procedures for adopting an alternative definition of "affected source," shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002.

Alternative emission limitation means conditions established pursuant to sections 112(i)(5) or 112(i)(6) of the Act by the Administrator or by a State with an approved permit program.

Alternative emission standard means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a test method in this chapter and that has been demonstrated to the Administrator's satisfaction, using Method 301 in Appendix A of this part, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this part.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

Commenced means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Compliance date means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator (or a State with an approved permit program) pursuant to section 112 of the Act.

Compliance schedule means:

(1) In the case of an affected source that is in compliance with all applicable requirements established under this part, a statement that the source will continue to comply with such requirements; or

(2) In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

(3) In the case of an affected source not in compliance with all applicable requirements established under this part, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established pursuant to section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction non-compliance with, the applicable requirements on which it is based.

Construction means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including, but not limited to, piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in this section. The costs of replacing minor ancillary equipment must be considered in determining whether the existing affected source is reconstructed.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous monitoring system (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

Continuous opacity monitoring system (COMS) means a continuous monitoring system that measures the opacity of emissions.

Continuous parameter monitoring system means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Effective date means:

(1) With regard to an emission standard established under this part, the date of promulgation in the FEDERAL REGISTER of such standard; or

(2) With regard to an alternative emission limitation or equivalent emission limitation determined by the Administrator (or a State with an approved permit program), the date that the alternative emission limitation or equivalent emission limitation becomes effective according to the provisions of this part.

Emission standard means a national standard, limitation, prohibition, or other regulation promulgated in a subpart of this part pursuant to sections 112(d), 112(h), or 112(f) of the Act.

Emissions averaging is a way to comply with the emission limitations specified in a relevant standard, whereby an affected source, if allowed under a subpart of this part, may create emission credits by reducing emissions from specific points to a level below that required by the relevant standard, and those credits are used to offset emissions from points that are not controlled to the level required by the relevant standard.

EPA means the United States Environmental Protection Agency.

Equivalent emission limitation means any maximum achievable control technology emission limitation or requirements which are applicable to a major source of hazardous air pollutants and are adopted by the Administrator (or a State with an approved permit program) on a case-by-case basis, pursuant to section 112(g) or (j) of the Act.

Excess emissions and continuous monitoring system performance report is a report that must be submitted periodically by an affected source in order to provide data on its compliance with relevant emission limits, operating parameters, and the performance of its continuous parameter monitoring systems.

Existing source means any affected source that is not a new source.

Federally enforceable means all limitations and conditions that are enforceable by the Administrator and citizens under the Act or that are enforceable under other statutes administered by the Administrator. Examples of federally enforceable limitations and conditions include, but are not limited to:

(1) Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to section 112 of the Act as amended in 1990;

(2) New source performance standards established pursuant to section 111 of the Act, and emission standards established pursuant to section 112 of the Act before it was amended in 1990;

(3) All terms and conditions in a title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

(4) Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

(5) Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR part 51;

(6) Limitations and conditions that are part of an operating permit where the permit and the permitting program pursuant to which it was issued meet all of the following criteria:

(i) The operating permit program has been submitted to and approved by EPA into a State implementation plan (SIP) under section 110 of the CAA;

(ii) The SIP imposes a legal obligation that operating permit holders adhere to the terms and limitations of such permits and provides that permits which do not conform to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA;

(iii) The operating permit program requires that all emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the SIP or enforceable under the SIP, and that the program may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise "federally enforceable";

(iv) The limitations, controls, and requirements in the permit in question are permanent, quantifiable, and otherwise enforceable as a practical matter; and

(v) The permit in question was issued only after adequate and timely notice and opportunity for comment for EPA and the public.

(7) Limitations and conditions in a State rule or program that has been approved by the EPA under subpart E of this part for the purposes of implementing and enforcing section 112; and

(8) Individual consent agreements that the EPA has legal authority to create.

Fixed capital cost means the capital needed to provide all the depreciable components of an existing source.

Fugitive emissions means those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Hazardous air pollutant means any air pollutant listed in or pursuant to section 112(b) of the Act.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Monitoring means the collection and use of measurement data or other information to control the operation of a process or pollution control device or to verify a work practice standard relative to assuring compliance with applicable requirements. Monitoring is composed of four elements:

(1) Indicator(s) of performance -- the parameter or parameters you measure or observe for demonstrating proper operation of the pollution control measures or compliance with the applicable emissions limitation or standard. Indicators of performance may include direct or predicted emissions measurements (including opacity), operational parametric values that correspond to process or control device (and capture system) efficiencies or emissions rates, and recorded findings of inspection of work practice activities, materials tracking, or design characteristics. Indicators may be expressed as a single maximum or minimum value, a function of process variables (for example, within a range of pressure drops), a particular operational or work practice status (for example, a damper position, completion of a waste recovery task, materials tracking), or an interdependency between two or among more than two variables.

(2) Measurement techniques -- the means by which you gather and record information of or about the indicators of performance. The components of the measurement technique include the detector type, location and installation specifications, inspection procedures, and quality assurance and quality control measures. Examples of measurement techniques include continuous emission monitoring systems, continuous opacity monitoring systems, continuous parametric monitoring systems, and manual inspections that include making records of process conditions or work practices.

(3) Monitoring frequency -- the number of times you obtain and record monitoring data over a specified time interval. Examples of monitoring frequencies include at least four points equally spaced for each hour for continuous emissions or parametric monitoring systems, at least every 10 seconds for continuous opacity monitoring systems, and at least once per operating day (or week, month, etc.) for work practice or design inspections.

(4) Averaging time -- the period over which you average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard. Examples of averaging time include a 3-hour average in units of the emissions limitation, a 30-day rolling average emissions value, a daily average of a control device operational parametric range, and an instantaneous alarm.

New affected source means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory that is subject to a section 112(d) or other relevant standard for new sources. This definition of "new affected source," and the criteria to be utilized in implementing it, shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002. Each relevant standard will define the term "new affected source," which will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:

(1) Emission reduction impacts of controlling individual sources versus groups of sources;

(2) Cost effectiveness of controlling individual equipment;

(3) Flexibility to accommodate common control strategies;

(4) Cost/benefits of emissions averaging;

(5) Incentives for pollution prevention;

(6) Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);

(7) Feasibility and cost of monitoring; and

(8) Other relevant factors.

New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For continuous opacity monitoring systems, opacity means the fraction of incident light that is attenuated by an optical medium.

Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source..

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Permit modification means a change to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permit revision means any permit modification or administrative permit amendment to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

Reconstruction means the replacement of components of an affected or a previously unaffected stationary source to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Regulation promulgation schedule means the schedule for the promulgation of emission standards under this part, established by the Administrator pursuant to section 112(e) of the Act and published in the FEDERAL REGISTER.

Relevant standard means:

(1) An emission standard;

(2) An alternative emission standard;

(3) An alternative emission limitation; or

(4) An equivalent emission limitation established pursuant to section 112 of the Act that applies to the collection of equipment, activities, or both regulated by such standard or limitation. A relevant standard may include or consist of a design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that the Administrator (or a State) establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to section 112 of the Act includes subpart A of this part, as provided by § 63.1(a)(4), and all applicable appendices of this part or of other parts of this chapter that are referenced in that standard.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Administrator.

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

(4) For affected sources (as defined in this part) applying for or subject to a title V permit: ''responsible official'' shall have the same meaning as defined in part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever is applicable.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this part.

Shutdown means the cessation of operation of an affected source or portion of an affected source for any purpose.

Six-minute period means, with respect to opacity determinations, any one of the 10 equal parts of a 1-hour period.

Standard conditions means a temperature of 293 °K (68° F) and a pressure of 101.3 kilopascals (29.92 in. Hg).

Startup means the setting in operation of an affected source for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement:

(1) The provisions of this part and/or

(2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Test method means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of this chapter, test methods incorporated by reference in this part, or methods validated for an application through procedures in Method 301 of appendix A of this part.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Visible emission means the observation of an emission of opacity or optical density above the threshold of vision.

Working day means any day on which Federal Government offices (or State government offices for a State that has obtained delegation under section 112(l)) are open for normal business. Saturdays, Sundays, and official Federal (or where delegated, State) holidays are not working days.

§ 63.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A = ampere
g = gram
Hz = hertz
J = joule
°K = degree Kelvin
kg = kilogram
l = liter
m = meter
m^3 = cubic meter
mg = milligram = 10^{-3} gram
ml = milliliter = 10^{-3} liter
mm = millimeter = 10^{-3} meter
Mg = megagram = 10^{6} gram = metric ton
MJ = megajoule
mol = mole
N = newton
ng = nanogram = 10^{-9} gram
nm = nanometer = 10^{-9} meter
Pa = pascal
s = second
V = volt
W = watt
Ω = ohm
μg = microgram = 10^{-6} gram
μl = microliter = 10^{-6} liter

(b) Other units of measure:

Btu = British thermal unit
°C = degree Celsius (centigrade)
cal = calorie
cfm = cubic feet per minute
cc = cubic centimeter

cu ft = cubic feet
d = day
dcf = dry cubic feet
dcm = dry cubic meter
dscf = dry cubic feet at standard conditions
dscm = dry cubic meter at standard conditions
eq = equivalent
°F = degree Fahrenheit
ft = feet
ft^2 = square feet
ft^3 = cubic feet
gal = gallon
gr = grain
g-eq = gram equivalent
g-mole = gram mole
hr = hour
in. = inch
in. H_2O = inches of water
K = 1,000
kcal = kilocalorie
lb = pound
lpm = liter per minute
meq = milliequivalent
min = minute
MW = molecular weight
oz = ounces
ppb = parts per billion
ppbw = parts per billion by weight
ppbv = parts per billion by volume
ppm = parts per million
ppmw = parts per million by weight
ppmv = parts per million by volume
psia = pounds per square inch absolute
psig = pounds per square inch gage
°R = degree Rankine
scf = cubic feet at standard conditions
scfh = cubic feet at standard conditions per hour
scm = cubic meter at standard conditions
scmm= cubic meter at standard conditions per minute
sec = second
sq ft = square feet
std = at standard conditions
v/v = volume per volume
yd^2 = square yards
yr = year

(c) Miscellaneous:

act = actual
avg = average
I.D. = inside diameter
M = molar

N = normal
O.D. = outside diameter
% = percent

§ 63.4 Prohibited activities and circumvention.

(a) *Prohibited activities.*

(1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(b) *Circumvention.* No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(3) [Reserved]

(c) *Severability.* Notwithstanding any requirement incorporated into a title V permit obtained by an owner or operator subject to the provisions of this part, the provisions of this part are federally enforceable.

§ 63.5 Preconstruction review and notification requirements.

(a) *Applicability.*

(1) This section implements the preconstruction review requirements of section 112(i)(1) for sources subject to a relevant emission standard that has been promulgated in this part. In addition, this section includes other requirements for constructed and reconstructed stationary sources that are or become subject to a relevant promulgated emission standard.

(2) After the effective date of a relevant standard promulgated under this part, the requirements in this section apply to owners or operators who construct a new source or reconstruct a source after the proposal date of that standard. New or reconstructed sources that start up before the standard's effective date are not subject to the preconstruction review requirements specified in paragraphs (b)(3), (d), and (e) of this section.

(b) *Requirements for existing, newly constructed, and reconstructed sources.*

(1) A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources,

including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

(2) [Reserved]

(3) After the effective date of any relevant standard promulgated by the Administrator under this part, no person may, without obtaining written approval in advance from the Administrator in accordance with the procedures specified in paragraphs (d) and (e) of this section, do any of the following:

(i) Construct a new affected source that is major-emitting and subject to such standard;

(ii) Reconstruct an affected source that is major-emitting and subject to such standard; or

(iii) Reconstruct a major source such that the source becomes an affected source that is major-emitting and subject to the standard.

(4) After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in § 63.9(b).

(5) [Reserved]

(6) After the effective date of any relevant standard promulgated by the Administrator under this part, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source.

(c) [Reserved]

(d) *Application for approval of construction or reconstruction.* The provisions of this paragraph implement section 112(i)(1) of the Act.

(1) *General application requirements.*

(i) An owner or operator who is subject to the requirements of paragraph (b)(3) of this section must submit to the Administrator an application for approval of the construction or reconstruction. The application must be submitted as soon as practicable before actual construction or reconstruction begins. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements of § 63.9(b)(5). The owner or operator may submit the application for approval well in advance of the date actual construction or reconstruction begins in order to ensure a timely review by the Administrator and that the planned date to begin will not be delayed.

(ii) A separate application shall be submitted for each construction or reconstruction.

Each application for approval of construction or reconstruction shall include at a minimum:

(A) The applicant's name and address;

(B) A notification of intention to construct a new major affected source or make any physical or operational change to a major affected source that may meet or has been determined to meet the criteria for a reconstruction, as defined in § 63.2 or in the relevant standard;

(C) The address (i.e., physical location) or proposed address of the source;

(D) An identification of the relevant standard that is the basis of the application;

(E) The expected date of the beginning of actual construction or reconstruction;

(F) The expected completion date of the construction or reconstruction;

(G) [Reserved]

(H) The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

(I) [Reserved]

(J) Other information as specified in paragraphs (d)(2) and (d)(3) of this section.

(iii) An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in paragraphs (d)(1)(ii)(H) and (d)(2) of this section shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the notification of compliance status required in § 63.9(h) (see
§ 63.9(h)(5)).

(2) *Application for approval of construction.* Each application for approval of construction must include, in addition to the information required in paragraph (d)(1)(ii) of this section, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each type of emission point for each type of hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions must include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions must include an estimated control efficiency (percent) for that method. Such technical information must include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

(3) *Application for approval of reconstruction.* Each application for approval of reconstruction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section - (i) A brief description of the affected source and the components that are to be replaced;

(ii) A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

(iii) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

(iv) The estimated life of the affected source after the replacements; and

(v) A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Administrator's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

(vi) If in the application for approval of reconstruction the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements, the owner or operator need not submit the information required in paragraphs (d)(3)(iii) through (d)(3)(v) of this section.

(4) *Additional information.* The Administrator may request additional relevant information after the submittal of an application for approval of construction or reconstruction.

(e) *Approval of construction or reconstruction.*

(1) (i) If the Administrator determines that, if properly constructed, or reconstructed, and operated, a new or existing source for which an application under paragraph (d) of this section was submitted will not cause emissions in violation of the relevant standard(s) and any other federally enforceable requirements, the Administrator will approve the construction or reconstruction.

(ii) In addition, in the case of reconstruction, the Administrator's determination under this paragraph will be based on:

(A) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new source;

(B) The estimated life of the source after the re-placements compared to the life of a comparable entirely new source;

(C) The extent to which the components being replaced cause or contribute to the emissions from the source; and

(D) Any economic or technical limitations on compliance with relevant standards that are inherent in the proposed replacements.

(2) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of construction or reconstruction within 60 calendar days after receipt of sufficient information to evaluate an application submitted under paragraph (d) of this section. The 60-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(3) Before denying any application for approval of construction or reconstruction, the Administrator will notify the applicant of the Administrator's intention to issue the denial together with - (i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator to enable further action on the application.

(4) A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

(5) Neither the submission of an application for approval nor the Administrator's approval of construction or reconstruction shall -

(i) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or (ii) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(f) *Approval of construction or reconstruction based on prior State preconstruction review.*

(1) Preconstruction review procedures that a State utilizes for other purposes may also be utilized for purposes of this section if the procedures are substantially equivalent to those specified in this section. The Administrator will approve an application for construction or reconstruction specified in paragraphs (b)(3) and (d) of this section if the owner or operator of a new affected source or reconstructed affected source, who is subject to such requirement meets the following conditions:

(i) The owner or operator of the new affected source or reconstructed affected source has undergone a preconstruction review and approval process in the State in which the source is (or would be) located and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant promulgated emission standard, if the source is properly built and operated.

(ii) Provide a statement from the State or other evidence (such as State regulations) that it considered the factors specified in paragraph (e)(1) of this section.

(2) The owner or operator must submit to the Administrator the request for approval of construction or reconstruction under this paragraph (f)(2) no later than the application deadline specified in paragraph (d)(1) of this section (see also § 63.9(b)(2)). The owner or operator must include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in paragraph (e) of this section. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction under this paragraph (f)(2).

§ 63.6 Compliance with standards and maintenance requirements.

(a) *Applicability.*

(1) The requirements in this section apply to the owner or operator of affected sources for which any relevant standard has been established pursuant to section 112 of the Act and the applicability of such requirements is set out in accordance with § 63.1(a)(4) unless --

(i) The Administrator (or a State with an approved permit program) has granted an extension of compliance consistent with paragraph (i) of this section; or

(ii) The President has granted an exemption from compliance with any relevant standard in accordance with section 112(i)(4) of the Act.

(2) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

(b) *Compliance dates for new and reconstructed sources.*

(1) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source for which construction or reconstruction commences after proposal of a relevant standard that has an initial startup before the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard not later than the standard's effective date.

(2) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source that has an initial startup after the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard upon startup of the source.

(3) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under this part pursuant to section 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date 3 years after the effective date if:

(i) The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; for purposes of this paragraph, a finding that controls or compliance methods are "more stringent" must include control technologies or performance criteria and compliance or compliance assurance methods that are different but are substantially equivalent to those required by the promulgated rule, as determined by the Administrator (or his or her authorized representative); and

(ii) The owner or operator complies with the standard as proposed during the 3-year period immediately after the effective date.

(4) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of a relevant standard established pursuant to section 112(f) shall not be required to comply with the section 112(f) emission standard until the date 10 years after the date construction or reconstruction is commenced, except that, if the section 112(f) standard is promulgated more than 10 years after construction or reconstruction is commenced, the owner or operator must comply with the standard as provided in paragraphs (b)(1) and (2) of this section.

(5) The owner or operator of a new source that is subject to the compliance requirements of paragraph (b)(3) or (4) of this section must notify the Administrator in accordance with § 63.9(d).

(6) [Reserved]

(7) When an area source becomes a major source by the addition of equipment or operations that meet the definition of new affected source in the relevant standard, the portion of the existing facility that is a new affected source must comply with all requirements of that standard applicable to new sources. The source owner or operator must comply with the relevant standard upon startup.

(c) *Compliance dates for existing sources.*

(1) After the effective date of a relevant standard established under this part pursuant to section 112(d) or 112(h) of the Act, the owner or operator of an existing source shall comply with such standard by the compliance date established by the Administrator in the applicable subpart(s) of this part. Except as otherwise provided for in section 112 of the Act, in no case will the compliance date established for an existing source in an applicable subpart of this part exceed 3 years after the effective date of such standard.

(2) If an existing source is subject to a standard established under this part pursuant to section 112(f) of the Act, the owner or operator must comply with the standard by the date 90

days after the standard's effective date, or by the date specified in an extension granted to the source by the Administrator under paragraph (i)(4)(ii) of this section, whichever is later.

(3)–(4) [Reserved]

(5) Except as provided in paragraph (b)(7) of this section, the owner or operator of an area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source shall be subject to relevant standards for existing sources. Such sources must comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard for existing sources in existence at the time the standard becomes effective.

(d) [Reserved]

(e) *Operation and maintenance requirements.*

(1) (i) At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) [Reserved]

(3) Startup, shutdown, and malfunction plan.

(i)The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard.

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring

equipment, in a manner which satisfies the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source must operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in § 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with Sec. 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (e)(3)(viii) of this section, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator. The Administrator may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The Administrator must request that the owner or operator submit a particular startup, shutdown, or malfunction plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine

or to receive a copy of that plan or portion of a plan. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(1)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by § 63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this

part, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

(f) *Compliance with nonopacity emission standards* -

(1) *Applicability.* The non-opacity emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this part, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.

(2) *Methods for determining compliance.*

(i) The Administrator will determine compliance with nonopacity emission standards in this part based on the results of performance tests conducted according to the procedures in § 63.7, unless otherwise specified in an applicable subpart of this part.

(ii) The Administrator will determine compliance with nonopacity emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in § 63.6(e) and applicable subparts of this part.

(iii) If an affected source conducts performance testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

(B) The performance test was conducted under representative operating conditions for the source;

(C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e) of this subpart; and

(D) The performance test was appropriately quality-assured, as specified in § 63.7(c).

(iv) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by review of records, inspection of the source, and other procedures specified in applicable subparts of this part.

(v) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in paragraph (e) of this section and applicable subparts of this part.

(3) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with a non-opacity emission standard, as specified in paragraphs (f)(1) and (2) of this section, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable), and information available to the Administrator pursuant to paragraph (e)(1)(i) of this section.

(g) *Use of an alternative nonopacity emission standard.*

(1) If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under any design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. Any FEDERAL REGISTER notice under this paragraph shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

(2) An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit a proposed test plan or the results of testing and monitoring in accordance with § 63.7 and § 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in § 63.7 and § 63.8.

(3) The Administrator may establish general procedures in an applicable subpart that accomplish the requirements of paragraphs (g)(1) and (g)(2) of this section.

(h) *Compliance with opacity and visible emission standards* -

(1) *Applicability.* The opacity and visible emission standards set forth in this part must apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in this part, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements.

(2) Methods for determining compliance.

(i) The Administrator will determine compliance with opacity and visible emission standards in this part based on the results of the test method specified in an applicable subpart. Whenever a continuous opacity monitoring system (COMS) is required to be installed to determine compliance with numerical opacity emission standards in this part, compliance with opacity emission standards in this part shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards in this part shall be determined by conducting observations in accordance with Test Method 9 in appendix A of part 60 of this chapter or the method specified in paragraph (h)(7)(ii) of this section. Whenever a visible emission test method is not specified, compliance with visible emission standards in this part shall be determined by conducting observations in accordance with Test Method 22 in appendix A of part 60 of this chapter.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

(B) The opacity or visible emission test was conducted under representative operating conditions for the source;

(C) The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e); and

(D) The opacity or visible emission test was appropriately quality-assured, as specified in § 63.7(c) of this section.

(3) [Reserved]

(4) *Notification of opacity or visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting opacity or visible emission observations in accordance with § 63.9(f), if such observations are required for the source by a relevant standard.

(5) *Conduct of opacity or visible emission observations.* When a relevant standard under this part includes an opacity or visible emission standard, the owner or operator of an affected source shall comply with the following:

(i) For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted concurrently with the initial performance test required in § 63.7 unless one of the following conditions applies:

(A) If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 60 days after achieving the maximum production rate at which a new or reconstructed source will be operated, but not later than 120 days after initial startup of the source, or within 120 days after the effective date of the relevant standard in the case of new sources that start up before the standard's effective date. If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 120 days after the compliance date for an existing or modified source; or

(B) If visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, or within the time period specified in paragraph (h)(5)(i)(A) of this section, the source's owner or operator shall reschedule the opacity or visible emission observations as soon after the initial performance test, or time period, as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. The rescheduled opacity or visible emission observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 63.7. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity or visible emission observations from being made concurrently with the initial performance test in accordance with procedures contained in Test Method 9 or Test Method 22 in appendix A of part 60 of this chapter.

(ii) For the purpose of demonstrating initial compliance, the minimum total time of opacity observations shall be 3 hours (30 6-minute averages) for the performance test or other required set of observations (e.g., for fugitive-type emission sources subject only to an opacity emission standard).

(iii) The owner or operator of an affected source to which an opacity or visible emission standard in this part applies shall conduct opacity or visible emission observations in accordance with the provisions of this section, record the results of the evaluation of emissions, and report to the Administrator the opacity or visible emission results in accordance with the provisions of § 63.10(d).

(iv) [Reserved]

(v) Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

(6) *Availability of records.* The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) *Use of a continuous opacity monitoring system.*

(i) The owner or operator of an affected source required to use a continuous opacity monitoring system (COMS) shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results in accordance with the provisions of § 63.10(e)(4).

(ii) Whenever an opacity emission test method has not been specified in an applicable subpart, or an owner or operator of an affected source is required to conduct Test Method 9 observations (see appendix A of part 60 of this chapter), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under § 63.7 in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, he or she shall notify the Administrator of that decision, in writing, simultaneously with the notification under § 63.7(b) of the date the performance test is scheduled to begin. Once the owner or operator of an affected source has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under § 63.7, unless the owner or operator notifies the Administrator in writing to the contrary not later than with the notification under § 63.7(b) of the date the subsequent performance test is scheduled to begin.

(iii) For the purposes of determining compliance with the opacity emission standard during a performance test required under § 63.7 using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test.

(iv) The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of § 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in § 63.8(c) and § 63.8(d), and that the resulting data have not been altered in any way.

(v) Except as provided in paragraph (h)(7)(ii) of this section, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in § 63.8(c), and met Performance Specification 1 in appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.

(8) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required by § 63.7, the results of Test Method 9 or another required opacity or visible emission test method, the observer certification required by paragraph (h)(6) of this section, and the continuous opacity monitoring system results, whichever is/are applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(9) *Adjustment to an opacity emission standard.*

(i) If the Administrator finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under § 63.7, but during the time such performance tests were conducted fails to

meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.

(ii) The Administrator may grant such a petition upon a demonstration by the owner or operator that -

(A) The affected source and its associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the performance tests;

(B) The performance tests were performed under the conditions established by the Administrator; and

(C) The affected source and its associated air pollution control equipment were incapable of being adjusted or operated to meet the relevant opacity emission standard.

(iii) The Administrator will establish an adjusted opacity emission standard for the affected source meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity emission standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity emission standard in the FEDERAL REGISTER.

(iv) After the Administrator promulgates an adjusted opacity emission standard for an affected source, the owner or operator of such source shall be subject to the new opacity emission standard, and the new opacity emission standard shall apply to such source during any subsequent performance tests.

(i) *Extension of compliance with emission standards.*

(1) Until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph, the owner or operator of an affected source subject to the requirements of this section shall comply with all applicable requirements of this part.

(2) *Extension of compliance for early reductions and other reductions*

(i) *Early reductions.* Pursuant to section 112(i)(5) of the Act, if the owner or operator of an existing source demonstrates that the source has achieved a reduction in emissions of hazardous air pollutants in accordance with the provisions of subpart D of this part, the Administrator (or the State with an approved permit program) will grant the owner or operator an extension of compliance with specific requirements of this part, as specified in subpart D.

(ii) *Other reductions.* Pursuant to section 112(i)(6) of the Act, if the owner or operator of an existing source has installed best available control technology (BACT) (as defined in section 169(3) of the Act) or technology required to meet a lowest achievable emission rate (LAER) (as defined in section 171 of the Act) prior to the promulgation of an emission standard in this part applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to the BACT or LAER installation, the Administrator will grant the owner or operator an extension of compliance with such emission standard that will apply until the date 5 years after the date on which such installation was achieved, as determined by the Administrator.

(3) *Request for extension of compliance.* Paragraphs (i)(4) through (i)(7) of this section concern requests for an extension of compliance with a relevant standard under this part (except requests for an extension of compliance under paragraph (i)(2)(i) of this section will be handled through procedures specified in subpart D of this part).

(4) (i) (A) The owner or operator of an existing source who is unable to comply with a relevant standard established under this part pursuant to section 112(d) of the Act may request that the Administrator (or a State, when the State has an approved part 70 permit program and the source is required to obtain a part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source)

grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) Any request under this paragraph for an extension of compliance with a relevant standard must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraphs (b) and (c) of this section), except as provided for in paragraph (i)(4)(i)(C) of this section. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial. Emission standards established under this part may specify alternative dates for the submittal of requests for an extension of compliance if alternatives are appropriate for the source categories affected by those standards.

(C) An owner or operator may submit a compliance extension request after the date specified in paragraph (i)(4)(i)(B) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (i)(6)(i) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(ii) The owner or operator of an existing source unable to comply with a relevant standard established under this part pursuant to section 112(f) of the Act may request that the Administrator grant an extension allowing the source up to 2 years after the standard's effective date to comply with the standard. The Administrator may grant such an extension if he/she finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under this paragraph must be submitted in writing to the Administrator not later than 90 calendar days after the effective date of the relevant standard.

(5) The owner or operator of an existing source that has installed BACT or technology required to meet LAER [as specified in paragraph (i)(2)(ii) of this section] prior to the promulgation of a relevant emission standard in this part may request that the Administrator grant an extension allowing the source 5 years from the date on which such installation was achieved, as determined by the Administrator, to comply with the standard. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 120 days after the promulgation date of the standard. The Administrator may grant such an extension if he or she finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(6) (i) The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:

(A) A description of the controls to be installed to comply with the standard;

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*1*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(*2*) The date by which final compliance is to be achieved;

(C) [Reserved]

(D) [Reserved]

(ii) The request for a compliance extension under paragraph (i)(5) of this section shall include all information needed to demonstrate to the Administrator's satisfaction that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(7) Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(8) *Approval of request for extension of compliance.* Paragraphs (i)(9) through (i)(14) of this section concern approval of an extension of compliance requested under paragraphs (i)(4) through (i)(6) of this section.

(9) Based on the information provided in any request made under paragraphs (i)(4) through (i)(6) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with an emission standard, as specified in paragraphs (i)(4) and (i)(5) of this section.

(10) The extension will be in writing and will -

(i) Identify each affected source covered by the extension;

(ii) Specify the termination date of the extension;

(iii) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(iv) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests); and

(v) (A) Under paragraph (i)(4), specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period; or

(B) Under paragraph (i)(5), specify any additional conditions that the Administrator deems necessary to assure the proper operation and maintenance of the installed controls during the extension period.

(11) The owner or operator of an existing source that has been granted an extension of compliance under paragraph (i)(10) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached. The contents of the progress reports and the dates by which they shall be submitted will be specified in the written extension of compliance granted under paragraph (i)(10) of this section.

(12) (i) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(i) or (i)(5) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(iv) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(13) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(ii) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator will notify the owner or operator in writing of the Administrator's intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator before further action on the request.

(iv) A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(14) The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (i)(10)(iii) or (iv) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(i) Notice of the reason for termination; and

(ii) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(iii) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(15) [Reserved]

(16) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the Act.

(j) *Exemption from compliance with emission standards.* The President may exempt any stationary source from compliance with any relevant standard established pursuant to section 112 of the Act for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years.

§ 63.7 Performance testing requirements.

(a) *Applicability and performance test dates.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) If required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.

(i)- (viii) [Reserved]

(ix) When an emission standard promulgated under this part is more stringent than the standard proposed (see § 63.6(b)(3)), the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

(b) *Notification of performance test.*

(1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review an approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the

Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) *Quality assurance program.*

(1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2) (i) *Submission of site-specific test plan.* Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) *Approval of site-specific test plan.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with -

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests

methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) (i) *Performance test method audit program.* The owner or operator must analyze performance audit (PA) samples during each performance test. The owner or operator must request performance audit materials 30 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the responsible enforcement authority.

(ii) The Administrator will have sole discretion to require any subsequent remedial actions of the owner or operator based on the PA results.

(iii) If the Administrator fails to provide required PA materials to an owner or operator of an affected source in time to analyze the PA samples during a performance test, the requirement to conduct a PA under this paragraph shall be waived for such source for that performance test. Waiver under this paragraph of the requirement to conduct a PA for a particular performance test does not constitute a waiver of the requirement to conduct a PA for future required performance tests.

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Conduct of performance tests.*

(1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator -

(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in § 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or

(ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in § 63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(f) *Use of an alternative test method* -

(1) *General.* Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator -

(i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;

(ii) Uses Method 301 in appendix A of this part to validate the alternative test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and

(iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.

(3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate and issue an approval or disapproval of the alternative test method. If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method. However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval/disapproval 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraph (f)(2) of this section. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.

(5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under § 63.7(f).

(6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of this part.

(g) *Data analysis, recordkeeping, and reporting.*

(1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is ''completed'' when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the, close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator (see § 63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the
results of the performance test to the appropriate permitting authority.

(2) [Reserved]

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or

results of such performance test and other data needed to determine emissions from an affected source.

(h) *Waiver of performance tests.*

(1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) Request to waive a performance test.

(i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(I), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) Approval of request to waive performance test. The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she -

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.8 Monitoring requirements.

(a) *Applicability.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(3) [Reserved]

(4) Additional monitoring requirements for control devices used to comply with provisions in relevant standards of this part are specified in § 63.11.

(b) *Conduct of monitoring.*

(1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator -

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see § 63.90(a) for definition); or

(ii) Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see § 63.90(a) for definition).

(iii) Owners or operators with flares subject to § 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2) (i) When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

(ii) If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator must install an applicable CMS at each emission point unless the installation of fewer systems is -

(A) Approved by the Administrator; or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of this part. If both such CMS are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CMS for the relevant compliance period.

(c) Operation and maintenance of continuous monitoring systems.

(1) The owner or operator of an affected source shall maintain and operate each CMS as specified in this section, or in a relevant standard, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of an affected source must maintain and operate each CMS as specified in § 63.6(e)(1).

(ii) The owner or operator must keep the necessary parts for routine repairs of the affected CMS equipment readily available.

(iii) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan for CMS as specified in § 63.6(e)(3).

(2) (i) All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under § 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS that is not a CPMS, which is installed in accordance with the provisions of this part and the applicable CMS performance specification(s), must check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (ii) of this section. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases must be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces must be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity. The CPMS must be calibrated prior to use for the purposes of complying with this section. The CPMS must be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results must be recorded and checked daily for proper operation.

(7) (i) A CMS is out of control if -

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

(ii) When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part.

(8) The owner or operator of a CMS that is out of control as defined in paragraph (c)(7) of this section shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in § 63.10(e)(3).

(d) *Quality control program.*

(1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

(2) The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(3) The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

(e) *Performance evaluation of continuous monitoring systems* -

(1) *General.* When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in this section or in the relevant standard.

(2) *Notification of performance evaluation.* The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under § 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3) (i) *Submission of site-specific performance evaluation test plan.* Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in § 63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator' failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) *Conduct of performance evaluation and performance evaluation dates.* The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under § 63.7 in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a relevant opacity emission standard as provided under § 63.6(h)(7), he/she shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under § 63.7 is conducted in time to submit the results of the performance evaluation as specified in paragraph (e)(5)(ii) of this section. If a performance test is not required, or the requirement for a performance test has been waived under § 63.7(h), the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in § 63.7(a), or as otherwise specified in the relevant standard.

(5) *Reporting performance evaluation results.*

(i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under § 63.7 or within 60 days of completion of the performance evaluation if no test is required, unless otherwise specified in a relevant standard. The Administrator may request that the owner or operator submit the raw data from a performance evaluation in the report of the performance evaluation results.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation under this paragraph. The copies shall be provided at least 15 calendar days before the performance test required under § 63.7 is conducted.

(f) *Use of an alternative monitoring method* -

(1) *General.* Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in § 63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:

(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

(ii) Alternative monitoring requirements when the affected source is infrequently operated;

(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4) (i) *Request to use alternative monitoring procedure.* An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) *Approval of request to use alternative monitoring procedure.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with --

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

(6) Alternative to the relative accuracy test. An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) *Criteria for approval of alternative procedures.* An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in § 63.7, or other tests performed following the criteria in § 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) *Petition to use alternative to relative accuracy test.* The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) *Rescission of approval to use alternative to relative accuracy test.* The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

(g) *Reduction of monitoring data.*

(1) The owner or operator of each CMS must reduce the monitoring data as specified in paragraphs (g)(1) through (5) of this section.

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in § 63.2.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(4) All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed under this part. For the owner or operator complying with the requirements of § 63.10(b)(2)(vii)(A) or (B), data averages must include any data recorded during periods of monitor breakdown or malfunction.

§ 63.9 Notification requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4) (i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

(b) *Initial notifications.*

(1) (i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that

the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of this section.

(iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under § 63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.

(2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the affected source;

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and

(v) A statement of whether the affected source is a major source or an area source.

(3) [Reserved]

(4) The owner or operator of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i); and

(ii) [Reserved]

(iii) [Reserved]

(iv) [Reserved]; and

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and

(ii) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(iii) Unless the owner or operator has requested and received prior permission from the Administrator to submit less than the information in § 63.5(d), the notification must include the information required on the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i).

(c) *Request for extension of compliance.* If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with § 63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in § 63.6(i)(4) through § 63.6(i)(6).

(d) *Notification that source is subject to special compliance requirements.* An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

(e) *Notification of performance test.* The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

(f) *Notification of opacity and visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in § 63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:

(1) A notification of the date the CMS performance evaluation under § 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under § 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under § 63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;

(2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by § 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by § 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by § 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) *Notification of compliance status.*

(1) The requirements of paragraphs (h)(2) through (h)(4)of this section apply when an affected source becomes subject to a relevant standard.

(2) (i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list -

(A) The methods that were used to determine compliance;

(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

(E) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);

(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

(ii) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.

(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) [Reserved]

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in § 63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of § 63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

(i) *Adjustment to time periods or postmark deadlines for submittal and review of required communications.*

(1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

§ 63.10 Recordkeeping and reporting requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the
State to satisfy the requirements of this section for that report.

(4) (i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.

(5) If an owner or operator of an affected source in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such source under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. For each relevant standard established pursuant to section 112 of the Act, the allowance in the previous sentence applies in each State beginning 1 year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in § 63.9(i).

(6) If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to section 112 of the Act, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the latest compliance date for any relevant standard established pursuant to section 112 of the Act for any such affected source(s). Procedures governing the implementation of this provision are specified in § 63.9(i).

(7) If an owner or operator supervises one or more stationary sources affected by standards established pursuant to section 112 of the Act (as amended November 15, 1990) and standards set under part 60, part 61, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the relevant section 112 standard, or 1 year after the stationary source is required to be in compliance with the applicable part 60 or part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in § 63.9(i).

(b) *General recordkeeping requirements.*

(1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of -

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment;

(iii) All required maintenance performed on the air pollution control and monitoring equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3));

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this sections, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) *Recordkeeping requirement for applicability determinations.* If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without

considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f), and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under this part) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any. The requirements to determine applicability of a standard under § 63.1(b)(3) and to record the results of that determination under paragraph (b)(3) of this section shall not by themselves create an obligation for the owner or operator to obtain a title V permit.

(c) *Additional recordkeeping requirements for sources with continuous monitoring systems.* In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of -

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)–(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in § 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(9) [Reserved]

(10) The nature and cause of any malfunction (if known);

(11) The corrective action taken or preventive measures adopted;

(12) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;

(13) The total process operating time during the reporting period; and

(14) All procedures that are part of a quality control program developed and implemented for CMS under § 63.8(d).

(15) In order to satisfy the requirements of paragraphs (c)(10) through (c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping

requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

(d) *General reporting requirements.*

(1) Not-withstanding the requirements in this paragraph or paragraph (e) of this section, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) *Reporting results of performance tests.* Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) *Reporting results of opacity or visible emission observations.* The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Test Method 9 or Test Method 22, or an alternative to these test methods) along with the results of the performance test required under § 63.7. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under § 63.7, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

(4) *Progress reports.* The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5) (i) Periodic startup, shutdown, and malfunction reports. If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see Sec. 63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Such a report shall identify any instance where any action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports

under this part, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under paragraph (e) of this section, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Administrator does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in paragraph (e)(3) of this section.

(ii) Immediate startup, shutdown, and malfunction reports. Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of this section, any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, the owner or operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph (d)(5)(ii) shall consist of a telephone call (or facsimile (FAX) transmission) to the Administrator within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the owner or operator may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under this paragraph (d)(5)(ii) are specified in Sec. 63.9(i).

(e) *Additional reporting requirements for sources with continuous monitoring systems* -

(1) *General.* When more than one CEMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CEMS.

(2) Reporting results of continuous monitoring system performance evaluations.

(i) The owner or operator of an affected source required to install a CMS by a relevant standard shall furnish the Administrator a copy of a written report of the results of the CMS performance evaluation, as required under § 63.8(e), simultaneously with the results of the performance test required under § 63.7, unless otherwise specified in the relevant standard.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation conducted under § 63.8(e). The copies shall be furnished at least 15 calendar days before the performance test required under § 63.7 is conducted.

(3) *Excess emissions and continuous monitoring system performance report and summary report.*

(i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a

relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when -

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) [Reserved].

(ii) Request to reduce frequency of excess emissions and continuous monitoring system performance reports. Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in § 63.8(c)(7) and § 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official

who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) *Summary report.* As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report - Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

(A) The company name and address of the affected source;

(B) An identification of each hazardous air pollutant monitored at the affected source;

(C) The beginning and ending dates of the reporting period;

(D) A brief description of the process units;

(E) The emission and operating parameter limitations specified in the relevant standard(s);

(F) The monitoring equipment manufacturer(s) and model number(s);

(G) The date of the latest CMS certification or audit;

(H) The total operating time of the affected source during the reporting period;

(I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

(J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

(K) A description of any changes in CMS, processes, or controls since the last reporting period;

(L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

(M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

(4) Reporting continuous opacity monitoring system data produced during a performance test. The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in paragraph (d)(2) of this section.

(f) *Waiver of recordkeeping or reporting requirements.*

(1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of record-keeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under this part (such as under § 63.6(i) and § 63.9(h)) or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she -

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.11 Control device requirements.

(a) *Applicability.* The applicability of this section is set out in Sec. 63.1(a)(4).

(b) Flares.

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(6) An owner/operator has the choice of adhering to the heat content specifications in paragraph (b)(6)(ii) of this section, and the maximum tip velocity specifications in paragraph (b)(7) or (b)(8) of this section, or adhering to the requirements in paragraph (b)(6)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max}, as determined by the following equation:

$$V_{max} = (X_{H2} - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9 (m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 63.14).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (b)(7)(i) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant = 1.740×10^{-7} (1/ppmv)(g-mole/scm)(MJ/kcal); where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77 or 90 (Reapproved 1994) (incorporated by reference as specified in § 63.14).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809-95. (incorporated by reference as specified in § 63.14) if published values are not available or cannot be calculated.

n = Number of sample components.

(7) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$Log_{10}(V_{max})=(H_T+28.8)/31.7$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
28.8 = Constant.
31.7 = Constant.
H_T = The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$$V_{max} = 8.71 + 0.708(H_T)$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
8.71 = Constant.
0.708 = Constant.
H_T = The net heating value as determined in paragraph (b)(6)(ii) of this section.

§ 63.12 State authority and delegations.

(a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from -

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

(b) (1) Section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and other requirements pursuant to section 112 for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

(2) Subpart E of this part establishes procedures consistent with section 112(l) for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

(c) All information required to be submitted to the EPA under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act, provided that each specific delegation may exempt sources from a certain Federal or State reporting requirement. The Administrator may permit all or some of the information to be submitted to the appropriate State agency only, instead of to the EPA and the State agency.

§ 63.13 Addresses of State air pollution control agencies and EPA Regional Offices.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated as follows:

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee). Director; Air, Pesticides and Toxics Management Division; Atlanta Federal Center, 61 Forsyth Street; Atlanta, GA 30303-3104.

(b) All information required to be submitted to the Administrator under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

(c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in this part, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of this part for that communication.

§ 63.14 Incorporations by reference.

(a) The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding addresses noted below, and all are available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC, at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC, and at the EPA Library (MD-35), U.S. EPA, Research Triangle Park, North Carolina.

(b) The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

(1) ASTM D523-89, Standard Test Method for Specular Gloss, IBR approved for § 63.782.

(2) ASTM D1193-77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 306, Sections 7.1.1 and 7.4.2.

(3) ASTM D1331-89, Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents, IBR approved for Appendix A: Method 306B, Sections 6.2, 11.1, and 12.2.2.

(4) ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for § 63.788, Appendix A.

(5) ASTM D1946-77, 90, 94, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for § 63.11(b)(6).

(6) ASTM D2369-93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for § 63.788, Appendix A.

(7) ASTM D2382-76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for § 63.11(b)(6).

(8) ASTM D2879-83, 96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for § 63.111 of Subpart G.

(9) ASTM D3257-93, Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography, IBR approved for § 63.786(b).

(10) ASTM 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography, IBR approved for § 63.365(e)(1) of Subpart O.

(11) ASTM D3792-91, Standard Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for § 63.788, Appendix A.

(12) ASTM D3912-80, Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(13) ASTM D4017-90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for § 63.788, Appendix A.

(14) ASTM D4082-89, Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(15) ASTM D4256-89, 94, Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(16) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for § 63.11(b)(6).

(17) ASTM E180-93, Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals, IBR approved for § 63.786(b).

(18) ASTM E260-91, 96, General Practice for Packed Column Gas Chromatography, IBR approved for §§ 63.750(b)(2) and 63.786(b)(5).

(19) Reserved

(20) Reserved

(21) ASTM D2099-00, Standard Test Method for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester, IBR approved for § 63.5350.

(24) ASTM D2697-86 (Reapproved 1998), ``Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," IBR approved for Sec. Sec. 63.3161(f)(1), 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(25) ASTM D6093-97 (Reapproved 2003), ``Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer," IBR approved for Sec. Sec. 63.3161(f)(1), 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(26) ASTM D1475-98 (Reapproved 2003), ``Standard Test Method for Density of Liquid Coatings, Inks, and Related Products," IBR approved for Sec. Sec. 63.3151(b), 63.3941(b)(4), 63.3941(c), 63.3951(c), 63.4141(b)(3), 63.4141(c), and 63.4551(c).

(27) ASTM D 6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide and Oxygen concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process heaters Using Portable Analyzers, IBR approved for Sec. 63.9307(c)(2).

(28) [Reserved]

(29) ASTM D6420-99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §§ 63.5799 and 63.5850.

(30) ASTM E 515-95 (Reapproved 2000), Standard Test Method for Leaks Using Bubble Emission Techniques, IBR approved for Sec. 63.425(i)(2).

(31) ASTM D5291-02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, IBR approved for Sec. 63.3981, appendix A.

(32) ASTM D5965-02, ``Standard Test Methods for Specific Gravity of Coating Powders," IBR approved for Sec. Sec. 63.3151(b) and 63.3951(c).

(33) ASTM D6053-00, Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes, IBR approved for Sec. 63.3981, appendix A.

(34) E145-94 (Reapproved 2001), Standard Specification for Gravity-Convection and Forced-Ventilation Ovens, IBR approved for Sec. 63.4581, Appendix A.

(35) [Reserved]

(36) ASTM D5066-91 (Reapproved 2001), ``Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis," IBR approved for Sec. 63.3161(g).

(37) ASTM D5087-02, ``Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)," IBR approved for Sec. Sec. 63.3165(e) and 63.3176, appendix A.

(38) ASTM D6266-00a, ``Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)," IBR approved for Sec. 63.3165(e).

(c) The materials listed below are available for purchase from the American Petroleum Institute (API), 1220 L Street, NW., Washington, DC 20005.

(1) API Publication 2517, Evaporative Loss from External Floating-Roof Tanks, Third Edition, February 1989, IBR approved for § 63.111 of subpart G of this part.

(2) API Publication 2518, Evaporative Loss from Fixed-roof Tanks, Second Edition, October 1991, IBR approved for § 63.150(g)(3)(i)(C) of subpart G of this part.

(3) API Manual of Petroleum Measurement Specifications (MPMS) Chapter 19.2, Evaporative Loss From Floating-Roof Tanks (formerly API Publications 2517 and 2519), First Edition, April 1997, IBR approved for § 63.1251 of subpart GGG of this part.

(d) *State and Local Requirements.* The materials listed below are available at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC.

(1) *California Regulatory Requirements Applicable to the Air Toxics Program,* January 5, 1999, IBR approved for § 63.99(a)(5)(ii) of subpart E of this part.

(2) New Jersey's *Toxic Catastrophe Prevention Act Program*, (July 20, 1998), Incorporation By Reference approved for § 63.99 (a)(30)(i) of subpart E of this part.

(3) (i) Letter of June 7, 1999 to the U.S. Environmental Protection Agency Region 3 from the Delaware Department of Natural Resources and Environmental Control requesting formal full delegation to take over primary responsibility for implementation and enforcement of the Chemical Accident Prevention Program under Section 112(r) of the Clean Air Act Amendments of 1990.

(ii) Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Accidental Release Prevention Regulation, sections 1 through 5 and sections 7 through 14, effective January 11, 1999, IBR approved for § 63.99(a)(8)(i) of subpart E of this part.

(iii) State of Delaware Regulations Governing the Control of Air Pollution (October 2000), IBR approved for § 63.99(a)(8)(ii)-(v) of subpart E of this part.

(e) The materials listed below are available for purchase from the National Institute of Standards and Technology, Springfield, VA 22161, (800) 553-6847.

(1) Handbook 44, Specificiations, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for § 63.1303(e)(3).

(2) [Reserved]

(f) The following material is available from the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), P. O. Box 133318, Research Triangle Park, NC 27709-3318 or at http://www.ncasi.org: NCASI Method DI/MEOH-94.02, Methanol in Process Liquids GC/FID (Gas Chromatography/Flame Ionization Detection), August 1998, Methods Manual, NCASI, Research Triangle Park, NC, IBR approved for § 63.457(c)(3)(ii) of subpart S of this part.

(g) The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201-3301, Telephone (703) 522-3032, Fax (703) 522-5468.

(1) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(2) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(3) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(4) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(5) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(6) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(7) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(h) The materials listed below are available for purchase from The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida, 33830, Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991, IBR.

(1) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(2) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus -- P2O5 or Ca3(PO4)2, Method A-Volumetric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(3) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(4) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(5) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method A -- Volumetric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(6) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(7) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(i) The following materials are available for purchase from at least one of the following addresses: ASME International, Orders/Inquiries, P.O. Box 2900, Fairfield, NJ 07007-2900; or Global Engineering Documents, Sales Department, 15 Inverness Way East, Englewood, CO 80112.

(1) ASME standard number QHO-1-1994, ``Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators," IBR approved for Sec. 63.1206(c)(6)(iii).

(2) ASME standard number QHO-1a-1996 Addenda to QHO-1-1994, ``Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators," IBR approved for Sec. 63.1206(c)(6)(iii).

(3) ANSI/ASME PTC 19.10-1981, ``Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]," IBR approved for Sec. Sec. 63.865(b), 63.3166(a)(3), 63.3360(e)(1)(iii), 63.3545(a)(3), 63.3555(a)(3), 63.4166(a)(3), 63.4362(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), and 63.9323(a)(3).

(j) The following material is available for purchase from: British Standards Institute, 389 Chiswick High Road, London W4 4AL, United Kingdom.

(1) BS EN 1593:1999, Non-destructive Testing: Leak Testing--Bubble Emission Techniques, IBR approved for Sec. 63.425(i)(2).

(2) [Reserved]

(k) The following material may be obtained from U.S. EPA, Office of Solid Waste (5305W), 1200 Pennsylvania Avenue, NW., Washington, DC 20460:

(1) Method 9071B, ``n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples," (Revision 2, April 1998) as published in EPA Publication SW-846: ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The incorporation by reference of Method 9071B is approved for Section 63.7824(e) of Subpart FFFFF of this part.

§ 63.15 Availability of information and confidentiality.

(a) *Availability of information.*

(1) With the exception of information protected through part 2 of this chapter, all reports, records, and other information collected by the Administrator under this part are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and title V permit is available to the public, consistent with protections recognized in section 503(e) of the Act.

(2) The availability to the public of information provided to or otherwise obtained by the Administrator under this part shall be governed by part 2 of this chapter.

(b) *Confidentiality.*

(1) If an owner or operator is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of section 114(c) shall apply to such information.

(2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.

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- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crush Stone Company
Post Office Box 1508
Brooksville, Florida ~~34601~~ 34605

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Charles Allen ☐ Agent ☐ Addressee

B. Received by (Printed Name) Charles Davis
C. Date of Delivery 5/23/05

D. Is delivery address different from Item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crush Stone Company
Post Office Box 1508
Brooksville, Florida 34601

PS Form 3800, January 2001 See Reverse for Instructions

Florida Crushed Stone/66435

Legal Notice

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department Of Environmental Protection

Florida Crushed Stone Company Brooksville Cement Manufacturing Facility-Brooksville Hernando County

Draft Air Construction Permit No.: 0530021-009-AC; PSD-FL-351

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Crushed Stone Company (FCS) to authorize FCS to construct a new dry process, preheater/precalciner kiln system at the Brooksville Cement Manufacturing Facility Plant located in Brooksville in Hernando County. The applicant's name and address are: Florida Crushed Stone Company, 13011 Cement Plant Road, Brooksville, Florida 34601.

The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with an in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NOx, PM, PM10, SO2 CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NOx, emissions from the new line. Baghouses will be installed to control PM and PM10 emissions. SO2 emissions will be controlled by process control. Process control, process design, and combustion unit will control CO emissions. VOC emissions will be controlled by clean raw materials and combustion control. Mercury emissions will be controlled by material balance with a minimum of quarterly analysis of raw material samples and making and maintaining records of monthly and rolling 12-month mercury throughout.

An air quality impact analysis for PM10 SO2 NOx CO and VOC was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted SO2 and NO2 impacts were insignificant in both the PSD Class I Chassahowitzka National Wildlife Refuge and the Class II area in the vicinity of the project, so no PSD Class I or II increment consumption analysis were required for SO2 and NO2. The maximum predicted PM10 annual impacts were insignificant in the PSD Class I area, so no PSD Class I increment consumption analysis for the annual averaging time was required for PM10. The maximum predicted PM10 PSD Class I and II increments consumed by all sources in the area, including this project, will be as follows:

Total From All Sources

Increment Consumed
(Hg/m3)
24-hour Class II 28.0
Annual Class II 4.8
24-hour Class I 1.30

Allowable Increment
(Hg/m3)
24-hour Class II 30
Annual Class II 17
24-hour Class I 10

Increment Consumed
(Percent)
24-hour Class II 93
Annual Class II 28
24-hour Class I 13

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57,F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interest will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) a statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons who substantial interest will be affected by any such final decision of the Department on the application having the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00a.m. to 5:00p.m., Monday thru Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4 Tallahassee, Florida, 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-1352
Telephone: (813) 744-6100
Fax: (813) 744-6084

The complete project file includes the technical evaluation, Draft Air construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, North Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The technical evaluation and draft permit may be viewed at www.dep.state.fl.us/air/permitting/construct.htm in the Florida Crushed Stone link.

PUBLISH: May 30, 2005

HERNANDO TODAY

Published Daily
BROOKSVILLE, HERNANDO, FLORIDA
STATE OF FLORIDA
COUNTY OF HERNANDO:

Before the undersigned authority personally appeared Sylvia Spivey , who on oath says that he/she is Legal Ad Coordinator of the Hernando Today/Hernando Sunday, a daily newspaper published at Brooksville in Hernando County, Florida: that the attached copy of the advertisement, being a Legal Notice ..... Florida Crushed Stone/Permit #0530021-009-AC; PSD-FL-351..... in the ...N/A..... Court, was published in said newspaper in the issues of ...May 30, 2005.....

.....

Affiant further says that the said Hernando Today/Hernando Sunday is a newspaper published at Brooksville, in said Hernando County, Florida, and that the said newspaper has heretofore been continuously published in said Hernando County, Florida, each week and has been entered as a second class mail matter at the post office in Brooksville, in said Hernando County, Florida for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sylvia Spivey
(Signature of Affiant)

Sworn to and subscribed before me this 5-31
day of May **, 2005**

Andrew H Zimbrecht
(Signature of Notary Public)

Andrew H. Zimbrecht
My Commission DD198580
Expires May 3, 2007

(Name of Notary typed, printed or stamp)

Personally Known X **or**
Produced Identification _____
Type of Identification Produced

.....

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crush Stone Company
Post Office Box 1508
Brooksville, Florida ~~34601~~ 34605

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Charles Davis
C. Date of Delivery 5/23/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

BROOKSVILLE FLORIDA
MAY 23 2005
34601

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7001 0320 0001 3692 3159

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

Tot
Sent
Stree or PC
City,

Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crush Stone Company
Post Office Box 1508
Brooksville, Florida 34601

7001 0320 0001 3692 3159

PS Form 3800, January 2001 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Charles Allen
Rinker Materials of Florida, Inc.
13011 Cement Plant Road
Brooksville, Florida 34601

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (*Printed Name*) CHARLES DAVIS

C. Date of Delivery 4/20/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (*Extra Fee*) ☐ Yes

2. Article Number
(*Transfer from service label*) 7001 0320 0001 3692 2091

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

7001 0320 0001 3692 2091

Mr. Charles Allen
Rinker Materials of Florida, Inc.
13011 Cement Plant Road
Brooksville, Florida 34601

PS Form 3800, January 2001 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Mr. Charles Allen
Rinker Materials of Florida, Inc.
13011 Cement Plant Road
Brooksville, Florida 34601

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Charles Davis C. Date of Delivery 12-4-05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7000 1670 0013 3110 2271

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To Mr. Charles Allen
Rinker Materials of Florida, Inc.
Street, Apt. No., or PO Box No. 13011 Cement Plant Road
City, State, ZIP+4 Brooksville, Florida 34601

7000 1670 0013 3110 2271

PS Form 3800, May 2000 See Reverse for Instructions

Coastal engineering associates, inc.
Engineering
Planning
Surveying
Environmental
Construction Management

June 2, 2005

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road, Mail Station #5505
Tallahassee, Florida 32399-2400

CERTIFIED MAIL – Return Receipt Requested

Re: Proof of Publication / Public Notice of Intent To Issue An Air Construction Permit
Air Construction Permit No.: 0530021-009-AC; PSD-FL-351
Brooksville Plant, Hernando County
Florida Crushed Stone Company

To Whom It May Concern:

The attached affidavit from the newspaper in which the above referenced legal advertisement was published on May 30, 2005 is hereby provided pursuant to Rule 62-119.106(5) F.A.C.

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

Sincerely,
COASTAL ENGINEERING ASSOCIATES, INC.

Tom Mountain
Sr. Vice President

Copy: C. Allen
D. Elias
file
B. Bull
C. Holladay
Q. Waters, SWD
B. Walker, EPA
Y. Bernard, WPS

966 Candlelight Boulevard • Brooksville, Florida 34601
(352) 796-9423 • Fax (352) 799-8359
e-mail: coastal@coastal-engineering.com

HERNANDO TODAY

Published Daily
BROOKSVILLE, HERNANDO, FLORIDA
STATE OF FLORIDA
COUNTY OF HERNANDO:

Before the undersigned authority personally appeared Sylvia Spivey, who on oath says that he/she is Legal Ad Coordina of the Hernando Today/Hernando Sunday, a newspaper published at Brooksville in Hernai County, Florida: that the attached copy of th advertisement, being a Legal Notice ..... Florida Crushed Stone/Permit #0530021-009-AC; PSD-FL-351..... in the ...N/A..... Court, was published in said newspaper in th issues of ...May 30, 2005.....

.....

Affiant further says that the said Hernando Today/Hernando Sunday is a newspaper pub listed at Brooksville, in said Hernando Count Florida, and that the said newspaper has her fore been continuously published in said Hernando County, Florida, each week and h been entered as a second class mail matter at post office in Brooksville, in said Hernando County, Florida for a period of 1 year next p ceding the first publication of the attached co of advertisement; and affiant further says that he/she has neither paid nor promised an person, firm or corporation any discount, rel commission or refund for the purpose of secu this advertisement for publication in the said newspaper.

Sylvia Spivey
(Signature of Affiant)

Sworn to and subscribed before me this 5 day of May, 2005

Andrew H Ambrecht
(Signature of Notary Public)

Andrew H. Ambrecht
My Commission DD198580
Expires May 3, 2007

(Name of Notary typed, printed or stamp)

Personally Known X or
Produced Identification _____
Type of Identification Produced

.....

Legals

Florida Crushed Stone/66435

Legal Notice

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department Of Environmental Protection

Florida Crushed Stone Company Brooksville Cement Manufacturing Facility-Brooksville Hernando County

Draft Air Construction Permit No.: 0530021-009-AC; PSD-FL-351

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Crushed Stone Company (FCS) to authorize FCS to construct a new dry process, preheater/precalciner kiln system at the Brooksville Cement Manufacturing Facility Plant located in Brooksville in Hernando County. The applicant's name and address are: Florida Crushed Stone Company, 13011 Cement Plant Road, Brooksville, Florida 34601.

The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with an in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NOx, PM, PM10, SO2 CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NOx, emissions from the new line. Baghouses will be installed to control PM and PM10 emissions. SO2 emissions will be controlled by process control. Process control, process design, and combustion unit will control CO emissions. VOC emissions will be controlled by clean raw materials and combustion control. Mercury emissions will be controlled by material balance with a minimum of quarterly analysis of raw material samples and making and maintaining records of monthly and rolling 12-month mercury throughout.

An air quality impact analysis for PM10 SO2 NOx CO, and VOC was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted SO2 and NO2 impacts were insignificant in both the PSD Class I Chassahowitzka National Wildlife Refuge and the Class II area in the vicinity of the project, so no PSD Class I or II increment consumption analysis were required for SO2 and NO2. The maximum predicted PM10 annual impacts were insignificant in the PSD Class I area, so no PSD Class I increment consumption analysis for the annual averaging time was required for PM10. The maximum predicted PM10 PSD Class I and II increments consumed by all sources in the area, including this project, will be as follows:

Total From All Sources

Increment Consumed (Hg/m3)
24-hour Class II 28.0
Annual Class II 4.8
24-hour Class I 1.30

Allowable Increment (Hg/m3)
24-hour Class II 30
Annual Class II 17
24-hour Class I 10

Increment Consumed (Percent)
24-hour Class II 93
Annual Class II 28
24-hour Class I 13

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57,F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interest will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) a statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00a.m. to 5:00p.m., Monday thru Friday, except legal holidays, at:

Department of
Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive,
Suite 4 Tallahassee,
Florida, 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of
Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-1352
Telephone: (813) 744-6100
Fax: (813) 744-6084

The complete project file includes the technical evaluation, Draft Air construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, North Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The technical evaluation and draft permit may be viewed at www.dep.state.fl.us/air/permitting/construct.htm in the Florida Crushed Stone link.

PUBLISH: May 30, 2005

Department of
Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

P.E. Certification Statement

Permittee: Florida Crushed Stone Company
Brooksville Cement Plant

DRAFT Permit No.: 0530021-009-AC
PSD-FL-351

Project: Air Construction Permit for a second dry process, preheater/precalciner kiln system

This application reviewed is to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone Company's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a co-located 150 MW coal fired power plant and a Portland cement plant and associated quarry, and raw material and cement handling operations. This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and additional coal handling and grinding operations.

I HEREBY CERTIFY *to the best of my knowledge and belief that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).*

This draft permit was prepared under my responsible charge by Mr. Bobby Bull with input from other Bureau of Air Regulation personnel as needed.

James K. Pennington, P.E.
Registration Number: 34536

5/17/05
Date

Permitting Authority:
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0144
Fax: 850/922-6979

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

May 20, 2005

CERTIFIED MAIL – Return Receipt Requested

Mr. Charles Allen
Director of Operations, Cement Division
Rinker Materials of Florida, Inc.
Florida Crushed Stone Company
P.O. Box 1508
Brooksville, Florida 34601

RE: **Draft** Permit for construction of a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone Company, Brooksville Cement Plant. Air Construction Permit 0530021-009-AC; PSD-FL-351.

Dear Mr. Allen:

Attached is one copy of the Draft Permit, 0530021-009-AC, Best Available Control Technology (BACT) Determination, and the Technical Evaluation and Preliminary Determination to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations.

The permitting authority's "INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" and the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" are also included. The "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT" must be published as soon as possible. Proof of publication, i.e., newspaper affidavit, must be provided to the permitting authority's office within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to James K. Pennington, P.E. at the above letterhead address. If you have any other questions, please contact Bobby Bull at 850/921-9585.

Sincerely,

Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/jkp/rlb

Enclosures

In the Matter of an
Application for Permit by:

Florida Crushed Stone Company
P.O. Box 1508
Brooksville, Florida 34601

/

Air Construction Permit No.: 0530021-009-AC; PSD-FL-351
Brooksville Plant
Hernando County

INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (permitting authority) gives notice of its intent to issue an air construction permit [copy of the draft permit enclosed] for the facility detailed in the application specified above, to authorize Florida Crushed Stone to construct a new dry process, preheater/precalciner kiln system at Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County.

The permittee, Florida Crushed Stone, applied on December 20, 2004, to construct a new dry process, preheater/precalciner kiln system at the Florida Crushed Stone's Brooksville Cement Manufacturing Facility, which is located near Brooksville, Hernando County. The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

The permitting authority has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62.212, F.A.C. This source is not exempt from permitting procedures. The permitting authority has determined that an Air Construction Permit is required for the proposed activity.

The permitting authority intends to issue this Air Construction Permit based on the belief that reasonable assurances have been provided to indicate that operation of the source will not adversely impact air quality, and the source will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.0872, F.S., and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." The notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the permitting authority at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax: 850/922-6979), within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

The permitting authority will issue the Final Air Construction Permit in accordance with the conditions of the enclosed Draft Air Construction Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. Mediation under Section 120.573, F.S., will not be available for this proposed action.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT". Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00 pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 (fourteen) days of receipt of this notice of intent. Petitions filed by any other person must be filed within 14 (fourteen) days of publication of the public notice or within 14 (fourteen) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207, F.A.C.

A petition must contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number, and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the permitting authority's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the permitting authority's action or proposed action;

(d) A statement of the material facts disputed by the petitioner, if any;

(e) A statement of the facts that the petitioner contends warrant reversal or modification of the permitting authority's action or proposed action;

(f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the permitting authority's action or proposed action; and,

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the permitting authority to take with respect to the action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the permitting authority's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the United States Environmental Protection Agency and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Trina L. Vielhauer
Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE and the Draft Permit and all copies were sent by certified mail before the close of business on 5/20/05 to the person(s) listed:

Charles Allen, Director of Operations, Cement Division, Rinker Materials of Florida, Florida Crushed Stone Company, P.O. Box 1508, Brooksville, FL 34601.

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE and the Draft Permit were sent by U.S. mail on the same date to the person(s) listed:

Eddie Allsopp, III, Rinker Materials of Florida, Inc.
Barry D. Andrews, P.E., RTP Environmental Associates, Inc.
Don Elias, Principal, RTP Environmental Associates, Inc.
Chair, Hernando County BOCC
Joel Smolen, Florida DEP- SWD
David Zell, Florida DEP- SWD
John Bunyak, NPS
Jim Little, EPA

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

Mary F. Harry 5/20/05
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection

Florida Crushed Stone Company
Brooksville Cement Manufacturing Facility - Brooksville
Hernando County

Draft Air Construction Permit No.: 0530021-009-AC; PSD-FL-351

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Crushed Stone Company (FCS) to authorize FCS to construct a new dry process, preheater/precalciner kiln system at the Brooksville Cement Manufacturing Facility Plant located in Brooksville in Hernando County. The applicant's name and address are: Florida Crushed Stone Company, 13011 Cement Plant Road, Brooksville, Florida 34601.

The existing facility consists of a Portland cement plant and associated quarry, power plant, and raw material and cement handling operations. The plant combines raw materials and utilizes a preheater/precalciner kiln with an in-line raw mill to produce clinker. The clinker will be milled and combined with gypsum to produce Portland cement, which will be stored in silos and shipped in bags or in bulk by truck or rail. Raw materials other than limestone and overburden, and all fuels will be brought to the site by truck or rail.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, cement loadout silos, and coal handling and grinding operations. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NOx, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. Baghouses will be installed to control PM and PM_{10} emissions. SO2 emissions will be controlled by process control. Process control, process design, and combustion unit will control CO emissions. VOC emissions will be controlled by clean raw materials and combustion control. Mercury emissions will be controlled by material balance with a minimum of quarterly analysis of raw material samples and making and maintaining records of monthly and rolling 12-month mercury throughput.

An air quality impact analysis for PM_{10}, SO_2, NO_X, CO and VOC was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted SO_2 and NO_2 impacts were insignificant in both the PSD Class I Chassahowitzka National Wildlife Refuge and the Class II area in the vicinity of the project, so no PSD Class I or II increment consumption analyses were required for SO_2 and NO_2. The maximum predicted PM_{10} annual impacts were insignificant in the PSD Class I area, so no PSD Class I increment consumption analysis for the annual averaging time was required for PM_{10}. The maximum predicted PM_{10} PSD Class I and II increments consumed by all sources in the area, including this project, will be as follows:

	Increment Consumed ($\mu g/m^3$)	Total From All Sources Allowable Increment ($\mu g/m^3$)	Increment Consumed (Percent)
24-hour Class II	28.0	30	93
Annual Class II	4.8	17	28
24-hour Class I	1.30	10	13

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If

written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT." Written comments must be post-marked and all facsimile comments must be received by the close of business (5:00 pm), on or before the end of this 30-day period, by the Permitting Authority at the above address or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at http://tlhora6.dep.state.fl.us/onw and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-1352
Telephone: (813) 744-6100
Fax: (813) 744-6084

The complete project file includes the technical evaluation, Draft Air Construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, North Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The technical evaluation and draft permit may be viewed at www.dep.state.fl.us/air/permitting/construct.htm in the Florida Crushed Stone link.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

Florida Crushed Stone Company

Brooksville Facility

Portland Cement Plant

Hernando County

DEP File No. 0530021-009-AC

PSD-FL-351

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

May 20, 2005

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL INFORMATION

1.1 APPLICANT NAME AND ADDRESS

Florida Crushed Stone Company
Brooksville Facility
P.O. Box 1508
Brooksville, FL 34601

Authorized Representative: Charles Allen, Director of Operations, Cement Division

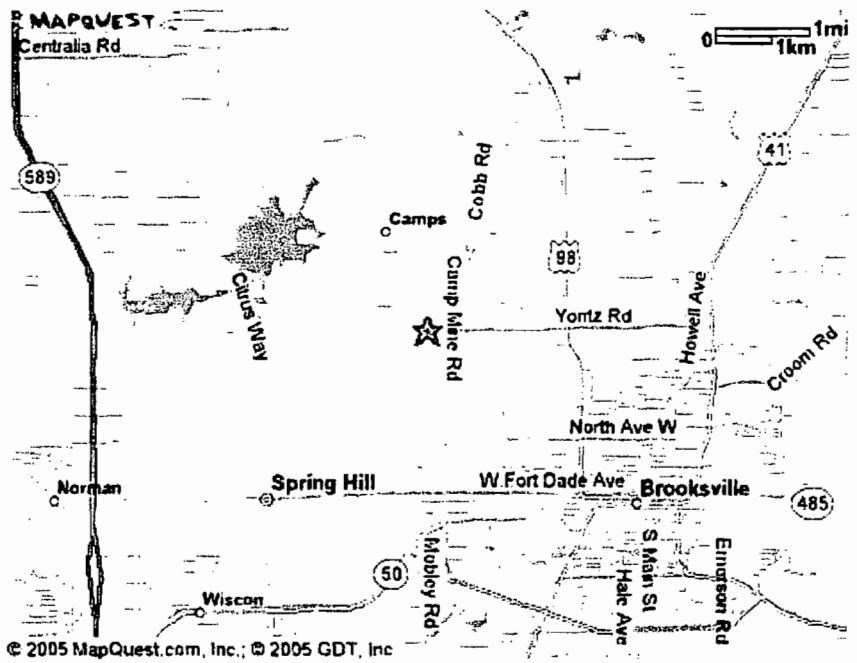
1.2 REVIEWING AND PROCESS SCHEDULE

12/20/2004	Received permit application, report and fee
12/28/2004	Received email from EPA dated 12/28/2004; No comments
01/19/2005	Sent Request for Additional Information
03/07/2005	Received Response to Request for Additional Information
04/06/2005	Application Complete

2. FACILITY INFORMATION

2.1 FACILITY LOCATION

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.00 km E and 3162.5 km N. The nearest distance of this site from the Chassahowitzka Class I PSD areas is 20 kilometers.



2.2 STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)

Industry Group No.	32	Stone, Clay, Glass, and Concrete Products
Industry No.	3241	Cement, Hydraulic

2.3 FACILITY CATEGORY

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, tires, used oil and various kinds of wastes are burned at many plants. The applicant proposed to fire coal, petroleum coke, tire derived fuels. The applicant will not fire or introduce hazardous wastes, petroleum contaminated soil or materials, used oil, oil fuels, other solid fuels, or solid wastes other than tires. Tire derived fuels may be fed into the kiln feed end at up to 15% of heat input.

The production of Portland cement is generally a four-step process: raw materials acquisition and handling, kiln feed preparation for pyroprocessing, pyroprocessing, and finished cement grinding. The chemical reactions and physical processes that constitute the transformation from raw materials to cement are quite complex. The heart of the Portland cement manufacturing process is the pyroprocessing system which includes the rotary kiln and preheater/precalciner.

Pyroprocessing may be divided into four stages, depending on location and temperature of the materials in the system: evaporation of uncombined water from raw materials; dehydration of combined water to form oxides of silicon, aluminum, and iron; calcination (liberation of carbon dioxide); reaction and sintering of the oxides in the kiln to form cement clinker.

Generally the entire process may be summarized as follows. Raw materials, predominantly limestone, but also including sand, clay, iron ore, and coal ash, will be crushed and then blended and milled in the raw mill. The resulting material will be conveyed to the pyroprocessing system in the top stage of the preheater. It will exit the preheater/precalciner and enter the kiln at the elevated end (feed end). The rotation of the kiln causes the solid materials to be slowly transported downward from the front end (discharge end). Fuel will be supplied to the precalciner combustion chamber, optionally at the feed end of the kiln, and at the lower or discharge end of the kiln. The hot, gaseous combustion products will move countercurrent to the material flow, thereby transferring heat to solids in the kiln and preheater/precalciner, and to the raw mill.

The clinker will enter the clinker cooler where it will be cooled by ambient air. This cooling or quenching serves to "freeze" the clinker, halting the formation chemistry. Hot air from the clinker cooler will be recovered and returned to the pyroprocessing system as combustion air and will also be supplied to the coal mill for drying the coal and petroleum coke. The cooled clinker will be stored in silos before being mixed with gypsum and limestone and ground in a ball mill in the finish milling operation to produce Portland cement. The Portland cement will be stored in silos and loaded in bulk into tanker trailers or in bags which will be palletized. The Portland cement will be hauled by truck for distribution to customers.

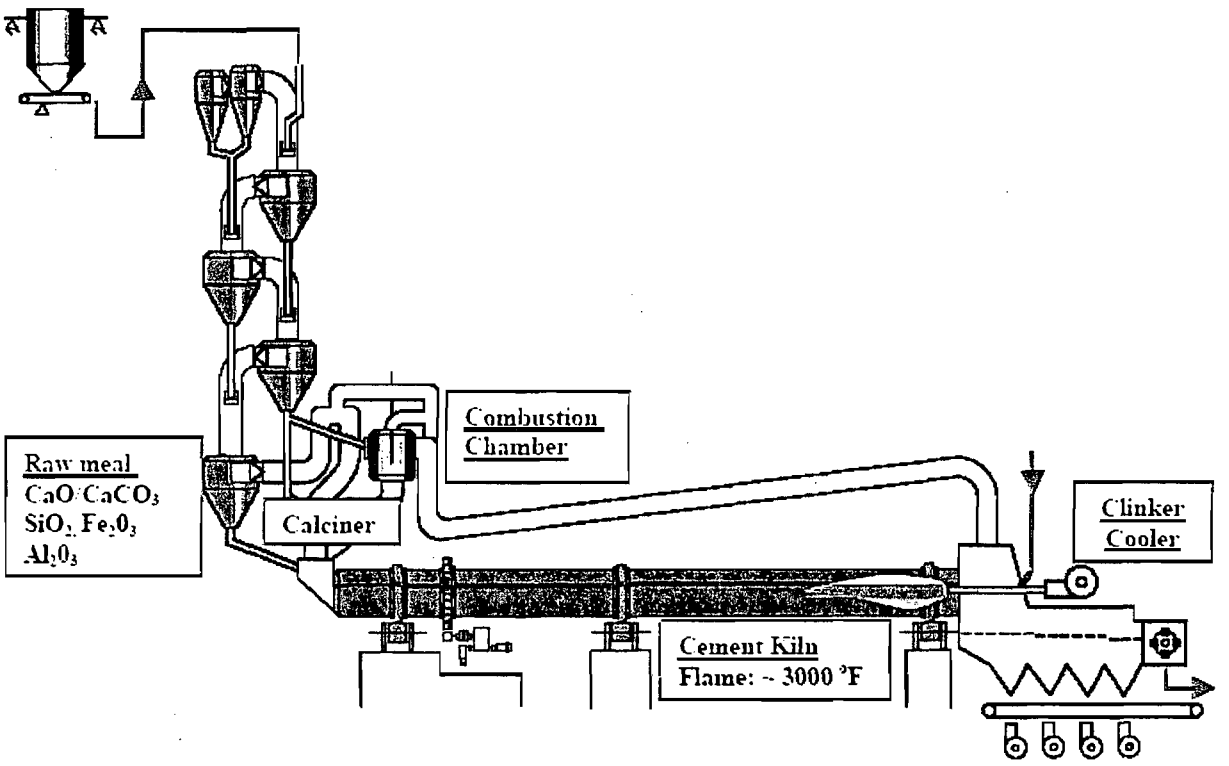


Diagram of Dry Process Cement Kiln with Preheater and Calciner Kiln

3.2 DETAILED PROCESS DESCRIPTION

The process for this plant is discussed in more detail below.

Raw Material Handling

Limestone will be mined primarily below the water table. The overburden, consisting of sand and clay, will be removed from the limestone surface and stockpiled in the vicinity of the crusher. The crusher will be portable, and will be relocated periodically in accordance with the mining plan. The overburden and the limestone will be fed into the crusher typically with front end loaders in the ratios dictated by the target chemical composition of the desired raw mix. The quarry mix will be delivered to a covered storage hall by a conveyor belt system. The quarry mix will have a moisture content of 10-20%. The storage hall will have space devoted to storage of the other raw materials which include but are not limited to: mill scale, feldspar and flyash. The other raw materials will be transported to the facility from offsite by truck.

Fugitive emissions from raw material handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter. Unpaved roads will be sprayed by a water truck. Paved roads will be cleaned by vacuum sweeper truck as required to prevent unconfined particulate matter emissions. Material stockpiles at the plant will be covered to limit particulate matter generated by wind erosion.

Raw Milling Operations

The quarry mix and other raw materials will be conveyed to the raw mill feed bin. Raw materials will be fed from the raw mill feed bin to the raw mill. The raw mill will grind and mix the raw materials, and dry the raw materials with the hot gases from the pyroprocessing system. Emissions from the raw mill are controlled by baghouses. The raw mill air heater will be controlled by the baghouse through the kiln.

3. PROJECT DESCRIPTION

This permitting action is to allow for the construction of a preheater/precalciner kiln with in-line raw mill and associated equipment. Emissions units addressed by this permit are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2:-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Pulverized Coal Bin

3.1 GENERAL PROCESS DESCRIPTION

Portland cement is a fine powder, usually gray in color, which consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrate, and small amounts of magnesium oxide, sodium, potassium and sulfur, to which one or more forms of calcium sulfate have been added. About 95% of the cement production in the U.S. is Portland cement. Masonry cement represents the balance of the domestic cement production.

There are several cement manufacturing processes including wet, dry, dry preheater and dry preheater/precalciner processes. These processes all produce Portland cement from raw materials through pyroprocessing. Each type of process has different characteristics for equipment design, method of operation, and fuel consumption. In the wet and dry processes, all of the pyroprocessing and fuel combustion occurs in the kiln, with the primary difference being that with the wet process the raw materials are blended and introduced into the kiln as a slurry. The preheater and preheater/precalciner processes are also dry processes, but in these processes thermal efficiency and production capacity have been improved by adding process vessels arranged vertically before the kiln, wherein the hot gases pass counter to the material flow, effecting heat transfer through the intimate contact between the two streams. The improved heat transfer allows the kiln length to be reduced. This arrangement also allows the hot gases from the preheater tower to be used to dry raw materials in the raw mill. In the preheater/precalciner process, fuel combustion is divided between the kiln and a preheater vessel below the preheater tower. This arrangement provides for greater thermal efficiency than the preheater process. A relatively new innovation is the use of a separate line combustion chamber for the preheater burner, so called because it is installed to the side (separate) of the material flow through the precalciner region. Because of its lower fuel requirements and greater efficiency, most new Portland cement plants use the dry preheater/precalciner process. The applicant proposed to use the dry preheater/precalciner process, with a separate line combustion chamber for the calciner burner, in an in-line arrangement with the raw mill.

Pyroprocessing System

The kiln feed from the homogenization silo will be conveyed to the preheater by means of an airlift. The feed will enter the top stage of the preheater or, during wet material conditions, drop into the next lower stage of the preheater to increase the gas temperature to the raw mill. Gases from the pyroprocessing system will flow counter to the material direction to the raw mill.

Coal, petroleum coke, natural gas, and flyash will be burned in the main burner at the discharge end of the kiln. Natural gas, fuel oil and propane will be used as a startup and supplemental fuel. The plant will also burn tires as available at the transition from the preheater to the kiln feed end. Used tires may be fed into the kiln feed end at up to 15% of heat input not to exceed 58.5 million BTU per hour heat input. Combustion air for the precalciner will be provided through a tertiary air duct from the clinker cooler.

The pyroprocessing system will transform the raw meal from the homogenization silo into clinker. This amount of clinker when mixed with calcium sulfate (gypsum) will produce 138 tons of Portland cement per hour.

Clinker Cooling And Handling

After discharge from the kiln, the clinker will be cooled with ambient air in a reciprocating grate cooler. The exhaust gases from the cooler will be cleaned by the baghouses operating under negative pressure from an ID fan. The cleaned gases will be exhausted through a stack that is shared with the coal mill. A portion of the clinker cooler gases will be ducted to the coal mill to dry the coal. These gases will then exhaust through the coal mill fabric filter into the common stack with the cooler exhaust. A portion of the clinker cooler gases will be ducted to the precalciner and the precalciner combustion chamber.

The clinker will be conveyed to the clinker silos. The clinker will be withdrawn from the silos by vibrating feeders, and discharged onto the finish mill feed belt. Enclosed clinker handling operations and storage silos will be controlled with baghouses.

Finish Mill

Gypsum and limestone will be received by truck and stored under cover in stockpiles. Each material will be transferred by a front end loader to feed hoppers, and conveyed to the finish mill. The finish mill can produce up to 138 tons per hour of Portland cement.

All enclosed sources associated with the finish milling operation will be controlled with baghouses. Fugitive emissions from gypsum and limestone handling and conveying associated with the finish milling operation will be minimized by inherent moisture and by the application of water as necessary for suppression of unconfined emissions of particulate matter.

Cement Handling

Finished Portland cement will be stored in concrete silos. The Portland cement will be withdrawn from the silos and loaded into tanker trailers for bulk shipment or into bags which will be palletized for shipment. Finished Portland cement will be transported by truck or rail.

All enclosed sources associated with the cement handling operation will be controlled with baghouses.

Coal and Petroleum Coke Handling

Coal and petroleum coke will be received by railcar. The bucket elevator will discharge either into a covered storage facility or onto a belt and then to a bin. Coal and petroleum coke in covered storage will be reclaimed by a front end loader through the unloading system. The milled fuels will be stored in a pulverized fuel storage bin for pneumatic conveyance to the main burner and precalciner burner.

All enclosed sources associated with the coal and petroleum coke handling and milling operation will be controlled with baghouses. Fugitive emissions from coal and petroleum coke handling and conveying will be minimized by inherent moisture and by the application of water as necessary for suppression of unconfined emissions of particulate matter.

Cement Kiln Dust

This cement plant will not generate cement kiln dust (CKD) as a waste product. This is consistent with the low alkali characteristics of the raw limestone and the greater opportunity for recycle afforded by the dry preheater/precalciner process. The process equipment utilized to transport the captured dust from the ESP back into the process is all enclosed. Unconfined emissions are not expected from dust handling and conveying activities.

4. PROJECT EMISSIONS

The total annual air pollutant potential emissions in tons per year from the facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1] (TPY)	MAXIMUM EMISSIONS (TPY)	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes
SAM (H2SO4)	7	5.1	No
Mercury (Hg)	0.1	0.061 (122 lbs)	No
Lead (Pb)	0.6	0.375 (750 lbs)	No

[1] Florida Administrative Code 212.400-2.

The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility. The proposed project will result in "significant increases" with respect to Table 62-212.400-2 of emissions of PM and PM_{10}, SO_2, NOx, CO, and VOC. This project will emit less than significant emission rates of the other regulated pollutants of Table 62-212.400-2.

Maximum emissions of mercury will be 122 pounds per year and are limited by the permit below the PSD applicability level (200 lbs/year). Mercury emissions will be determined by raw materials testing. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the raw mill feed and fuels. It will be assumed all mercury going into the system will be emitted through the process. Current testing at Florida Rock's Newberry Plant and Suwannee American Cement's Branford Plant has shown mercury emissions are below detectable levels. Maximum emissions of dioxin will be 0.00105 pounds per year and are limited by the federal MACT rule. Dioxin is not subject to PSD review.

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide, and designated as unclassifiable for PM_{10}.

The proposed project was reviewed under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility. This review consisted

of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions. (The BACT determination is documented separately.)

The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, Subpart Y Standards of Performance for Coal Preparation Plants, and Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359) and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

The emission units affected by this permitting action shall comply with all applicable provisions of the Florida Administrative Code, including applicable portions of the Code of Federal Regulations incorporated therein. This permitting action does not provide a shield from the enforcement of other applicable legal requirements.

6. AIR POLLUTION CONTROL TECHNIQUES

The applicant proposed to control air pollutant emissions through various methods. The applicant proposed the following as BACT for the following PSD pollutants. Control equipment (baghouses) was proposed for particulate matter and the use of wet suppression, paving of roadways, street sweeping on paved roads, and enclosing stockpiles to reduce wind erosion to control particulate matter from fugitive sources. The facility proposed Alkali/Sulfur Balance (i.e. control of natural constituents) for SO_2 control. Selective Non-catalytic reduction (SNCR) was proposed for NOx control. Combustion control and good combustion practices were identified for CO and VOC control. These control techniques and emission limits are discussed in detail in the BACT Determination for this project dated May 20, 2005. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the raw mill feed and fuels. Dioxin emissions will be controlled by limiting the temperature of the inlet of the electrostatic precipitator for the in-line kiln/raw mill pursuant to federal NESHAP regulation as required by 40 CFR 63 subpart LLL.

6.1 COMPLIANCE PROCEDURES

The permit requires annual testing for emissions from the in-line kiln/raw mill of PM_{10}, SO_2, NOx, CO, VOC, mercury and visible emissions. The permit requires annual testing for emissions from the clinker cooler of PM, PM_{10}, and visible emissions. Annual testing is required for visible emissions from all other emission points. Initial testing is required for PM from the emission points controlled by baghouses. Testing for PM_{10} is required for some of the emission points controlled by baghouses only if the tests for PM do not show compliance with the PM limit. Pursuant to federal rule, the permit requires testing for dioxin/furan emissions initially and every 30 months. In addition, a continuous emission monitoring (CEM) system is required for SO_2, NOx, CO, and VOC emissions from the in-line kiln/raw mill and continuous opacity monitoring (COM) systems are required for visible emissions from in-line kiln/raw mill and the clinker cooler. Continuous monitoring of other parameters such as the inlet temperature of the electrostatic precipitator for the in-line kiln/raw mill and the coal mill exit gas temperature is required.

6.2 EXCESS EMISSIONS

Allowable Excess Emissions: Pursuant to Rules 62-4.070(3) and 62-210.700(5), F.A.C., for purposes of this permit, all limits established pursuant to the State Implementation Plan, including those limits

established as BACT, include emissions during periods of startup, shutdown and malfunction. Excess emissions shall not exceed a 2-hour duration in any 24 hour period. This provision can not be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited pursuant to Rule 62-210.700(4), F.A.C.

7. SOURCE IMPACT ANALYSIS

7.1 INTRODUCTION

The proposed project is a major modification to an existing facility and will increase PM_{10}, SO_2, NOx, CO and VOC emissions at levels in excess of PSD significant amounts. PM_{10}, SO_2, and NO_X, are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments and significant impact levels defined for them. CO is a criteria pollutant and has only AAQS and significant impact levels defined for it. Emissions of VOC are related to the formation of ozone and are not generally modeled for individual stationary sources. The air quality impact analyses required by the PSD regulations for these pollutants include:

- An analysis of existing air quality for PM_{10}, SO_2, NO_X, CO and VOC;
- A significant impact analysis for PM_{10}, SO_2, NO_X and CO;
- A PSD increment analysis for PM_{10};
- An Ambient Air Quality Standards (AAQS) analysis for PM_{10} and+;
- An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in the application and this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

7.2 ANALYSIS OF EXISTING AIR QUALITY IN THE VICINITY OF THE PROJECT

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimus ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimus ambient concentration. If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established

AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from the existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling. No de minimus ambient concentration is provided for ozone. Instead the net emissions increase of VOC is compared to a de minimus monitoring emission rate of 100 tons per year.

The table below shows project air quality impacts for comparison to de minimus ambient concentrations.

AIR QUALITY IMPACT DE MINIMUS LEVELS				
Pollutant	**Averaging Time**	**Modeled Concentration ($\mu g/m^3$)**	**Impact Greater than De Minimus (Yes/No)**	**De Minimus Level ($\mu g/m^3$)**
SO_2	24-hr	2	No	13
PM_{10}	24-hr	13	Yes	10
CO	8-hr	70	No	575
NO_2	Annual	0.5	No	14
Ozone	Annual Emission Rate	66 TPY of VOC	No	100 TPY VOC

As shown in the table SO_2, NO_2, VOC and CO impacts from the project are predicted to be less than the de minimus levels; therefore, preconstruction monitoring is not required for these pollutants.

However, the table shows that PM_{10} impacts from the project are predicted to be greater than the corresponding de minimus level. Therefore, the applicant is not exempt from preconstruction monitoring for PM_{10}. The applicant may, instead, satisfy this requirement using previously existing representative data. Previously existing representative monitoring data does exist from PM_{10} monitors located in Hernando County within 3 km of the facility; this data is appropriate for fulfilling the monitoring requirement for this pollutant and for establishing a background concentration for use in the PM_{10} AAQS analysis. PM_{10} background concentrations for the PM_{10} AAQS analysis are shown in the table below.

PM_{10} Monitor Data for Background Concentrations

Years	**Monitor Locations**	**Concentration (ug/m^3) High 2nd high 24-hour average**	**Arithmetic Mean Concentration (ug/m^3) Annual Average**
2001-2003	Hernando County	58	19

7.3 MODELS AND METEOROLOGICAL DATA USED IN SIGNIFICANT IMPACT, PSD INCREMENT AND AAQS ANALYSES

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing facilities in the surrounding Class II Area and the Class I Chassahowitzka National Wildlife Refuge (CNWR) located 20 km away at its closest point. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. It incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfied the good engineering practice (GEP) stack height criteria.

Modeling was performed by both the applicant and the Department. Meteorological data used in the ISCST3 model consisted of a concurrent 5-year period of hourly surface weather observations from the National Weather Service (NWS) station at Tampa, Florida and twice-daily upper air soundings also from Tampa, Florida. The 5-year period of meteorological data was from 1991 through 1995. This NWS station was selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

7.4 SIGNIFICANT IMPACT ANALYSIS

Where predicted concentrations are below the significance levels for a given pollutant, no further modeling is required for that pollutant. A rectangular grid was used with this modeling to evaluate the distance to where highest (high-first-high) short term and long term ambient concentrations fall below the appropriate pollutant significance levels. Modeling to determine significance in the PSD Class II area in the vicinity of the project was conducted using facility fenceline receptors with 50-meter spacing; discrete receptors with 100-meter spacing from the fenceline to 2.5 kilometers; discrete receptors with 250 meter spacing extending out 5 kilometers; discrete receptors with 500 meter spacing extending out 10 kilometers; and discrete receptors with a 1 kilometer spacing extending out 18 kilometers. There are over 4000 receptors in the Class II modeling. In the Class II area, the significant impact distance is the critical distance and determines the significant impact area (SIA) over which any additional multisource modeling is required. The SIA is defined as a circular area centered on the proposed source with a radius equal to the critical distance. The SIA, if any, was established for every averaging period of every applicable pollutant for every year of meteorological data. The SIA, for each applicable pollutant, over which NAAQS and increment compliance modeling is performed, is the largest of these areas.

Modeling to determine significance was also done in the PSD Class I CNWA. Over 800 discrete rectangular receptors were placed in the Class I area for evaluation. If a predicted pollutant concentration is greater than its significance level, then a multisource analysis is also done using these Class I area receptors.

The following table shows maximum predicted impacts and the SIA in the Class II area for each applicable averaging period for each pollutant.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)	SIA (km)
SO_2	Annual	0.1	1	No	None
	24-hr	2.3	5	No	None
	3-hr	10.2	25	No	None
PM_{10}	Annual	2.4	1	Yes	1.4
	24-hr	15.6	5	Yes	3.4
CO	8-hr	141	500	No	None
	1-hr	302	2,000	No	None
NO_2	Annual	0.9	1	No	None

SO_2, NO_2 and CO were determined to have less than significant impacts in the Class II area. This demonstrates compliance with ambient air quality standards and PSD increments for these pollutants. No further dispersion modeling was required to be performed for these pollutants.

PM_{10} was determined to have greater than significant impacts in the Class II area. The SIA based on maximum predicted ambient air concentrations of PM_{10} for all periods was 3.4 km with the maximum predicted impacts located near the eastern facility boundary. Therefore, refined dispersion modeling including other sources in the area was required and conducted for PM_{10} to demonstrate compliance with the PSD increments and the AAQS.

The following table shows the predicted impacts in the Class I area for each applicable averaging period for each pollutant.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO PSD CLASS I SIGNIFICANT IMPACT LEVELS IN THE CNWA

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)
SO_2	Annual	0.009	0.1	No
	24-hr	0.19	0.2	No
	3-hr	0.94	1.0	No
PM_{10}	Annual	0.05	0.2	No
	24-hr	0.8	0.3	Yes
NO_2	Annual	0.09	0.1	No

PM_{10} was determined to have greater than significant impacts in the Class I area for the 24-hour averaging time. Therefore, refined dispersion modeling including other sources in the area was required and conducted for PM_{10} to demonstrate compliance with the PSD Class I 24-hour increment.

7.5 PSD INCREMENT ANALYSIS

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant over a baseline level set in 1977. Refined Class I and II Increment compliance modeling is performed only if the SIA determination modeling indicates that the project would have a significant impact on air quality. The purpose of this increment compliance modeling is to demonstrate that the new sources will not significantly cause or contribute to a violation of a PSD Increment.

This modeling involved the sources under review as well as sources from within and near the SIA in the inventory prepared by the Department and the applicant using approved screening techniques for determining the sources to be included in the modeling analysis.

These runs were to identify regulatory high receptors, high-first-high for each year for PM10 annual average, and high-second-highest over the five years for the 24-hour average.

The results of the PM_{10} Class II increment analysis are given below and show that the maximum predicted impacts are less than the respective allowable increments. The maximum predicted 24-hour impact, which is over 90% of the allowable increment is due mainly to modeled fugitive PM_{10} emissions impacts

along the facility's fenceline. These values drop off rapidly with distance from the fenceline. The maximum predicted impacts due to stack sources are much less and are around 10 ug/m^3.

PSD CLASS II INCREMENT ANALYSIS				
Pollutant	**Averaging Time**	**Maximum Predicted Impact (µg/m^3)**	**Impact Greater than Allowable Increment? (Yes/No)**	**Allowable Increment (µg/m^3)**
PM_{10}	Annual	4.8	No	17
	24-hr	28.0	No	30

The results of the PM_{10} Class I increment analysis is given below and shows that the maximum predicted impacts is less than the allowable increment.

PSD CLASS I INCREMENT ANALYSIS-CNWA				
Pollutant	**Averaging Time**	**Maximum Predicted Impact (µg/m^3)**	**Impact Greater than Allowable Increment? (Yes/No)**	**Allowable Increment (µg/m^3)**
PM_{10}	24-hr	1.3	No	10

7.6 AAQS ANALYSIS

AAQS compliance modeling was performed for PM_{10} because the SIA determination modeling indicated that the new sources would have a significant impact on air quality. The purpose of AAQS compliance modeling is to demonstrate that the new sources will not cause or contribute to a violation of an AAQS.

AAQS compliance modeling addressed all areas within the Significant Impact Area (SIA). These runs identify regulatory high receptors; high-first-high for each year for PM10 annual average, and high-second-highest over the five years for the 24-hour average.

AAQS compliance modeling involved the sources under review as well as sources from within and near the SIA in the inventory prepared by the Department and the applicant using approved screening techniques. The background concentrations developed from the existing monitoring data discussed earlier were added to the modeled concentrations to determine compliance with the AAQS. The table below gives the results and shows that maximum predicted impacts are less than the AAQS.

AMBIENT AIR QUALITY IMPACTS						
Pollutant	**Averaging Time**	**Major Sources Impact (µg/m^3)**	**Background Concentration (µg/m^3)**	**Total Impact (µg/m^3)**	**Total Impact Greater than AAQS**	**Florida AAQS (µg/m^3)**
PM_{10}	Annual	7	19	26	No	50
	24-hr	47	58	105	No	150

7.7 ADDITIONAL IMPACTS ANALYSIS

7.7.1-IMPACTS ON SOILS, VEGETATION, WILDLIFE, AND VISIBILITY

Federal Secondary Ambient Air Quality Standards were established to protect the public welfare including the protection of animal and plant life, property, visibility and atmospheric clarity, and the enjoyment of life and property.

The U. S. Environmental Protection Agency was directed by Congress to develop primary and secondary ambient air quality standards. The primary standards were to protect human health and the secondary standards were to:

"... protect the public welfare from any known or anticipated adverse effects of a pollutant."

The public welfare was to include soils, vegetation and visibility.

The facility will not cause or contribute to any exceedance of established ambient air quality standards. The emissions from the facility will result in ambient impacts that are less than significant and are considered to be de minimus, for all regulated pollutants except for PM_{10}.

The impacts to ambient air resulting from emissions of PM10 are well below the applicable Federal Secondary Ambient Air Quality Standards. Compliance with PSD Class II increments establishes an effective ambient air quality standard that is much more stringent than the ambient air quality standards. It is concluded that there will be no adverse effect to the soils or vegetation of the area. A Class I area visibility analysis was performed for the CNWA using the PLUVUE II visibility model. Maximum predicted impacts are less than the critical values established by the federal land manager.

7.7.2 GROWTH-RELATED AIR QUALITY IMPACTS

No quantifiable air quality impacts are projected for the area as a result of general commercial, residential, industrial and other growth associated with the facility.

The proposed construction will require an increase in personnel at the cement plant. No increase in residential or commercial construction is expected in the area surrounding the plant as a result of this modification. Therefore, no additional growth impacts are expected as a result of the proposed project.

The area the facility will affect is the area of significant impact described in the air quality analysis section of this report. This area is within a radius of 3.4 kilometers from the proposed facility. The applicant owns a substantial amount of this area. General commercial, residential, and other growth within the radius is expected to continue at approximately the current rate.

7.8 GOOD ENGINEERING PRACTICE STACK HEIGHT DETERMINATION

A Good Engineering Practice (GEP) review was conducted for each proposed new source to determine if building downwash effects needed to be included in the modeling and to determine the appropriate stack heights to be used with the models. The new stacks will be lower than GEP height; therefore building downwash effects were included in the modeling analyses

8. ADDITIONAL REQUIREMENTS

The permit has additional requirements that provide reasonable assurance that Department rules can be met. Some of these are conditions that:

Limit fuels and materials to exclude hazardous wastes, contaminated materials and other fuels.

9. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. The Department intends to issue an air construction permit to the applicant based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Department will therefore issue a draft permit to the applicant that allows the applicant to construct a dry process, preheater/precalciner type Portland cement kiln system subject to the conditions of that permit.

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Florida Crushed Stone Company
Brooksville Plant
PSD-FL-351
Air Permit 0530021-009-AC
Hernando County

1. BACKGROUND

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.00 km E and 3162.5 km N. The nearest distance of this site from the Chassahowitzka Class I PSD area is 20 kilometers.

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per

year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs).

Emissions units addressed by this permitting action are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2:-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Seperator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Pulverized Coal Bin

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) will exceed 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62- 212.400-1, F.A.C. Because emissions will be greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it will be a major modification to an existing facility with a potential emissions increase greater than the PSD significance levels for NO_x, PM, PM_{10},

SO_2, CO, and VOC. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions.

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide, and designated as unclassifiable for PM10.

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs). The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, Subpart Y Standards of Performance for Coal Preparation Plants, and Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. Some of these emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

Particulate matter emissions from the in-line kiln/raw mill and from the clinker cooler will be controlled by a baghouse. Particulate matter emissions from other sources will be controlled by baghouses. Sulfur dioxide emissions are inherently limited by the process (Alkali/Sulfur Balance). NOx emissions will be controlled by multi-stage combustion and/or Selective Non-Catalytic Reduction (SNCR). Carbon monoxide and VOC emissions will be limited by combustion control.

The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1] (TPY)	MAXIMUM EMISSIONS (TPY)	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 212.400-2.

Maximum emissions of mercury will be 122 pounds per year. Mercury emissions are below the 200 lb per year threshold and will not subject to PSD review. Control of mercury emissions will result from limiting the mass of mercury introduced into the pyroprocessing system from the preheater feed and fuels. Maximum emissions of dioxin will be 0.00105 pounds per year. Dioxin emissions will be controlled by limiting the temperature of the inlet of the baghouse for the in-

line kiln/raw mill pursuant to federal NESHAP regulation. Dioxin is not subject to PSD review. Emissions of PM and PM_{10} from the unenclosed conveying equipment are expected to be insignificant because of inherent moisture and moisture applied to comply with the reasonable precautions for control of unconfined particulate matter emissions.

2. RELEVANT PERMIT PROCESSING DATES OF THE BACT APPLICATION

12/20/2004	Received permit application, report and fee
12/28/2004	Received email from EPA dated 12/09/2004; No comments
01/19/2005	Sent Request for Additional Information
03/07/2005	Received Response for Additional Information
04/06/2005	Application Complete

3. REVIEWERS

James K. Pennington, P.E., Bobby Bull, Engineering Specialist II, and Cleve Holladay, Engineer IV (modeling), prepared the BACT determination.

4. DETAILED PROCESS DESCRIPTION

The Department has a substantial body of information on Portland cement manufacturing and the applicant submitted a very detailed description of the process options with special emphasis on the types of raw materials that are readily available in the area of concern.

Portland cement is a fine powder, usually gray in color, which consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrate, and small amounts of magnesium oxide, sodium, potassium and sulfur, to which one or more forms of calcium sulfate (gypsum) have been added. About 95% of the cement production in the U.S. is Portland cement. Masonry cement represents the balance of the domestic cement production. There are several cement manufacturing processes including wet, dry, dry preheater and dry preheater/precalciner processes. These processes all produce Portland cement from raw materials through pyroprocessing. Each type of process has different characteristics for equipment design, method of operation, and fuel consumption. In the wet and dry processes, all of the pyroprocessing and fuel combustion occurs in the kiln, with the primary difference being that with the wet process, the raw materials are blended and introduced into the kiln as a slurry.

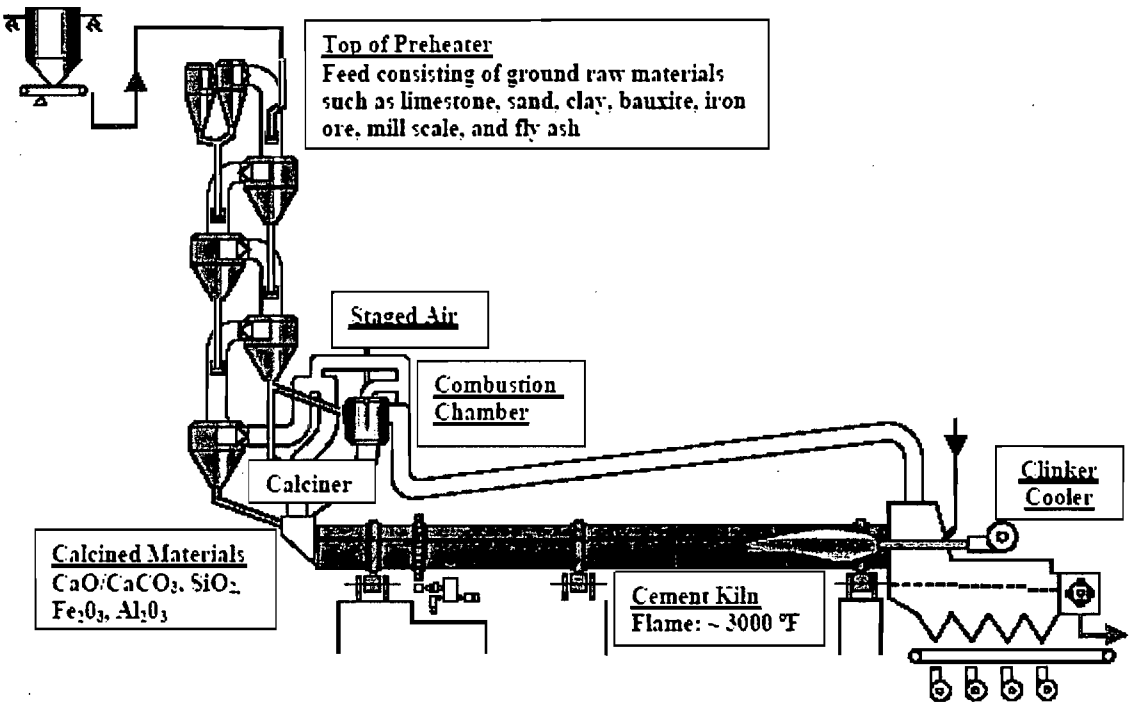


Figure 1: Diagram of Dry Process Cement Kiln with Preheater and Staged Air Calciner[1]

The preheater and preheater/precalciner processes as shown in Figure 1are also dry processes, but in these processes thermal efficiency and production capacity have been improved by adding process vessels arranged vertically before the kiln, wherein the hot gases pass counter to the material flow, effecting heat transfer through the intimate contact between the two streams. The improved heat transfer allows the kiln length to be reduced. This arrangement also allows the hot gases from the preheater tower to be used to dry raw materials in the raw mill. In the preheater/precalciner process, fuel combustion is divided between the kiln and a preheater vessel below the preheater tower. This arrangement provides for greater thermal efficiency than the preheater process. A relatively new innovation is the use of a separate line combustion chamber for the preheater burner, so called because it is installed to the side (separate) of the material flow through the precalciner region. Because of its lower fuel requirements and greater efficiency, most new Portland cement plants use the dry preheater/precalciner process. The applicant proposed to use the dry preheater/precalciner process, with a separate line combustion chamber for the calciner burner, in an in-line arrangement with the raw mill.

The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, used tires, used oil and various kinds of wastes are burned at many plants. The applicant proposed to fire coal, petroleum coke, natural gas, distillate fuel oil, propane, and when available, used tires and flyash. The applicant will not fire or introduce hazardous wastes, petroleum contaminated soil or materials, used oil, other solid fuels, or solid wastes other than tires. Used tires may be fed into the kiln feed end at up to 15% of heat input not to exceed 58.5 million BTU per hour heat input.

[1] Diagram from Department website; http://www.dep.state.fl.us/Air/permitting/construction.htm

The production of Portland cement is generally a four-step process: raw materials acquisition and handling, kiln feed preparation for pyroprocessing, pyroprocessing, and finished cement grinding. The chemical reactions and physical processes that constitute the transformation from raw materials to cement are quite complex, both chemically and physically. The heart of the Portland cement manufacturing process is the pyroprocessing system which includes the rotary kiln and preheater/precalciner as shown in Figure 1.

Pyroprocessing may be divided into four stages, depending on location and temperature of the materials in the system: evaporation of uncombined water from raw materials; dehydration of combined water to form oxides of silicon, aluminum, and iron; calcination (liberation of carbon dioxide); reaction and sintering of the oxides in the kiln to form cement clinker.

Generally the entire process may be summarized as follows. Raw materials, predominantly limestone, but also including sand, clay, iron ore, and coal ash, will be crushed and then blended and milled in the raw mill. The resulting material will be conveyed to the pyroprocessing system in the top stage of the preheater. It will exit the preheater/precalciner and enter the kiln at the elevated end (feed end). The rotation of the kiln causes the solid materials to be slowly transported downward from the front end (discharge end). Fuel will be supplied to the precalciner combustion chamber, optionally at the feed end of the kiln, and at the lower or discharge end of the kiln. The hot, gaseous combustion products will move countercurrent to the material flow, thereby transferring heat to solids in the kiln and preheater/precalciner, and to the raw mill.

The clinker will enter the clinker cooler as shown in Figure 1 where it will be cooled by ambient air. This cooling or quenching serves to "freeze" the clinker, halting the formation chemistry. Hot air from the clinker cooler will be recovered and returned to the pyroprocessing system as combustion air and will also be supplied to the coal mill for drying the coal and petroleum coke. The cooled clinker will be stored in silos before being mixed with gypsum and limestone and ground in a ball mill in the finish milling operation to produce Portland cement. The Portland cement will be stored in silos and loaded in bulk into tanker trailers or in bags which will be palletized.

The process for this plant is discussed in more detail below.

Limestone will be mined primarily below the water table. The overburden, consisting of sand and clay, will be removed from the limestone surface and stockpiled in the vicinity of the crusher. The crusher will be portable, and will be relocated periodically in accordance with the mining plan. The overburden (sand and clay) and the limestone will be fed into the crusher with front end loaders or other material handling devices in the ratios dictated by the target chemical composition of the desired raw mix. The quarry mix will be delivered to a covered storage hall by a conveyor belt system and by haul trucks. The quarry mix will have a moisture content of 10-20%. The storage hall will have space devoted to storage of the other raw materials which include but are not limited to: mill scale, feldspar and flyash. The other raw materials will be transported to the facility by truck.

Fugitive emissions from raw material handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter. Paved and unpaved roads will be sprayed by a water truck and water sprays. Paved roads will be cleaned by vacuum sweeper truck as required to prevent accumulations of unconfined particulate matter and emissions of such. Material stockpiles at the plant will be covered to limit particulate matter emissions generated by wind erosion.

The quarry mix and other raw materials will be conveyed to the raw mill feed bin. Raw materials will be fed from the raw mill feed bin to the raw mill. The raw mill will grind and mix the raw materials, and dry the raw materials with the hot gases from the pyroprocessing system. Emissions from the raw mill (and in-line kiln) will be controlled by a baghouse. The baghouse catches and the raw mill product will be conveyed to the homogenization silo. Other enclosed emission sources will be controlled by baghouses (fabric filters) as well. The captured dust will be recycled into the process unless otherwise authorized by the Department.

The kiln feed from the homogenization silo will be conveyed to the preheater by means of an airlift. The feed will enter the top stage of the preheater or, during wet material conditions, drop into the next lower stage of the preheater as shown in Figure 1 to increase the gas temperature to the raw mill. Gases from the pyroprocessing system will flow counter to the material direction to the raw mill and the baghouse.

Coal, petroleum coke, and flyash will be burned in the precalciner separate line combustion chamber near the inlet to the kiln as well as at the main burner at the discharge end of the kiln. The plant will also burn tires at the transition from the preheater to the kiln feed end. Combustion air for the precalciner will be provided through a tertiary air duct from the clinker cooler.

The pyroprocessing system will transform the raw meal from the homogenization silo into clinker. This amount of clinker will produce 138 tons of Portland cement per hour.

After discharge from the kiln, the clinker will be cooled with ambient air in a reciprocating grate cooler. The exhaust gases from the cooler will be cleaned by an baghouse operating under negative pressure from an ID fan. The cleaned gases will be exhausted through a stack that is shared with the coal mill. A portion of the clinker cooler gases will be ducted to the coal mill to dry the coal. These gases will then exhaust through the coal mill fabric filter (baghouse) into the common stack with the cooler exhaust. A portion of the clinker cooler gases will be ducted to the precalciner and the precalciner combustion chamber.

The clinker will be conveyed to the clinker silos. The clinker will be withdrawn from the silos by vibrating feeders, and discharged onto the finish mill feed belt. Enclosed clinker handling operations and storage silos will be controlled with baghouses.

Gypsum and limestone will be received by truck and stored under cover in stockpiles. Each material will be transferred by a front end loader to feed hoppers, and conveyed to the finish mill. The finish mill can produce up to 138 tons per hour of Portland cement.

All enclosed sources associated with the finish milling operation will be controlled with baghouses. Fugitive emissions from gypsum and limestone handling and conveying associated with the finish milling operation will be minimized by inherent moisture and by the application of water for suppression of unconfined emissions of particulate matter.

Finished Portland cement will be stored in concrete silos. Portland cement will be withdrawn from the silos and loaded into tanker trailers for bulk shipment or into bags which will be cleaned and palletized for shipment. Finished Portland cement will be transported by truck or rail.

All enclosed sources associated with the Portland cement handling operation will be controlled with baghouses.

Coal and petroleum coke will be received by railcar. The bucket elevator will discharge onto a belt and then to a bin. Coal and petroleum coke will be metered from the bin to a vertical mill, for milling and drying with hot gases from the clinker cooler. The milled fuels will be stored in a pulverized fuel storage bin for pneumatic conveyance to the main burner and precalciner burner.

All enclosed sources associated with the coal and petroleum coke handling and milling operation will be controlled with baghouses. Fugitive emissions from coal and petroleum coke handling and conveying will be minimized by inherent moisture and by the application of water for suppression of unconfined fugitive emissions of particulate matter.

5. BACT DETERMINATION REQUESTED BY THE APPLICANT

The following table of emissions estimates was submitted by the applicant for BACT evaluation.

REGULATED AIR POLLUTANTS SIGNIFICANT EMISSION RATES

Pollutant	Significant Emission Rate (Tons/Year)	Modification Emission Rate (Tons/Year)	
			PSD ?
Carbon monoxide	100	2133.6	YES
Nitrogen oxides	40	1126.2	YES
Sulfur dioxide	40	122.7	YES
Ozone	40 VOC	105.3 VOC	YES
Particulate matter	25/15	256.4	YES
Sulfuric acid mist	7	5.1	NO
Lead	0.6 (1200 lbs)	0.375 (750 lb)	NO
Mercury	0.1 (200 lbs)	0.0751 (150.2 lb)	NO

Reference: Table 62-212.400-2, F.A.C.

The applicant proposed BACT for the PSD pollutants that triggered PSD as follows.

Particulate Matter (PM and PM_{10})
Control equipment (baghouses) was proposed for particulate matter (PM) and particulate matter smaller than 10 microns (PM_{10}) emitted from point sources. The use of wet suppression, paving of roadways, street sweeping, and enclosing stockpiles to reduce wind erosion was proposed to control particulate matter from fugitive sources.

Sulfur Dioxide (SO_2)
The facility proposed Alkali/Sulfur Balance in the process for SO_2 control.

Nitrogen Oxides (NOx)
Selective Non-catalytic reduction (SNCR) was proposed for NOx control with multi-stage combustion as needed to supplement the controls. SNCR alone could be used or in conjunction with multi-stage combustion for maximum operational flexibility. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project.

Carbon Monoxide (CO)
Process control, process design, and combustion unit design were proposed for CO.

Volatile Organic Compounds (VOC)
Clean raw materials and combustion control were proposed for VOC.

6. BACT DETERMINATION PROCEDURE

Rule 62-212.400(6)(a), F.A.C., requires that in making the BACT determination, the Department shall give consideration to:

1. Any Environmental Protection Agency determination of BACT pursuant to Section 169 of the Clean Air Act, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), or 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants).
2. All scientific, engineering, and technical material and other information available to the Department.
3. The emission limiting standards or BACT determination of any other state.
4. The social and economic impact of the application of such technology.

The EPA currently directs that BACT should be determined using the "top-down" approach. In this approach, available control technologies are ranked in order of control effectiveness for the emissions unit under review. The most stringent alternative is evaluated first. That alternative is selected as BACT unless the alternative is found to not be achievable based on technical considerations or energy, environmental or economic impacts. If this alternative is eliminated for these reasons, the next most stringent alternative is considered. This top-down approach is continued until BACT is determined. In general EPA has identified five key steps in the top-down BACT process: Identify alternative control technologies; eliminate technically infeasible options; rank remaining control technologies by control effectiveness; evaluate most effective controls; and select BACT.
BACT evaluation should be performed for each emissions source and pollutant under consideration. All of the combustion emissions from the plant are associated with the in-line kiln/raw mill. BACT for particulate matter can be treated separately for the in-line kiln/raw mill, clinker cooler, the enclosed material handling processes and the unenclosed conveyors.

The Department may consider the control or reduction of "non-regulated" air pollutants when determining the BACT limit for regulated pollutants, and will weigh control of non-regulated air pollutants favorably when considering control technologies for regulated pollutants. The Department will also favorably consider control technologies that utilize pollution prevention strategies. These approaches are consistent with EPA's consideration of environmental impacts.

The EPA has determined that a BACT determination shall not result in a selection of a control technology which would not meet any applicable emission limitation under 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) or 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants). This project is subject to such standards as described above.

7. BACT POLLUTANT ANALYSIS AND DEPARTMENT'S DETERMINATION

For this project the PSD pollutants of concern are PM, PM_{10}, SO_2, NOx, CO and VOC. The total annual air pollutant potential emissions in tons per year from the major modification of the existing facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1]	MAXIMUM EMISSIONS	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes

1 Florida Administrative Code 62-212.400-2.

The applicant proposed control strategies for these pollutants for the emission sources at this facility. The applicant's proposal and the Department's BACT for each pollutant and source is discussed below.

Nitrogen Oxides (NOx) [2]

Nitrogen oxides (NOx) emissions from a modern dry process Portland cement plant kiln are the result of fuel combustion in the main kiln burner and the precalciner burner. These emissions can be reduced by minimizing fuel combustion; or conversely, by increasing the thermal efficiency of the kiln system. The most fuel-efficient Portland cement plants are the dry-process plants with a precalciner and preheater. Approximately 40 percent of the fuel utilized in these plants is fired in the kiln to create a clinkering condition while the remainder is fired in the precalciner to preheat the raw meal as it passes through the preheater and to calcine the limestone in the raw meal.

There are three reported mechanisms involved in the formation of NOx: "prompt" NOx, fuel NOx, and thermal NOx. "Prompt" NOx is NOx formed instantaneously at the flame surface during luminous oxidation. This NOx is independent of flame temperature and excess air. The formation of this NOx and the resulting concentration in the gases exhausted from the kiln can be considered as the baseline NOx emissions resulting from the two combustion processes.

The fuel NOx is the NOx formed by the oxidation of nitrogen in the fuel. Approximately 60 percent of the fuel nitrogen is converted to NOx depending upon available oxygen in the flame and the temperature profile of the flame.

The thermal NOx is the most significant source of NOx in cement kilns. This NOx is formed through a reaction between atmospheric nitrogen and oxygen. The rate of formation is a function of both available oxygen in the flame and the temperature of the flame. In general, thermal NOx levels increase sharply above a flame temperature of approximately 1600°F.

The combustion characteristics of various fuels affect the formation of both fuel NOx and thermal NOx. Additionally, the firing location (the main kiln burner or the precalciner burner) affects NOx formation as a result of differing heat release requirements.

[2]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

Natural gas when fired in the main kiln burner has been shown to generate approximately twice the amount of NOx per ton of clinker as coal or oil. This is not intuitive as the adiabatic flame temperatures of coal and oil is higher than for natural gas and both coal and oil have more fuel nitrogen than natural gas. Additionally, coal and oil are generally fired with a higher volume of combustion air which increases the availability of oxygen, and hence the potential for NOx formation. There are other factors associated with coal and oil burning, however, that more than offset the factors leading to higher NOx formation with these fuels. These factors include the flame shape, the luminescence of the flame, and higher levels of carbon monoxide (CO), and various radicals that tend to counter the formation of NOx.

The use of petroleum coke in either the kiln burner or precalciner appears to increase NOx emissions even though the nitrogen content of petroleum coke is lower than coal and it burns with a lower flame temperature. Petroleum coke cannot be burned alone, however, as it does not provide enough volatile matter.

The applicant proposed that NOx emissions at this facility will be controlled through Non-Selective Catalytic Reduction (SNCR), in conjunction with Multi-Stage Combustion, as well as the plant design and operation. The applicant considered other possible control methods, and rejected Selective Catalytic Reduction (SCR) as BACT for this project. The SCR technology is currently being used by only one location in Europe at the Solnhofer Portland Zementwerke AG Plant in Solnhofer, Germany. The facility performed a pilot study, and incorporated the SCR technology in 1999. However, there has been no pilot study conducted in the United States, and there have been no indications that a pilot plant will be constructed to test SCR by any Portland cement facilities in the United States.

The applicant proposed SNCR to further reduce NO_x emissions. The SNCR will operate in conjunction with the multi-stage combustion (including reducing conditions at the precalciner as needed). The applicant proposed SNCR with multi-stage combustion as needed to achieve a NOx emission rate of 1.95 pounds of NOx per ton of clinker (30 day rolling average). The most recent permitting practice has been to issue a limit with a 30-day averaging time rather than a higher limit with a shorter averaging period.

The lowest emission rate in a final permit in the state of Florida is the Suwannee American Cement (SAC) kiln No. 1 that has a limit of 2.4 lb/ton clinker (30 day rolling average) and is actively meeting that limit. The SAC plant relies on staged combustion in the calciner (SCC) in a reducing atmosphere. They recently trial tested and subsequently installed an ammonia-based selective non-catalytic reduction (SNCR) system that they can use as needed to control NOx.

The most recent permit issued outside of the state of Florida is for the Holcim Lee Island Plant that will have the largest cement kiln in the United States. The project was approved by the State of Missouri with a limit of 2.4 lb/ton of clinker (30 day rolling average). This limit will be met by a combination of SCC and SNCR.

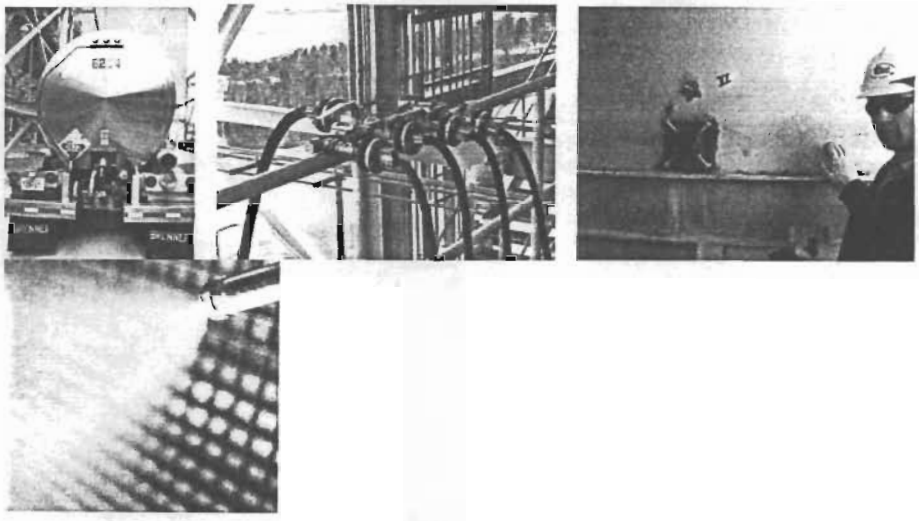
Recent testing conducted at Titan America in Medley, Florida indicated that it is possible to achieve 2.0 lb/ton of clinker (30 day rolling average) by a version of SCC with raw meal catalysis in a high temperature reducing atmosphere. Titan has advised the Department that they plan to apply to increase their annual hours of operation while complying with a limit of 2.1 lb/ton of clinker (30 day rolling average).

Both Suwannee American Cement (SAC) and Florida Rock Industries (FRI) conducted SNCR tests on their existing kilns and demonstrated that this emissions limit can be achieved using SNCR alone or by a combination of SCC and SNCR. In contrast to previous concerns by the cement industry in the United States, no visible secondary plume was observed. The reason is that raw materials in Florida are generally low in sulfur and chlorides and the potential to form ammoniated particulate compounds and the associated secondary plume is minimal.

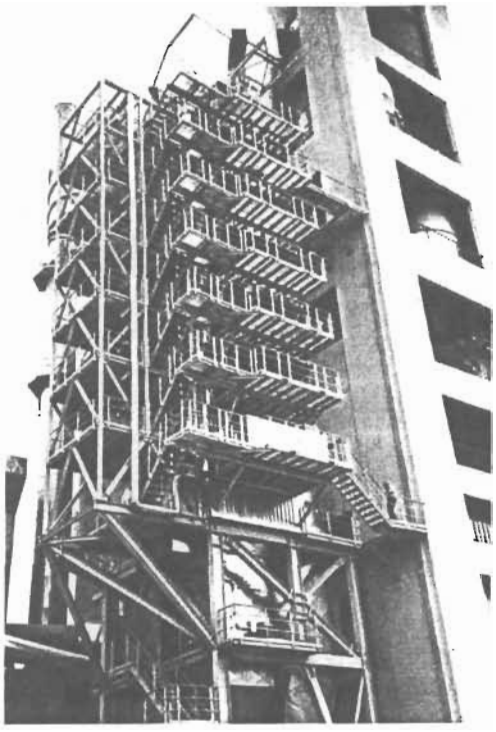
The Department reviewed the applicant's discussion on SCR and rejects the cost estimates. The BACT emission limit can be achieved with SCR or SNCR. Some additional time would be needed to conduct tests to determine the correct catalyst formulation for SCR. The Department does not consider SCR necessary to achieve a BACT level of control in Florida. Substantial sulfur present in the raw materials would make SCR a better choice than SNCR to avoid secondary plume formation, but this is not the case in Florida.

The only known commercial SCR system at a cement plant is at the Solnhofer Portland Cement Plant in Germany. The unit is efficient at NO_X control and helps reduce raw material ammonia, SO_2 and VOC emissions. These conditions (high raw material ammonia, VOC, sulfur) do not exist in Florida thus SNCR is entirely satisfactory as BACT.

The difference in the two technologies can be appreciated by the following pictures. SNCR requires some fairly simple equipment, whereas SCR (the equipment alongside the preheater tower) has a much larger footprint with structural considerations.



SNCR. Aqueous Ammonia, Compressed Air, One of Four Ports at existing duct, Injector(s)



SCR. Substantial Structure for Catalyst Layers.

The Department agrees with the applicant that SNCR is BACT for NOx for this project. Based on SNCR testing conducted at the FRI facility near Newberry and at the SAC facility near Branford, the facility should be able to meet 1.95 pounds of NOx per ton of clinker (30 day rolling average) as proposed by the applicant.

The applicant requested a higher limit for NO_x for one year after startup, and the Department agrees that such a trial period is reasonable. However, a shorter duration is mandated. During the first 180 operating days after startup, the kiln shall not exceed a NOx limit of 2.40 lb/ton clinker (30 day rolling average).

The Department has determined that 1.95 lb NO_x/ton of clinker is BACT and has reasonable assurance that this value can be met by SNCR or a combination of SCC and SNCR. The proposed kiln design is consistent with this conclusion. This BACT determination is the most stringent in the country.

Sulfur Dioxide (SO_2) [2]

Sulfur dioxide is generated from volatilization and subsequent oxidation of sulfur compounds in the raw materials within the preheater and precalciner regions, and by oxidation of sulfur compounds in the fuel during combustion. Sulfur dioxide at this facility will be generated through these mechanisms. The sulfur content of both raw materials and fuels varies based on the raw materials and fuels available at a given location, and consequently sulfur dioxide emissions vary with these factors. As is typical of conditions in Florida, the limestone, which is the principal raw material, will be low in sulfur compounds. Sulfur compounds present in the other

raw materials such as the iron sources, which represent a small proportion of the total raw materials, will most significantly contribute to sulfur dioxide emissions.

Most of the sulfur dioxide formed subsequently reacts with alkaline compounds present in the pyroprocessing environment to form alkali sulfates, which become incorporated in the cement clinker. The amount of sulfur dioxide released in the flue gases will vary with the amount of excess alkali available for absorption. The pyroprocessing system is very alkaline, and will be quite effective at removing sulfur dioxide formed from fuel sulfur. A significant proportion of sulfur dioxide from sulfur in raw materials will be removed through intimate contact with the incoming alkaline raw materials which flow counter to the gas flow. Further contact is achieved in the raw mill where the flue gases are used to dry incoming material feed.

The applicant proposes to limit sulfur dioxide emissions through alkali/sulfur balance. This will be accomplished by taking advantage of the alkaline environment in the kiln, preheater/precalciner, and raw mill to effect substantial removal of sulfur dioxide. Ultimately, the sulfur is incorporated into the clinker, thus minimizing the amount emitted to the atmosphere. The applicant proposed a sulfur dioxide limit of 0.23 pounds per ton of clinker produced (30 day rolling average).

The applicant provided information comparing the use of a wet scrubber and semi-dry scrubber to alkali/sulfur balance, and the use of both controls simultaneously to estimate sulfur dioxide emissions. The applicant rejected the use of the wet scrubber and semi-dry scrubber to reduce SO_2 based on the cost effectiveness analysis.

Whereas the most recent permitting practice throughout the country has been to issue a limit with a relatively long averaging time, the practice in Florida has been to use short averaging times for SO_2.

The lowest SO_2 emission rate in a permit in the state of Florida is at the applicant's existing Kiln No. 1 that has a limit of 0.16 lb SO_2/ton clinker on a 24-hour basis and is actively meeting that limit. The FRI plant relies on:

1. Inherently low sulfur in the raw material to avoid SO_2 emissions from the preheater.
2. Scrubbing of fuel sulfur by finely divided lime in the calciner.

The recent Holcim Lee Island permit was issued with an SO_2 limit of 1.26 lb SO_2/ton of clinker on a 30-day basis relying basically on the same principles of control.

Testing at Florida preheater/calciner cement kilns usually indicates emissions less than 0.05 lb SO_2/ton of clinker.

The Department considers the "Top" technology to be very low sulfur in the raw materials in combination with scrubbing of fuel sulfur by finely divided lime in the calciner. For areas where there are occasional pockets of sulfur laden materials that can not be avoided, then this technology could be augmented by injection of hydrated lime or other methods of control into the preheater, lime mist into the conditioning tower, or pneumatic conveyance of lime from the calciner to the upper preheater.

Usually even these additional measures are not needed when such raw material pockets are encountered with the raw mill in operation. Additional measures are needed when the raw mill is down to insure BACT level control. Hydrated lime injection into the preheater is practiced at Suwannee American Cement when these conditions occur.

A wet scrubber and semi-dry scrubber is not a consideration in Florida because of the efficacy of the described measures in achieving such low emissions. They are suitable when the measures described do not achieve BACT. A wet scrubber is not the "Top" technology for kilns in Florida, but can easily be the top technology where pyritic sulfur is prevalent such as in Texas, South Carolina, and New York (if not Missouri). The Department rejects the submitted cost analysis but does not require a new one.

FCS proposed a BACT limit of 0.23 lb/ton of clinker on a 30-day basis.

The Department does not believe that burning of petroleum coke will cause additional SO_2 emissions compared with coal because of the virtually complete scrubbing that occurs in the calciner. Also the raw material characteristics are not likely to change such that SO_2 is emitted from the preheater. If fly ash from the power industry has high sulfur content, it can be injected directly into the calciner where it too can be scrubbed.

The Department believes that process control is the appropriate technology for control of sulfur dioxide emissions for this project and is BACT. The Department considered imposing limitations on the sulfur content of the fuels and the raw materials used, but determined that such limits are not required due to the inherent low sulfur of the raw materials. Fuel sulfur is largely irrelevant because of the substantial exposure and contact between sulfur dioxide formed from fuel sulfur and the alkaline materials. Sulfur limits on the raw materials are not needed because the primary raw material, limestone, will be naturally low in sulfur. The other raw materials will be obtained by the applicant, which will acquire materials with regard to the alkali available in the process for control of sulfur dioxide formed from volatilization and oxidation of sulfur compounds in these materials. The Department will require hydrated lime injection or other methods of control as needed to reduce emissions. The Department will require a continuous emission monitor system for sulfur dioxide, which will offer a continuous demonstration of compliance with the emission limit, as well as process control data for the plant operators. The use of a CEM system ensures that process control will be effective, and eliminates the need for a limit on sulfur in raw materials.

Process control will allow for sulfur dioxide emissions to be minimized by maintaining a sufficient alkaline environment in the pyroprocessing system and by intimate contact between raw materials and exhaust gases. The sulfur dioxide that would result from fuel sulfur, as well as that resulting from volatilization and oxidation of sulfur from raw materials, will be controlled in this manner. Hydrated lime injection and other methods of control will be used to reduce SO_2 emissions as needed.

The BACT sulfur dioxide emission limit for this plant shall be 0.23 pounds/ton of clinker produced, and 28.8 pounds per hour, based on a rolling 24-hour averaging time. The Department has determined that 0.23lb SO_2/ton of clinker on a 24-hour basis is the "Top BACT" and has reasonable assurance that this value can be met by the measures described above. The proposed Kiln 2 design is consistent with this conclusion.

Particulate Matter (PM and PM_{10})[2]

Particulate matter results from the various physical and chemical processes at a cement manufacturing plant such as: quarrying and crushing, material transfer and storage, grinding and blending, clinker production, finish grinding, and packaging and loading. As is typical of cement plants, the largest emission source of particulate matter at this facility will be the pyroprocessing system that includes the inline kiln/raw mill and clinker cooler. At this facility, all cement kiln

dust (CKD) captured in the in-line kiln/raw mill baghouse will be returned to the pyroprocessing system as raw material. Emissions from enclosed fuel and material handling and storage operations represent another significant source of emissions at this facility. Unenclosed sources represent the smallest sources of emissions, given the use of proper controls. The limestone will primarily be mined below the water table and have an average moisture of 10-20%. The quarrying activities and associated crushing and transport will involve moist or wet raw materials with negligible unconfined emissions.

Common control devices for controlling emissions of particulate matter at cement plants are fabric filters (baghouses) and electrostatic precipitators (ESPs). Baghouses and ESPs are generally considered equivalent for particulate control. Both types of devices can achieve removal efficiencies of over 99%. ESPs and baghouses are used extensively as control devices at cement plants. ESPs are generally specified for kiln and clinker cooler exhaust gases because of their ability to operate effectively at varying temperatures, although baghouses are also used at some facilities for this purpose. Both types of control equipment provide for the recovery and recycling of CKD back into the process stream. ESPs offer the advantage of having no fabric filters that will wear and break and require routine replacement, while baghouses offer the advantage of providing for "passive" control in the event of an electrical power failure. A review of the BACT/LAER Clearinghouse shows that baghouses and ESPs are widely used to control particulate matter from process emission units at cement plants. Both offer an essentially equivalent level of control and are commonly accepted as BACT. Baghouses are also generally used to control particulate emissions from most other material processing operations at cement plants.

Common controls to limit particulate emissions from fugitive sources (such as roadways, stockpiles, and material processing and conveying equipment) include application of water for dust suppression, removal of dust, application of other dust suppressants, paving of roads and covering of stockpiles to reduce wind erosion. These methods of controlling fugitive particulate matter emissions are generally considered to be BACT for most material handling operations and paved and unpaved roads.

The applicant proposed the following controls for PM and PM_{10}. Baghouses will be used to control particulate emissions from material storage buildings, enclosures, bins, silos, conveying equipment, kiln/raw mills and clinker coolers. Particulate emissions from mill vents, air separator vents, material handling systems, bins, and silos will be controlled by baghouses. Particulate emissions from milling, transfer points, and storage silos/bins are typically controlled by baghouses.

The Department agrees with the applicant's proposal, but has instituted additional limits for PM and PM_{10} of 0.13 (.23 lb/ton of clinker) and 0.11 (.20 lb/ton clinker) pounds per ton of dry preheater feed, and 28.8 and 25.0 lb/hr for the in-line kiln/raw mill and clinker cooler, respectively. BACT is the use of a baghouse to control particulate matter emissions from the kiln. Visible emissions from these sources shall not exceed 10 percent opacity. BACT for other enclosed emission sources will be control of particulate matter emissions using baghouses to meet respective PM and PM_{10} emission limits of 0.01 and 0.007 grains per dry standard cubic foot. Visible emissions from these sources shall not exceed 5 percent opacity. The department will require the applicant to install continuous opacity monitoring systems (COMS) on the kiln's stack.

BACT for unenclosed sources is generally control of particulate matter emissions by inherent or applied moisture. Unpaved roads will be sprayed with water to prevent unconfined particulate matter emissions. Material and fuel storage piles will be stored under roof or in enclosed vessels. Storage piles shall be shaped, compacted and oriented to minimize wind erosion. Storage piles shall be wetted with devices located near such piles when visual inspection determines wetting is needed. Paving of the manufacturing area and access roadways is required. Sweeping of paved road will be required.

Carbon Monoxide (CO) [2]

Carbon monoxide is a pollutant formed by the incomplete combustion of carbon in the fuels fired during pyroprocessing. When insufficient oxygen is provided or poor combustion conditions occur, more CO and less CO_2 is formed than under ideal conditions. VOC is also a pollutant formed by the incomplete combustion of fuel.

Emissions of CO and VOC are controlled by utilization of proper combustion practices to maximize the oxidation of carbon to CO_2 instead of CO, and by flue gas controls. No add-on controls for CO or VOC have been demonstrated for cement plants. CO and NOx generally show an inverse relationship in cement plants as in many combustion processes, so reduction of NOx results in higher CO emissions. The applicant proposed combustion control as BACT for CO and VOC from this plant, and proposed emission limits of 4.0 and 0.19 pounds per ton of clinker produced for CO and VOC, respectively.

The most recent permitting practice throughout the country has been to issue a limit with a relatively short averaging time, but without a continuous emission monitoring. Emission limits since 1995 at cement kilns in Florida that have actually been built have ranged from 1.77 (later re-permitted at 2.3) lb CO/ton of clinker at Titan America to 3.6 lb/ton at Florida Rock's Kiln 1 and SAC. For reference, previous permits for Florida Crushed Stone Kiln No. 2 (that was not constructed) had limits of 2.0 lb/ton.

The recent Holcim Lee permit in Missouri limited CO to 6 lb/ton of clinker as BACT.

The above mentioned plants rely on the following to reduce CO emissions:

1. Relatively low carbonaceous matter in the raw materials
2. Good combustion at the main kiln burner and calciner
3. Addition of tertiary air from the kiln hood and clinker cooler
4. Varying degrees of calciner sizes and duct lengths to complete burnout

The Titan America Cement Plant actually achieves approximately 0.5 lb CO/ton of clinker. However that plant has an enormous calciner that provides a separate loop to promote maximum burnout. Additionally the calciner's size requires a taller preheater structure with excessive costs for each additional foot of height.

The lowest CO value in a permit (~ 0.37 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTOs.

The Department considers 3.6 lb/ton of clinker to represent BACT due to the use of the SNCR unit to reduce NO_x emissions. This limit allows for consideration of the tendency of CO to

increase when SNCR is used at cement plants to control NO_X. This has been documented during tests conducted at several European cement plants built by the proposed manufacturer of the applicant's Kiln No. 2. The use of a CEMS for CO will provide real time CO measurements. The Department does not consider it cost-effective to construct an excessively large calciner or install RTOs to further control CO. It is still possible that a longer loop between the final branch of tertiary air introduction to the lowest cyclone will be needed.

The Department will require that high carbon fly ash be injected directly into the calciner to avoid CO evolution in the preheater.

The Department agrees with the applicant in that BACT for CO shall be combustion control. The emission limit for CO shall be 3.6 pounds per ton of clinker produced, and 450.0 pounds per hour, based on a 24 hour average. A CEMS will be required for CO. The facility will also install process monitors for CO to provide for the use of CO as a short-term measure of the efficacy of combustion control.

Volatile Organic Compounds (VOC) [3]

The most recent permitting practice throughout the country has been to issue a limit with a 30-day averaging time using a VOC or total hydrocarbons (THC) continuous emission monitoring system (CEMS). The 30 averaging time is consistent with the emissions standards of 40 CFR 63, subpart LLL.

There are no VOC or THC limits for cement plants based on a New Source Performance Standard. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subpart LLL limits THC at "greenfield plants". The FRI Kiln No. 2 project is a new kiln at a "brownfield plant" because the first kiln was permitted prior to the June 1999 applicability date for Subpart LLL.
For reference the Subpart LLL requirement is 50 parts per million by volume, dry of Total Hydrocarbons (THC) at 7 percent oxygen (ppmvd @7% O_2). This value is the maximum achievable control technology (MACT). Though not applicable to FRI, MACT serves as a reference for determinations of best available control technology (BACT). VOC in cement plants is roughly the equivalent of THC minus the sum of methane and ethane. The latter compounds comprise roughly 30 percent of THC. Thus a VOC limit equal to Subpart LLL limit would be approximately 32 ppmvd @7% O_2. The value 32 ppmvd of VOC is roughly 0.32 lb VOC/ton of clinker.

Since 1995, BACT determinations in Florida have ranged from 0.085 to 0.12 lb VOC/ton. The limit issued by the State of Missouri to the recently permitted Holcim Lee Island Plant is 0.33 lb/ton of clinker and is probably equivalent to the mentioned Subpart LLL THC limit.

The proposed FCS kiln and calciner are very effective in controlling VOC from combustion except when overly aggressive reducing conditions are employed to control NO_X. FCS will rely primarily on SNCR to control NO_X and is not likely to produce much VOC from combustion.

Given good combustion, the "Top" control is limitation of organic matter in raw materials. Limestone in Florida is low in organic matter. However care is required when obtaining additives such as mill scale for iron ore to avoid oily substances. FCS proposes a limit of 0.19 lb VOC/ton of clinker. This is equal to approximately 62 tons per year. By contrast, there are parts of the

[3]Reference e-mail from Alvaro Linero to Jim Pennington on March 25, 2005

country (such as Michigan) where naturally occurring kerogen in limestone can cause emissions of thousands of tons of VOC and objectionable odor from cement plants.

The lowest VOC value in a permit (~ 0.026 lb/ton) is believed to be for the TXI Midlothian Plant. A $17,500,000 regenerative thermal oxidation system (RTO) was installed to deal with inherently high carbonaceous and organic matter in the raw material and to avoid PSD. TXI is presently petitioning the Texas Environmental Quality Board to remove the RTO system.

For reference, Holcim installed an RTO at the Dundee, Michigan plant to deal with the VOC and odor problem from that operation. Holcim also installed an activated coke filter at their Siggenthal, Switzerland Plant to control emissions when using dried wastewater treatment sludge as a fuel. The filter aided in VOC, CO, SO_2 heavy metal, and ammonia control. Sludge burning and pollution control was made viable through subsidization by the City of Zurich.

The Department considers 0.12 lb/ton of clinker by low organic compounds in the raw materials to represent BACT based on previously submitted applications. This value is about 1/3 of the recent Holcim Lee determination by the State of Missouri. It is less than half the value issued for the Holcim Holly Hill project in South Carolina and is approximately equal to the 0.11 lb/ton limit proposed as lowest achievable emission rate (LAER) for the St. Lawrence Cement project in New York.

The emission limit for VOC shall be 0.12 pounds per ton of clinker produced, and 15.0 pounds per hour, based on a 30 day averaging time. This averaging time is consistent with the NESHAP requirements. The department will require the applicant to install a CEMS to measure total hydrocarbons emitted from the facility.

Based on the information provided by the applicant, independent research and training of the reviewers and the informed good engineering judgment of the Department's personnel, BACT for PM, PM10, SO2, NOx, CO and VOC for the emission sources at this facility is determined to be the control technologies and emission limits discussed above.

8. COMPLIANCE

The compliance methods are briefly summarized here. Except for PM and PM10, compliance with the emission and process limitations for the in-line kiln/raw mill shall be demonstrated on a regular basis through a variety of continuous monitoring systems, and by record keeping for some production parameters. Compliance with the visible emissions limitation for the clinker cooler shall be regularly demonstrated using COM system clinker cooler stack. With the exception of waived stack tests for baghouses meeting a 5% opacity, annual emission tests will be required for all emission-limited pollutants, including visible emissions, from the in-line kiln/raw mill and the clinker cooler. Tests conducted for the annual RATA can satisfy the annual test requirements for the in-line kiln/raw mill. Initial compliance testing to demonstrate compliance with the emission limits for the three largest process sources controlled by baghouses will be required; thereafter, no subsequent tests will be required if these sources meet a visible emissions limit of 5% opacity. Initial and annual tests for the other process sources controlled by baghouses is not required if these sources meet a visible emissions limit of 5% opacity. The opacity limit for the clinker cooler is 10%.

The Department will require that the data from continuous monitors for emissions be available to the Department.

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

PERMITTEE

Florida Crushed Stone Company
Brooksville Plant
10311 Cement Plant Road
Brooksville, FL 32669

Permit No.	0530021-009-AC, PSD-FL-351
Project	New Kiln System
SIC No.	3241
Expires:	^DRAFT (3 years from final issuance)

Authorized Representative:

Charles Allen, Director of Operations, Cement Division

PROJECT AND LOCATION

This permit authorizes Florida Crushed Stone Company to construct a dry process, preheater/precalciner kiln system to be located at 10311 Cement Plant Road, Hernando County. The UTM coordinates are: Zone 17; 360.0 km E and 3162.5 km N.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix A	BACT Determination
Appendix B	40 CFR 60 Subpart F and 40 CFR 60 General Provisions
Appendix C	40 CFR 63 Subpart LLL and 40 CFR 63 General Provisions
Appendix GC	General Permit Conditions
Appendix D	Technical Evaluation and Final Determination

Michael G. Cooke, Director
Division of Air Resource Management

FACILITY DESCRIPTION

The existing facility is an integrated facility that includes a Portland cement manufacturing plant, a power plant and a coal yard. The power boiler is a coal fired unit that is allowed to generate a net delivered 150 MW. The cement kiln I, in-line kiln/raw mill and clinker cooler I share a common baghouse fabric filter system (for particulate matter emissions control) and stack with the power plant. Dry limestone injection is used to control SO_2 emissions from the power boiler, which is then collected in the common baghouse fabric filter system. Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from the materials used for making clinker. All of the materials handling activities are controlled by fabric filter baghouse control systems, except for the Clinker Receiving/Handling System and the coal yard activities. For the Clinker Receiving/Handling System, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor are controlled using a Johnson-Marsh Dust Suppressant system, which uses a non-ionic wetting agent to enhance the wettability of the clinker. Water sprays or chemical wetting agents and stabilizers are used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions and minimize visible emission. All fly ash handling systems (including transfer and silo storage) are totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

This project is for a new cement manufacturing line (line 2) at the existing facility. New emissions units for the project will include a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, two cement loadout silos, and coal handling and grinding operations. Line 2 will have a capacity of 206.3 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 138 tons per hour of Portland cement production. The annual rates for the proposed system are not based on the maximum allowable rates for feed material and clinker production. This project is subject to Prevention of Significant Deterioration (PSD) Review and a Best Available Control Technology (BACT) determination for NO_x, PM, PM_{10}, SO_2, CO, and VOC. The plant will be installing Selective Non-catalytic Reduction (SNCR) technology to control NO_x emissions from the new line. NOx emissions limit from the kiln will be 1.95 lbs of NOx per ton of clinker (243.8 lb/hour). Emissions limits for PM, PM_{10}, SO_2, CO, and VOC are 0.23 pounds of PM per ton of clinker (28.8 lb/hr), 0.20 pounds of PM_{10} per ton of clinker (25.0 lb/hr), 0.23 pounds of SO_2 per ton of clinker (28.8 lb/hr), 3.60 pounds of CO per ton of clinker (450 lb/hr), and 0.12 pounds of VOC per ton of clinker (15 lb/hr), respectively. Mercury emissions will be limited to 122 lbs per year from the new line, and visible emissions from the line will be limited to 10% opacity. Daily and annual rates are 1,686,300 tons per year (4,620 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,208,880 tons per year (3,312 tons/day) of Portland cement production. Fuels allowed to be used in the pyroprocessing system are natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, and tire derived fuels. The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 131,400 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 225 tons per hour of raw material (1,971,000 tons per year) in any consecutive 12-month period.

PROJECT DETAILS

This permitting action is to allow for the construction of a preheater/precalciner kiln with in-line raw mill. Emissions units addressed by this permit are:

EMISSIONS UNIT ID NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, Air Heater
045	2E-22	Filter Dust
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin
060	2S-15	Coal Mill
061	2S-20	Fuel Bin

The total annual air pollutant potential emissions in tons per year from the facility will be:

POLLUTANT	PSD SIGNIFICANCE LEVELS [1]	MAXIMUM EMISSIONS	SUBJECT TO PSD REVIEW?
PM/ PM_{10}	25/15	256.4	Yes
SO_2	40	122.7	Yes
NOx	40	1126.2	Yes
CO	100	2133.6	Yes
VOC (Ozone)	40	105.3	Yes
Mercury	200 pounds per year	122 pounds per year	No

REGULATORY CLASSIFICATION

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).
The proposed project is subject to the provisions of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it is a modification to an existing facility.

This facility is a major source of hazardous air pollutants (HAPs) and is subject to 40 CFR 63, Subpart LLL, National Emissions Standard for Portland Cement Manufacturing.

The emissions units included in this project are subject to regulation under the New Source Performance Standards, 40 CFR 60 Subpart A, General Provisions, Subpart F, Standards of Performance for Portland Cement Plants, and Subpart Y Standards of Performance for Coal Preparation Plants. Some of these

emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359) and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Some emissions units are subject to Rule 62-296.407, F.A.C., Portland cement plants. Additionally the permit references the test methods of 40 CFR 60, Appendix A, Test Methods; 40 CFR 63, Appendix A, Test Methods; 40 CFR 51, Appendix M, Recommended Test Methods for State Implementation Plans; 40 CFR 61, Appendix B, Test Methods.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Permit application and report received on December 20, 2004.
- EPA's comments received December 28, 2004 via email; No comments.
- Department's request for additional information on January 19, 2005.
- Applicant's additional information received March 7, 2005.

The following specific conditions apply to all emissions units at this facility addressed by this permit.

1. Permitting Authority:

   a. For this permit (PSD Permits), the permitting authority is the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and phone number (850)488-0114.

   b. For future permitting actions (Minor Construction or Title V), all documents related to applications for permits to construct or modify an emissions unit should be submitted to the Florida Department of Environmental Protection (FDEP), Southwest District, 3804 Coconut Palm Drive, Tampa, FL 33619-1352 and phone number (813) 744-6100.

2. Compliance Authority: All documents related to operation, reports, tests, and notifications should be submitted to the Department of Environmental Protection's Southwest District Office at
   Department of Environmental Protection
   Southwest District Office
   3804 Coconut Palm Drive
   Tampa, Florida 33619-1352
   Telephone: 813/744-6100 Fax: 813/744-6084

3. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60 and Part 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Expiration: This air construction permit shall expire on (3 years from date of final issuance). The permittee, for good cause, may request that this construction and PSD permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C]

PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

BACT Determination: In conjunction with extension of the 18 month periods to commence or continue construction, or extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [40 CFR 52.21(j)(4)]

8. Modifications: The permittee shall submit an application to the Department when there is any modification to this facility. This application shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such application shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

9. Final Construction Schedule: The permittee shall provide to the Department a final construction schedule after selection of the contractor and before commencement of construction. [Rule 62-212.400(5)(h)2., F.A.C.]

10. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than 20% opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

11. Unconfined Emissions of Particulate Matter:

a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

b. Reasonable precautions include the following:

- Paving and maintenance of roads, parking areas and yards.
- Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

Additional reasonable precautions applicable to this facility are:

- All materials, coal and petroleum coke at the plant shall be stored under roof on compacted clay or concrete, or in enclosed vessels.
- Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles.
- All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of materials, coal and petroleum coke regularly and before handling. If the visual inspections indicate a lack of surface moisture, the materials, coal and petroleum coke shall be wetted with sprinklers. Such wetting shall continue until the potential for unconfined particulate matter emissions are minimized.
- Water spray shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.
- The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.
- Vacuum Sweeper shall be used on paved roads.

c. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rule 62-296.320(4)(c), F.A.C.]

12. General Pollutant Emission Limiting Standards:

a. No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

b. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(1)(a)&(2), F.A.C.]

[Note: An objectionable odor is defined in Rule 62-210.200(203), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

13. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

14. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed

facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

15. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

16. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63.

    Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]

17. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. [Rule 62-297.310(1), F.A.C.]

18. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
    (a) General Compliance Testing.
    3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    a. Did not operate; or
    b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
    4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    a. Visible emissions, if there is an applicable standard;
    [Rule 62-297.310(7), F.A.C.]

19. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum

permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

20. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

21. Applicable Test Procedures
a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]

b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

22. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]
a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

23. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]

24. Test Notification: The owner or operator shall notify the Department's district office at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.]

[Note: The owner or operator shall comply with all applicable timelines stated in 40 CFR 60.7, Notification and recordkeeping and 40 CFR 63.9, Notification Requirements.]

25. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

26. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

27. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

28. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]

29. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report. A quarterly written report is hereby requested by the Department for every quarter that the facility is in operation. If no malfunctions occurred during a quarter, a written report stating that no malfunctions occurred shall be submitted. [Rule 62-210.700(6), F.A.C.]

30. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Northeast District office by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION A.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	FACILITY ID NO.	EMISSIONS UNIT DESCRIPTION
044	2K-06	Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater

This Emission unit is subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. This emission unit also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. Emissions unit 044 is subject to Rule 62-296.407, F.A.C., Portland Cement Plants.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: These units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
2. Fuels: Fuels fired in the pyroprocessing system (kiln and calciner) shall not exceed a total maximum heat input of 390 million Btu per hour (MMBtu/hr) and shall consist only of natural gas, coal, distillate oil, petroleum coke, flyash, on-spec oil, and whole tires. Propane may be fired and shall not exceed a maximum hourly rate of 4150 gallons/hr.
   a. Whole tires may be fired directly in the pyroprocessing system at a rate not to exceed a maximum heat input of 15% of the total pyroprocessing heat input, not to exceed 58.5 MMBtu/hr at any time. The remaining 85% of the total pyroprocessing heat input shall be derived from firing coal, flyash, petroleum coke, natural gas, propane or distillate oil. Whole tires fired in this manner shall be fed into the kiln system at the transition section between the base of the precalciner and the point where gases exit the kiln. The tire feeder mechanism shall be designed with a double airlock.
   b. Coal and/or petroleum coke shall not exceed 15.0 tons per hour. Natural gas shall not exceed 432 MMCF/hr. Distillate oil shall not exceed 3080 gallons/hr. Flyash shall not exceed 15.0 tons/hr.

   [Rules 62-4.070(3) and 62-210.200, F.A.C., Definitions -- potential to emit (PTE), F.A.C., and Applicant request, application received 12/20/04.]
3. Fuels and Materials Not Allowed: The owner or operator shall not introduce hazardous wastes, petroleum contaminated soil or materials, used oil, oil fuels, solid fuels other than those allowed by this permit, or solid wastes other than whole tires into any part of the process or emission control equipment. [Rule 62-4.070(3), F.A.C.]
4. Process Rate Limitations: The kiln shall not process more than 206.3 tons per hour of dry preheater feed and dry flyash and shall not exceed 4,620 tons in any 24-hour period. The kiln shall not produce more than 125 tons of clinker per hour, and 2800 tons in any 24-hr period. The facility shall not produce more than 138 tons of Portland cement per hour, 30-day average. Process and production rates shall be further limited to 1,686,300 tons of dry preheater feed and dry flyash in any consecutive

12-month period (4620 tons/day), 1,022,000 tons of clinker in any consecutive 12-month period (2800 tons/day), and 1,208,880 tons of Portland cement in any consecutive 12-month period.

The clinker production rate identified in the above paragraph shall be determined by the following equation:

Clinker Production = [(Feed)(Kiln Feed LOI Factor) + (Fly Ash Injection)(Fly Ash LOI Factor)]

Where:

- Fly ash is determined from the rotary feed system or equivalent.
- LOI for the kiln feed and fly ash is based on a monthly average determined from daily measurements.

[Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

5. Air Heater: The permittee may install an air heater associated with the raw mill, fired only with natural gas and distillate oil with a maximum rated heat input capacity of 32 MMBtu/hr. [Rule 62-4.070(3), F.A.C.]
6. Cement Kiln Dust: Cement kiln dust shall be recirculated in the process and shall not be directly discharged from process or emission control equipment unless authorized by the Department. Cement kiln dust removed from process equipment during maintenance and repair shall be confined and controlled at all times and shall be managed in accordance with the applicable provisions of 40 CFR 261. [Rule 62-4.070(3), F.A.C.]
7. Whole Tire Management: Tires and tire derived fuel shall be stored, handled and managed in accordance with the provisions of Chapter 62-711, F.A.C. [Rule 62-4.070(3), F.A.C.]
8. O&M Plan for Baghouses and ESP: The owner or operator shall prepare an operation and maintenance plan (O&M plan). The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Southwest District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

COMBUSTION AND PROCESS CONTROL TECHNOLOGY

9. Combustion and Process Control Technology: The owner or operator shall install selective noncatalytic reduction (SNCR) and multistage combustion (MSC) or equivalent system. The owner or operator shall use SNCR and/or MSC for control of NOx emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO_2 through design and control of the clinker production process. The owner or operator shall use hydrated lime injection when necessary to reduce SO_2 emissions. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

[Note: The emission limits for particulate matter and visible emissions imposed by Rule 62-212.400 and BACT are as stringent or more stringent than the limits imposed by the applicable NSPS or NESHAP rules. However, the BACT requirements do not waive or vary any monitoring or record keeping requirements of the NSPS and NESHAP rules.]

10. Mercury into the Pyroprocessing System Limited: The total mass of mercury compounds introduced into the pyroprocessing system, expressed as Hg, in raw mill feed and fuels shall not exceed 122 pounds per consecutive 12-month period. [62-4.070(3), F.A.C.]

11. Performance Testing: The owner or operator shall notify the Department at least 90 days prior to initiating any significant change in the feed or fuel used in the most recent performance test for D/F or PM. For purposes of this condition, significant means any of the following: a change in supplier of feed or fuel; any physical or chemical change in the feed or fuel; and change in the LOI of the flyash. Based on the information provided, the Department will determine if performance testing pursuant to 40 CFR 63.1349 will be required for the new feed or fuel. [62-4.070(3), F.A.C.]

12. Emissions unit 044 shall have one emission point, the stack of the Kiln #2, Pre-Heater, Pre-Calciner, Clinker Cooler, and Air Heater, designated by the permittee as 2K-06. Particulate matter emissions from this emissions unit shall be controlled by a baghouse.

    Emissions from this unit shall not exceed the following limits for the following pollutants. Emissions from the natural gas fired air heater are included in the limits below.

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	0.136 lb/ton of dry preheater feed; 0.23lb/ton of clinker	28.8 lb/hr	3 hours [3]	BACT
PM_{10}	0.118 lb/ton of dry preheater feed; 0.20 lb/ton of clinker	25.0 lb/hr	3 hours [3]	BACT
SO_2	0.23 lb/ton of clinker	28.8 lb/hour	24 hours [4]	BACT
NOx	1.95 lb/ton of clinker [1]	243.75 lb/hour [1]	30 day	BACT
CO	3.6 lb/ton of clinker	450.0 lb/hour	24 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	15.0 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT
Mercury		122 lb/yr		BACT

[1] NOx emissions shall not exceed 2.4 lb/ton of clinker and 306.25 lb/hour (30 day rolling average) during the first 180 operating day after initial startup. After 180 operating days after initial plant startup, emissions of NOx shall not exceed the limits shown in the table.

[2] VOC emissions shall be expressed as propane.

[3] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

[4] The averaging time for SO_2 shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[5] The averaging time for CO shall be a rolling average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours.

[6] The averaging time for VOC shall be a 30-day block average specified in 40 CFR 63.1350(h).

[7] The averaging time for visible emissions shall be a 6-minute block average that shall be computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 117.6; PM_{10}, 102.3; SO_2, 117.6; NO_x, 996.7 (after year one); CO, 1840; and VOC, 61.3 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. These emission limits are based on 2,800 tons per day and 1,022,000 tons per year of clinker production. [Rules 62-4.070(3), 62-212.400, F.A.C., and BACT]

13. Malfunction of the SNCR System: Malfunction of the SNCR System is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia based solutions into the kiln system. In accordance with the limits in condition 12, the exclusion of NOx data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 30 day NOx standard. No more than 6 hours per calendar day and no more than 30 hours in any 30 day operating block may be excluded. Within one working day of the occurrence, the permittee shall notify the Department's Southwest District of any malfunction of the SNCR system. [Rules 62-4.070(3), F.A.C.]

14. No owner or operator of a Portland Cement kiln shall cause, permit, or allow the emission of particulate matter in excess of 0.30 pounds per ton to the kiln (dry basis, excluding fuel), or visible emissions the density of which is greater than 20 percent opacity. [Rule 62-296.407, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

15. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NOx, SO_2, CO and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limit for NOx shall be based on a 30-day calendar rolling average that shall be recomputed every 24 hours from the individual hourly averages for the current hour and the preceding 23 hours. Compliance with the emission limit for SO_2 shall be based on a rolling 24-hour average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours. Each hourly average shall be computed from a minimum of one measurement every minute. Compliance with the 24 hour emission limit for CO shall be computed from a minimum of one measurement every minute. Compliance with the 30 day emission limit for VOC shall be based on a 30 day block average that shall be computed from a minimum of one measurement every minute. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour. [Rule 62-4.070(3), F.A.C., and BACT]

16. Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse stack pursuant to 40 CFR 63.1350. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse is required pursuant to 40 CFR 63.1349 and 63.1350.

17. CEM System Requirements: The selection, installation, calibration, maintenance, operation, record keeping, and reporting of the CEM system shall comply with the requirements of 40 CFR 60.7 and 60.13; 40 CFR 60 Appendix B, Performance Specifications; and, Appendix F, Quality Assurance Procedures. [Rules 62-4.070(3), 62-210.800 and 62-297.520, F.A.C., and BACT]

[Note: 40 CFR 60 Appendix B and Appendix F have been omitted for brevity. See the Code of Federal Regulations for the text of these sections.]

18. Emission Tests Required: In addition to the continuous monitoring requirements of this permit, the owner or operator shall demonstrate compliance with the emission limits of this permit for emissions unit 044 initially and annually using the test methods of 40 CFR 60 Appendix A and 40 CFR 61 Appendix B specified below. The tests conducted annually for the relative accuracy test audit (RATA) for the CEM system may be used to satisfy this requirement provided the owner or operator satisfies the prior notification requirements and emission testing requirements of this permit for performance and compliance tests.

POLLUTANT	TEST METHOD
PM	Method 5 [1]
PM_{10}	Method 5, assuming all PM measured is PM_{10}
SO_2	Method 6 or 6C
NOx	Method 7 or 7E [2]
VE	Method 9
CO	Method 10 or 10A
VOC	Method 25 or 25A

[1] The minimum sample volume shall be 30 dry standard cubic feet.
[2] NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.

Each test shall be conducted while all continuous monitoring systems are functioning properly, and with all process units operating at their permitted capacity.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

19. Emission tests of emissions unit 044 shall be conducted for the pollutants in condition 18 upon initial operation under the fuel scenario representing the highest potential for generating emissions:

PRIMARY FUEL	SECONDARY FUEL
Coal	Whole tires directly into the pyroprocessing system, petroleum coke, and flyash

Subsequent annual testing under these fuel firing scenarios is not required for any firing scenario that is used for less than 400 hours in the previous year, as documented by fuel firing records.

21. Materials Balance testing in condition 22 will be used to determine mercury emissions.

[Rules 62-4.070(3), 62-296.701(4)(a), (c) and (d), and 62-297.310(7), F.A.C. and BACT]

[Note: 40 CFR 60 Appendix A has been omitted for brevity. See the Code of Federal Regulations for the text of this section.]

22. Material Balance Analysis of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance and making and maintaining records of monthly and rolling 12-month mercury throughput. The owner or operator shall, for each month of sampling required by this condition, perform daily sampling of the raw mill feed, coal, petroleum coke, and tires, and shall composite the daily samples each month, and shall analyze the monthly composite sample to determine mercury content of these materials for the month. The owner or operator shall

determine the mass of mercury introduced into the pyroprocessing system (in units of pounds per month) from the total of the product of the mercury content from the monthly composite analysis and the mass of each material or fuel used during the month. The consecutive 12-month record shall be determined from the individual monthly records for the current month and the preceding eleven months and shall be expressed in units of pounds of mercury per consecutive 12-month period. Such records shall be completed no later than 25 days following the month of the records. To determine the mercury content of the feed material and fuels to be used in the monthly calculation, sampling and analysis shall be performed in accordance with the following schedule:

i. During the first quarter of plant operation, sample each month analyze each month's composite sample.

ii. After the first quarter, sample for one month of each quarter and analyze that month's composite sample.

[Rule 62-4.070(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

23. Records of Process and Production Rates: The owner or operator shall make and maintain records of the process rate of dry preheater feed in units of tons per hour and tons per consecutive 12-month period, and the production rate of clinker and cement in units of tons per hour and tons per consecutive 12-month period. The owner or operator shall make and maintain records of the production of Portland cement in units of tons per consecutive 12-month period. Records in units of tons per hour shall be based on either hourly averages or daily averages and shall be completed no later than the day following the day of the record. Records in units of tons per consecutive 12-month period shall be made from monthly records of process and production rates for the past 12 months, and shall be completed no later than the 10th day of each following month. [Rule 62-4.070(3), F.A.C. and BACT]

24. Records of Fuels and Heat Input: The owner or operator shall record the fuel firing rate continuously. The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content, heat content and, for coal, petroleum coke, natural gas, fuel oil, propane, flyash, and whole tires, and the proximate and ultimate analyses.

    The owner or operator shall make and maintain records of heat input to the pyroprocessing system on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel firing rate by the heating value representative of that fuel from the records of fuel analysis. Such records shall be completed for each block-hour, within 15 minutes of the end of each block-hour.

    [Rule 62-4.070(3), F.A.C.]

25. Records of Startup, Shutdown and Malfunction: The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Rule 62-4.070(3), F.A.C.]

26. Material Balance Records of Mercury: The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance as required by condition 22 and making and maintaining records of monthly and rolling 12-month mercury throughput
[Rule 62-4.070(3), F.A.C.]

27. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION B.
The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.		EMISSIONS UNIT DESCRIPTION
045	2E-22	Filter Dust (2 dust collectors: 2G-08 and 2G-09)
046	2F-04	Raw Meal Transport
047	2H-05	Kiln Feed Transport
048	2L-01	Clinker Transport
049	2L-14	Gypsum Bin
050	2L-05	Clinker Storage
051	2M-04	Finish Mill Collecting Bin
052	2N-01	Finish Mill
053	2N-03	Air Slide
054	2N-04	Bucket Elevator
055	2N-06	High Efficiency Separator
056	2N-26	Cement Cooler
057	2P-01	Cement Transport
058	2Q-28	Cement Loadout Bin
059	2Q-31	Cement Loadout Bin

These Emissions units are subject to 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants (40 CFR 60.60 – 60.66) and 40 CFR 60 Subpart A. These emissions units are also subject to 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340 – 63.1359), adopted by reference into Rule 62.204.800, F.A.C. and 40 CFR 63 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

[The numbering of the original federal rules in the following conditions has been preserved for ease of reference. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary of the Department or the Secretary's designee.]

1. Emissions from the following emissions units shall not exceed the following limits for the following pollutants:

EMISSIONS UNIT	FACILITY ID NO.	EMISSION LIMIT PM (LB/HR)	EMISSIONS LIMIT PM_{10} (LB/HR)	AVERAGING TIME
045	2E-22 2G-08	0.336 (1.47 tpy)	0.235 (1.03 tpy)	3 hours [1]
	2E-22 2G-09	1.143 (5.01 tpy)	0.80 (3.504 tpy)	3 hours [1]
046	2F-04	0.26 (1.14 tpy)	0.182 (.8 tpy)	3 hours [1]
047	2H-05	0.26 (1.14 tpy)	0.18 (.8 tpy)	3 hours [1]
048	2L-01	0.19 (0.83 tpy)	0.133 (0.58 tpy)	3 hours [1]
049	2L-14	0.320 (1.40 tpy)	0.224 (0.98 tpy)	3 hours [1]
050	2L-05	0.253 (1.11 tpy)	0.177 (0.776 tpy)	3 hours [1]
051	2M-04	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]

052	2N-01	2.31 (10.12 tpy)	1.62 (7.08 tpy)	3 hours [1]
053	2N-03	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
054	2N-04	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
055	2N-06	9.199 (40.29 tpy)	6.44 (28.2 tpy)	3 hours [1]
056	2N-26	0.403 (1.77 tpy)	0.282 (1.24 tpy)	3 hours [1]
057	2P-01 Transport A	0.256 (1.12 tpy)	0.18 (0.785 tpy)	3 hours [1]
	2P-01 Transport B	0.832 (3.64 tpy)	0.582 (2.55 tpy)	3 hours [1]
058	2Q-28	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]
059	2Q-31	0.208 (0.91 tpy)	0.146 (0.638 tpy)	3 hours [1]

[1] The averaging times for PM and PM_{10} correspond to the required length of sampling for the initial and subsequent emission tests.

The averaging time for visible emissions shall be a 6-minute block average computed from a minimum of one measurement every 15 seconds. The 6 minute block averages shall start at the beginning of each hour.

[Rules 62-4.070(3), 62-210.700(5) and 62-212.400, F.A.C., and BACT]

2. Particulate matter (PM) emissions from these emissions units shall not exceed 0.01 grains/dscf, and PM_{10} emissions shall not exceed 0.007 grains/dscf. Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (No visible emissions). Emissions of NO_x, SO_2, CO and VOC will be controlled by emissions unit 044.

   Initial and annual compliance testing for PM and PM_{10} emissions from this emissions unit is waived, and an alternative standard of 5% opacity (No visible emissions) is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.
   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

3. Visible Emission Tests Required – The owner or operator shall demonstrate compliance with the visible emission limits of this subsection annually, using the methods specified in this subsection. [Rule 62-297.310(7)(a)4.a., F.A.C.]

   [Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request]

4. This emissions unit is subject to all applicable requirements of Appendix B and Appendix C of this permit.

SUBSECTION C.

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
060/061	Coal Handling and Grinding operations

Emissions units 060 and 061 are subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants (40 CFR 60.250 – 60.254) and 40 CFR 60 Subpart A. These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Hours of Operation: This emissions unit may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
2. Process Rate Limitation: The coal mill shall not crush more than 15.0 tons per hour of coal and/or petroleum coke, 30-day average. The coal mill shall not crush more than 131,400 tons annually. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
3. O&M Plan for Baghouses: The owner or operator shall prepare an operation and maintenance plan (O&M Plan) for emissions unit 060. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Northeast District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

4. The emissions units correspond shall have the following emission points:

EMISSIONS UNIT NO.	EMISSION POINT	DESCRIPTION
060	2S-15	Coal mill
061	2S-20	Fuel bin

Particulate matter (PM) emissions from emissions unit 060 shall not exceed 0.01 grains/dscf (1.60 lb/hr; 7.01 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (1.12 lb/hr; 4.91 tpy). Particulate matter (PM) emissions from emissions unit 061 shall not exceed 0.01 grains/dscf (0.145 lb/hr; 0.64 tpy), and PM_{10} emissions shall not exceed 0.007 grains/dscf (0.102 lb/hr; 0.445 tpy). Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. Visible emissions from each emission point of this emissions unit shall not exceed 5% opacity (observations for the initial compliance test shall be made for 3 hours (thirty 6-minute averages)).

Initial and annual compliance testing for PM emissions from each emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. If the Department has reason to believe that the particulate weight emission standard is not being met, it

shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A.

[Rules 62-4.070(3), 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

5. Emission Tests Required: The owner or operator shall demonstrate compliance with the visible emissions standard for emissions unit 060 annually using EPA Method 9, as described in 40 CFR 60 Appendix A. The owner or operator shall demonstrate initial compliance with the particulate matter (PM) limits of this permit for emissions unit 061 using EPA Method 5, as described in 40 CFR 60 Appendix A. Should subsequent particulate matter (PM) testing be required for both emissions units, compliance shall be demonstrated using EPA Method 5.

[Rules 62-4.070(3), 62-297.310 and 62-297.620(4), F.A.C. and BACT]

REPORTING AND RECORD KEEPING REQUIREMENTS

6. Records of Process Rates: The owner or operator shall make and maintain records showing the monthly processing rate of coal and petroleum coke crushed in the coal mill. Records of the processing rate for each month shall be completed no later than 10 days following the end of the month. [Rule 62-4.070(3), F.A.C.]

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

7. Pursuant to 40 CFR 60.250 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems.
[40 CFR 60.250]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

8. Pursuant to 40 CFR 60.252 Standards for particulate matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any thermal dryer gases which:
(1) Contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf).
(2) Exhibit 20 percent opacity or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.
[40 CFR 60.252(a) and (c)]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

9. Pursuant to 40 CFR 60.253 Monitoring of operations:

(a) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:
(1) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ±3° Fahrenheit.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under 40 CFR 60.13(b).
[40 CFR 60.253(a) and (b)]

10. Pursuant to 40 CFR 60.254 Test methods and procedures:

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particular matter standards in § 60.252 as follows:
(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.
(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.
[40 CFR 60.254(a) and (b)]

FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NOx TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer and Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	CMS performance summary [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ___	a. Monitor equipment malfunctions .... ___
b. Control equipment problems ..... ___	b. Non-Monitor equipment malfunctions ..... ___
c. Process problems ..... ___	c. Quality assurance calibration ..... ___
d. Other known causes ..... ___	d. Other known causes ..... ___
e. Unknown causes ..... ___	e. Unknown causes ..... ___
2. Total duration of excess emissions ..... ___	2. Total CMS Downtime ..... ___
3. [Total duration of excess emissions] x (100) / [Total source operating time] ..... ___ % [2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ___ % [2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____

Title: _____

Date: _____

1. Pursuant to 40 CFR 60 Subparts F and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 60 Subpart F and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX C. 40 CFR 63 SUBPART LLL AND 40 CFR 63 GENERAL PROVISIONS

1. Pursuant to 40 CFR 63 Subparts LLL and A:

   The owner or operator shall comply with all applicable provisions of 40 CFR 63 Subpart LLL and A, which are attached to this permit.

[Note: The numbering of the original rules this appendix has been preserved for ease of reference to the rules. Inapplicable paragraphs have been omitted for clarity and brevity. The term "Administrator" when used in 40 CFR 63 shall mean the Secretary or the Secretary's designee.]

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62–4.160, F.A.C.]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

APPENDIX GC
CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62–4.160, F.A.C.]

G.14 The permittee shall comply with the following:
(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX B: 40 CFR 60 SUBPART F AND GENERAL PROVISIONS

FEDERAL NSPS REQUIREMENTS

APPLICABILITY AND DEFINITIONS

Pursuant to 40 CFR 60.60 Applicability and Designation of Affected Facility:

(a) The provisions of this subpart are applicable to the following affected facilities in Portland cement plants: Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.
[40 CFR 60.60]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

Pursuant to 40 CFR 60.62 Standard for Particulate Matter:

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any kiln any gases which:

(1) Contain particulate matter in excess of 0.15 kg per metric ton of feed (dry basis) to the kiln (0.30 lb per ton).

(2) Exhibit greater than 20 percent opacity.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per metric ton of feed (dry basis) to the kiln (0.10 lb per ton).

(2) Exhibit 10 percent opacity, or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater.
[40 CFR 60.62(a), (b) and (c)]

[Note: Emissions units 009, 012 and 013 are subject to the visible emissions limit of paragraph (c) of this condition. The BACT emission limits of this permit for emissions units 009 and 012 are as stringent or are more stringent than the emission limits imposed by this rule.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

Pursuant to 40 CFR 60.63 Monitoring of Operations:

(a) The owner or operator of any Portland cement plant subject to the provisions of this part shall record the daily production rates and kiln feed rates.

(b) Except as provided in paragraph (c) of this section, each owner or operator of a kiln or clinker cooler that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate in accordance with § 60.13 a continuous opacity monitoring system to measure the opacity of emissions discharged into the atmosphere from any kiln or clinker cooler. Except as provided in paragraph (c) of this section, a continuous opacity monitoring system

shall be installed on each stack of any multiple stack device controlling emissions from any kiln or clinker cooler. If there is a separate bypass installed, each owner or operator of a kiln or clinker cooler shall also install, calibrate, maintain, and operate a continuous opacity monitoring system on each bypass stack in addition to the main control device stack. Each owner or operator of an affected kiln or clinker cooler for which the performance test required under § 60.8 has been completed on or prior to December 14, 1988, shall install the continuous opacity monitoring system within 180 days after December 14, 1988.

(c) For the purpose of reports under § 60.65, periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity exceeds that allowed by § 60.62(a)(2) or § 60.62(b)(2).
[40 CFR 60.63 (a), (b) and (d)]

Pursuant to 40 CFR 60.64 Test Methods and Procedures:

(a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standard in 40 CFR 60.62 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E = (c_s Q_{sd})/(P K)$

where:
E = emission rate of particulate matter, kg/metric ton (lb/ton) of kiln feed.
c_s = concentration of particulate matter, g/dscm (g/dscf).
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
P = total kiln feed (dry basis) rate, metric ton/hr (ton/hr).
K = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30.0 dscf) for the kiln and at least 60 minutes and 1.15 dscm (40.6 dscf) for the clinker cooler.

(3) Suitable methods shall be used to determine the kiln feed rate (P), except fuels, for each run. Material balance over the production system shall be used to confirm the feed rate.

(4) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
[40 CFR 60.64(a) and (b)]

REPORTING AND RECORD KEEPING REQUIREMENTS

Pursuant to 40 CFR 60.65 Recordkeeping and Reporting:

(a) Each owner or operator required to install a continuous opacity monitoring system under 40 CFR 60.63(b) shall submit reports of excess emissions as defined in 40 CFR 60.63(d). The content of these reports must comply with the requirements in 40 CFR 60.7(c). Notwithstanding the provisions of 40 CFR 60.7(c), such reports shall be submitted semiannually.

(b) Each owner or operator monitoring visible emissions under 40 CFR 60.63(c) shall submit semi-annual reports of observed excess emissions as defined in 40 CFR 60.63(d).

(c) Each owner or operator of facilities subject to the provisions of 40 CFR 60.63(c) shall submit semi-annual reports of the malfunction information required to be recorded by 40 CFR 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere.
[40 CFR 60.65(a), (b) and (c)]

Subpart A-General Provisions for 40 CFR 60

40 CFR 60.1 Applicability.

(a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced
after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution controlagency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).
[40 CFR 60.1(a), (b) and (c)]

40 CFR 60.5 Determination of construction or modification.

(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

§ 60.6 Review of plans.

(a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.

(b)(1) A separate request shall be submitted for each construction or modification project.

(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each

affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.

(c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

40 CFR 60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

1. A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

2. Reserved.

3. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

4. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

5. A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

6. A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

7. A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5) of 40 CFR 60. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

(b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent

reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]

(e) (1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance

history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance re-port (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

(f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:

(1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(g) If notification substantially similar to that in 40 CFR 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR 60.7(a).

(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
[40 CFR 60.7(a), (b), (c), (d), (e), (f), (g), (h)]

40 CFR 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
[40 CFR 60.8(a)]

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
[40 CFR 60.8(b)(1), (2), (3), (4) & (5)]

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
[40 CFR 60.8(c)].

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems , etc) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the perfomance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes

(i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and

(ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)].

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)].

§ 60.9 Availability of information.

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of §§ 60.5 and 60.6 is governed by §§ 2.201 through 2.213 of this chapter and not by § 2.301 of this chapter.)

40 CFR 60.10 State authority.

The provisions of 40 CFR 60 shall not be construed in any manner to preclude any State or political subdivision thereof from:

(a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.

(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

[40 CFR 60.10(a) and (b)].

40 CFR 60.11 Compliance with standards and maintenance requirements.

(a) Compliance with standards in this part, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-

minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e) (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in 40 CFR 60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in 40 CFR 60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The

owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in 40 CFR 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of 40 CFR 60.7(e)(1) shall apply.

(4) The owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by 40 CFR 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and 40 CFR 60.8 performance test results.

(5) The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by 40 CFR 60.8, the opacity observation results and observer certification required by 40 CFR 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by 40 CFR 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with 40 CFR 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, the shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is

meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.

(f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.
[40 CFR 60.11(a), (b), (c), (d), (e) and (f)]

40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

40 CFR 60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continuos opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d) (1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and

20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and
all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) (1) When more than one continuous monitoring system is used to measure the emissions from only one affected facility (e.g. multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless installation of fewer systems is approved by the Administrator.

(2) When the effluents from two or more affected facilities subject to the same opacity standard are combined before being released to the atmosphere, the owner or operator may either install a continuous opacity monitoring system at a location monitoring the combined effluent or install an opacity combiner system comprised of opacity and flow monitoring systems on each stream, and shall report as per Sec. 60.7(c) on the combined effluent. When the affected facilities are not subject to the same opacity standard applicable, except for documented periods of shutdown of the affected facility, subject to the most stringent opacity standard shall apply

(3) When the effluents from two or more affected facilities subject to the same emissions standard, other than opacity, are combined before released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the continuous monitoring standard, separate continuous monitoring systems shall be installed on each effluent and the owner or operator shall report as required for each affected facility.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. For owners or operators complying with the requirements in Sec. 60.7(f)(1) or (2), data averages must include any data recorded during periods of monitor breakdown or malfunction. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O2 or ng or pollutant per J of heat input). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(h)].

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(5) Alternative methods of converting pollutant concentration measurements to units of the standards.

(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(i)].

(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:

(1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in section 8.4 of Performance Specification 2 and substitute the procedures in section 16.0 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 of this subpart or other tests performed
following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

(2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., 40 CFR 60.45(g)(2) and 40 CFR 60.45(g)(3), 40 CFR 60.73(e), and 40 CFR 60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in section 8.4 of Performance Specification 2.
[Rule 62-296.800, F.A.C.; 40 CFR 60.13(j)].

40 CFR 60.14 Modification.

(a) Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(a)].

(b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1) . When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(b)].

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(c)].

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(e)].

(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(f)].

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved.
[Rule 62-296.800, F.A.C.; 40 CFR 60.14(g)].

(h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(j) (1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(2) This exemption shall not apply to any new unit that:

(i) Is designated as a replacement for an existing unit;

(ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(iii) Is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A *temporary clean coal control technology demonstration projec*t, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

40 CFR 60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(a)].

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

[Rule 62-296.800, F.A.C.; 40 CFR 60.15(b)].

(c) "Fixed capital cost"' means the capital needed to provide all the depreciable components.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(c)].

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(1) Name and address of the owner or operator.

(2) The location of the existing facility.

(3) A brief description of the existing facility and the components which are to be replaced.

(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(6) The estimated life of the existing facility after the replacements.

(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(d)].

(e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(e)].

(f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:

(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and

(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(f)].

(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.
[Rule 62-296.800, F.A.C.; 40 CFR 60.15(g)].

§ 60.18 General control device requirements.

(a) *Introduction.* This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, Vmax, as determined by the following equation:

Vmax=(XH2−K1)* K2

Where:

Vmax=Maximum permitted velocity, m/sec.

K1=Constant, 6.0 volume-percent hydrogen.

K2=Constant, 3.9(m/sec)/volume-percent hydrogen.

XH2=The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, Vmax, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, Vmax, as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f) (1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Eq. 1

where:
HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, \quad 1.740 \times 10^{-7} \quad \left(\frac{1}{ppm}\right) \left(\frac{g\ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

Eq. 2

Ci=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and
Hi=Net heat of combustion of sample component i, kcal/g mole at 25 °>C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, Vmax, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation. Log10 (Vmax)=(HT+28.8)/31.7
Vmax=Maximum permitted velocity, M/sec
28.8=Constant
31.7=Constant
HT=The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, Vmax, for air-assisted flares shall be determined by the following equation. Vmax=8.706+0.7084 (HT)
Vmax=Maximum permitted velocity, m/sec
8.706=Constant
0.7084=Constant
HT=The net heating value as determined in paragraph (f)(3).

§ 60.19 General notification and reporting requirements.

(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word ''calendar'' is absent, unless otherwise specified in an applicable requirement.

(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be post-marked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the post-mark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.

(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f) (1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

APPENDIX C: 40 CFR 63 SUBPART LLL AND GENERAL PROVISIONS

FEDERAL NESHAP REQUIREMENTS

GENERAL

Pursuant to 40 CFR 63.1340 Applicability and Designation of Affected Sources:

(a) Except as specified in paragraphs (b) and (c) of this section, the provisions of this subpart apply to each new and existing Portland cement plant which is a major source as defined in §63.2.

(b) The affected sources subject to this subpart are:
(1) Each kiln and each in-line kiln/raw mill at any major source, including alkali bypasses, except for kilns and in-line kiln/raw mills that burn hazardous waste and are subject to and regulated under subpart EEE of this part;
(2) Each clinker cooler at any Portland cement plant which is a major source;
(3) Each raw mill at any Portland cement plant which is a major source;
(4) Each finish mill at any Portland cement plant which is a major source;
(5) Each raw material dryer at any Portland cement plant which is a major source and each greenfield raw material dryer at any Portland cement plant which is a major source;
(6) Each raw material, clinker, or finished product storage bin at any Portland cement plant which is a major source;
(7) Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln at any Portland cement plant which is a major source;
(8) Each bagging system at any Portland cement plant which is a major source.

(c) For Portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill. Any equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage is not subject to this subpart. In addition, the primary and secondary crushers of the on-site nonmetallic mineral processing plant, regardless of whether they precede the raw material storage, are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.
(d) The owner or operator of any affected source subject to the provisions of this subpart is subject to title V permitting requirements.

Pursuant to 40 CFR 63.134 Definitions:

The terms used in this rule are defined at 40 CFR 63.1341 Definitions, the text of which is reproduced below.

All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.
Alkali bypass means a duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the "kiln exhaust gas bypass".
Bagging system means the equipment which fills bags with Portland cement.
Bin means a manmade enclosure for storage of raw materials, clinker, or finished product prior to further processing at a Portland cement plant.

Clinker cooler means equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.
Continuous monitor means a device which continuously samples the regulated parameter specified in §63.1350 of this subpart without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the continuous emission monitoring system performance specifications in appendix B to part 60 of this chapter.
Conveying system means a device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include but are not limited to the following: feeders, belt conveyors, bucket elevators and pneumatic systems.
Conveying system transfer point means a point where any material including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.
Dioxins and furans (D/F) means tetra-, penta-, hexa-, hepta-, and octa- chlorinated dibenzo dioxins and furans.
Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.
Feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to the kiln. Feed does not include the fuels used in the kiln to produce heat to form the clinker product.
Finish mill means a roll crusher, ball and tube mill or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.
Greenfield kiln, in-line kiln/raw mill, or *raw material dryer* means a kiln, in-line kiln/raw mill, or raw material dryer for which construction is commenced at a plant site (where no kilns and no in-line kiln/raw mills were in operation at any time prior to March 24, 1998) after March 24, 1998.
Hazardous waste is defined in §261.3 of this chapter.
In-line kiln/raw mill means a system in a Portland cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.
Kiln means a device, including any associated preheater or precalciner devices, that produces clinker by heating limestone and other materials for subsequent production of Portland cement.
Kiln exhaust gas bypass means alkali bypass.
Monovent means an exhaust configuration of a building or emission control device (e. g. positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i. e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.
New brownfield kiln, in-line kiln raw mill, or *raw material dryer* means a kiln, in-line kiln/raw mill or raw material dryer for which construction is commenced at a plant site

(where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.
One-minute average means the average of thermocouple or other sensor responses calculated at least every 60 seconds from responses obtained at least once during each consecutive 15 second period.
Portland cement plant means any facility manufacturing Portland cement.
Raw material dryer means an impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.
Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.
Rolling average means the average of all one-minute averages over the averaging period.
Run average means the average of the one-minute parameter values for a run.
TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[40 CFR 63.1340 and 63.1341]

EMISSION STANDARDS AND OPERATING LIMITS

Pursuant to 40 CFR 63.1342 Standards: General:

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to subpart LLL.

(b) Table 1 of this section provides a summary of emission limits and operating limits of this subpart.

Table 1 §63.1342. Emission Limits and Operating Limits.

Affected Source	Pollutant or Opacity	Emission and Operating Limit
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	PM	0.15 kg/Mg of feed (dry basis)
	Opacity	20 percent
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	D/F	0.20 ng TEQ/dscm or 0.40 ng TEQ/dscm when the average of the performance test run average particulate matter control device (PMCD) inlet temperatures is 204° C or less. [Corrected to 7 percent oxygen] Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test.

Affected Source	Pollutant or Opacity	Emission and Operating Limit
		If activated carbon injection is used: Operate such that the three-hour rolling average activated carbon injection rate is no less than rate established at performance test. Operate such that either the carrier gas flow rate or carrier gas pressure drop exceeds the value established at performance test. Inject carbon of equivalent specifications to that used at performance test.
New greenfield kilns and in-line kiln/raw mills at major sources	THC	50 ppmvd, as propane, corrected to 7 percent oxygen
All clinker coolers at major sources	PM	0.050 kg/Mg of feed (dry basis)
	Opacity	10 percent
All raw mills and finish mills at major sources	Opacity	10 percent
New greenfield raw material dryers at major sources	THC	50 ppmvd, as propane, corrected to 7 percent oxygen
All raw material dryers and material handling points at major sources	Opacity	10 percent

Pursuant to 40 CFR 63.1343 Standards for Kilns and In-line Kiln/raw Mills:

(a) *General.* The provisions in this section apply to each kiln, each in-line kiln/raw mill, and any alkali bypass associated with that kiln or in-line kiln/raw mill.

(c) *Greenfield/major sources.* No owner or operator that commences construction of a greenfield kiln or greenfield inline kiln/raw mill at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources any gases which:

(1) Contain particulate matter in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the bypass stack are subject to this emission limit.

(2) Exhibit opacity greater than 20 percent.

(3) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf)(TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-10} gr per dscf)(TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204° C (400° F) or less.

(4) Contain total hydrocarbon (THC), from the main exhaust of the kiln or in-line kiln/raw mill, in excess of 50 ppmvd as propane, corrected to seven percent oxygen.

[40 CFR 63.1343]

Pursuant to 40 CFR 63.1344 Operating Limits for Kilns and In-line kiln/raw Mills:

(a) The owner or operator of a kiln subject to a D/F emission limitation under §63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under §63.1343 must operate the in-line kiln/raw mill, such that,

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in paragraph (b) of this section and established during the performance test, with or without the raw mill operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with §63.1349(b)(3)(iv).

[40 CFR 63.1344]

Pursuant to 40 CFR 63.1345 Standards for Clinker Coolers:

(a) No owner or operator of clinker cooler shall cause to be discharged into the atmosphere from the clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) Exhibit opacity greater than ten percent.

(b) [Reserved]

[40 CFR 63.1345]

[Note: 40 CFR 63.1346 is not applicable to this project.]

Pursuant to 40 CFR 63.1347 Standards for Raw and Finish Mills:

The owner or operator of each raw mill or finish mill shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent. [40 CFR 63.1347]

[Note: The BACT emission limits of this permit for emissions unit 006 are as stringent or are more stringent than the emission limit of this condition.]

Pursuant to 40 CFR 63.1348 Standards for Affected Sources Other Than Kilns; In-Line Kiln/Raw Mills; Clinker Coolers; New and Reconstructed Raw Material Dryers; and Raw and Finish Mills:

The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading

system; shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent. [40 CFR 63.1348]

MONITORING AND COMPLIANCE PROVISIONS

Pursuant to 40 CFR 63.1349 Performance Testing Requirements:

(a) The owner or operator of an affected source subject to this subpart shall demonstrate initial compliance with the emission limits of §63.1343 and §§63.1345 through 63.1348 using the test methods and procedures in paragraph (b) of this section and §63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

(1) A brief description of the process and the air pollution control system;
(2) Sampling location description(s);
(3) A description of sampling and analytical procedures and any modifications to standard procedures;
(4) Test results;
(5) Quality assurance procedures and results;
(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(7) Raw data sheets for field sampling and field and laboratory analyses;
(8) Documentation of calculations;
(9) All data recorded and used to establish parameters for compliance monitoring; and
(10) Any other information required by the test method.

(b) Performance tests to demonstrate initial compliance with this subpart shall be conducted as specified in paragraphs (b)(1) through (b)(4) of this section.

(1) The owner or operator of a kiln subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section. The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. The opacity exhibited during the period of the Method 5 of Appendix A to part 60 of this chapter performance tests required by paragraph (b)(1)(i) of this section shall be determined as required in paragraphs (b)(1)(v) through (vi) of this section.

(i) Method 5 of appendix A to part 60 of this chapter shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). Each run shall be conducted for at least 1 hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. A determination of the PM collected in the impingers (``back half'') of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of this subpart. However, this shall not preclude the permitting authority from requiring a determination of the ``back half'' for other purposes.

(ii) Suitable methods shall be used to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (c_s Q_{sd}) / P \qquad \textbf{(Eq 1)}$$

Where: E = emission rate of particulate matter, kg/Mg of kiln feed.
c_s = concentration of PM, kg/dscm.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(iv) When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the main exhaust and alkali bypass of the kiln or in-line kiln/raw mill shall be tested simultaneously and the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and alkali bypass shall be computed for each run using equation 2,

$$E_c = (c_{sk}Q_{sdk} + c_{sb}Q_{sdb})/P \qquad \textbf{(Eq 2)}$$

Where: E_c = the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and bypass stack, kg/Mg of kiln feed.
c_{sk} = concentration of particulate matter in the kiln or in-line kiln/raw mill effluent, kg/dscm.
Q_{sdk} = volumetric flow rate of kiln or in-line kiln/raw mill effluent, dscm/hr.
c_{sb} = concentration of particulate matter in the alkali bypass gas, kg/dscm.
Q_{sdb} = volumetric flow rate of alkali bypass gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(v) Except as provided in paragraph (b)(1)(vi) of this section the opacity exhibited during the period of the Method 5 performance tests required by paragraph (b)(1)(i) of this section shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(vi) Each owner or operator of a kiln, in-line kiln/raw mill, or clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (b)(1)(v) of this section, conduct an opacity test in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of Performance Specification 1 (PS-1) of appendix B to part 60 of this chapter is not feasible, a test shall be conducted in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. The maximum six-minute average opacity shall be determined during the three Method 5 test runs, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).

(2) The owner or operator of any affected source subject to limitations on opacity under this subpart that is not subject to paragraph (b)(1) of this section shall demonstrate initial

compliance with the affected source opacity limit by conducting a test in accordance with Method 9 of appendix A to part 60 of this chapter. The performance test shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (b)(2)(i) through (ii) of this section apply:

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period.

(3) The owner or operator of an affected source subject to limitations on D/F emissions under this subpart shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of appendix A to part 60 of this chapter. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a kiln or in-line kiln/raw mill equipped with an alkali bypass shall conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. However, the owner or operator of an in-line kiln/raw mill may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with Sec. 63.7(e). The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run, and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1344(b).

(v) If activated carbon injection is used for D/F control, the rate of activated carbon injection to the kiln or in-line kiln/raw mill exhaust, and where applicable, the rate of activated carbon injection to the alkali bypass exhaust, must be continuously recorded during the period of the Method 23 test, and the continuous injection rate record(s) must be included in the performance test report. In addition, the performance test report must include the brand and type of activated carbon used during the performance test and a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the test. Activated carbon injection rate parameters must be determined in accordance with paragraphs (b)(3)(vi) of this section.

(vi) The run average injection rate must be calculated for each run, and the average of the run average injection rates must be determined and included in the

performance test report and will determine the applicable injection rate limit in accordance with §63.1344(c)(1).

(4) The owner or operator of an affected source subject to limitations on emissions of THC shall demonstrate initial compliance with the THC limit by operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 of this chapter. The duration of the performance test shall be three hours, and the average THC concentration (as calculated from the one-minute averages) during the three hour performance test shall be calculated. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraphs (b)(1) and (b)(2) of this section shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.

(d) Performance tests required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) (1) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph (b)(3) of this section.

(2) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

(3) In preparation for and while conducting a performance test required in paragraph (e)(1) of this section, a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in paragraphs (e)(3)(i) through (iv) of this section are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.

(i) The source must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (e)(1) of this section, including when the planned operational change period would begin.

(ii) The performance test results must be documented in a test report according to paragraph (a) of this section.

(iii) A test plan must be made available to the Administrator prior to testing, if requested.

(iv) The performance test must be conducted, and it must be completed within 360 hours after the planned operational change period begins.

(f) Table 1 of this section provides a summary of the performance test requirements of this subpart.

[40 CFR 63.1349]

Table 1 to 40 CFR 63.1349. Summary of Performance Test Requirements.

AFFECTED SOURCE AND POLLUTANT	PERFORMANCE TEST
In-line kiln/raw mill [b, c] PM	EPA Method 5 [a]
In-line kiln/raw mill [b, c] Opacity	COM [d, e]
In-line kiln/raw mill [b, c, f, g] D/F	EPA Method 23 [h]
In-line kiln/raw mill [c] THC	THC CEM (EPA PS-8A) [i]
Clinker cooler PM	EPA Method 5 [a]
Clinker cooler opacity	COM [d, j]
Raw and finish mill opacity	EPA Method 9[a, j]
Materials handling processes (raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging, and bulk loading and unloading systems) opacity	EPA Method 9[a, j]

[a] Required initially and every 5 years thereafter.
[b] Includes main exhaust.
[c] In-line kiln/raw mill to be tested with and without raw mill in operation.
[d] Must meet COM performance specification criteria.
[e] Opacity limit is 20 percent.
[f] [This note is not applicable to this facility.]
[g] Temperature determined separately with and without the raw mill operating.
[h] Required initially and every 30 months thereafter.
[i] EPA Performance Specification (PS)-8A of appendix B to 40 CFR part 60.
[j] Opacity limit is 10 percent.

[40 CFR 63.1349]

Pursuant to 40 CFR 63.1350 Monitoring Requirements:

(a) The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information:

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of §§63.1343 through 63.1348;

(2) Corrective actions to be taken when required by paragraph (e) of this section;

(3) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year; and

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under §§63.1346 and 63.1348. Such procedures must include the provisions of paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to part 60 of this chapter. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. ``Totally enclosed conveying system transfer point'' shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs (a)(4)(i) through (iv) of this section for each such conveying system transfer point located within the building, or for the building itself, according to paragraph (a)(4)(vii) of this section.

(vii) If visible emissions from a building are monitored, the requirements of paragraphs (a)(4)(i) through (iv) of this section apply to the monitoring of the building, and you must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses in accordance with paragraphs (c)(1) through (c)(3) of this section.

(1) Except as provided in paragraph (c)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a continuous opacity monitor (COM) located at the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a kiln or in-line kiln/raw mill subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with

multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (c)(1) of this section, monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A to part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard.

(d) The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler in accordance with paragraphs (d)(1) through (d)(3) of this section.

(1) Except as provided in paragraph (d)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a COM located at the outlet of the clinker cooler PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (d)(1) of this section, monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A to part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

(e) The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD of these affected sources in accordance with the procedures of Method 22 of appendix A to part 60 of this chapter. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of appendix A to part 60 of this chapter. The duration of the Method 9 test shall be 30 minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in §63.1349(b)(3)(iv).

(ii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of an affected source subject to a limitation on D/F emissions that employs carbon injection as an emission control technique shall comply with the monitoring requirements of paragraphs (f)(1) through (f)(6) and (g)(1) through (g)(6) of this section to demonstrate continuous compliance with the D/F emission standard.

(1) Install, operate, calibrate and maintain a continuous monitor to record the rate of activated carbon injection. The accuracy of the rate measurement device must be $\pm$ 1 percent of the rate being measured.

(2) Verify the calibration of the device at least once every three months.

(3) The three-hour rolling average activated carbon injection rate shall be calculated as the average of 180 successive one-minute average activated carbon injection rates.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available,

the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average activated carbon injection rate must begin anew, without considering previous recordings.

(6) The owner or operator must install, operate, calibrate and maintain a continuous monitor to record the activated carbon injection system carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) established during the D/F performance test in accordance with paragraphs (g)(6)(i) through (g)(6)(iii) of this section.

(i) The owner or operator shall install, calibrate, operate and maintain a device to continuously monitor and record the parameter value.

(ii) The owner or operator must calculate and record three-hour rolling averages of the parameter value.

(iii) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average shall be added to the previous 179 values to calculate the three-hour rolling average.

(h) The owner or operator of an affected source subject to a limitation on THC emissions under this subpart shall comply with the monitoring requirements of paragraphs (h)(1) through (h)(3) of this section to demonstrate continuous compliance with the THC emission standard:

(1) The owner or operator shall install, operate and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A, of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part.

(2) The owner or operator is not required to calculate hourly rolling averages in accordance with section 4.9 of Performance Specification 8A.

(3) Any thirty-day block average THC concentration in any gas discharged from a greenfield raw material dryer, the main exhaust of a greenfield kiln, or the main exhaust of a greenfield in-line kiln/raw mill, exceeding 50 ppmvd, reported as propane, corrected to seven percent oxygen, is a violation of the standard.

(i) The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln raw mill at least once per year.

(j) The owner or operator of an affected source subject to a limitation on opacity under §63.1346 or §63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph (a) of this section.

(k) The owner or operator of an affected source subject to a particulate matter standard under §63.1343 shall install, calibrate, maintain and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.

(l) An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of

this subpart, except for emission standards for THC, subject to the provisions of paragraphs (l)(1) through (l)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (l)(3)(i) through (l)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(m) The requirements under paragraph (e) of this section to conduct daily Method 22 testing shall not apply to any specific raw mill or finish mill equipped with a continuous opacity monitor COM or bag leak detection system (BLDS). If the owner or operator chooses to install a COM in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, then the COM must be installed at the outlet of the PM control device of the raw mill or finish mill, and the COM must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of this part and according to PS-1 of appendix B to part 60 of this chapter. To remain in compliance, the opacity must be

maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. If the owner or operator chooses to install a BLDS in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, the requirements in paragraphs (m)(1) through (9) of this section apply to each BLDS:

(1) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. ``Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.

(4) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(5) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(6) All BLDS must be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations. The EPA recommends that where appropriate, the standard operating procedures manual for each bag leak detection system include concepts from EPA's ``Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997).

(7) The baseline output of the system must be established as follows:

(i) Adjust the range and the averaging period of the device; and

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan required by paragraph (a) of this section. In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in Sec. 63.2 certifies in writing to the Administrator that the fabric filter has been inspected and found to be in good operating condition.

(9) The owner or operator must maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time will be counted. The owner or operator must continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.

(n) A summary of the monitoring requirements of this subpart is given in Table 1 to this section.

Table 1 40 CFR 63.1350. Monitoring Requirements.

AFFECTED SOURCE/POLLUTANT OR OPACITY	MONITOR TYPE/ OPERATION/PROCESS	MONITORING REQUIREMENTS
All affected sources	Operations and maintenance plan	Prepare written plan for all affected sources and control devices
All in-line kiln raw mills/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level
In-line kiln raw mills/particulate matter	Particulate matter continuous emission monitoring system	Deferred
In-line kiln raw mills/ D/F	Combustion system inspection	Conduct annual inspection of components of combustion system
	Continuous temperature monitoring at PMCD inlet	Install, operate, calibrate and maintain continuous temperature monitoring and recording system; calculate three-hour rolling averages; verify temperature sensor calibration at least quarterly
In-line kiln raw mills/THC	Total hydrocarbon continuous emission monitor	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration
Clinker coolers/opacity	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level.
Finish mills at major sources/opacity	Method 22 visible emissions test	Conduct daily 6-minute Method 22 visible emissions test while mill is operating at highest load or capacity level; if visible emissions are observed, initiate corrective action within one hour and conduct 30-minute Method 9 test within 24 hours

AFFECTED SOURCE/POLLUTANT OR OPACITY	MONITOR TYPE/ OPERATION/PROCESS	MONITORING REQUIREMENTS
Raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems at major sources/opacity	Method 22 visible emissions test	As specified in operation and maintenance plan

[40 CFR 63.1350]

Pursuant to 40 CFR 63.1351 Compliance Dates:

(b) The compliance date for an owner or operator of an affected source subject to the provisions of this subpart that commences new construction or reconstruction after March 24, 1998 is June 14, 1999 or immediately upon startup of operations, whichever is later. [40 CFR 63.1351]

Pursuant to 63.1352 Additional Test Methods:

(a) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 are permitted to use Method 320 or Method 321 of appendix A of this part.

(b) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 are permitted to use Methods 26 or 26A of appendix A to part 60 of this chapter.

(c) Owners or operators conducting tests to determine the rates of emission of specific organic HAP from raw material dryers, kilns and in-line kiln/raw mills at Portland cement manufacturing facilities, for use in applicability determinations under §63.1340 of this subpart are permitted to use Method 320 of appendix A to this part, or Method 18 of appendix A to part 60 of this chapter.
[40 CFR 63.1352]

NOTIFICATION, REPORTING AND RECORDKEEPING

Pursuant to 40 CFR 63.1353 Notification Requirements:

(a) The notification provisions of 40 CFR part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(b) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in §63.9 as follows:

(1) Initial notifications as required by §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been

submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

(2) Notification of performance tests, as required by §§63.7 and 63.9(e).

(3) Notification of opacity and visible emission observations required by §63.1349 in accordance with §§63.6(h)(5) and 63.9(f).

(4) Notification, as required by §63.9(g), of the date that the continuous emission monitor performance evaluation required by §63.8(e) of this part is scheduled to begin.

(5) Notification of compliance status, as required by §63.9(h).

[40 CFR 63.1353]

Pursuant to 40 CFR 63.1354 Reporting Requirements:

(a) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in §63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by §63.1349.

(3) As required by §63.10(d)(4), the owner or operator of an affected source who is required to such reports by the dates specified in the written extension of compliance.

(4) As required by §63.10(d)(5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(6) As required by §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by §63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under §63.7 and described in §63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under §63.8(e).

(8) As required by §63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in §63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in §63.1344(a) and (b);

(ii) All failures to calibrate thermocouples and other temperature sensors as required under §63.1350(f)(7) of this subpart; and

(iii) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under §63.1344(c).

(iv) The results of any combustion system component inspections conducted within the reporting period as required under §63.1350(i).

(v) All failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a).

(10) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.

[40 CFR 63.1354]

Pursuant to 40 CFR 63.1355 Recordkeeping Requirements:

(a) The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

(b) The owner or operator shall maintain records for each affected source as required by §63.10(b)(2) and (b)(3) of this part; and

(1) All documentation supporting initial notifications and notifications of compliance status under §63.9 of this part;

(2) All records of applicability determination, including supporting analyses; and

(3) If the owner or operator has been granted a waiver under §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(c) In addition to the recordkeeping requirements in paragraph (b) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c).

[40 CFR 63.1355]

OTHER

Pursuant to 40 CFR 63.1357 Temporary, Conditioned Exemption from Particulate Matter and Opacity Standards:

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from:

(1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The owner or operator must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted. The plan must include:

(1) The number of test conditions and the number of runs for each test condition;

(2) The target particulate matter emission level for each test condition;

(3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and

(4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with §63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in §63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

(e) The PM and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for the purposes of conducting tests to correlate PM CEMS with manual method test results, including all runs and conditions, except as described in this paragraph. Where additional time is required to correlate a PM CEMS device, a source may petition the Administrator for an extension of the 96-hour aggregate waiver of compliance with the PM and opacity standards. An extension of the 96-hour aggregate waiver is renewable at the discretion of the Administrator.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

[40 CFR 63.1357]

Pursuant to 40 CFR 63.1358 Delegation of Authority:

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in Sec. Sec. 63.1340, 63.1342 through 63.1348, and 63.1351.

(2) Approval of major alternatives to test methods under Sec. 63.7(e)(2)(ii) and (f), as defined in Sec. 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under Sec. 63.8(f), as defined in Sec. 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under Sec. 63.10(f), as defined in Sec. 63.90, and as required in this subpart.

[40 CFR 63.1358]

40 CFR 63 Subpart A - General Provisions

§ 63.1 Applicability.

(a) *General.*

(1) Terms used throughout this part are defined in § 63.2 or in the Clean Air Act (Act) as amended in 1990, except that individual subparts of this part may include specific definitions in addition to or that supersede definitions in § 63.2.

(2) This part contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR part 61. The NESHAP in part 61 promulgated by signature of the Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to this part.

(3) No emission standard or other requirement established under this part shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (section 111, part C or D or any other authority of this Act), or a standard issued under State authority. The Administrator may specify in a specific standard under this part that facilities subject to other provisions under the Act need only comply with the provisions of that standard.

(4) (i) Each relevant standard in this part 63 must identify explicitly whether each provision in this subpart A is or is not included in such relevant standard.

(ii) If a relevant part 63 standard incorporates the requirements of 40 CFR part 60, part 61, or other part 63 standards, the relevant part 63 standard must identify explicitly the applicability of each corresponding part 60,part 61, or other part 63 subpart A (General) Provision.

(iii) The General Provisions in this Subpart A do not apply to regulations developed pursuant to section112(r) of the amended Act., unless otherwise specified in those regulations.

(5) [Reserved]

(6) To obtain the most current list of categories of sources to be regulated under section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD–13), Research Triangle Park, North Carolina 27711.

(7) [Reserved]

(8) [Reserved]

(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in § 63.9(i).

(13) [Reserved]

(14) [Reserved]

(b) *Initial applicability determination for this part.*

(1) The provisions of this part apply to the owner or operator of any stationary source that

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) [Reserved]

(3) An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under this part, must keep a record as specified in § 63.10(b)(3).

(c) *Applicability of this part after a relevant standard has been set under this part.*

(1) If a relevant standard has been established under this part, the owner or operator of an affected source must comply with the provisions of that standard and of this subpart as provided in paragraph (a)(4) of this section.

(2) Except as provided in § 63.10(b)(3), if a relevant standard has been established under this part, the owner or operator of an affected source may be required to obtain

a title V permit from a permitting authority in the State in which the source is located. Emission standards promulgated in this part for area sources pursuant to section 112(c)(3) of the Act will specify whether –

(i) States will have the option to exclude area sources affected by that standard from the requirement to obtain a title V permit (i.e., the standard will exempt the category of area sources altogether from the permitting requirement);

(ii) States will have the option to defer permitting of area sources in that category until the Administrator takes rulemaking action to determine applicability of the permitting requirements; or

(iii) If a standard fails to specify what the permitting requirements will be for area sources affected by such a standard, then area sources that are subject to the standard will be subject to the requirement to obtain a title V permit without any deferral.

(3) [Reserved]

(4) [Reserved]

(5) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of this subpart.

(d) [Reserved]

(e) If the Administrator promulgates an emission standard under section 112(d) or (h) of the Act that is applicable to a source subject to an emission limitation by permit established under section 112(j) of the Act, and the requirements under the section 112(j) emission limitation are substantially as effective as the promulgated emission standard, the owner or operator may request the permitting authority to revise the source's title V permit to reflect that the emission limitation in the permit satisfies the requirements of the promulgated emission standard. The process by which the permitting authority determines whether the section 112(j) emission limitation is substantially as effective as the promulgated emission standard must include, consistent with part 70 or 71 of this chapter, the opportunity for full public, EPA, and affected State review (including the opportunity for EPA's objection) prior to the permit revision being finalized. A negative determination by the permitting authority constitutes final action for purposes of review and appeal under the applicable title V operating permit program.

§ 63.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Pub. L. 101–549, 104 Stat. 2399).

Actual emissions is defined in subpart D of this part for the purpose of granting a compliance extension for an early reduction of hazardous air pollutants.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Affected source, for the purposes of this part, means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory for which a section 112(d) standard or other relevant standard is established pursuant to section 112 of the Act. Each relevant standard will define the "affected source," as defined in this paragraph unless a different definition is warranted

based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term "affected source," as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing title IV of the Act. Affected source may be defined differently for part 63 than affected facility and stationary source in parts 60 and 61, respectively. This definition of "affected source," and the procedures for adopting an alternative definition of "affected source," shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002.

Alternative emission limitation means conditions established pursuant to sections 112(i)(5) or 112(i)(6) of the Act by the Administrator or by a State with an approved permit program.

Alternative emission standard means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a test method in this chapter and that has been demonstrated to the Administrator's satisfaction, using Method 301 in Appendix A of this part, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this part.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

Commenced means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Compliance date means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator (or a State with an approved permit program) pursuant to section 112 of the Act.

Compliance schedule means:

(1) In the case of an affected source that is in compliance with all applicable requirements established under this part, a statement that the source will continue to comply with such requirements; or

(2) In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

(3) In the case of an affected source not in compliance with all applicable requirements established under this part, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established pursuant to section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction non-compliance with, the applicable requirements on which it is based.

Construction means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including, but not limited to, piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in this section. The costs of replacing minor ancillary equipment must be considered in determining whether the existing affected source is reconstructed.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous monitoring system (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

Continuous opacity monitoring system (COMS) means a continuous monitoring system that measures the opacity of emissions.

Continuous parameter monitoring system means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Effective date means:

(1) With regard to an emission standard established under this part, the date of promulgation in the FEDERAL REGISTER of such standard; or

(2) With regard to an alternative emission limitation or equivalent emission limitation determined by the Administrator (or a State with an approved permit program), the date that the alternative emission limitation or equivalent emission limitation becomes effective according to the provisions of this part.

Emission standard means a national standard, limitation, prohibition, or other regulation promulgated in a subpart of this part pursuant to sections 112(d), 112(h), or 112(f) of the Act.

Emissions averaging is a way to comply with the emission limitations specified in a relevant standard, whereby an affected source, if allowed under a subpart of this part, may create emission credits by reducing emissions from specific points to a level below that required by the relevant standard, and those credits are used to offset emissions from points that are not controlled to the level required by the relevant standard.

EPA means the United States Environmental Protection Agency.

Equivalent emission limitation means any maximum achievable control technology emission limitation or requirements which are applicable to a major source of hazardous air pollutants and are adopted by the Administrator (or a State with an approved permit program) on a case-by-case basis, pursuant to section 112(g) or (j) of the Act.

Excess emissions and continuous monitoring system performance report is a report that must be submitted periodically by an affected source in order to provide data on its compliance with relevant emission limits, operating parameters, and the performance of its continuous parameter monitoring systems.

Existing source means any affected source that is not a new source.

Federally enforceable means all limitations and conditions that are enforceable by the Administrator and citizens under the Act or that are enforceable under other statutes administered by the Administrator. Examples of federally enforceable limitations and conditions include, but are not limited to:

(1) Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to section 112 of the Act as amended in 1990;

(2) New source performance standards established pursuant to section 111 of the Act, and emission standards established pursuant to section 112 of the Act before it was amended in 1990;

(3) All terms and conditions in a title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

(4) Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

(5) Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR part 51;

(6) Limitations and conditions that are part of an operating permit where the permit and the permitting program pursuant to which it was issued meet all of the following criteria:

(i) The operating permit program has been submitted to and approved by EPA into a State implementation plan (SIP) under section 110 of the CAA;

(ii) The SIP imposes a legal obligation that operating permit holders adhere to the terms and limitations of such permits and provides that permits which do not conform to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA;

(iii) The operating permit program requires that all emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the SIP or enforceable under the SIP, and that the program may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise "federally enforceable";

(iv) The limitations, controls, and requirements in the permit in question are permanent, quantifiable, and otherwise enforceable as a practical matter; and

(v) The permit in question was issued only after adequate and timely notice and opportunity for comment for EPA and the public.

(7) Limitations and conditions in a State rule or program that has been approved by the EPA under subpart E of this part for the purposes of implementing and enforcing section 112; and

(8) Individual consent agreements that the EPA has legal authority to create.

Fixed capital cost means the capital needed to provide all the depreciable components of an existing source.

Fugitive emissions means those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Hazardous air pollutant means any air pollutant listed in or pursuant to section 112(b) of the Act.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Monitoring means the collection and use of measurement data or other information to control the operation of a process or pollution control device or to verify a work practice standard relative to assuring compliance with applicable requirements. Monitoring is composed of four elements:

(1) Indicator(s) of performance -- the parameter or parameters you measure or observe for demonstrating proper operation of the pollution control measures or compliance with the applicable emissions limitation or standard. Indicators of performance may include direct or predicted emissions measurements (including opacity), operational parametric values that correspond to process or control device (and capture system) efficiencies or emissions rates, and recorded findings of inspection of work practice activities, materials tracking, or design characteristics. Indicators may be expressed as a single maximum or minimum value, a function of process variables (for example, within a range of pressure drops), a particular operational or work practice status (for example, a damper position, completion of a waste recovery task, materials tracking), or an interdependency between two or among more than two variables.

(2) Measurement techniques -- the means by which you gather and record information of or about the indicators of performance. The components of the measurement technique include the detector type, location and installation specifications, inspection procedures, and quality assurance and quality control measures. Examples of measurement techniques include continuous emission monitoring systems, continuous opacity monitoring systems, continuous parametric monitoring systems, and manual inspections that include making records of process conditions or work practices.

(3) Monitoring frequency -- the number of times you obtain and record monitoring data over a specified time interval. Examples of monitoring frequencies include at least four points equally spaced for each hour for continuous emissions or parametric monitoring systems, at least every 10 seconds for continuous opacity monitoring systems, and at least once per operating day (or week, month, etc.) for work practice or design inspections.

(4) Averaging time -- the period over which you average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard. Examples of averaging time include a 3-hour average in units of the emissions limitation, a 30-day rolling average emissions value, a daily average of a control device operational parametric range, and an instantaneous alarm.

New affected source means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory that is subject to a section 112(d) or other relevant standard for new sources. This definition of "new affected source," and the criteria to be utilized in implementing it, shall apply to each section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002. Each relevant standard will define the term "new affected source," which will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:

(1) Emission reduction impacts of controlling individual sources versus groups of sources;

(2) Cost effectiveness of controlling individual equipment;

(3) Flexibility to accommodate common control strategies;

(4) Cost/benefits of emissions averaging;

(5) Incentives for pollution prevention;

(6) Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);

(7) Feasibility and cost of monitoring; and

(8) Other relevant factors.

New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For continuous opacity monitoring systems, opacity means the fraction of incident light that is attenuated by an optical medium.

Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source..

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Permit modification means a change to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permit revision means any permit modification or administrative permit amendment to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

Reconstruction means the replacement of components of an affected or a previously unaffected stationary source to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Regulation promulgation schedule means the schedule for the promulgation of emission standards under this part, established by the Administrator pursuant to section 112(e) of the Act and published in the FEDERAL REGISTER.

Relevant standard means:

(1) An emission standard;

(2) An alternative emission standard;

(3) An alternative emission limitation; or

(4) An equivalent emission limitation established pursuant to section 112 of the Act that applies to the collection of equipment, activities, or both regulated by such standard or limitation. A relevant standard may include or consist of a design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that the Administrator (or a State) establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to section 112 of the Act includes subpart A of this part, as provided by § 63.1(a)(4), and all applicable appendices of this part or of other parts of this chapter that are referenced in that standard.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Administrator.

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

(4) For affected sources (as defined in this part) applying for or subject to a title V permit: ''responsible official'' shall have the same meaning as defined in part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever is applicable.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this part.

Shutdown means the cessation of operation of an affected source or portion of an affected source for any purpose.

Six-minute period means, with respect to opacity determinations, any one of the 10 equal parts of a 1-hour period.

Standard conditions means a temperature of 293 °K (68° F) and a pressure of 101.3 kilopascals (29.92 in. Hg).

Startup means the setting in operation of an affected source for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement:

(1) The provisions of this part and/or

(2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Test method means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of this chapter, test methods incorporated by reference in this part, or methods validated for an application through procedures in Method 301 of appendix A of this part.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Visible emission means the observation of an emission of opacity or optical density above the threshold of vision.

Working day means any day on which Federal Government offices (or State government offices for a State that has obtained delegation under section 112(l)) are open for normal business. Saturdays, Sundays, and official Federal (or where delegated, State) holidays are not working days.

§ 63.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A = ampere
g = gram
Hz = hertz
J = joule
°K = degree Kelvin
kg = kilogram
l = liter
m = meter
m^3 = cubic meter
mg = milligram = 10^{-3} gram
ml = milliliter = 10^{-3} liter
mm = millimeter = 10^{-3} meter
Mg = megagram = 10^{6} gram = metric ton
MJ = megajoule
mol = mole
N = newton
ng = nanogram = 10^{-9} gram
nm = nanometer = 10^{-9} meter
Pa = pascal
s = second
V = volt
W = watt
Ω = ohm
μg = microgram = 10^{-6} gram
μl = microliter = 10^{-6} liter

(b) Other units of measure:

Btu = British thermal unit
°C = degree Celsius (centigrade)
cal = calorie
cfm = cubic feet per minute
cc = cubic centimeter

cu ft = cubic feet
d = day
dcf = dry cubic feet
dcm = dry cubic meter
dscf = dry cubic feet at standard conditions
dscm = dry cubic meter at standard conditions
eq = equivalent
°F = degree Fahrenheit
ft = feet
ft^2 = square feet
ft^3 = cubic feet
gal = gallon
gr = grain
g-eq = gram equivalent
g-mole = gram mole
hr = hour
in. = inch
in. H_2O = inches of water
K = 1,000
kcal = kilocalorie
lb = pound
lpm = liter per minute
meq = milliequivalent
min = minute
MW = molecular weight
oz = ounces
ppb = parts per billion
ppbw = parts per billion by weight
ppbv = parts per billion by volume
ppm = parts per million
ppmw = parts per million by weight
ppmv = parts per million by volume
psia = pounds per square inch absolute
psig = pounds per square inch gage
°R = degree Rankine
scf = cubic feet at standard conditions
scfh = cubic feet at standard conditions per hour
scm = cubic meter at standard conditions
scmm= cubic meter at standard conditions per minute
sec = second
sq ft = square feet
std = at standard conditions
v/v = volume per volume
yd^2 = square yards
yr = year

(c) Miscellaneous:
act = actual
avg = average
I.D. = inside diameter
M = molar

N = normal
O.D. = outside diameter
% = percent

§ 63.4 Prohibited activities and circumvention.

(a) *Prohibited activities.*

(1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(b) *Circumvention.* No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(3) [Reserved]

(c) *Severability.* Notwithstanding any requirement incorporated into a title V permit obtained by an owner or operator subject to the provisions of this part, the provisions of this part are federally enforceable.

§ 63.5 Preconstruction review and notification requirements.

(a) *Applicability.*

(1) This section implements the preconstruction review requirements of section 112(i)(1) for sources subject to a relevant emission standard that has been promulgated in this part. In addition, this section includes other requirements for constructed and reconstructed stationary sources that are or become subject to a relevant promulgated emission standard.

(2) After the effective date of a relevant standard promulgated under this part, the requirements in this section apply to owners or operators who construct a new source or reconstruct a source after the proposal date of that standard. New or reconstructed sources that start up before the standard's effective date are not subject to the preconstruction review requirements specified in paragraphs (b)(3), (d), and (e) of this section.

(b) *Requirements for existing, newly constructed, and reconstructed sources.*

(1) A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources,

including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

(2) [Reserved]

(3) After the effective date of any relevant standard promulgated by the Administrator under this part, no person may, without obtaining written approval in advance from the Administrator in accordance with the procedures specified in paragraphs (d) and (e) of this section, do any of the following:

(i) Construct a new affected source that is major-emitting and subject to such standard;

(ii) Reconstruct an affected source that is major-emitting and subject to such standard; or

(iii) Reconstruct a major source such that the source becomes an affected source that is major-emitting and subject to the standard.

(4) After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in § 63.9(b).

(5) [Reserved]

(6) After the effective date of any relevant standard promulgated by the Administrator under this part, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source.

(c) [Reserved]

(d) *Application for approval of construction or reconstruction.* The provisions of this paragraph implement section 112(i)(1) of the Act.

(1) *General application requirements.*

(i) An owner or operator who is subject to the requirements of paragraph (b)(3) of this section must submit to the Administrator an application for approval of the construction or reconstruction. The application must be submitted as soon as practicable before actual construction or reconstruction begins. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements of § 63.9(b)(5). The owner or operator may submit the application for approval well in advance of the date actual construction or reconstruction begins in order to ensure a timely review by the Administrator and that the planned date to begin will not be delayed.

(ii) A separate application shall be submitted for each construction or reconstruction.

Each application for approval of construction or reconstruction shall include at a minimum:

(A) The applicant's name and address;

(B) A notification of intention to construct a new major affected source or make any physical or operational change to a major affected source that may meet or has been determined to meet the criteria for a reconstruction, as defined in § 63.2 or in the relevant standard;

(C) The address (i.e., physical location) or proposed address of the source;

(D) An identification of the relevant standard that is the basis of the application;

(E) The expected date of the beginning of actual construction or reconstruction;

(F) The expected completion date of the construction or reconstruction;

(G) [Reserved]

(H) The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

(I) [Reserved]

(J) Other information as specified in paragraphs (d)(2) and (d)(3) of this section.

(iii) An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in paragraphs (d)(1)(ii)(H) and (d)(2) of this section shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the notification of compliance status required in § 63.9(h) (see
§ 63.9(h)(5)).

(2) *Application for approval of construction.* Each application for approval of construction must include, in addition to the information required in paragraph (d)(1)(ii) of this section, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each type of emission point for each type of hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions must include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions must include an estimated control efficiency (percent) for that method. Such technical information must include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

(3) *Application for approval of reconstruction.* Each application for approval of reconstruction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section - (i) A brief description of the affected source and the components that are to be replaced;

(ii) A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

(iii) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

(iv) The estimated life of the affected source after the replacements; and

(v) A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Administrator's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

(vi) If in the application for approval of reconstruction the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements, the owner or operator need not submit the information required in paragraphs (d)(3)(iii) through (d)(3)(v) of this section.

(4) *Additional information.* The Administrator may request additional relevant information after the submittal of an application for approval of construction or reconstruction.

(e) *Approval of construction or reconstruction.*

(1) (i) If the Administrator determines that, if properly constructed, or reconstructed, and operated, a new or existing source for which an application under paragraph (d) of this section was submitted will not cause emissions in violation of the relevant standard(s) and any other federally enforceable requirements, the Administrator will approve the construction or reconstruction.

(ii) In addition, in the case of reconstruction, the Administrator's determination under this paragraph will be based on:

(A) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new source;

(B) The estimated life of the source after the re-placements compared to the life of a comparable entirely new source;

(C) The extent to which the components being replaced cause or contribute to the emissions from the source; and

(D) Any economic or technical limitations on compliance with relevant standards that are inherent in the proposed replacements.

(2) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of construction or reconstruction within 60 calendar days after receipt of sufficient information to evaluate an application submitted under paragraph (d) of this section. The 60-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(3) Before denying any application for approval of construction or reconstruction, the Administrator will notify the applicant of the Administrator's intention to issue the denial together with - (i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator to enable further action on the application.

(4) A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

(5) Neither the submission of an application for approval nor the Administrator's approval of construction or reconstruction shall -

(i) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or (ii) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(f) *Approval of construction or reconstruction based on prior State preconstruction review.*

(1) Preconstruction review procedures that a State utilizes for other purposes may also be utilized for purposes of this section if the procedures are substantially equivalent to those specified in this section. The Administrator will approve an application for construction or reconstruction specified in paragraphs (b)(3) and (d) of this section if the owner or operator of a new affected source or reconstructed affected source, who is subject to such requirement meets the following conditions:

(i) The owner or operator of the new affected source or reconstructed affected source has undergone a preconstruction review and approval process in the State in which the source is (or would be) located and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant promulgated emission standard, if the source is properly built and operated.

(ii) Provide a statement from the State or other evidence (such as State regulations) that it considered the factors specified in paragraph (e)(1) of this section.

(2) The owner or operator must submit to the Administrator the request for approval of construction or reconstruction under this paragraph (f)(2) no later than the application deadline specified in paragraph (d)(1) of this section (see also § 63.9(b)(2)). The owner or operator must include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in paragraph (e) of this section. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction under this paragraph (f)(2).

§ 63.6 Compliance with standards and maintenance requirements.

(a) *Applicability.*

(1) The requirements in this section apply to the owner or operator of affected sources for which any relevant standard has been established pursuant to section 112 of the Act and the applicability of such requirements is set out in accordance with § 63.1(a)(4) unless --

(i) The Administrator (or a State with an approved permit program) has granted an extension of compliance consistent with paragraph (i) of this section; or

(ii) The President has granted an exemption from compliance with any relevant standard in accordance with section 112(i)(4) of the Act.

(2) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

(b) *Compliance dates for new and reconstructed sources.*

(1) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source for which construction or reconstruction commences after proposal of a relevant standard that has an initial startup before the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard not later than the standard's effective date.

(2) Except as specified in paragraphs (b)(3) and (4) of this section, the owner or operator of a new or reconstructed affected source that has an initial startup after the effective date of a relevant standard established under this part pursuant to section 112(d), (f), or (h) of the Act must comply with such standard upon startup of the source.

(3) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under this part pursuant to section 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date 3 years after the effective date if:

(i) The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; for purposes of this paragraph, a finding that controls or compliance methods are "more stringent" must include control technologies or performance criteria and compliance or compliance assurance methods that are different but are substantially equivalent to those required by the promulgated rule, as determined by the Administrator (or his or her authorized representative); and

(ii) The owner or operator complies with the standard as proposed during the 3-year period immediately after the effective date.

(4) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of a relevant standard established pursuant to section 112(f) shall not be required to comply with the section 112(f) emission standard until the date 10 years after the date construction or reconstruction is commenced, except that, if the section 112(f) standard is promulgated more than 10 years after construction or reconstruction is commenced, the owner or operator must comply with the standard as provided in paragraphs (b)(1) and (2) of this section.

(5) The owner or operator of a new source that is subject to the compliance requirements of paragraph (b)(3) or (4) of this section must notify the Administrator in accordance with § 63.9(d).

(6) [Reserved]

(7) When an area source becomes a major source by the addition of equipment or operations that meet the definition of new affected source in the relevant standard, the portion of the existing facility that is a new affected source must comply with all requirements of that standard applicable to new sources. The source owner or operator must comply with the relevant standard upon startup.

(c) *Compliance dates for existing sources.*

(1) After the effective date of a relevant standard established under this part pursuant to section 112(d) or 112(h) of the Act, the owner or operator of an existing source shall comply with such standard by the compliance date established by the Administrator in the applicable subpart(s) of this part. Except as otherwise provided for in section 112 of the Act, in no case will the compliance date established for an existing source in an applicable subpart of this part exceed 3 years after the effective date of such standard.

(2) If an existing source is subject to a standard established under this part pursuant to section 112(f) of the Act, the owner or operator must comply with the standard by the date 90

days after the standard's effective date, or by the date specified in an extension granted to the source by the Administrator under paragraph (i)(4)(ii) of this section, whichever is later.

(3)–(4) [Reserved]

(5) Except as provided in paragraph (b)(7) of this section, the owner or operator of an area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source shall be subject to relevant standards for existing sources. Such sources must comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard for existing sources in existence at the time the standard becomes effective.

(d) [Reserved]

(e) *Operation and maintenance requirements.*

(1) (i) At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) [Reserved]

(3) Startup, shutdown, and malfunction plan.

(i)The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard.

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring

equipment, in a manner which satisfies the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source must operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in § 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with Sec. 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (e)(3)(viii) of this section, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator. The Administrator may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The Administrator must request that the owner or operator submit a particular startup, shutdown, or malfunction plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine

or to receive a copy of that plan or portion of a plan. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(1)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by § 63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this

part, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

(f) *Compliance with nonopacity emission standards* -

(1) *Applicability.* The non-opacity emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this part, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.

(2) *Methods for determining compliance.*

(i) The Administrator will determine compliance with nonopacity emission standards in this part based on the results of performance tests conducted according to the procedures in § 63.7, unless otherwise specified in an applicable subpart of this part.

(ii) The Administrator will determine compliance with nonopacity emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in § 63.6(e) and applicable subparts of this part.

(iii) If an affected source conducts performance testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

(B) The performance test was conducted under representative operating conditions for the source;

(C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e) of this subpart; and

(D) The performance test was appropriately quality-assured, as specified in § 63.7(c).

(iv) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by review of records, inspection of the source, and other procedures specified in applicable subparts of this part.

(v) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in paragraph (e) of this section and applicable subparts of this part.

(3) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with a non-opacity emission standard, as specified in paragraphs (f)(1) and (2) of this section, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable), and information available to the Administrator pursuant to paragraph (e)(1)(i) of this section.

(g) *Use of an alternative nonopacity emission standard.*

(1) If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under any design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. Any FEDERAL REGISTER notice under this paragraph shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

(2) An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit a proposed test plan or the results of testing and monitoring in accordance with § 63.7 and § 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in § 63.7 and § 63.8.

(3) The Administrator may establish general procedures in an applicable subpart that accomplish the requirements of paragraphs (g)(1) and (g)(2) of this section.

(h) *Compliance with opacity and visible emission standards* -

(1) *Applicability*. The opacity and visible emission standards set forth in this part must apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in this part, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements.

(2) Methods for determining compliance.

(i) The Administrator will determine compliance with opacity and visible emission standards in this part based on the results of the test method specified in an applicable subpart. Whenever a continuous opacity monitoring system (COMS) is required to be installed to determine compliance with numerical opacity emission standards in this part, compliance with opacity emission standards in this part shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards in this part shall be determined by conducting observations in accordance with Test Method 9 in appendix A of part 60 of this chapter or the method specified in paragraph (h)(7)(ii) of this section. Whenever a visible emission test method is not specified, compliance with visible emission standards in this part shall be determined by conducting observations in accordance with Test Method 22 in appendix A of part 60 of this chapter.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if -

(A) The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

(B) The opacity or visible emission test was conducted under representative operating conditions for the source;

(C) The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e); and

(D) The opacity or visible emission test was appropriately quality-assured, as specified in § 63.7(c) of this section.

(3) [Reserved]

(4) *Notification of opacity or visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting opacity or visible emission observations in accordance with § 63.9(f), if such observations are required for the source by a relevant standard.

(5) *Conduct of opacity or visible emission observations.* When a relevant standard under this part includes an opacity or visible emission standard, the owner or operator of an affected source shall comply with the following:

(i) For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted concurrently with the initial performance test required in § 63.7 unless one of the following conditions applies:

(A) If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 60 days after achieving the maximum production rate at which a new or reconstructed source will be operated, but not later than 120 days after initial startup of the source, or within 120 days after the effective date of the relevant standard in the case of new sources that start up before the standard's effective date. If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 120 days after the compliance date for an existing or modified source; or

(B) If visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, or within the time period specified in paragraph (h)(5)(i)(A) of this section, the source's owner or operator shall reschedule the opacity or visible emission observations as soon after the initial performance test, or time period, as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. The rescheduled opacity or visible emission observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 63.7. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity or visible emission observations from being made concurrently with the initial performance test in accordance with procedures contained in Test Method 9 or Test Method 22 in appendix A of part 60 of this chapter.

(ii) For the purpose of demonstrating initial compliance, the minimum total time of opacity observations shall be 3 hours (30 6-minute averages) for the performance test or other required set of observations (e.g., for fugitive-type emission sources subject only to an opacity emission standard).

(iii) The owner or operator of an affected source to which an opacity or visible emission standard in this part applies shall conduct opacity or visible emission observations in accordance with the provisions of this section, record the results of the evaluation of emissions, and report to the Administrator the opacity or visible emission results in accordance with the provisions of § 63.10(d).

(iv) [Reserved]

(v) Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

(6) *Availability of records.* The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) *Use of a continuous opacity monitoring system.*

(i) The owner or operator of an affected source required to use a continuous opacity monitoring system (COMS) shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results in accordance with the provisions of § 63.10(e)(4).

(ii) Whenever an opacity emission test method has not been specified in an applicable subpart, or an owner or operator of an affected source is required to conduct Test Method 9 observations (see appendix A of part 60 of this chapter), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under § 63.7 in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, he or she shall notify the Administrator of that decision, in writing, simultaneously with the notification under § 63.7(b) of the date the performance test is scheduled to begin. Once the owner or operator of an affected source has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under § 63.7, unless the owner or operator notifies the Administrator in writing to the contrary not later than with the notification under § 63.7(b) of the date the subsequent performance test is scheduled to begin.

(iii) For the purposes of determining compliance with the opacity emission standard during a performance test required under § 63.7 using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test.

(iv) The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of § 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in § 63.8(c) and § 63.8(d), and that the resulting data have not been altered in any way.

(v) Except as provided in paragraph (h)(7)(ii) of this section, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in § 63.8(c), and met Performance Specification 1 in appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.

(8) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required by § 63.7, the results of Test Method 9 or another required opacity or visible emission test method, the observer certification required by paragraph (h)(6) of this section, and the continuous opacity monitoring system results, whichever is/are applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(9) *Adjustment to an opacity emission standard.*

(i) If the Administrator finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under § 63.7, but during the time such performance tests were conducted fails to

meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.

(ii) The Administrator may grant such a petition upon a demonstration by the owner or operator that -

(A) The affected source and its associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the performance tests;

(B) The performance tests were performed under the conditions established by the Administrator; and

(C) The affected source and its associated air pollution control equipment were incapable of being adjusted or operated to meet the relevant opacity emission standard.

(iii) The Administrator will establish an adjusted opacity emission standard for the affected source meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity emission standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity emission standard in the FEDERAL REGISTER.

(iv) After the Administrator promulgates an adjusted opacity emission standard for an affected source, the owner or operator of such source shall be subject to the new opacity emission standard, and the new opacity emission standard shall apply to such source during any subsequent performance tests.

(i) *Extension of compliance with emission standards.*

(1) Until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph, the owner or operator of an affected source subject to the requirements of this section shall comply with all applicable requirements of this part.

(2) *Extension of compliance for early reductions and other reductions*

(i) *Early reductions.* Pursuant to section 112(i)(5) of the Act, if the owner or operator of an existing source demonstrates that the source has achieved a reduction in emissions of hazardous air pollutants in accordance with the provisions of subpart D of this part, the Administrator (or the State with an approved permit program) will grant the owner or operator an extension of compliance with specific requirements of this part, as specified in subpart D.

(ii) *Other reductions.* Pursuant to section 112(i)(6) of the Act, if the owner or operator of an existing source has installed best available control technology (BACT) (as defined in section 169(3) of the Act) or technology required to meet a lowest achievable emission rate (LAER) (as defined in section 171 of the Act) prior to the promulgation of an emission standard in this part applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to the BACT or LAER installation, the Administrator will grant the owner or operator an extension of compliance with such emission standard that will apply until the date 5 years after the date on which such installation was achieved, as determined by the Administrator.

(3) *Request for extension of compliance.* Paragraphs (i)(4) through (i)(7) of this section concern requests for an extension of compliance with a relevant standard under this part (except requests for an extension of compliance under paragraph (i)(2)(i) of this section will be handled through procedures specified in subpart D of this part).

(4) (i) (A) The owner or operator of an existing source who is unable to comply with a relevant standard established under this part pursuant to section 112(d) of the Act may request that the Administrator (or a State, when the State has an approved part 70 permit program and the source is required to obtain a part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source)

grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) Any request under this paragraph for an extension of compliance with a relevant standard must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraphs (b) and (c) of this section), except as provided for in paragraph (i)(4)(i)(C) of this section. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial. Emission standards established under this part may specify alternative dates for the submittal of requests for an extension of compliance if alternatives are appropriate for the source categories affected by those standards.

(C) An owner or operator may submit a compliance extension request after the date specified in paragraph (i)(4)(i)(B) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (i)(6)(i) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(ii) The owner or operator of an existing source unable to comply with a relevant standard established under this part pursuant to section 112(f) of the Act may request that the Administrator grant an extension allowing the source up to 2 years after the standard's effective date to comply with the standard. The Administrator may grant such an extension if he/she finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under this paragraph must be submitted in writing to the Administrator not later than 90 calendar days after the effective date of the relevant standard.

(5) The owner or operator of an existing source that has installed BACT or technology required to meet LAER [as specified in paragraph (i)(2)(ii) of this section] prior to the promulgation of a relevant emission standard in this part may request that the Administrator grant an extension allowing the source 5 years from the date on which such installation was achieved, as determined by the Administrator, to comply with the standard. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 120 days after the promulgation date of the standard. The Administrator may grant such an extension if he or she finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(6) (i) The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:

(A) A description of the controls to be installed to comply with the standard;

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*1*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(*2*) The date by which final compliance is to be achieved;

(C) [Reserved]

(D) [Reserved]

(ii) The request for a compliance extension under paragraph (i)(5) of this section shall include all information needed to demonstrate to the Administrator's satisfaction that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(7) Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(8) *Approval of request for extension of compliance.* Paragraphs (i)(9) through (i)(14) of this section concern approval of an extension of compliance requested under paragraphs (i)(4) through (i)(6) of this section.

(9) Based on the information provided in any request made under paragraphs (i)(4) through (i)(6) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with an emission standard, as specified in paragraphs (i)(4) and (i)(5) of this section.

(10) The extension will be in writing and will -

(i) Identify each affected source covered by the extension;

(ii) Specify the termination date of the extension;

(iii) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(iv) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests); and

(v) (A) Under paragraph (i)(4), specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period; or

(B) Under paragraph (i)(5), specify any additional conditions that the Administrator deems necessary to assure the proper operation and maintenance of the installed controls during the extension period.

(11) The owner or operator of an existing source that has been granted an extension of compliance under paragraph (i)(10) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached. The contents of the progress reports and the dates by which they shall be submitted will be specified in the written extension of compliance granted under paragraph (i)(10) of this section.

(12) (i) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(i) or (i)(5) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(iv) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(13) (i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(ii) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator will notify the owner or operator in writing of the Administrator's intention to issue the denial, together with -

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator before further action on the request.

(iv) A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(14) The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (i)(10)(iii) or (iv) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(i) Notice of the reason for termination; and

(ii) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(iii) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(15) [Reserved]

(16) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the Act.

(j) *Exemption from compliance with emission standards.* The President may exempt any stationary source from compliance with any relevant standard established pursuant to section 112 of the Act for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years.

§ 63.7 Performance testing requirements.

(a) *Applicability and performance test dates.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) If required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.

(i)- (viii) [Reserved]

(ix) When an emission standard promulgated under this part is more stringent than the standard proposed (see § 63.6(b)(3)), the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

(b) *Notification of performance test.*

(1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review an approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the

Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) *Quality assurance program.*

(1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2) (i) *Submission of site-specific test plan.* Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) *Approval of site-specific test plan.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with -

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests

methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) (i) *Performance test method audit program.* The owner or operator must analyze performance audit (PA) samples during each performance test. The owner or operator must request performance audit materials 30 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the responsible enforcement authority.

(ii) The Administrator will have sole discretion to require any subsequent remedial actions of the owner or operator based on the PA results.

(iii) If the Administrator fails to provide required PA materials to an owner or operator of an affected source in time to analyze the PA samples during a performance test, the requirement to conduct a PA under this paragraph shall be waived for such source for that performance test. Waiver under this paragraph of the requirement to conduct a PA for a particular performance test does not constitute a waiver of the requirement to conduct a PA for future required performance tests.

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Conduct of performance tests.*

(1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator -

(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in § 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or

(ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in § 63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(f) *Use of an alternative test method -*

(1) *General.* Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator -

(i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;

(ii) Uses Method 301 in appendix A of this part to validate the alternative test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and

(iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.

(3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate and issue an approval or disapproval of the alternative test method. If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method. However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval/disapproval 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraph (f)(2) of this section. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.

(5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under § 63.7(f).

(6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of this part.

(g) *Data analysis, recordkeeping, and reporting.*

(1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is ''completed'' when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the, close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator (see § 63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the
results of the performance test to the appropriate permitting authority.

(2) [Reserved]

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or

results of such performance test and other data needed to determine emissions from an affected source.

(h) *Waiver of performance tests.*

(1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) Request to waive a performance test.

(i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(I), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) Approval of request to waive performance test. The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she -

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.8 Monitoring requirements.

(a) *Applicability.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(3) [Reserved]

(4) Additional monitoring requirements for control devices used to comply with provisions in relevant standards of this part are specified in § 63.11.

(b) *Conduct of monitoring.*

(1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator -

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see § 63.90(a) for definition); or

(ii) Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see § 63.90(a) for definition).

(iii) Owners or operators with flares subject to § 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2) (i) When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

(ii) If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator must install an applicable CMS at each emission point unless the installation of fewer systems is -

(A) Approved by the Administrator; or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of this part. If both such CMS are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CMS for the relevant compliance period.

(c) Operation and maintenance of continuous monitoring systems.

(1) The owner or operator of an affected source shall maintain and operate each CMS as specified in this section, or in a relevant standard, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of an affected source must maintain and operate each CMS as specified in § 63.6(e)(1).

(ii) The owner or operator must keep the necessary parts for routine repairs of the affected CMS equipment readily available.

(iii) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan for CMS as specified in § 63.6(e)(3).

(2) (i) All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under § 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS that is not a CPMS, which is installed in accordance with the provisions of this part and the applicable CMS performance specification(s), must check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (ii) of this section. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases must be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces must be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity. The CPMS must be calibrated prior to use for the purposes of complying with this section. The CPMS must be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results must be recorded and checked daily for proper operation.

(7) (i) A CMS is out of control if -

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

(ii) When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part.

(8) The owner or operator of a CMS that is out of control as defined in paragraph (c)(7) of this section shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in § 63.10(e)(3).

(d) *Quality control program.*

(1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

(2) The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(3) The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

(e) *Performance evaluation of continuous monitoring systems* -

(1) *General.* When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in this section or in the relevant standard.

(2) *Notification of performance evaluation.* The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under § 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3) (i) *Submission of site-specific performance evaluation test plan.* Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in § 63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator' failure to approve or disapprove a plan in a timely manner shall -

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) *Conduct of performance evaluation and performance evaluation dates.* The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under § 63.7 in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a relevant opacity emission standard as provided under § 63.6(h)(7), he/she shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under § 63.7 is conducted in time to submit the results of the performance evaluation as specified in paragraph (e)(5)(ii) of this section. If a performance test is not required, or the requirement for a performance test has been waived under § 63.7(h), the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in § 63.7(a), or as otherwise specified in the relevant standard.

(5) *Reporting performance evaluation results.*

(i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under § 63.7 or within 60 days of completion of the performance evaluation if no test is required, unless otherwise specified in a relevant standard. The Administrator may request that the owner or operator submit the raw data from a performance evaluation in the report of the performance evaluation results.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation under this paragraph. The copies shall be provided at least 15 calendar days before the performance test required under § 63.7 is conducted.

(f) *Use of an alternative monitoring method -*

(1) *General.* Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in § 63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:

(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

(ii) Alternative monitoring requirements when the affected source is infrequently operated;

(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4) (i) *Request to use alternative monitoring procedure.* An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) *Approval of request to use alternative monitoring procedure.*

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with --

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

(6) Alternative to the relative accuracy test. An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) *Criteria for approval of alternative procedures.* An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in § 63.7, or other tests performed following the criteria in § 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) *Petition to use alternative to relative accuracy test.* The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) *Rescission of approval to use alternative to relative accuracy test.* The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

(g) *Reduction of monitoring data.*

(1) The owner or operator of each CMS must reduce the monitoring data as specified in paragraphs (g)(1) through (5) of this section.

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in § 63.2.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(4) All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed under this part. For the owner or operator complying with the requirements of § 63.10(b)(2)(vii)(A) or (B), data averages must include any data recorded during periods of monitor breakdown or malfunction.

§ 63.9 Notification requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4) (i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

(b) *Initial notifications.*

(1) (i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that

the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of this section.

(iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under § 63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.

(2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the affected source;

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and

(v) A statement of whether the affected source is a major source or an area source.

(3) [Reserved]

(4) The owner or operator of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i); and

(ii) [Reserved]

(iii) [Reserved]

(iv) [Reserved]; and

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and

(ii) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(iii) Unless the owner or operator has requested and received prior permission from the Administrator to submit less than the information in § 63.5(d), the notification must include the information required on the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i).

(c) *Request for extension of compliance.* If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with § 63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in § 63.6(i)(4) through § 63.6(i)(6).

(d) *Notification that source is subject to special compliance requirements.* An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

(e) *Notification of performance test.* The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

(f) *Notification of opacity and visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in § 63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:

(1) A notification of the date the CMS performance evaluation under § 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under § 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under § 63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;

(2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by § 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by § 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by § 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) *Notification of compliance status.*

(1) The requirements of paragraphs (h)(2) through (h)(4)of this section apply when an affected source becomes subject to a relevant standard.

(2) (i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list -

(A) The methods that were used to determine compliance;

(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

(E) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);

(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

(ii) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.

(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) [Reserved]

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in § 63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of § 63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

(i) *Adjustment to time periods or postmark deadlines for submittal and review of required communications.*

(1) (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

§ 63.10 Recordkeeping and reporting requirements.

(a) *Applicability and general information.*

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the
State to satisfy the requirements of this section for that report.

(4) (i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.

(5) If an owner or operator of an affected source in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such source under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. For each relevant standard established pursuant to section 112 of the Act, the allowance in the previous sentence applies in each State beginning 1 year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in § 63.9(i).

(6) If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to section 112 of the Act, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the latest compliance date for any relevant standard established pursuant to section 112 of the Act for any such affected source(s). Procedures governing the implementation of this provision are specified in § 63.9(i).

(7) If an owner or operator supervises one or more stationary sources affected by standards established pursuant to section 112 of the Act (as amended November 15, 1990) and standards set under part 60, part 61, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the relevant section 112 standard, or 1 year after the stationary source is required to be in compliance with the applicable part 60 or part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in § 63.9(i).

(b) *General recordkeeping requirements.*

(1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of -

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment;

(iii) All required maintenance performed on the air pollution control and monitoring equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3));

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this sections, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) *Recordkeeping requirement for applicability determinations.* If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without

considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f), and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under this part) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any. The requirements to determine applicability of a standard under § 63.1(b)(3) and to record the results of that determination under paragraph (b)(3) of this section shall not by themselves create an obligation for the owner or operator to obtain a title V permit.

(c) *Additional recordkeeping requirements for sources with continuous monitoring systems.* In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of -

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)–(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in § 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(9) [Reserved]

(10) The nature and cause of any malfunction (if known);

(11) The corrective action taken or preventive measures adopted;

(12) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;

(13) The total process operating time during the reporting period; and

(14) All procedures that are part of a quality control program developed and implemented for CMS under § 63.8(d).

(15) In order to satisfy the requirements of paragraphs (c)(10) through (c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping

requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

(d) *General reporting requirements.*

(1) Not-withstanding the requirements in this paragraph or paragraph (e) of this section, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) *Reporting results of performance tests.* Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) *Reporting results of opacity or visible emission observations.* The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Test Method 9 or Test Method 22, or an alternative to these test methods) along with the results of the performance test required under § 63.7. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under § 63.7, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

(4) *Progress reports.* The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5) (i) Periodic startup, shutdown, and malfunction reports. If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see Sec. 63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Such a report shall identify any instance where any action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports

under this part, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under paragraph (e) of this section, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Administrator does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in paragraph (e)(3) of this section.

(ii) Immediate startup, shutdown, and malfunction reports. Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of this section, any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, the owner or operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph (d)(5)(ii) shall consist of a telephone call (or facsimile (FAX) transmission) to the Administrator within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the owner or operator may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under this paragraph (d)(5)(ii) are specified in Sec. 63.9(i).

(e) *Additional reporting requirements for sources with continuous monitoring systems* -

(1) *General.* When more than one CEMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CEMS.

(2) Reporting results of continuous monitoring system performance evaluations.

(i) The owner or operator of an affected source required to install a CMS by a relevant standard shall furnish the Administrator a copy of a written report of the results of the CMS performance evaluation, as required under § 63.8(e), simultaneously with the results of the performance test required under § 63.7, unless otherwise specified in the relevant standard.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation conducted under § 63.8(e). The copies shall be furnished at least 15 calendar days before the performance test required under § 63.7 is conducted.

(3) *Excess emissions and continuous monitoring system performance report and summary report.*

(i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a

relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when -

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) [Reserved].

(ii) Request to reduce frequency of excess emissions and continuous monitoring system performance reports. Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in § 63.8(c)(7) and § 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official

who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) *Summary report.* As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report - Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

(A) The company name and address of the affected source;

(B) An identification of each hazardous air pollutant monitored at the affected source;

(C) The beginning and ending dates of the reporting period;

(D) A brief description of the process units;

(E) The emission and operating parameter limitations specified in the relevant standard(s);

(F) The monitoring equipment manufacturer(s) and model number(s);

(G) The date of the latest CMS certification or audit;

(H) The total operating time of the affected source during the reporting period;

(I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

(J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

(K) A description of any changes in CMS, processes, or controls since the last reporting period;

(L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

(M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

(4) Reporting continuous opacity monitoring system data produced during a performance test. The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in paragraph (d)(2) of this section.

(f) *Waiver of recordkeeping or reporting requirements.*

(1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of record-keeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under this part (such as under § 63.6(i) and § 63.9(h)) or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she -

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.11 Control device requirements.

(a) *Applicability.* The applicability of this section is set out in Sec. 63.1(a)(4).

(b) Flares.

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(6) An owner/operator has the choice of adhering to the heat content specifications in paragraph (b)(6)(ii) of this section, and the maximum tip velocity specifications in paragraph (b)(7) or (b)(8) of this section, or adhering to the requirements in paragraph (b)(6)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max}, as determined by the following equation:

$$V_{max} = (X_{H2} - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9 (m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 63.14).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (b)(7)(i) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant = 1.740×10^{-7} (1/ppmv)(g-mole/scm)(MJ/kcal); where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77 or 90 (Reapproved 1994) (incorporated by reference as specified in § 63.14).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809-95. (incorporated by reference as specified in § 63.14) if published values are not available or cannot be calculated.

n = Number of sample components.

(7) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$Log_{10}(V_{max})=(H_T+28.8)/31.7$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
28.8 = Constant.
31.7 = Constant.
H_T = The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$$V_{max} = 8.71 + 0.708(H_T)$$

Where:
V_{max} = Maximum permitted velocity, m/sec.
8.71 = Constant.
0.708 = Constant.
H_T = The net heating value as determined in paragraph (b)(6)(ii) of this section.

§ 63.12 State authority and delegations.

(a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from -

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

(b) (1) Section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and other requirements pursuant to section 112 for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

(2) Subpart E of this part establishes procedures consistent with section 112(l) for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

(c) All information required to be submitted to the EPA under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act, provided that each specific delegation may exempt sources from a certain Federal or State reporting requirement. The Administrator may permit all or some of the information to be submitted to the appropriate State agency only, instead of to the EPA and the State agency.

§ 63.13 Addresses of State air pollution control agencies and EPA Regional Offices.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated as follows:

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee). Director; Air, Pesticides and Toxics Management Division; Atlanta Federal Center, 61 Forsyth Street; Atlanta, GA 30303-3104.

(b) All information required to be submitted to the Administrator under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

(c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in this part, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of this part for that communication.

§ 63.14 Incorporations by reference.

(a) The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding addresses noted below, and all are available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC, at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC, and at the EPA Library (MD-35), U.S. EPA, Research Triangle Park, North Carolina.

(b) The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

(1) ASTM D523-89, Standard Test Method for Specular Gloss, IBR approved for § 63.782.

(2) ASTM D1193-77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 306, Sections 7.1.1 and 7.4.2.

(3) ASTM D1331-89, Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents, IBR approved for Appendix A: Method 306B, Sections 6.2, 11.1, and 12.2.2.

(4) ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for § 63.788, Appendix A.

(5) ASTM D1946-77, 90, 94, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for § 63.11(b)(6).

(6) ASTM D2369-93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for § 63.788, Appendix A.

(7) ASTM D2382-76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for § 63.11(b)(6).

(8) ASTM D2879-83, 96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for § 63.111 of Subpart G.

(9) ASTM D3257-93, Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography, IBR approved for § 63.786(b).

(10) ASTM 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography, IBR approved for § 63.365(e)(1) of Subpart O.

(11) ASTM D3792-91, Standard Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for § 63.788, Appendix A.

(12) ASTM D3912-80, Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(13) ASTM D4017-90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for § 63.788, Appendix A.

(14) ASTM D4082-89, Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(15) ASTM D4256-89, 94, Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for § 63.782.

(16) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for § 63.11(b)(6).

(17) ASTM E180-93, Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals, IBR approved for § 63.786(b).

(18) ASTM E260-91, 96, General Practice for Packed Column Gas Chromatography, IBR approved for §§ 63.750(b)(2) and 63.786(b)(5).

(19) Reserved

(20) Reserved

(21) ASTM D2099-00, Standard Test Method for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester, IBR approved for § 63.5350.

(24) ASTM D2697-86 (Reapproved 1998), ``Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," IBR approved for Sec. Sec. 63.3161(f)(1), 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(25) ASTM D6093-97 (Reapproved 2003), ``Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer," IBR approved for Sec. Sec. 63.3161(f)(1), 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(26) ASTM D1475-98 (Reapproved 2003), ``Standard Test Method for Density of Liquid Coatings, Inks, and Related Products," IBR approved for Sec. Sec. 63.3151(b), 63.3941(b)(4), 63.3941(c), 63.3951(c), 63.4141(b)(3), 63.4141(c), and 63.4551(c).

(27) ASTM D 6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide and Oxygen concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process heaters Using Portable Analyzers, IBR approved for Sec. 63.9307(c)(2).

(28) [Reserved]

(29) ASTM D6420-99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §§ 63.5799 and 63.5850.

(30) ASTM E 515-95 (Reapproved 2000), Standard Test Method for Leaks Using Bubble Emission Techniques, IBR approved for Sec. 63.425(i)(2).

(31) ASTM D5291-02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, IBR approved for Sec. 63.3981, appendix A.

(32) ASTM D5965-02, ``Standard Test Methods for Specific Gravity of Coating Powders," IBR approved for Sec. Sec. 63.3151(b) and 63.3951(c).

(33) ASTM D6053-00, Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes, IBR approved for Sec. 63.3981, appendix A.

(34) E145-94 (Reapproved 2001), Standard Specification for Gravity-Convection and Forced-Ventilation Ovens, IBR approved for Sec. 63.4581, Appendix A.

(35) [Reserved]

(36) ASTM D5066-91 (Reapproved 2001), ``Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis," IBR approved for Sec. 63.3161(g).

(37) ASTM D5087-02, ``Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)," IBR approved for Sec. Sec. 63.3165(e) and 63.3176, appendix A.

(38) ASTM D6266-00a, ``Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)," IBR approved for Sec. 63.3165(e).

(c) The materials listed below are available for purchase from the American Petroleum Institute (API), 1220 L Street, NW., Washington, DC 20005.

(1) API Publication 2517, Evaporative Loss from External Floating-Roof Tanks, Third Edition, February 1989, IBR approved for § 63.111 of subpart G of this part.

(2) API Publication 2518, Evaporative Loss from Fixed-roof Tanks, Second Edition, October 1991, IBR approved for § 63.150(g)(3)(i)(C) of subpart G of this part.

(3) API Manual of Petroleum Measurement Specifications (MPMS) Chapter 19.2, Evaporative Loss From Floating-Roof Tanks (formerly API Publications 2517 and 2519), First Edition, April 1997, IBR approved for § 63.1251 of subpart GGG of this part.

(d) *State and Local Requirements.* The materials listed below are available at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC.

(1) *California Regulatory Requirements Applicable to the Air Toxics Program,* January 5, 1999, IBR approved for § 63.99(a)(5)(ii) of subpart E of this part.

(2) New Jersey's *Toxic Catastrophe Prevention Act Program*, (July 20, 1998), Incorporation By Reference approved for § 63.99 (a)(30)(i) of subpart E of this part.

(3) (i) Letter of June 7, 1999 to the U.S. Environmental Protection Agency Region 3 from the Delaware Department of Natural Resources and Environmental Control requesting formal full delegation to take over primary responsibility for implementation and enforcement of the Chemical Accident Prevention Program under Section 112(r) of the Clean Air Act Amendments of 1990.

(ii) Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Accidental Release Prevention Regulation, sections 1 through 5 and sections 7 through 14, effective January 11, 1999, IBR approved for § 63.99(a)(8)(i) of subpart E of this part.

(iii) State of Delaware Regulations Governing the Control of Air Pollution (October 2000), IBR approved for § 63.99(a)(8)(ii)-(v) of subpart E of this part.

(e) The materials listed below are available for purchase from the National Institute of Standards and Technology, Springfield, VA 22161, (800) 553-6847.

(1) Handbook 44, Specificiations, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for § 63.1303(e)(3).

(2) [Reserved]

(f) The following material is available from the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), P. O. Box 133318, Research Triangle Park, NC 27709-3318 or at http://www.ncasi.org: NCASI Method DI/MEOH-94.02, Methanol in Process Liquids GC/FID (Gas Chromatography/Flame Ionization Detection), August 1998, Methods Manual, NCASI, Research Triangle Park, NC, IBR approved for § 63.457(c)(3)(ii) of subpart S of this part.

(g) The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201-3301, Telephone (703) 522-3032, Fax (703) 522-5468.

(1) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(2) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(3) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(4) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(5) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(6) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(7) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(h) The materials listed below are available for purchase from The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida, 33830, Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991, IBR.

(1) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(2) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus -- P2O5 or Ca3(PO4)2, Method A-Volumetric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(3) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(4) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus-P2O5 or Ca3(PO4)2, Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(5) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method A -- Volumetric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(6) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(7) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P2O5, Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(i) The following materials are available for purchase from at least one of the following addresses: ASME International, Orders/Inquiries, P.O. Box 2900, Fairfield, NJ 07007-2900; or Global Engineering Documents, Sales Department, 15 Inverness Way East, Englewood, CO 80112.

(1) ASME standard number QHO-1-1994, ``Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators," IBR approved for Sec. 63.1206(c)(6)(iii).

(2) ASME standard number QHO-1a-1996 Addenda to QHO-1-1994, ``Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators," IBR approved for Sec. 63.1206(c)(6)(iii).

(3) ANSI/ASME PTC 19.10-1981, ``Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]," IBR approved for Sec. Sec. 63.865(b), 63.3166(a)(3), 63.3360(e)(1)(iii), 63.3545(a)(3), 63.3555(a)(3), 63.4166(a)(3), 63.4362(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), and 63.9323(a)(3).

(j) The following material is available for purchase from: British Standards Institute, 389 Chiswick High Road, London W4 4AL, United Kingdom.

(1) BS EN 1593:1999, Non-destructive Testing: Leak Testing--Bubble Emission Techniques, IBR approved for Sec. 63.425(i)(2).

(2) [Reserved]

(k) The following material may be obtained from U.S. EPA, Office of Solid Waste (5305W), 1200 Pennsylvania Avenue, NW., Washington, DC 20460:

(1) Method 9071B, ``n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples," (Revision 2, April 1998) as published in EPA Publication SW-846: ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The incorporation by reference of Method 9071B is approved for Section 63.7824(e) of Subpart FFFFF of this part.

§ 63.15 Availability of information and confidentiality.

(a) *Availability of information.*

(1) With the exception of information protected through part 2 of this chapter, all reports, records, and other information collected by the Administrator under this part are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and title V permit is available to the public, consistent with protections recognized in section 503(e) of the Act.

(2) The availability to the public of information provided to or otherwise obtained by the Administrator under this part shall be governed by part 2 of this chapter.

(b) *Confidentiality.*

(1) If an owner or operator is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of section 114(c) shall apply to such information.

(2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 307-04-04
April 7, 2005

Via Email and USPS

Trina Vielhauer
Florida Dept. of Environmental Protection
Twin Towers Office Bldg
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Rinker/Florida Crushed Stone
Brooksville Cement Plant
Kiln No. 1
Request for a Minor Air Construction Permit Amendment to Address Dioxin/Furan Related Matters

Dear Trina:

This is a follow up confirmation to my handwritten memo to you of April 6, 2005 addressing the above captioned matter. This letter will confirm that the Rinker Materials Corporation (Rinker) will agree to a minor air construction permit amendment for the company's existing Brooksville cement plant (the No. 1 Kiln System) to incorporate a permit condition that will restrict the cement plant operations in a manner that will assure compliance with the D/F emission limits of the National Emissions Standards for Hazardous Pollutants (NESHAP) for Portland cement plants (40 CFR 63, Subpart LLL), and corresponding air permit conditions.

Specifically, Rinker agrees to accept a permit condition that complies with the following:

> *For Kiln No. 1 to operate during periods of time when the co-located CPL power plant is not operating and during times the power plant is starting up, the No. 1 Raw Mill shall operate at all times, except that periods of raw mill downtime, not to exceed ten consecutive hours, are authorized.*
>
> *For purposes of this condition, power plant start up is defined as the period beginning with the initiation of firing either fuel oil or coal following periods of power plant down time and continuing for 72 consecutive hours.*
>
> *The raw mill operating limits specified herein do not apply during the start up of the cement plant.*
>
> *The conditions herein may be amended if Rinker provides the Department with other assurances, acceptable to the Department, that the permitted dioxin/furan emission limits will be complied with during the above described conditions.*

We appreciate the effort that you and your staff have expended on this matter. If there are questions or comments regarding this agreement or if the suggested permit condition is substantially altered, please contact me at 352-377-5822 or jkoogler@kooglerassociates.com.

Very truly yours,

KOOGLER & ASSOCIATES, INC.

John B. Koogler, Ph.D., P.E.
Florida Professional Engineer
Registration No. 12925

JBK/lt

cc: Greg DeAngelo, FDEP
Jim Pennington, FDEP
Bobby Bull, FDEP
Charles Allen, Rinker
Scott Benyon, Rinker
Mike Vardeman, Rinker
Segundo Fernandez, OHFC
David Dee, Landers & Parsons
Don Elias, RTP Environmental Associates

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June 29, 2005

James K. Pennington, P.E.
Administrator, North Permitting Section
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Re: Comments on Draft Permit and BACT Determination
DEP File No. 0530021-009-AC (PSD-FL-351)
Proposed New Kiln (Cement Plant #2) at the Florida Crushed Stone Brooksville Facility
Hernando County, Florida

Dear Jim:

Enclosed are four original signed and sealed copies of the letter which provides responses to the draft permit for the proposed new kiln (Cement Plant #2) at the Florida Crushed Stone Brooksville Facility. I understand from talking to Don Elias that four is the number of originals that FDEP needs to continue with processing the permit application.

RTP and Florida Crushed Stone appreciate the expedited attention that has been given to processing this permit application. If you require additional information or have questions please contact Charles Allen at (352) 799-7881 or Don Elias at (732) 968-9600.

Sincerely,

Barry

Barry D. Andrews, P.E.

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June 29, 2005

James K. Pennington, P.E.
Administrator, North Permitting Section
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Re: Comments on Draft Permit and BACT Determination
DEP File No. 0530021-009-AC (PSD-FL-351)
Proposed New Kiln (Cement Plant #2) at the Florida Crushed Stone Brooksville Facility
Hernando County, Florida

Dear Mr. Pennington:

Florida Crushed Stone Company (FCS) has reviewed the Department's draft PSD permit and supporting documentation for FCS's proposed cement plant in Brooksville, Florida. This letter contains FCS's comments concerning the draft permit, as well as a couple of comments on the Department's Best Available Control Technology Determination. FCS's comments are ordered by page number from the draft permit and also reference the section or permit condition. Underlining indicates any requested changes to language.

DRAFT PSD PERMIT

1. **Page 2, Facility Description, Paragraph 2**
The production and processing limits listed at the end of this paragraph should be noted as informational and not as limits, except for the clinker production. The clinker production rate can be checked by an inspector and thus affords the necessary practical enforceability. The other values increase the complexity of the permit without adding additional assurances of compliance with the emission standards. However, if the Department believes the production levels (not limits) should be added for informational purposes, the correct values are as follows:

   Line 2 will have a capacity of 214.9 tons per hour of material fed (dry basis) to the preheater, 125 tons per hour of clinker production, and 240 tons per hour of cement production (30 day average).

Daily and annual rates are 1,756,380 tons per year (4,812 tons/day) of material fed to the preheater (dry basis), 1,022,000 tons per year (2,800 tons/day) of clinker production, and 1,301,138 tons per year (5,760 tons/day) of cement production.

The plant will also include a coal processing operation that will crush coal and petroleum coke and will have an annual processing capacity of 165,000 tons of coal and petroleum coke. The new raw material and handling storage shall not process more than 276 tons per hour of raw material (2,417,760 tons per year) in any consecutive 12-month period.

2. **Page 3, Section I, Regulatory Classification, Paragraph 4**
It should be stated that the facility is assumed to be a major source of hazardous air pollutants, because the facility is assumed to be a major source of hydrochloric acid (HCl). It should be noted that test data is not available to confirm this assumption. Recent data for similar facilities indicate that Portland cement plants may not be a major source of HCl.

3. **Page 6, Section II, Condition 8**
It is requested that the first sentence of the condition be changed to read:
"The permitee shall submit an application to the Department when there is any modification to this facility that would require a permit under State or Federal regulations."

4. **Page 7, Section II, Condition 11.b**
Because of the large geographical buffer zone between the material storage area and the property boundary, the fugitive emissions from these sources will not significantly affect ambient air quality. In fact, the current ambient PM10 monitoring program has demonstrated that air quality is safely below the standards, and that the current material handling practices are adequate. Therefore, FCS requests that the first bullet in this condition be revised to:
"FCS will utilize material handling precautions similar to those currently used for Kiln 1".

5. **Page 11, Section III, Condition 2**
Regarding Condition 2a, the use of SNCR to control NOx emissions will give FCS the option of operating the kiln with oxidizing conditions at the back end of the kiln (the end of the kiln where the gases exit and the end of the kiln into which whole tire derived fuel will be introduced). The oxidizing condition will likely allow FCS to use more whole tire derived fuel, and FCS requests an upper limit on the heat input provided by whole tire derived fuel of 40 percent.

Regarding condition 2b, it is requested that the sentence "Flyash shall not exceed 15.0 tons/hr." be deleted. The feed rate will depend on the quality (e.g., Btu value) of the ash and may change. If the Department believes that this condition must be included, the value should be revised to 25 tons/hr.

6. **Page 11, Section III, Condition 3**

"Used oil" and "oil fuels" should be deleted to be consistent with Specific Condition 2, which allows on-spec oil and distillate oil to be used as fuel.

7. **Page 11, Section III, Condition 4**
As noted in Comment 1, FCS believes that these production limits are duplicative and unnecessary for compliance purposes. The clinker production rate affords practical enforceability, while the additional limitations will not provide additional assurance that the facility is complying with its emission limits. If the Department still believes that these Process Rate Limitations are needed, the correct values are presented in Comment 1.

8. **Page 12, Section III, Condition 4**
The formula for Clinker Production should read:

Clinker Production = [(Preheater Feed)(Kiln Feed LOI Factor plus kiln feed loss from preheater) + (Fly Ash Injection)(Fly Ash LOI Factor)]

9. **Page 12, Section III, Condition 9**
To be consistent with page 8 of the *Best Available Control Technology Determination* prepared by the Department, the first sentence should read:
"The owner or operator shall install selective noncatalytic reduction (SNCR) and multistage combustion (MSC) or equivalent system <u>as needed to supplement the controls</u>."

10. **Page 12, Section III, Condition 9**
It is requested that the fifth sentence of the condition be changed to read:
"The owner or operator shall use hydrated lime injection <u>or other control techniques</u> when necessary to <u>achieve the</u> SO_2 <u>emission limits</u>."

11. **Page 13, Section III, Condition 11**
It is requested that the first two sentences in Specific Condition 11 be changed to read:

> <u>Performance Testing: The owner or operator shall notify the Department at least 60 days prior to initiating a change in feed or fuel that may adversely affect compliance with D/F or PM emission limiting standards, or as soon as practical where 60 days advance notice is not feasible. For purposes of this condition, such change may include a physical or chemical change in feed or fuel or a change in the LOI of the flyash.</u>

This proposed language is consistent with the language of 40 CFR 60.1349(e)(3)(i). In the proposed language, a change in a "supplier of feed or fuel" has been eliminated because a supplier can be changed without affecting the physical or chemical characteristics of feed or fuel, or adversely affecting compliance with D/F or PM limiting standards.

12. Page 13, Section III, Condition 12

As requested and discussed in the permit application, the CO and VOC emission limits should be 4.0 and 0.19 lb/ton clinker, respectively, and the averaging period for SO_2 and CO should be a 30-day average. The averaging time for the CO limit should match the VOC and NO_x limits, because these pollutants are interrelated in their formation and control. The SO_2 limit should be 30 days, as is typical for most combustion sources that utilize coal as a fuel.

FCS is proposing an aggressive NO_x limit, based on the use of innovative combustion and emissions control systems. Efforts to reduce NO_x emissions through combustion controls such as MSC and the application of SNCR typically result in higher CO and VOC emissions. There is very little data to show that the Department's proposed CO and VOC limits are consistently achievable with the proposed control systems under all operational conditions. Less than a month of data is available from the tests of SNCR at Suwanee American and Florida Rock. There are no data available to show whether emissions will increase over time or when the facility is operating under a wider range of conditions. A two year study period is proposed to allow for a variety of operating conditions to be verified by actual plant operation. Consequently, FCS believes there are inadequate data to support the limits for CO and VOC that have been proposed by the Department. Significantly, as noted on Page BD-19, the 0.12 lb/ton limit for VOC in the Draft permit is "...approximately equal to the 0.11 lb/ton limit proposed as LAER for the St Lawrence Cement project in New York." The Rinker project is subject to BACT, not LAER.

FCS suggests footnotes similar to that for NO_x, which proposes lower rates after a period of initial operation. It is requested that the footnotes for the table be changed for CO and VOC as follows:

[2] CO emissions shall not exceed 4.0 lb/ton of clinker and 466.7 lb/hr (30-day block average) during the first two years of operation after initial startup. Commencing two years after initial plant startup, emissions of CO shall not exceed the limits shown in the table if these limits are shown to be achievable by actual plant performance.

[3] VOC emissions shall be expressed as propane. VOC emissions shall not exceed 0.19 lb/ton of clinker and 22.17 lb/hr (30-day block average) during the first two years of operation after initial startup. Commencing two years after initial plant startup, emissions of VOC shall not exceed the limits shown in the table if these limits are shown to be achievable by actual plant performance.

Finally, please include the following clarifying language. In the first sentence of the second paragraph, please revised "Emissions from this unit shall not exceed the following limits for the following pollutants" to "Emissions from this unit shall not exceed the following limits for the following pollutants, excluding periods of startup, shutdown and malfunction as defined in Condition 14 below".

13. Page 13, Section III, Condition 12

In the table, the basis for the mercury limit is not BACT.

14. Page 14, Section III, Condition 12

In the paragraph below the table, the annual emissions presented by the Department do not represent the facility's total potential to emit because they do not include startup and shutdown emissions. Consequently, the annual emissions presented in this paragraph should be considered informational only, not emission limits.

In the same paragraph, the parenthetical statement after NO_x should read "(after 180 days)."

15. Page 14, Section III, Condition 13

In the application, the discussion of malfunctions is based on 7 hours per "event" Therefore, in the third sentence of this Condition; each event should be 7 hours per calendar day, instead of 6 hours.

16. Page 14, Section III, Condition 14

FCS is proposing a new Condition 14 to address startup, shutdown and malfunctions as follows (the addition of this Condition will require the permit Conditions following it to be renumbered; however, in the draft permit there is no Condition 20, therefore only permit Conditions 14-19 in Section III need to be renumbered). The ambient air quality analyses presented in the Application considered higher emissions for these periods (as listed below), and demonstrated compliance with all ambient standards. These additional operating conditions should be specified as allowable in the permit.

POLLUTANT	POTENTIAL EMISSIONS	
SO_2		57.5 lb/hour
NO_x		1000 lb/hour
CO		1000 lb/hour
VOC		71.3 lb/hour

Periods of Startup, Shutdown and Malfunction: The owner or operator shall not cause, permit, or allow the total operating time during periods of startup, shutdown, and malfunction to exceed 336 hours per year on a rolling 365-day total. Within one working day of a malfunction, the permitee shall notify the Department's Southwest District.

17. Page 14, Section III, Condition 15

As mentioned in our comment #11, the averaging period for SO_2 and CO is requested to be a 30-day average.

18. Page 15, Section III, Condition 19

It is requested that the following be added after the table:
"If all of the secondary fuels listed above are not available at the time of testing, the tests shall be based on the fuels that are available. If another secondary fuel becomes available in the future, additional tests shall be conducted with that fuel, if such tests are deemed necessary by the Department, before that fuel is used."

19. Page 16, Section III, Condition 24, First Paragraph

It is requested that the second sentence read as follows:
"The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content and heat content of the fuel. For coal, natural gas, fuel oil, and propane, the records also shall include the proximate and ultimate analyses.

20. Page 19, Section III, Subsection B, Condition 2, Paragraph 2

The first sentence should read:
"Initial and annual compliance testing for PM and PM10 emissions from these emission units..."

21. Page 20, Section III, Subsection C, Condition 2

The emissions from the coal handling and grinding operations are limited by the baghouse grain loading and baghouse flow rates, and do not depend upon the process rate throughput. Therefore, FCS requests that these process rate limits be deleted, as there are other enforceable limits on these units. However, if the Department believes that this condition must be included, the limits should be revised to 20 tons/hr and 165,000 tons per year.

BACT DETERMINATION

22. Page BD-3, Last Sentence

The dioxin emissions stated in the Department's BACT determination (0.00105 pounds per year) are based on units with a baghouse inlet temperature >204 C. As noted in the application, FCS's proposed inlet temperature will be < 204 C and the emissions are limited to 0.00236 pounds per year in accordance with the NESHAP requirements in 40 CFR 63.1343.

23. Page BD-8, Particulate Matter (PM and PM_{10})
Refer to comment number 4.

Thank you for your review and consideration of FCS's comments. Please do not hesitate to contact Charles Allen at (352) 799-7881 or me at (732) 968-9600 if you require further information.

Sincerely,

Don Elias

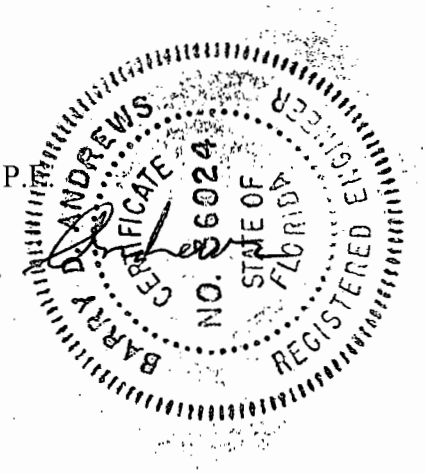
Donald F. Elias /BDA
Principal

Cc: C. Allen
S. Benyon
M. Vardeman
D. Dee
M. Podrez
pf RMBR

SEAL

Barry D. Andrews, P.E.

Barry D. Andrews



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

January 19, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Charles Allen
Rinker Materials of Florida, Inc.
13011 Cement Plant Road
Brooksville, FL 34601

Re: Request for Additional Information
DEP File No. 0530021-009-AC (PSD-FL-351)
Proposed New Kiln (Cement Plant #2) at the Florida Crushed Stone Brooksville Facility in Hernando County, Florida

Dear Mr. Allen:

On December 20, 2004, we received from RTP Environmental Associates, Inc. your application for an air construction permit for a new kiln at the Brooksville cement plant located at 13011 Cement Plant Road, Brooksville, Hernando County. Also, on December 20, we received the correct PSD permit processing fee.

Pursuant to Rule 62-4.055, F.A.C., Permit Processing, the Department requests submittal of additional information prior to processing the application. For responses to any of the items below that require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Provide manufacturer's certification that will confirm the maximum design capacity of the kiln in tons per hour of dry feed and in tons per hour of clinker produced. Provide a similar certification for heat input for the kiln and precalciner burners. Rule 62-4.070, F.A.C.
2. Provide details on the kiln burner and describe where air and fuel will be introduced and how they are staged to minimize NO_X formation. Please indicate the type of burner that will be used. Explain why the flue gas needs reheating for use with an SCR system.
Rules 62-212.400 and 62-4.070(1), F.A.C.
3. Describe the manner in which the precalciner vessel(s) will operate at the facility.
Rules 62-212.400 and 62-4.070(1), F.A.C.
4. Please provide information on CO and VOC control options, and details of both why CO and VOC will require a higher emission limit than has currently been permitted. 62-4.070(1), F.A.C.
5. Please provide information justifying a proposed limit of 0.2lb/ton for both PM and PM_{10}.
62-4.070(1), F.A.C.
6. Please assess the use of "high-efficiency bag filter, outfitted with teflon-coated fiberglass bags" and/or HEPA filters as secondary controls of particulate matter from the kiln system. What percentage, if any, of the collected fines will be recycled into the process? Rule 62-212.400, F.A.C.

7. Submit a projected chemical analysis of the raw materials and additives likely to be used at this plant. Provide a proximate and ultimate analysis of the fuels proposed. Rule 62-4.070(1), F.A.C

8. Please indicate if you intend to add any storage tanks meeting the applicability requirements under 40 CFR 60, Subpart Kb.
Rule 62-4.070(1), F.A.C.

9. Describe the primary fuel firing scenarios and describe the ratio of heat input at various fuel mixtures. Detail why heat input ratios might change under normal operating conditions and emissions. Provide an estimate of pollutant emissions under each scenario. Define the combustion practices that will be used to control CO and VOC. Rule 62-4.070(1), F.A.C.

10. Part D [Segment (Process/Fuel) Information] of Section 1 in the application indicates only three segments. However in Section 4.0 of the BACT Determination, other fuels are listed as fuels for the kiln and pre-calciner. Provide a list all fuels the facility intends to use for the kiln, pre-calciner and all other emissions units. Explain in what combinations or maximum amounts/percentages these fuels will be used. Explain how the different fuel types/combinations may affect emission rates, operation of control equipment (fabric filter (PM/PM10) and SNCR (NOx)) and affect control of combustion in the kiln (as Good Combustion Practice is the proposed BACT technology for CO and VOC, and Multistage Combustion is a component of the BACT for NOx). Rule 62-4.070(1), F.A.C.

11. Please explain the SO_2 emissions limit of 0.23 lb/hr. Provide information on the increase of SO_2 by co-firing different fuels with the coal in the kiln, and how this will effect your BACT determination for SO_2. Consider the possibility of hydrated lime injection for added SO_2 control when the raw mill is off, or raw material with higher sulfur is encountered, or if excess SO_2 from burning high sulfur fuel causes a break through in the calciner. Rule 62-4.070(1), F.A.C.

12. Provide the volume and residence time of material in the calciner with the production rate of 125 tons per hour for the new kiln. Rule 62-4.070(1), F.A.C.

13. For NO_x, SO_2, and CO, please justify the significantly higher emission rates for startup, shutdown, and non routine activities. Rule 62-4.070(1), F.A.C.

14. Estimate the impact of mercury deposition in the vicinity of this facility. Please provide reasonable assurance that the 26 lb/year of mercury emissions will not be exceeded. Also, provide reasonable assurance that the lead PSD significance levels will not be exceeded. Advise of any methods that will be undertaken to minimize mercury emissions such as raw material selection or transferring some baghouse dust straight to product. Rule 62-4.070(1), F.A.C.

15. Part D [Segment (Process/Fuel) Information] of Section 1 in the application indicates the kiln will have a maximum of 6 startups lasting 12 hours per year. However, throughout the application and in the BACT Determination, startup/shutdown and non routine emissions estimates vary based on 4 events each month lasting 7 hours for a total of 28 hours a month. Please explain the discrepancy. Explain the NO_x, SO_2, and CO calculations used for startup, shutdown and non routine emissions. The application states 750 hours for these periods, but the calculations are based on the 28 hours a month (336 hours/year). Explain the discrepancy. How many startup and shutdown events will normally occur each year? Describe the nature and duration of emissions, particularly from the in-line kiln/raw mill and clinker cooler, during startup and shutdown. Describe procedures used to minimize excess emissions during these events. Rules 62-4.070(1) and 62-210.700, F.A.C.

16. Provide additional BACT incremental control and economic analysis for controlling SO_2, PM, and CO. Explain cost savings and analysis between different types of controls and the level of each of the controls for these pollutants. Rule 62-4.070, F.A.C.

17. Please provide manufacturer, model numbers and design specifications for the fabric filters, ESPs, continuous monitoring systems used for these systems. Rules 62-4.070 and 62-212.400, F.A.C.

18. Does Florida Crushed Stone or its parent company have any current violations of Department regulations at any of their facilities? Please provide all documentation in relation to these violations. Rule 62-4.070(5), F.A.C.

19. Rule 62-212.400(5)(h) 5, F.A.C. requires the applicant to provide information relating to the air quality impact of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Please provide this information. The additional impacts section 7.0 does not adequately address this requirement.

20. Please update the application with the detailed building structure information used in the modeling to determine downwash impacts. This information should include building dimensions for all buildings used in the modeling analyses. In addition, please provide the detailed facility layout to scale of the facility showing the exact location of the modeling origin in meters and the location from this modeling origin of each building and stack. All stacks and buildings should be labeled. In addition, a grid with 100 meter spacing should be overlaid over this plot plan so that the information on the plot plan can be easily correlated with the information in the BPIP files. Additionally fence lines or physical barriers which preclude access to non-ambient air should be shown. Non-ambient air is the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barrier

21. The worst case operational scenarios should be used in the impact modeling. Emissions rates based on a 30 day average limit are not appropriate for evaluating the impacts on short-term standards and increments. Please provide short-term modeling based on the worst case 3 and 24 hour emission rates expected.

22. The United States Fish and Wildlife Service (FWS) has established a concern threshold for nitrogen deposition in the Chassahowitzka Class I area and requires an evaluation of this deposition. Please provide this evaluation.

23. The emission sources used for both the NAAQS and PSD compliance modeling were selected based on the 20D rule. This rule does not consider the additive effects of a number of sources located in the same general location. Review of the 20D rule eliminated sources reveals a few PM10 sources that may need to be included in the impact modeling emission inventories. In addition, the application of the 20D rule starts at the edge of the significant impact area (5 km in this case) instead of at the center of the facility. This means that all sources within the significant impact area should be modeled. Please provide a detailed table showing how the 20 D rule was applied to the cumulative PM inventory submitted with this application.

24. The preferred ambient background concentrations for the NAAQS compliance demonstration should be the maximum annual concentration measured at a representative monitoring location. An average of the highest concentrations over several years is not appropriate for this assessment.

25. Please provide a detailed list of the parameters used in the fugitive PM_{10} modeling. Please provide the value and supporting information for the silt loading factor used to estimate the paved road emissions inputs in this modeling. The details of the PM_{10} point, area and volume sources associated with the facility, including existing sources, along with associated stack parameters should be provided. In addition, have all quantifiable fugitive emissions, other than paved road emissions been

included in the PM_{10} modeling analysis? Also provide information on the precautions to prevent emissions of unconfined particulate matter.

26. The kiln stack temperature used in the air quality modeling is 560.9 degrees K, which is at least 100 degrees K hotter than the projected temperatures for similar kilns in the area, including the existing kiln at Florida Crushed Stone. Please explain.

Since the application is not complete, an *incomplete application* has been provided to the Federal Land Manager in accordance with Rule 62-212.400(4)(a)2., F.A.C. Federal Land Manager Participation. The FLM is responsible for demonstrating to the Department whether emissions from the facility will have an adverse impact on the air quality-related values (AQRVs including visibility) of the Federal Class I Area. The Department must consider such a demonstration in its Preliminary Determination if it is received within 30 days after the Department sends a complete application to the FLM.

We will forward any comments received from other agencies as soon as we receive them. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call Bobby Bull at 850-921-9585. Matters regarding modeling issues should be directed to Cleve Holladay at 850/921-8986.

Sincerely,

James K. Pennington, P.E., Administrator
North Permitting Section

JKP/rlb

Eddie Allsopp, III, Rinker Materials of Florida, Inc.
Barry D. Andrews, P.E., RTP Environmental Associates, Inc.
Jerry Kissell, Florida DEP- SWD
David Zell, Florida DEP- SWD
John Bunyak, NPS
Jim Little, EPA

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239 US Highway 22 East
Green Brook, NJ 08812

(732) 968-9600 Voice
(732) 968-9603 Fax

LETTER OF TRANSMITTAL

To: James Pennington
Florida Department of
Environmental Protection
111 South Magnolia St.
Tallahassee, FL 32301

Date: January 14, 2005
Project: RMBR

We Are Sending You: ☐ Attached ☐ Under Separate Cover

Via: ☐ 1st Class Mail ☒ Federal Express ☐ Hand Delivery
☐ United Parcel Service Tracking #: ☐ Other _____

Copies	Date	No.	Description
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These are Transmitted as Checked Below:

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☐ For Review and Comment
☐ Resubmit ____ Copies for Approval
☐ For Your Use
☐ As Requested
☐ Copies Returned After Loan
☐ Returned for Corrections
☐ For Signature
☐ For Signature and Submittal to State

Remarks:

Copy to:

Signed: _____

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

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. **Owner/Authorized Representative Name:**
   Charles Allen

2. **Owner/Authorized Representative Mailing Address...**
   Organization/Firm: Rinker Materials
   Street Address: 13011 Cement Plant Road
   City: Brooksville State: Florida County: Hernando Zip Code: 34601

3. **Owner/Authorized Representative Telephone Numbers...**
   Telephone: (532) 799 - 7881 ext. Fax: (532) 799 - 6088

4. **Owner/Authorized Representative Email Address: callen@rinker.com**

5. **Owner/Authorized Representative Statement:**

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

   Charles Allen
   Signature

   1-03-05
   Date

RECEIVED
JAN 18 2005
BUREAU OF AIR REGULATION

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. **Application Responsible Official Name: Eddie Allsopp, III**

2. **Application Responsible Official Qualification (Check one or more of the following options, as applicable):**

   [X] **For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.**

   [ ] **For a partnership or sole proprietorship, a general partner or the proprietor, respectively.**

   [ ] **For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.**

   [ ] **The designated representative at an Acid Rain source.**

3. **Application Responsible Official Mailing Address...**
   Organization/Firm: Rinker Materials of Florida, Inc.
   Street Address: 1501 Belvedere Road
   City: West Palm Beach State: Florida Zip Code: 33406

4. **Application Responsible Official Telephone Numbers...**
   Telephone: (561) 820 - 8343 ext. Fax: (561) 659 - 4361

5. **Application Responsible Official Email Address: eallsopp@rinker.com**

APPLICATION INFORMATION

6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Signature **Date** 1/03/05

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- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:
Mr. Charles Allen
Rinker Materials of Florida, Inc.
13011 Cement Plant Road
Brooksville, Florida 34601

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Charles Davis C. Date of Delivery 12-5-05

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13011 Cement Plant Road
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Project Number	Permit Type	PSD Number	Document Type	Document Date	PATS Number	Upload Date	View Document
009	AC	PSD-FL-351	Correspondence	3/3/2005		3/10/2005	00001337.pdf
009	AC	PSD-FL-351	Permit	7/6/2005		7/6/2005	000013D3.pdf

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