

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

*In the Matter of an Application
for Air Construction Permit by:*

Mr. Hardy Johnson, President Tarmac America, LLC 445 Fairway Drive Deerfield Beach, Florida 33441	DEP File No. 0250020-017-AC (PSD-FL-360) Titan Florida Pennsuco Cement Plant Production Increase Miami-Dade County, Florida
--	--

Enclosed is the Final Permit Number PSD-FL-360 (0250020-017-AC) to increase annual production at the Titan Florida Pennsuco Cement Plant in Medley, Miami-Dade County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; 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 of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

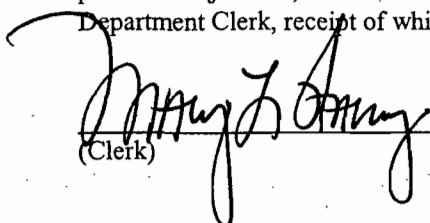
CERTIFICATE OF SERVICE

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 sent by U.S. Mail or electronic mail before the close of business on 12/2/05 to the person(s) listed:

Hardy Johnson, Tarmac America*
Al Townsend, Titan
Daniel Crowley, Titan
Terry Lancaster, Titan
David A. Buff, P.E., Golder
Patrick Wong, Miami-Dade DERM
Darrel Graziani, DEP SED
Jim Little, EPA Region 4
John Bunyak, National Park Service

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) 12/2/05
(Date)

FINAL DETERMINATION

File No. 0250020-017-AC (PSD-FL-360)

Titan Florida Pennsuco Cement Plant
Medley, Miami-Dade County

The Department distributed a Public Notice package on October 14, 2005 for the project to increase operating hours and annual clinker production rate from 1,642,500 TPY to 2,190,000 TPY at the modernized cement plant. Titan Florida Pennsuco Cement Plant is located at 11000 NW 121 Way, Medley, Miami-Dade County. The Public Notice of Intent to Issue was published in the October 15th edition of The Miami Herald.

No requests for public meetings or administrative hearings were received on the Notice of Intent to Issue. Written comments were received from Titan. Miami-Dade DERM submitted recommended changes to the list of "Additional Reasonable Precautions for Emissions of Unconfined Particulate Matter" in Specific Condition 34. Titan's written comments are described below (*italics*) followed by the Department's responses.

The Department's representatives held teleconferences with Titan's representatives on November 8, November 19, and November 22 to fully discuss Titan's comments

SPECIFIC CONDITION NO. 4 and 25

Raw Mill and Finish Mill Monitoring

Titan proposed to modify Specific Conditions No. 4 and No. 25 by adding the following language:

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 Part 60 of this chapter. 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 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 visual opacity test of each stack from which visible emissions were observed in accordance with Method 9. The duration of the Method 9 test shall be thirty minutes.

This language is an applicable requirement and it was already included within the Appendix LLL of the draft permit pursuant to Section 40 CFR 63.1350(e). Department agrees to duplicate the language in Specific Conditions 4 and 25 at the request of Titan.

SPECIFIC CONDITION NO. 9

Main Stack-Pyroprocessing/Raw Mill Emission Limits

Titan's comment on Note 2 of table: When does this 30 operating day block average (for CO, VOC, and SO₂) start? If I (Titan) operate 22 days and the kiln goes down for three days, we start adding to the 22 days again (after restart) until I have 30 days.

Titan's comment on Note 3 of the table: When does this 12 month rolling average(for NO_x) start?

The Department agrees with Titan's interpretation of operating day blocks. The starting date of the 30 operating day blocks and the 12 month rolling period is January 1, 2006 and will be shown in Condition 14 to which Notes 2 and 3 of Condition 9 refer.

SPECIFIC CONDITION NO. 12

Testing Procedures and Methods

Note 1 to Table: Titan asks for clarification as follows: You (the Department) are stating here that if the RATA is within the 20% allowed by the regulations than I (Titan) do not need to do annual SO_x, NO_x, CO, or VOC testing to a reference method?

Miami-Dade DERM provided the following comments on this issue: "RATA testing is done to ensure the accuracy of Continuous Emissions Monitors (CEMS). A RATA test is passed if the results are within 20% of the referenced method or 10% of the standard. This is therefore more relaxed than a regular compliance test.

"The Draft permit is requiring annual testing for CO, SO₂, NO_x and VOC, with an option to not test if the facility passes the annual RATA test. With this option they may never do a compliance test as long as they pass RATA. To provide reasonable assurance the facility should be required to do annual RATA testing and a compliance test every 5 years."

The Department is not stating that passing a Relative Accuracy Test Audit (RATA) obviates the need for an annual compliance test. Rather, conducting a RATA provides the opportunity to use the data from the associated referenced method to fulfill the independent initial and annual compliance test requirement. The criteria for passing or failing an initial or annual compliance test using the referenced method are independent from the concurrent RATA.

It is noted that the referenced test methods specified in the permit are instrumental methods rather than wet chemistry procedures or sampling by manual Orsat equipment, etc. The CEMS are calibrated using gases of known concentration in a manner similar to the way in which the modern reference method instruments are calibrated. The two instruments are much closer in precision and accuracy than suggested by the criteria (e.g. the 20% value) developed when cruder (1960's and 1970's) referenced methods were used.

Note 1 to the table in Condition 12 will be modified to read:

1. 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. The result from the actual referenced method (RM) test during the RATA needs to show compliance with the allowable permit emission limit.

SPECIFIC CONDITION NO. 13

Feed or Fuel Changes and D/F Performance Testing

Titan proposed to modify Specific Condition No. 13 by replacing it with the following language:

The owner or operator is required to repeat the performance tests for kilns or in-line kiln/raw mills as specified in Appendix A, 40 CFR Part 60 within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test.

The Department's representatives discussed this matter with Titan's representative. The reasons for notification prior to the changes were discussed. Titan's representative pointed out that terms in the Department's language, such as "a physical or chemical change in feed", might be construed by personnel at the plant in such a manner that changes requiring notification will occur every day.

It was agreed that the notification requirement will remain in the permit as well as the language. However, Titan requested the opportunity in the future to develop language that will be clearer to plant personnel and encompass the changes that the Department actually needs to review.

SPECIFIC CONDITION NO. 14

Continuous Emission Monitoring Systems

Titan's representative verbally advised that the location of their CO monitor is in the downcomer, which is a section between the exit of gases from the preheater and the raw mill. Titan wishes to continue using the CO monitor located in the downcomer rather than installing another CO monitor in the stack.

The Department agrees with this request. At the point in the downcomer where the CO monitor is located, there is also an oxygen monitor and an additional NO_x monitor. At the downcomer location, it is likely that CO burnout has occurred. The Department will require that the CO monitor in the downcomer be subjected to annual RATA in the same fashion as the other CEMS. The concentration of CO in the exhaust gases in the downcomer is likely to be within the deviation allowed by a RATA when compared with CO concentrations in the stack.

Reference paragraph 14 c (new paragraph 14 d). Titan's comment on Valid Hour Averages: It is our understanding of (Data Acquisition Handling Systems) that samples are collected every ten seconds (and) must have 75% of the samples to be valid. In your (Department's) description here, we (Titan) could actual take a sample at 12:00 and not have to take another sample until 12:45 which would leave thirty minutes in between each sample. I (Titan) would ask that we change this wording to be more in line with federal regulations.

The issue was discussed in detail with Titan's representative. It is not necessary to change any language in this condition. For an hourly average to be considered valid, at least two data points separated by a period of 15 minutes or more must be used to compute the hourly average. It is understood that when more than two data points are available, all available data points must be used to calculate the hourly average. However, if due to CEM system malfunction, only the two data points as described above are available, then the hour is still considered valid.

Reference paragraph 14d (new paragraph 14e). Titan's comment on Data Availability: You (Department) are stating here that as long as I (Titan) have data for 90% of my total operating time for any six-month period I do not need to submit an excess emission report? Are you sure that is how you wanted that to read. In every state I've worked in it's always been and it states in the federal regulations that I must submit excess emission reports within thirty (30) days of the end of the quarter to the local permitting agency.

In response to Titan's written and verbal comments, the Department modifies Specific Condition Nos. 14 a. to f. as follows:

SPECIFIC CONDITION NO. 14

Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) in the in-line kiln/raw mill stack to measure and record the emissions of NO_x, SO₂, CO, and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Alternatively, the CO monitor located in the downcomer (between the preheater and in-line raw mill) calibrated, maintained and operated as a CEMS may be used (in lieu of a CO CEMS located in the stack) to measure and record CO in a manner sufficient to demonstrate compliance with the emission limits for CO. The CEMS systems shall express the results in units of pounds per ton of clinker produced, and pounds per hour. Emissions of VOC shall be reported in units of the standards (lb/hour, lb/ton clinker) and ppmvd as propane corrected to 7% oxygen.

- a. *Compliance Demonstration:* Compliance with the short-term emission limits for NO_x, SO₂, CO, and VOC shall be based on a 24-hour block rolling average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 all valid hourly averages. The 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average values. If there are less than 24 hours during the block, the 24-hr block average shall be the average of all valid hourly average values available during the 24 hour block. Compliance with the long-term emission limits for SO₂, CO, and VOC shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. For purposes of the SO₂, CO, and VOC long-term emission limits, an operating day is any day that the kiln produces clinker or fires fuel. The first 30 operating day block shall begin the first operating day on or after January 1, 2006.
- b. *(New) Compliance with the CO emission limits when using downcomer CO monitor:* Oxygen content must be measured at the location of the downcomer CO monitor. Data from the downcomer CO monitor shall be corrected to accurately reflect stack CO concentrations and to calculate mass emissions. The CO stack tests required when conducting a RATA or demonstrating initial or annual compliance shall be conducted in the in-line kiln/raw mill stack.
- c. *(Previously b) Compliance with the long-term NO_x emissions limit:* Compliance with the long-term NO_x emission limit shall be based on a 12 month rolling average that shall be recomputed each month as the arithmetic average of that month and the preceding 11 months. Each monthly average shall be computed by averaging all valid hourly averages occurring within each calendar month. The first 12 month period shall commence on January 1, 2006. No changes other than numeration from b to c .
- d. *(Previously c) Valid Hourly Average:* No changes besides numeration.
- e. *(Previously d) Data Availability:* During each semiannual (six-month) period, CEM system valid hourly averages shall be obtained for at least ~~90~~ 95 percent of the operating hours for which the plant is producing clinker. If the CEM system does not obtain valid hourly averages for 90 percent or more of the operating hours per semiannual period for which the

plant is producing clinker, the permittee shall also submit a continuous monitoring system performance report with the semiannual excess emissions and continuous monitoring system performance report. This report must include corrective actions, and it shall be submitted within 30 days following the end of each semiannual reporting period.

- f. *(Previously e) Compliance Assurance:* CEM system breakdowns, malfunctions, repairs, calibration checks, zero adjustments, and span adjustments all result in periods during which CEM system data are not obtained. During such periods in excess of ~~120 hours~~ five percent of the total operating hours per calendar quarter, the permittee shall assure compliance with the emissions standards of this permit through stack tests, alternative monitoring systems, or other methods as approved by the Department.

SPECIFIC CONDITION NO. 16

Material Balance Records of Mercury

Titan states: It should be noted that pursuant to the federal Clean Air Act (section 112(d)(1)), mercury and lead were delisted from the federal NSR program. Accordingly, any exceedances of these values do not constitute a violation of federal NSR permitting requirements.

Testing conducted on October 22, 2004 resulted in mercury and lead emissions well below the annual emission thresholds for mercury and lead identified in this paragraph. Accordingly, DERM waives testing for mercury and lead until October 22, 2009.

The Department verbally discussed this matter with Titan's representative. The Department clarified that the Environmental Regulatory Commission has determined the Department would maintain mercury as a pollutant regulated by the Department's PSD Regulations at Paragraph 62-212.400, F.A.C.

The Department advised that a single stack test is not representative of mercury emissions because of: raw materials variations and alternating enrichment and intermittent alleviation via the stack of the external mercury cycle under raw mill on and off conditions.

The Department provided via electronic mail conditions from the most recent cement kiln permits in response to Titan's concern about being more burdened with this requirement than other plants.

Titan's representative requested that the materials samples be taken at the feed silo to the kiln, but it was pointed out that this location would overestimate mercury flow because of enrichment within the external cycle. The Department agreed to provide time to Titan to develop the internal protocols to collect, homogenize, store and test raw material and fuel samples.

Titan requested to develop in the future a method to integrate these determinations into present plant sample collection procedures or conceivably develop a different method to accurately determine mercury emissions. The procedures may be developed soon enough to incorporate into the Title V Operation Permit presently under review. No changes will be made to the condition at this time except to allow commencement of the sampling program after development of the necessary protocols and by July 1, 2006.

The following language is appended to Specific Condition 16:

The first 12-month rolling period shall begin on July 1, 2006.

SPECIFIC CONDITION NO. 3, 8, 21, 24, and 28

Visible Emission Limits

Titan proposed to modify Specific Conditions No. 21, 24 and 28 by adding the 40 CFR 63, Subpart LLL language to these visible emissions conditions as follows:

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 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 [40 CFR] 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 (6) 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.*

This language is an applicable requirement and it was already included within the Appendix LLL of the draft permit pursuant to Section 40 CFR 63.1350 (a)(4)(i), (ii), (iii) and (iv). Department agrees to duplicate the language in Specific Conditions 21, 24 and 28 at the request of Titan as well as in 3 and 8 that have the identical reference to Permit Appendix LLL. The following sentence that was left out of Titan's description of (4)(iv) above will be added as well:

"...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."

SPECIFIC CONDITION NO. 31

Coal Handling System

Titan commented (that directly under the table): it is stated that the opacity limit is 10%, below it states 5%. Is it 5% to 10%? Make sure it's consistent in terminology.

The Department clarifies that the limit for the common (main) stack is 10 % opacity. The limit of 5 % opacity is for all the other emission units at this Coal Handling System. No changes are required for this condition.

SPECIFIC CONDITION NO. 33

No comments were received regarding this condition. It is repeated here because of its relation to comments in the following sections.

33. Reasonable Precautions for Emissions of Unconfined Particulate Matter: This facility is subject to applicable requirements of Rule 62-296.320(4)(c)1, 2, 3, & 4, F.A.C. Refer to Appendix C: Common Conditions.

APPENDIX C, COMMON CONDITIONS, CONDITION NO. 11

No comments were received regarding this condition. It is the reference to Specific Condition 33 and rationale for Specific Conditions 34, 35, and Appendix D. It is repeated here because of its relation to the mentioned specific conditions.

11. Unconfined Emissions of Particulate Matter:

- (1) 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.
- (2) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- (3) Reasonable precautions include the following:
 - a. Paving and maintenance of roads, parking areas and yards.
 - b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - c. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - d. 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.
 - e. Landscaping or planting of vegetation.
 - f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
 - g. Confining abrasive blasting where possible.
 - h. Enclosure or covering of conveyor systems.

Additional reasonable precautions applicable to this facility are included in Section III of the Permit under Subsection: Cement Plant Fugitives Emissions and Appendix D: Fugitive Dust Improvement Plan.

- (4) 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.]

SPECIFIC CONDITION NO. 35

No comments were received regarding this condition. It is repeated here because of its relation to comments in the following sections.

35. Fugitive Dust Improvement Plan: The owner or operator shall implement the Fugitive Dust Improvement Plan attached as Appendix D. The permittee shall submit quarterly progress reports to include a status report on each specific action implemented under Appendix D (part of the permit). The first quarterly report shall be submitted in January 2006, with updates every 3 months thereafter for a two-year period. The progress reports shall be submitted to the Compliance Authority (Miami-Dade County DERM).

SPECIFIC CONDITION 34 - ADDITIONAL REASONABLE PRECAUTIONS FOR EMISSIONS OF UNCONFINED PARTICULATE MATTER

Personnel

Titan's comment on 34.a: Define all plant operators? Does this mean all heavy equipment operators, all tanker drivers, all train operators? Is this strictly in the aggregate part of the plant or does it include the block and ready mix? The block and read-mix already water their stock piles continually but the pile in the aggregate facility is a little harder because the more you water them the more muck coming out of the trucks leaving the facility.

Titan subsequently recommended the following replacement language: Train all aggregate and material handling personal on visible emissions and standard operating procedures for controlling fugitive emission.

DERM recommended the following replacement language: The facility shall develop and implement a facility-wide Fugitive Dust Response Plan by March of 2006. All plant operators must be trained in visible emissions and in the facilities Fugitive Dust Response Plan and shall perform visual inspections of on-site roadways and stockpiled materials regularly and before handling. If the visual inspections indicate fugitive emissions, the observer must implement the facilities response plan.

The Department notes that there was little evidence of fugitive dust control under the old wet process operation. The superior process dust control equipment and the Fugitive Dust Improvement Plan implemented at the new dry process operation provide reasonable assurance that the project nets out of PSD for PM/PM₁₀. Condition 34.a is modified as follows:

- a. ~~All plant operators shall be trained in the facilities basic environmental compliance and shall perform visual inspections of stockpiled 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.~~

Aggregate and material handling personnel, their supervisors, and environmental personnel, shall be trained in visible emissions, permit conditions related to fugitive emissions, and the Best Management Practices developed by Titan to implement the Fugitive Dust Improvement Plan under Appendix D.

Condition 34 b. No comments were initially received about this condition. Titan subsequently submitted recommended changes below.

The Department agrees with Titan's recommendation. A speed limit of 5 miles per hour (mph) is difficult to discern and enforce. The training including the identification of the patterns to personnel assigned to these tasks will likely be more productive. For example, there will be specific patterns to cover the entrance to the cement plant, the ready-mix plant, and the block plant. Condition 34.u. related to water trucks is consolidated with this condition. The condition is modified as follows:

- ~~b. To effectively control dust by road sweepers, provide operators training on proper operation. Proper operation includes going slow (5 mph or less) and having the water nozzles effectively controlling dust when sweeping roads. (No change).~~

Personnel shall be trained on proper operation of wet-dry sweeper and water trucks. Training shall include but not be limited to speed, nozzle operation, and cleaning patterns around the plants that comprise the facility.

Roads

Titan's comment 34.c.: The speed limit through the plant is now 19.5 mph or less. Trying to enforce a 5 to 10 mile hour speed limit would be almost impossible. Can we just keep it the way it is and maybe add some speed humps at problem locations?

Titan subsequently submitted the following replacement language:

Maintain current speed limit of 19.5 mph and communicate to all outside hauling companies the importance of controlling visible emissions within the facility property boundaries.

DERM and the Department agree with Titan. Titan pointed out that the large quarry trucks that deliver material to the crusher are physically limited in maximum speed capability to insure adherence to the 19.5 mph speed limit. DERM recommended the following acceptable replacement language. Additional Department language is shown as double-underline.

- c. ~~Reduce speed limit (5 to 10 mph) on the unpaved haul roads to ensure effective reduction of emissions from trucks.~~

Identify areas where the installation of speed bumps would be beneficial in reducing vehicular speed and fugitive emissions. Install the additional speed bumps by June 30, 2006.

- d. Clean and maintain paved road surfaces, which includes removing silt build-up, repairing all potholes, sweeping on a daily basis and utilizing a water truck to control visible emissions.

Titan's comment 34.e.: The manufacturing area is paved and the block areas are paved areas. Which raw material road are you (Department) referring to? The one that goes from the aggregate plant to the quarry?

DERM recommended paving of the raw material road from the aggregate plant to the raw material storage area. In subsequent discussions, Titan pointed out that they have paved the previously unpaved finish mill area. The entire block plant and ready-mix plant are paved. They will construct a new entrance road as described in the Fugitive Dust Improvement Plan and pave the lime rock road from the pack house to the new entrance.

Titan claimed that it is not feasible to pave the mentioned raw material road actually large swath or path. There are large material piles along the path and a lot of material handling equipment working these areas. According to the Fugitive Dust Improvement Plan, sprinkler system shall be installed along the main haul road from the quarry to the Aggregate Plant. This will reduce fugitive PM emissions from this unpaved road.

A new entrance road will be constructed by extending 106th Avenue north along the east side of the property, just east of the old ESPs. This road improvement will be implemented in cooperation with the City of Medley. Once the entrance road is completed, the lime rock road from the pack house to 106th Avenue will be paved. This will reduce truck traffic on the Main plant entrance road (off U.S. 27), and will reduce fugitive emissions from unpaved roads.

On balance, the Department believes that the project still nets out of PSD for PM/PM₁₀. Sufficient reasonable precautions are proposed without paving the mentioned road. This matter can be reviewed as a possible reasonable precaution in the future after observing the success of the other measures described in this permit. The condition will be changed as follows:

- e. Pave the manufacturing areas in the cement plant, the block area, the ready-mix plant, ~~raw materials roads~~ and the access roadways for the facility with asphalt or concrete.
- f. Maintain dedicated berm areas that have been established throughout the facility to further reduce wind erosion from ground areas.

Condition 34 g. No comment was received from Titan about this condition.

DERM recommended to the Department that the condition be removed. Presumably this recommendation was in conjunction with the paving of the same area recommended by DERM. Since the paving of this area will not be required at this time, the condition requiring the installation of the sprinkler system along the same path will be preserved.

- g. Install a sprinkler system to reduce dust along the aggregate road between the pits and the storage building.

Titan's comment 34.h.: The area directly to the south of the entrance and the railroad track is not owned nor operated by Titan but the side to the north is owned by Titan and is an area utilized by trucks who cannot get into the facility for one reason or another but they are not blocking the entrance nor sitting out by the highway. Titan will agree to establishing more green areas within the facility but would prefer to not change that area at this time.

Titan subsequently proposed replacement language that was accepted by the Department.

The Department notes that there will be improvements to 102nd Road and 106th Avenue. On balance this represents an improvement consistent with netting out of PSD for PM/PM₁₀. The possible improvements along the main entrance can be reviewed as possible reasonable precautions in the future after observing the success of the other measures described in this permit. The condition will be changed as follows:

- ~~h. Improve the main entrance to the plant by establishing green areas between the railroad tracks and the security gate. Refer to Appendix D: Facility Fugitives Emissions Control.~~

Improve the main entrance by establishing green areas between the security gate and the main facilities.

Materials

Titan's comment 34.i.: It is impossible for Titan to store all raw and fuel material indoors. If forced to store all materials inside then production and employment will change because we will not be able to operate without significant material on the ground ready to move at any time. Titan will develop and train front loader operators that move said material in best management practices. Subsequently, Titan pointed out they no longer generate and no longer need to store additional very fine cement kiln dust outdoors.

The Department notes that prior to the modernization and the construction of an 8-acre materials storage building, virtually all material was stored outdoors. According to Titan, at least 80% of raw materials used by the cement plant is stored indoors. Although the Department does not believe "it is impossible to store all raw materials indoors", the Department believes that even with deletion of the condition, the project will still net out of PSD. This condition is modified as follows:

- ~~i. Store raw materials and fuels in a storage building, and move primarily by stacker/reclaimer and covered conveyor belts.~~

To the extent feasible, raw materials and fuels for the cement facility will be storage inside the raw material building. All material within the raw material building will be moved by stacker/reclaimer and covered conveyor belts.

Titan's comment 34.j.: Installing water spray bars sounds in the "perfect" world great, but the increase in fuels because of the moisture content of the material will increase not only emissions but production costs. Spray bars on other areas of the conveyor systems present their own set of problems like material clumping together and clogging other pieces of equipment, etc.

Titan subsequently proposed the language below as an additional permit condition to replace 34.j.

The Department accepts Titan's arguments and believes there are still sufficient reasonable precautions to net out of PSD. The recommended replacement condition is acceptable.

- ~~j. Install water spray bars at each unenclosed material and fuel conveyor. The spray bars 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.~~

All conveyors are to be enclosed on at least three sides.

Titan's comment 34.k.: Again, it creates more problem than decreasing any type of fugitive emissions.

The Department agrees with Titan comments. This condition is deleted.

- ~~k. Install water supply lines, hoses and sprinklers near all stockpiled materials, coal and petroleum coke stockpiles.~~

Titan's comment 34.l.: Again we are an aggregate facility and requesting that we store all materials under roof is impossible.

The Department believes that storage of over 80% of the cement process raw materials indoors is a substantial improvement over the previous practices and provides sufficient assurance that the project nets out of PSD. The condition will be removed.

~~l. Store all materials, coal and petroleum coke at the plant under roof on compacted clay or concrete, or in enclosed vessels.~~

Titan's comment 34.m.: Where do you want us to increase this storage area at?

The Department agrees there is sufficient covered storage area given the substantial increase over the minimal storage under wet process operation. The condition will be removed.

~~m. Increase storage area for coal handling to accommodate additional inventory.~~

Condition 34 n. No comment was initially received about this condition. Titan subsequently submitted the replacement language below.

The Department does not regulate indoor air. However, material that collects on interior walls and other surfaces (e.g. in the finish mill building) has been observed to contribute to visible emissions from open buildings. The additional language regarding the clinker production area is acceptable. The Department will clarify that the concern is visible emissions outdoors. The condition is modified as follows:

~~n. Implement a cleaning process inside buildings to minimize dust.~~

k. The facility shall continue to maintain the clinker production area and continue to implement a cleaning process inside buildings to minimize dust emitted to the outside environment.

~~o. l. Unloading and reclaiming of materials will be curtailed during windy or dry conditions.~~

~~p. m. Raw materials will be managed to minimize their time in storage.~~

Trucks

Condition 34 q. No comment was initially received about this condition. Titan subsequently submitted the replacement language below. In subsequent discussions, Titan requested not to require bulk transport trucks to use a wheel wash. Their contention is that bulk transport trucks are restricted solely to roads that are paved. Further they have closed other roads entering and leaving the facility thus insuring that these vehicles stay on paved roads. They also stated that there are three vehicle wash stations used by the bulk transport vehicles.

The Department agrees, given that the manufacturing areas and roads used by the bulk transport trucks have been paved. The condition is modified as follows:

~~q. Install a wheel wash system and a dewatering area at the unpaved aggregate plant entrance/exit. In addition, install sufficient wheel wash system(s) at the facility entrance/exit to ensure bulk transport trucks leaving the plant shall travel through a wheel wash that removes particulate matter from vehicle tires, before traveling on the facility's access roadways.~~

n. All trucks leaving the aggregate facility will be required to dewater and drive through the tire wash system.

Titan's comment 34.r.: Titan does not own the trucks leaving the facility and most of the trucks leaving are owned by individual companies and people. Titan can recommend that all trucks leaving the facility tarp their loads. But if the FDOT and local regulations cannot get trucks to comply with the regulations how can Titan enforce such regulations?

In subsequent discussions, Titan's representative stated that the company has riders in its contracts with transportation companies requiring adherence to the environmental regulations including the tarpaulin requirement. Titan stated they are sending memoranda reminding the companies of the requirement to comply with the tarpaulin requirement. Titan recommended the replacement language below.

This condition is modified as follows:

~~r. Cover and secure transport trucks entering and leaving the facility with tarpaulins to prevent spillage. Advise drivers and companies of need to continue compliance outside of the facility.~~

o. Titan America/Tarmac will work with all transport companies to further educate drivers in the Florida Department of Transportation requirements that all loads be tarped prior to leaving the facility.

Conditions 34 s and t.: No comments were initially received from Titan about these conditions. Subsequently DERM and Titan submitted similar language consolidating these two conditions.

The conditions are modified and consolidated as follows:

~~s. Keep trucks on concrete surfaces within the loadout and the Cement Packhouse part of the facility.~~

~~t. Use concrete or asphalt paved roads.~~

p. All trucks traveling within the cement facility should stay on asphalt or concrete surfaces. All road surfaces outside of the aggregate facility shall be constructed of concrete and/or asphalt.

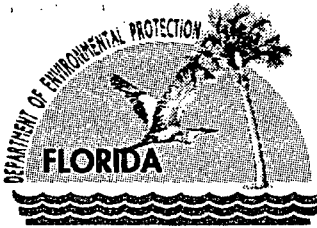
Conditions 34 u.: No comments were initially received from Titan about this condition. Subsequently, Titan recommended consolidation of this condition with Condition 34.b. above.

This condition is deleted. Refer to Condition 34.b.

~~u. Use watering trucks (facility should have at least 2) and road's vacuum sweepers to serve the entire facility.~~

CONCLUSION

The final action of the Department is to issue the permit with the changes noted above.



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

PERMITTEE:

Tarmac America, LLC.
455 Fairway Drive
Deerfield Beach, Florida 33441

Permit No.	0250020-017-AC (PSD-FL-360)
Project:	Production Increase
SIC:	3241 Cement, Hydraulic
Expires:	April 30, 2006

Authorized Representative:
Hardy Johnson, President
Tarmac America LLC

PROJECT AND LOCATION:

The project is a production increase from 1,642,500 tons per year (TPY) to 2,190,000 TPY of clinker at the recently modernized dry process Titan Florida Pennsuco Cement Plant in Medley Florida. The project involves no additional physical modifications and involves removal of annual production restrictions and limitations on hours of operation on a number of emissions units.

This permit is issued pursuant to the Rules for the Prevention of Significant Deterioration (PSD). It authorizes the production increase, the various changes in hours of operation, and final emission limits including best available control technology (BACT) for carbon monoxide (CO). This permit includes certain provisions from the previous permits related to the modernization project as revised by the present project. It reflects the final as-built configuration, production limits, emissions limits, shut down of the wet process lines, applicable rules, compliance assurance provisions, etc.

The Titan Florida Pennsuco Cement Plant is located at 11000 NW 121 Way, Medley, Miami-Dade County. UTM coordinates are Zone 17; 562.8 km E; 2861.7 km N.

STATEMENT OF BASIS:

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The above named permittee is authorized to construct/operate the facility 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).

Attached appendices and documents made a part of this permit:

Appendices A through I	Section IV of Permit – Table of Content, Appendices
------------------------	---

Michael G. Cooke, Director
Division of Air Resource
Management

"More Protection, Less Process"

Printed on recycled paper.

SECTION I. GENERAL INFORMATION

FACILITY DESCRIPTION

Tarmac America LLC operates the Titan Florida Pennsuco facility in Medley, Miami-Dade County. The facility consists of:

- A 10,000,000 tons per year (TPY) on-site limestone quarry that supplies approximately 3,000,000 TPY to the adjacent cement plant and the remainder to other users;
- A dry process portland cement plant that consumes up to 3,723,000 TPY of limestone and mineral aggregate and is permitted to produce no more than 2,190,000 TPY of clinker and approximately 2,400,000 TPY of portland cement;
- A ready-mix concrete plant; and
- An 85,000 block per day grey concrete block plant.

CEMENT PLANT DESCRIPTION

This permit relates to the dry process portland cement plant which, by this permit is permitted to increase annual production from 1,642,500 TPY to 2,190,000 TPY of clinker. Modernization of the plant included startup of the dry pyroprocessing line in 2004 and shutdown of the two wet process lines in the same year. The portland cement plant includes the following main components:

- An 8-acre, 95-foot high "A-frame" raw materials storage building (MSB);
- Raw material and fuel piles stored outside and inside of the MSB. The piles consist of blended limestone, alumina source (e.g. bauxite), iron source (e.g. mill scale), high lime limestone, coal, and petroleum coke;
- Materials handling equipment including bridge reclaimers, stackers, belt conveyors, conveyor from the MSB to the raw mill, control system/analyzer, etc.;
- An F.L. Smidth nominal 400 dry tons per hour (TPH) Model 52/4 Raw mill and F.L. Smidth nominal 15,000 ton blending silo;
- An F.L. Smidth Rotax kiln that is 65 meters long and 5 meters in diameter;
- An F.L. Smidth 5-stage "Low NO_x" in-line calciner (ILC) with sequenced fuel and air introduction and meal staging;
- An F.L. Smidth 4x5 cross bar clinker cooler;
- An F.L. Smidth Airtec ten-compartment baghouse with 690 bags per compartment;
- An F.L. Smidth nominal 35 TPH coal (and petroleum coke) mill;
- Four finish mills including a new F.L. Smidth finish mill consisting of four ball mills; and
- Cement storage, truck/rail loadout and packhouse.

RELEVANT DOCUMENTS

The construction permit application 0250020-017-AC to increase annual production was received on April 18, 2005. It was revised and made complete by a submittal dated September 30, 2005 requesting issuance of the permit pursuant to the PSD Rules at Paragraph 62-212.400, F.A.C.

The documents listed below are not part of this permit; however, they are specifically related to the modernization project and to the present permitting action:

- Construction Permit 0250020-008-AC issued October 21, 1999.
- Construction Permit 0250020-010-AC issued May 1, 2001.
- Construction Permit 0250020-016-AC issued May 31, 2005.

SECTION I. GENERAL INFORMATION

EMISSIONS UNITS

This permit addresses the following Emissions Units at the portland cement plant:

ARMS Emission Unit No.	EMISSION UNIT DESCRIPTION
010	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6
014	Cement Storage Silos 1 through 12
015	Cement Distribution, Rail and Truck Loadout
016	Cement Packhouse
026	Coal Handling System
027	Clinker Handling and Storage
028	Raw Mill and Pyroprocessing System
029	Raw Material Handling
031	Fugitive Emissions – Transportation, Miscellaneous Transfers, Storage

REGULATORY CLASSIFICATION

Title III: The Department has determined that the facility is a major source of hazardous air pollutants (HAP).

Title V: 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/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY.

PSD: This facility is within an industry included in the list of the 28 Major Facility Categories per Table 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, F.A.C., Prevention of Significant Deterioration (PSD). The proposed project is subject to PSD because annual CO emissions will increase by an amount greater than the significant emission rate of 100 TPY given in Table 212.400-2.

NSPS: This facility operates units that were originally subject to the following New Source Performance Standards in 40 CFR 60 adopted and incorporated by reference in Rule 62-204.800, F.A.C.: Subpart A (General Provisions); Subpart F (Portland Cement Plants); Subpart Y (Coal Preparation Plants); and Subpart OOO (Nonmetallic Mineral Processing Plants). Pursuant to 40 CFR 63.1356(a), any affected source subject to the major source provisions of Subpart LLL is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart F or 40 CFR60, Subpart OOO.

NESHAP: This facility operates units subject to the following National Emission Standards for Hazardous Air Pollutants in 40 CFR 63 adopted and incorporated by reference in Rule 62-204.800, F.A.C.: Subpart A (General Provisions); and Subpart LLL (Portland Cement Manufacturing Industry).

SECTION II. ADMINISTRATIVE REQUIREMENTS

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Florida Department of Environmental Protection's Bureau of Air Regulation located at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400 and phone number 850/488-0114.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to: Air Quality Management Division, Miami-Dade County Department of Environmental Resources Management, 33 Southwest Second Avenue, Suite 900, Miami, Florida 33130-1540. Copies shall also be submitted to: Air Resource Section, Southeast District Office, Florida Department of Environmental Protection, 400 North Congress Avenue, West Palm Beach, Florida 33401 (Telephone: 561/681-6600).
3. General Conditions: The owner and operator are subject to, and shall operate under the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403, F.S. [Rule 62-4.160, F.A.C.]
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 24- Code of Miami-Dade-County, Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; 40 CFR 60; and 40 CFR 63. 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.]
5. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]
6. Completion of Construction: Construction on the modernized cement plant is essentially complete and the new pyroprocessing line has already been tested for compliance with the conditions of the previous air construction permit. On-going construction activities include completion of a new mill and on-going fugitive emissions projects. The permit expiration date is April 30, 2006 and will allow operation of the plant while the Department of Environmental Protection processes the Title V Operation Renewal Permit.
7. New or Additional Conditions: 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.]
8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
9. Title V Permit: This permit authorizes construction/modification of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee applied for a Title V Operation Permit Renewal that anticipated the present air construction permit. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT RAW MATERIAL HANDLING SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
029	Raw Material Handling Operations

The raw material handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. 311.BF650	Dust collector for limestone and mineral aggregate feed bins/conveying
Baghouse I.D. 311.BF750	Dust collector for raw material conveyance from feed bins to raw mill
Baghouse I.D. 311.BF470	Dust collector for raw material conveyance from feed bins to raw mill
Baghouse I.D. 311.BF950	Dust collector for raw material conveyance from feed bins to raw mill

Operational Requirements

1. **Hours of Operation:** This emissions unit system is allowed to operate 8,760 hours per year. [Application received April 18, 2005]
2. **Raw Material Handling System Throughput Specification:** The maximum dry throughput rate is 3,723,000 TPY. The owner or operator shall record all throughput rates on a rolling 12-month basis, and maintain records for a minimum of 5 years. [Application received April 18, 2005; Permit 0250020-016-AC; Rules 62-4.070(3); and 62-213.440, F.A.C.]

Emissions Limitations and Performance Standards

3. **Visible Emissions Limits:** Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below except that the applicable standard is 5% instead of 10%.
 - (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 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 [40 CFR] 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 (6) consecutive monthly tests.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- (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.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 13 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.}

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

4. Raw Mill Monitoring: The owner or operator of a raw mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCDs (PM control devices) of these affected sources, in accordance with the procedures of Method 22 of Appendix A, 40 CFR Part 60 and as required by 40 CFR 63.1350(e), Subpart LLL.

Pursuant to 40 CFR 63.1350(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 PMCDs of these affected sources, in accordance with the procedures of Method 22 of Appendix A of Part 60 of this chapter. 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 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 visual opacity test of each stack from which visible emissions were observed in accordance with Method 9. The duration of the Method 9 test shall be thirty minutes.

[Rules 62-4.070(3) and 40 CFR 63.1350, Monitoring Requirements]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT PYROPROCESSING AND RAW MILL SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
026	Pyroprocessing and Raw Mill System Operations

The pyroprocessing and raw mill system are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D: 331.BF200	Main Stack & dust collector for preheater/kiln/cooler/raw mill/coal mill
Baghouse I.D: 331.BF740	Dust collector for kiln dust conveyance and storage bin
Baghouse I.D: 341.BF350	Dust collector for preheater feed silo
Baghouse I.D: 351.BF440	Dust collector for raw meal conveyance from feed silo to preheater
Baghouse I.D: 351.BF470	Dust collector for raw meal conveyance from feed silo to preheater
Baghouse I.D: 331.BF645	Dust collector for truck loadout of kiln dust

Operational Requirements

5. Hours of Operation: This emissions unit system is allowed to operate 8760 hours per year. [Applicant request - application received April 18, 2005, Rule 62-210.200, F.A.C., Definitions – Potential to Emit (PTE)]
6. Pyroprocessing System Production Limits: The maximum production of clinker shall not exceed 250 TPH on a 24-hour block average and 2,190,000 TPY. [Rule 62-210.200, (Definitions – Potential to Emit), F.A.C.; Applicant request in application received April 18, 2005]
7. Fuels: Allowable fuels fired in the pyroprocessing/raw mill emission unit consist of natural gas, bituminous coal, petroleum coke, No. 2 fuel oil with used oil blend and No. 6 fuel oil with used oil blend. Fuel oil includes on-spec used oil (refer to definition in specific condition 15).

{There is no heat input limitation. For reference, the design heat input capacities of the kiln burner and calciner burner are 290 million Btu per hour (mmBtu/hr) and 385 mmBtu/hr respectively. The clinker production limit effectively limits PTE.}

Emissions Limitations and Performance Standards

8. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses, except for the main stack baghouse, I.D.331.BF200. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below except that the applicable standard is 5% instead of 10%.
 - (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 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 [40 CFR] Part 60 of this chapter. The test must be conducted while the affected source is in operation.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- (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 (6) 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.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points, except for the *main stack*, in this emission unit system will be less than 7 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL}

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

9. Main Stack - Pyroprocessing/Raw Mill Emission Limits: Emissions exiting the main stack from the Pyroprocessing/Raw Mill system shall not exceed the limits shown in the following table:

PARAMETER	EMISSION LIMIT	AVERAGING TIME	COMPLIANCE METHOD	LIMIT BASIS
Opacity ⁶	10 Percent	6 minute block	COMS, Method 9	PTE, Avoid PSD 40 CFR Subpart LLL
PM ⁶	0.067 lb/ton of dry kiln feed	3 hours ⁵	Annual Method 5	PTE, Avoid PSD 40 CFR Subpart LLL
	28.5 lb/hr			
PM ₁₀ ⁶	0.056 lb/ton of dry kiln feed	3 hours ⁵	Annual Method 5	PTE, Avoid PSD 40 CFR Subpart LLL
	23.9 lb/hr			
SO ₂	0.50 lb/ton of clinker	30 days ²	CEMS	PTE, Avoid PSD
	320 lb/hour	24 hours ¹		
NO _x (as NO ₂)	2.17 lb/ton of clinker	12-months ³	CEMS	PTE, Avoid PSD
	720 lb/hour	24 hours ¹		
CO	2.0 lb/ton of clinker	30 days ²	CEMS	BACT
	576 lb/hour ¹	24 hours ¹		
VOC ⁴	0.16 lb/ton of clinker ²	30 days ²	CEMS	PTE, Avoid PSD
	40 lb/hour	24 hours ¹		
Mercury (Hg)	229 lb/yr (base + 199 lb/yr)	12-month	Fuels, Materials ⁸	PTE, Avoid PSD
Temperature ⁷	Baghouse Temperature (T) ≤ T during Dioxin/Furan Tests	Continuous		40 CFR 63, Subpart LLL
Dioxin/Furan	0.2 ng TEQ/dscm (T≥204 °C)	3 hours	30 Months, Method 23	40 CFR 63, Subpart LLL
	0.4 ng TEQ/dscm (T<204 °C)			

- 1 Compliance with the short-term emission limit for SO₂, NO_x, CO, and VOC shall be based on a 24-hour block average computed in accordance with Specific Condition 14. Compliance with lb/hr SO₂ emissions limitations in this condition will insure compliance with Miami-Dade County Code, Section 24-17(2)(a) limiting emissions to 1.2 lb SO₂/MMBtu heat input when solid fuel is fired, or 0.8 lb SO₂/MMBtu heat input when liquid fuel is fired, based on a 24 hour average
- 2 Compliance with the long-term emission limit for SO₂, CO, and VOC shall be based on a 30 operating-day block average computed in accordance with Specific Condition 14.
- 3 Compliance with the long-term emission limit for NO_x shall be based on 12 month rolling average computed in accordance with Specific Condition 14.
- 4 VOC emissions shall be expressed as propane.
- 5 The averaging times for PM and PM₁₀ correspond to the required length of sampling for the initial and subsequent emission tests. Compliance demonstration with these limits shall be conducted pursuant to 40 CFR 63.1349(b)(1).
- 6 Compliance with the Opacity, PM and PM₁₀ permit limits given for in-line kiln/raw mill will insure compliance with applicable limits from 40 CFR 63, Subpart LLL for the in-line kiln/raw mill, and clinker cooler, and 40 CFR 60, Subpart Y for the coal mill.
- 7 The temperature requirements for the operation of in-line kiln/raw mill are in accordance with 40 CFR 63.1344(a) & (b), and 63.1349(b)(3)(iv).
- 8 Determined by raw materials and fuels entering the process. Refer to Condition 10.

[Applicant BACT information for CO and request to escape PSD for other criteria pollutants; Rules 62-4.070(3) and 62-212.400, F.A.C.; 40 CFR 63.1343 and 63.1345; Application received April 18, 2005 and revised September 30, 2005].

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

{Permitting Note: For compliance with the long term CO, NO_x, SO₂, and VOC limits (30-day block and 12-month rolling averages), the averaging periods shall begin January 1, 2006.}

10. Mercury Emissions from the Pyroprocessing/Raw Mill System: Mercury emissions exiting the main stack from the Pyroprocessing/Raw Mill system shall not exceed 229 pounds per year on a 12-month rolling basis. Mercury

[Rules 62-4.070(3) and 62-210.200, F.A.C. (definitions – Potential to Emit), Avoid PSD]

Test Methods, Monitoring and Procedures

11. Determination of Clinker Production Rate during Testing: Prior to any emission testing to demonstrate compliance with any emission limit, the permittee shall determine the clinker production rate for the test according to the equation in Specific Condition 18. The permittee shall notify the DERM of the preheater kiln feed rate and the factor used to determine the clinker production rate in advance of the commencement of any test(s). The rate of clinker production shall be used to determine compliance with all clinker-based emission limits in the permit for that test. [DERM Requirement. Rule 62-4.070(3), F.A.C.]
12. Testing Procedures and Methods: In addition to the CEMS or COMS compliance requirements listed in Condition 10, the main stack & dust collector, Baghouse I.D. 331.BF200, serving the preheater/kiln/cooler/raw mill/coal mill shall be tested according to the EPA Methods and at the frequencies listed below:

POLLUTANT	TEST METHOD	FREQUENCY
PM/PM ₁₀	5	Annual
Opacity	9	Annual
SO ₂	6 or 6C	Annual ¹
NO _x (as NO ₂)	7 or 7E	Annual ¹
CO	10	Annual ¹
VOC	25 or 25A	Annual ¹
Dioxins/Furans	23	30 months

1. 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. The result from the actual referenced method (RM) test during the RATA needs to show compliance with the allowable permit emission limit.

[Rules 62-4.070(3), 62-297.310(7), and 62-212.400, F.A.C.; Permit 0250020-016-AC]

13. Feed or Fuel Changes and D/F Performance Testing: The owner or operator shall notify the compliance authority 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 loss on ignition (LOI) characteristic of the fly ash; a change between non-beneficiated fly ash and beneficiated fly ash. Based on the information provided, the compliance authority 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.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

14. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) in the in-line kiln/raw mill stack to measure and record the emissions of NO_x, SO₂, CO, and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Alternatively, the CO monitor located in the downcomer (between the preheater and in-line raw mill) calibrated, maintained and operated as a CEMS may be used (in lieu of a CO CEMS located in the stack) to measure and record CO in a manner sufficient to demonstrate compliance with the emission limits for CO. The CEMS systems shall express the results in units of pounds per ton of clinker produced and pounds per hour. Emissions of VOC shall be reported in units of the standards (lb/hour, lb/ton clinker) and ppmvd as propane corrected to 7% oxygen.
- a. *Compliance Demonstration*: Compliance with the short-term emission limits for NO_x, SO₂, CO, and VOC shall be based on a 24-hour block average. The 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average values. If there are less than 24 hours during the block, the 24-hr block average shall be the average of all valid hourly average values available during the 24 hour block. Compliance with the long-term emission limits for SO₂, CO, and VOC shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. For purposes of the SO₂, CO, and VOC long-term emission limits, an operating day is any day that the kiln produces clinker or fires fuel. The first 30 operating day block shall begin the first operating day on or after January 1, 2006.
 - b. *Compliance with the CO emission limits when using downcomer CO monitor*: Oxygen content must be measured at the location of the downcomer CO monitor. Data from the downcomer CO monitor shall be corrected to accurately reflect stack CO concentrations and to calculate mass emissions. The CO stack tests required when conducting a RATA or demonstrating initial or annual compliance shall be conducted in the in-line kiln/raw mill stack.
 - c. *Compliance with the long-term NO_x emissions limit*: Compliance with the long-term NO_x emission limit shall be based on a 12 month rolling average that shall be recomputed each month as the arithmetic average of that month and the preceding 11 months. Each monthly average shall be computed by averaging all valid hourly averages occurring within each calendar month. The first 12 month period shall commence on January 1, 2006.
 - d. *Valid Hourly Averages*: Each hourly average shall be computed as the arithmetic average of the data points generated by the CEM system. Data points must be generated at least once per minute. For an hourly average to be considered valid, at least two data points separated by a period of 15 minutes or more must be used to compute the hourly average.
 - Hours during which there is no preheater feed and no fuel fired to the kiln systems are not valid.
 - Hours during which the plant is firing fuel but producing no clinker are valid, but these hours are excluded from the production-normalized emission rate computation (pounds per ton of dry preheater feed or pounds per ton of clinker). These hours are included in any pollutant mass emission rate computation (pounds per hour).
 - e. *Data Availability*: During each semiannual (six-month) period, CEM system valid hourly averages shall be obtained for at least 95 percent of the operating hours for which the plant is producing clinker. If the CEM system does not obtain valid hourly averages for 90 percent or more of the operating hours per semiannual period for which the plant is producing clinker, the permittee shall also submit a continuous monitoring system performance report with the semiannual excess emissions report. This report must include corrective actions, and it shall be submitted within 30 days following the end of each semiannual reporting period.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- f. *Compliance Assurance*: CEM system breakdowns, malfunctions, repairs, calibration checks, zero adjustments, and span adjustments all result in periods during which CEM system data are not obtained. During such periods in excess of five percent of the total operating hours per calendar quarter, the permittee shall assure compliance with the emissions standards of this permit through stack tests, alternative monitoring systems, or other methods as approved by the Department.
15. Continuous Emissions Monitor System (CEMS) Requirements: All CEM systems shall be installed, operational, recording and continuously transmitting available data prior to the initial startup of the kiln and shall be certified within 60 days after achieving the maximum production rate at which the plant will be operated, but not later than 180 days after initial startup. The monitoring systems shall be certified in accordance with the appropriate Performance Specification in 40 CFR 60 Appendix B. The systems shall comply with the requirements for continuous monitoring systems found in the general provisions of 40 CFR 63, Subpart A including development of a quality control program. Data on monitoring equipment specifications, manufacturer, type calibration and maintenance requirements, and the proposed location of each monitor shall be provided to the DERM for review at least 45 days prior to replacement of any CEMS. [Rules 62-4.070 (3) and 62-204.800, F.A.C.]
16. Material Balance Records 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 fuel oil 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. The first 12-month rolling period shall begin on July 1, 2006.

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

On-Specification Used Fuel Oil

17. Limits and Test Methods Applicable to On-Spec Fuel Oil:

- a. "Non-hazardous 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 shall not be fired.

CONSTITUENT/PROPERTY	LIMIT	TEST METHOD ²
Arsenic	5 ppm	EPA SW-846 (3040-7130)
Cadmium	2 ppm	EPA SW-846 (3040-7130)
Chromium	10 ppm	EPA SW-846 (3040-7130)
Lead	100 ppm	EPA SW-846 (3040-7130)
Total Halogens	<1000 ppm ¹	ASTM E442
PCBs	<50 ppm	ASTM D4059
Flash Point	100 °F (minimum)	ASTM D93

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

Sulfur	% by weight (informational)	ASTM D2622, D4294-90, or both D4057-88 & D129-91
Heat of Combustion	Btu/gal (informational)	ASTM D240-76
Density	Lb/gal (informational)	ASTM D1298-80

1. 40 CFR 279.10(b)(1) (ii) *Rebuttable presumption for used oil.* Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of 40 CFR part 261. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of 40 CFR part 261). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 512-1800 (document number 955-001-00000-1"). If successfully rebutted for used oil up to 4000 ppm total halogens, used oil up to 4000 ppm maximum total halogens may be fired.
 2. Other test methods may be used only after receiving written approval from the DERM.
 - b. *Analysis of used oil fuel.* The permittee may determine that the used oil to be burned for energy recovery meets the fuel specifications of §279.11 by performing analyses, or obtaining copies of analyses or other information, documenting that the used oil fuel meets the specifications.
 - c. *Record retention.* The permittee must keep copies of analyses of the used oil (or other information used to make the determination) for five years.
 - d. *Fuel Analysis for On-specification Used Oil Requirements.* Fuel analysis shall be in accordance with 40 CFR 266.43(b)(1) & (6). A sample shall be taken from the outlet of the blend tank on the first working day (i.e., Monday-Friday; exceptions: holidays) of each month, if any used oil was placed in the blend tank the previous month; or, the sample can be taken directly from the used oil mobile collection tank after final collection and prior to the time of initial transfer; but, that sampling frequency shall be no less than quarterly and the sampling methodology shall have been established with the DERM, Miami-Dade County prior to sampling. Upon taking a sample, the sample shall be analyzed for the following constituent/property and associated unit and using the following test methods (or their latest version):
 - e. *Submission of Samples.* The results of each sample analysis (on the laboratory's letterhead) shall be submitted to the DERM within 30-days after the sample is taken and analyzed.
 - f. The results of each sample analysis (on the laboratory's letterhead) shall be submitted to the DERM within 30 days after a sample is taken and analyzed.
- [DERM requirements. Rule 62-4.070(3), F.A.C., 40 CFR 279.11, which is adopted by reference in Rule 62-710.210(2), F.A.C., 40 CFR 279.72, 40 CFR 63.1343 and 63.1345, Application received April 18, 2005]
18. Used Oil Usage Records: In order to document compliance with the used oil limitations, the following requirements shall be adhered to as a minimum:
 - a. *Transfers to Storage Tank.* The dates and quantities of both on-specification used oil and purchased fuel oil transferred to the in-line kiln/raw mill's storage tank shall be reported quarterly (i.e., Jan.-Mar., April-June, July-Sept., and Oct.-Dec.) to the DERM and due during the month following the ending quarter.
 - b. *Recordkeeping.* When burning used oil, records shall be maintained in accordance with applicable provisions of 40 CFR 279, Subpart B and Subpart G (July 1, 1996 version), Standards For The Management of Used Oil and Chapter 62-710, F.A.C.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- c. *Delivery Receipts.* The following shall be recorded on the delivery receipt:
- the use of tamper proof seals on the delivery receipt
 - the volume of fuel delivery
 - a cross reference to the analysis which establishes that the used oil meets EPA used oil fuel specifications
 - the results of the screening analysis
 - the name of the person performing the test
 - the specific test kit used
 - the amount of oil sampled
 - the amount and name of the solution used to dilute the oil
- d. *Delivery Procedures.* The following procedures shall be implemented:
- On and off specification used oil that is delivered without a delivery receipt containing all the above information, or which is not properly sealed, or for which the delivery receipt does not contain all the necessary information, is not to be accepted and the DERM is to be notified by phone immediately (with written confirmation to follow), if such a delivery is attempted.
 - Verification by signature on the delivery receipt shall be provided by plant personnel that the delivery truck arrived on site with all seals intact. As delivered samples of all used oil fuel received shall be accumulated through each quarter for each supplier.

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

Process and Production Recordkeeping

19. Production Rate Recording: The owner or operator shall record the preheater kiln feed rate using the F.L. Smidth automated preheater feed weighing device and record the daily clinker production. The clinker production rate for the purposes of determining compliance with Specific Condition 6, shall be determined as the product of Preheater Kiln Feed and the Loss on Ignition (LOI) factor. LOI for the preheater kiln feed is based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker or fires fuel. The calculation shall be expanded as need to consider the additional feed points and LOI.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT CLINKER HANDLING & STORAGE SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
027	Clinker Handling & Storage System

The clinker handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I. D: 441.BF540	Conveyance/transfer from cooler to new clinker silos and off-spec silo
Baghouse I. D: 481.BF140	Conveyance/transfer/storage for new clinker silos and off-spec silo
Baghouse I. D: 481.BF330	Storage from off-spec silo and conveyance from new clinker silos
Baghouse I. D: 481.BF540	Conveyance from new clinker silos and off-spec silo to old clinker storage
Baghouse I. D: 481.BF640	Conveyance from new clinker and off-spec silos to old clinker storage area
Baghouse I. D: 481.BF730	Conveyance/transfer to old clinker area and storage clinker silos 2,5,17,18
Baghouse I. D: 481.BF930	Storage clinker silos 21, 22, 23, 26, 27, 28
Baghouse I.D: F-633	Storage clinker silos 12, 19, 20

Operational Requirements

20. Hours of Operation: This emissions unit is allowed to operate 8760 hours per year. Production is automatically limited by the clinker production limits established in Specific Condition 6 for the pyroprocessing system. [Applicant request. Application received April 18, 2005]

Emissions Limitations and Performance Standards

21. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below except that the applicable standard is 5% instead of 10%.

- (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 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 [40 CFR] 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 (6) consecutive monthly tests.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- (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.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and 0.01 gr/acf (Baghouse F-633). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 19.70 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL. [Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT FINISH MILLS SYSTEM

This system addresses the following emissions units.

ARMS E.U. No.	DESCRIPTION
011	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6

The finish mill handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. F-113	Dust collector – Finish Mill No. 1 – Feeder
Baghouse I.D. F-130	Dust collector – Finish Mill No. 1 – Mill Sweep
Baghouse I.D. F-313	Dust collector – Finish Mill No. 3 – Feeder
Baghouse I.D. F-332	Dust collector – Finish Mill No. 3 – Mill Sweep
Baghouse I.D. 533.BF340	Dust collector – Finish Mill No. 3 - O-Sepa Cement Separator
Baghouse I.D. F-432	Dust collector – Finish Mill No. 4 - Belt conveyor/Separator
Baghouse I.D. F-430	Dust collector – Finish Mill No. 4 - Ball Mill/Mill Sweep
Baghouse I.D. F-728	Dust collector – Finish Mill No. 4 – O-Sepa Cement Separator
Baghouse I.D. 536.BF340	Dust collector – Finish Mill No. 6 - O-Sepa Cement Separator
Baghouse I.D. 536.BF500	Dust collector – Finish Mill No. 6 - Sweep

Operational Requirements

- 22. Hours of Operation: These emissions unit system is allowed to operate 8,760 hours per year. [Application received April 18, 2005.]
- 23. Finish Mill Process Rates: The maximum total hourly process rate of cement is 359TPH on a 24-hour block average. The individual process rates are 25 TPH (F-113/F-130); 84 TPH (533.BF340/F-313 / F-332) and 140 TPH (F-430 / F-432 / F-728). The owner or operator shall record all hourly process rates, and maintain records for a minimum of 5 years. [Application received April 18, 2005, Rules 62-4.070(3); and 62-213.440, F.A.C.]

Emissions Limitations and Performance Standards

- 24. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63, Section 63.1350(a)(4)(i), (ii), (iii) and (iv) below except that the applicable standard is 5% instead of 10%.
 - (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- (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 [40 CFR] 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 (6) 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.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and 0.01 gr/acf (F-113; F-130; F-313; F-330; F-430; F-432). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 133.83 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL}

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

Monitoring Requirements

25. **Finish Mill Monitoring:** The owner or operator of a raw mill and finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCDs (PM control devices) of these affected sources, in accordance with the procedures of Method 22 of Appendix A, 40 CFR Part 60 and as required by 40 CFR 63.1350(e), Subpart LLL.

Pursuant to 40 CFR 63.1350(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 PMCDs of these affected sources, in accordance with the procedures of Method 22 of Appendix A of Part 60 of this chapter. 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 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 visual opacity test of each stack from which visible emissions were observed in accordance with Method 9. The duration of the Method 9 test shall be thirty minutes.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

[Rules 62-4.070(3) and 40 CFR 63.1350, Monitoring Requirements]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT PRODUCTS STORAGE SILOS/ PACKHOUSE/ LOADOUT SYSTEM

This system addresses the following emissions units.

ARMS E.U. No.	DESCRIPTION
014	Cement Storage
015	Cement Distribution Rail/Truck Loadout
016	Cement Packhouse

The cement handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. F-511	Dust collector - Cement Silos 1-6
Baghouse I.D. F-512	Dust collector - Cement Silos 7-9
Baghouse I.D. F-513	Dust collector - Cement Silo 10
Baghouse I.D. F-514	Dust collector - Cement Silo 11
Baghouse I.D. F-515	Dust collector - Cement Silo 12
Baghouse I.D. B-110	Dust collector - Bulk Loadout Unit 1 (Rail/Truck).
Baghouse I.D. B-210	Dust collector - Bulk Loadout Unit 2 (Truck).
Baghouse I.D. B-372	Dust collector - Bulk Loadout Unit 3 - Line 1
Baghouse I.D. B-374	Dust collector - Bulk Loadout Unit 3 - Line 2
Baghouse I.D. B-382	Dust collector - Bulk Loadout Unit 3 - Line 3
Baghouse I.D. B-120	Dust collector - Packhouse
Baghouse I.D. B-205	Dust collector - Packhouse
Baghouse I.D. B-400	Dust collector - Packhouse

Operational Requirements

26. Hours of Operation: These emissions units are allowed to operate 8,760 hours per year. [Requested by applicant April 18, 2005. Permit 0250020-016-AC]
27. Cement Storage Silo/Packhouse/Loadout Process and Production Design Specifications: The maximum process input rate to each cement silo and loadout operation is 500 TPH on a 24-hour block average. The maximum production rate of cement in the Packhouse is 170 TPH on a 24-hour block average. [Permit 0250020-016-AC. Requested by applicant April 18, 2005]

Emissions Limitations and Performance Standards

28. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63, Section 63.1350(a)(4)(i), (ii), (iii) and (iv) below except that the applicable standard is 5% instead of 10%.
 - (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- (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 [40 CFR] 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 (6) 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.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.01 grains/actual cubic foot (gr/acf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 31.24 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL }

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT COAL HANDLING SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
026	Coal and Petroleum Coke Handling System

The provisions of 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants and 40 CFR 60, Subpart A- General Provisions are applicable to this process emissions unit system (Appendix H attached).

The coal handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. 461-BF300	Coal Mill ¹
Baghouse I.D. 461-BF130	Dump Hopper (Transfer)
Baghouse I.D. 461-BF230	Conveyors (2) (Transfer) & Coal/Petroleum Coke Feed Bins
Baghouse I.D. 461-BF750	Coke/Petroleum Coke (Transfer) Surge Bin Feeder).
Baghouse I.D. 461-BF650	Coal (Transfer) / Surge Bin (Feeder)
Baghouse I.D. 461.BF350	Coal Mill Feed

1. This emissions unit discharges to the common (main) stack. The Clinker Cooler which is limited to 10% opacity, discharges to the common (main) stack and therefore determines the opacity limit for this emissions unit. Total PM/PM₁₀ emissions from Pyroprocessing/Raw Mill/Coal Mill Systems shall not exceed 130.3 and 109.5 TPY respectively.

All of the above process emissions units, except for the dump hopper with baghouse 461-BF130, are subject to 40 CFR 60, Subpart Y, NSPS for Coal Preparation Plants (Appendix H attached).

Operational Requirements

29. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Application submitted in April 18, 2005]
30. Coal/Petroleum Coke Maximum Usage: The maximum combined usage of coal and petroleum coke is 30 TPH on a 24-hour block average and 263,000 TPY. The maximum petroleum coke usage rate shall not exceed 20 TPH on a 24-hour block average. Daily records of usage must be kept on site and retained for a minimum of 5 years.
[Rule 62-210.200 & 62-4.070(3) F.A.C., Applicant request; Rule 62-4.070(3), F.A.C.]

Emissions Limitations and Performance Standards

31. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be demonstrated by EPA Reference Method 9 and the procedures specified in 40 CFR 60.11.

For the coal mill main, baghouse 461-BF300, the opacity shall not exceed 10%. Compliance shall be demonstrated pursuant to EPA Reference Method 9. Annual emissions of PM/PM₁₀ for the kiln/cooler/coal mill main stack shall not exceed 110 TPY

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and to 0.01 grains/actual cubic foot (gr/acf) (for baghouses 461-BF300; 461.BF350). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 3.10 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 60, Subpart Y}

[40 CFR 60, Subpart Y; Rules 62-297.620(4), F.A.C., 62-4.070(3), and 62-212.400, F.A.C. and 40 CFR 63.1348]

32. Particulate and Fugitive Emissions: Particulate and fugitive emissions from coal handling facilities shall be minimized by following the procedures listed below:

- a. All conveyers and transfer points shall be enclosed or covered to preclude particulate emissions (except those directly associated with coal stacking/reclaiming).
- b. Coal storage piles shall be shaped, compacted and oriented to minimize wind erosion.
- c. Water sprays or chemical wetting agents and stabilizers shall be applied to storage piles, handling equipment, etc., during dry periods as necessary to all facilities to maintain an opacity of less than 20 percent at the property line for fugitive emission sources.

[Rule 62-296.320(4)(c), F.A.C.; 62-4.070(3)]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT FUGITIVE EMISSIONS

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
031	Fugitive Emissions – Transportation, Miscellaneous Transfers, and Storage

Unregulated Emissions Unit and/or Activities. This is an emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

Vehicular traffic and coal, petcoke, and raw material transfer points generate fugitive PM emissions from the handling, transfer, and storage between the unloading areas and the storage building. The activities are listed in the following table:

ACTIVITY	DESCRIPTION	ESTIMATED EMISSIONS (PM and PM ₁₀) ¹
Coal Handling	Drop Operations	0.17 and 0.059 TPY
Coal Handling	Vehicular Traffic	6.9 and 2.4 TPY
Raw Material Blending	Drop Operations	1.6 and 0.6 TPY
Raw Material Blending	Vehicular Traffic	14 and 4.9 TPY
Total Quantifiable Emissions	Fugitive Emissions	23 and 8 TPY

- The estimates given were included in calculations by the applicant demonstrating that the modernization and production increase projects do not trigger PSD. It is not practicable to actually measure the emissions directly. Reasonable assurance that these emissions are controlled to the levels given above is by adherence to the Reasonable Precautions listed below.

[Application received April 18, 2005; Rule 62-4.070(3), F.A.C.]

- Reasonable Precautions for Emissions of Unconfined Particulate Matter: This facility is subject to applicable requirements of Rule 62-296.320(4)(c)1, 2, 3, & 4, F.A.C. Refer to Appendix C: Common Conditions.
- Additional Reasonable Precautions for Emissions of Unconfined Particulate Matter: Pursuant to Rule 62-296.320(4)(c)2, F.A.C, the permittee shall implement the following additional reasonable precautions at this facility:

PERSONNEL

- Aggregate and material handling personnel, their supervisors, and environmental personnel, shall be trained in visible emissions, permit conditions related to fugitive emissions, and the Best Management Practices developed by Titan to implement the Fugitive Dust Improvement Plan under Appendix D.
- Personnel shall be trained on proper operation of wet-dry sweeper and water trucks. Training shall include but not be limited to speed, nozzle operation, and cleaning patterns around the plants that comprise the facility.

ROADS

- Identify areas where the installation of speed bumps would be beneficial in reducing vehicular speed and fugitive emissions. Install the additional speed bumps by June 30, 2006.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- d. Clean and maintain paved road surfaces, which includes removing silt build-up, repairing all potholes, sweeping on a daily basis and utilizing a water truck to control visible emissions.
- e. Pave the manufacturing areas in the cement plant, the block area, the ready-mix plant, and the access roadways for the facility with asphalt or concrete.
- f. Maintain dedicated berm areas that have been established throughout the facility to further reduce wind erosion from ground areas.
- g. Install a sprinkler system to reduce dust along the aggregate road between the pits and the storage building.
- h. Improve the main entrance by establishing green areas between the security gate and the main facilities.

MATERIALS

- i. To the extent feasible, raw materials and fuels for the cement facility will be storage inside the raw material building. All material within the raw material building will be moved by stacker/reclaimer and covered conveyor belts.
- j. All conveyors are to be enclosed on at least three sides.
- k. The facility shall continue to maintain the clinker production area and continue to implement a cleaning process inside buildings to minimize dust emitted to the outside environment.
- l. Unloading and reclaiming of materials will be curtailed during windy or dry conditions.
- m. Raw materials will be managed to minimize their time in storage.

TRUCKS

- n. All trucks leaving the aggregate facility will be required to dewater and drive through the tire wash system.
- o. Titan America/Tarmac will work with all transport companies to further educate drivers in the Florida Department of Transportation requirements that all loads be tarped prior to leaving the facility.
- p. All trucks traveling within the cement facility should stay on asphalt or concrete surfaces. All road surfaces outside of the aggregate facility shall be constructed of concrete and/or asphalt.

[Rule 62-296.320(4)(c)2., F.A.C., Rule 62-4.070(3)F.A.C., Application received April 18, 2005 and, Fugitive Dust Improvement Plan dated August 19, 2005]

35. Fugitive Dust Improvement Plan: The owner or operator shall implement the Fugitive Dust Improvement Plan attached as Appendix D. The permittee shall submit quarterly progress reports to include a status report on each specific action implemented under Appendix D (part of the permit). The first quarterly report shall be submitted in January 2006, with updates every 3 months thereafter for a two-year period. The progress reports shall be submitted to the Compliance Authority (Miami-Dade County DERM).

SECTION IV. FACILITY COMMON CONDITIONS

CEMENT PLANT EMISSIONS UNITS APPLICABLE RULES COMMON CONDITIONS

The following conditions are applicable to the following emissions units as required:

ARMS Emission Unit No.	EMISSION UNIT DESCRIPTION
010	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6
014	Cement Storage Silos 1 through 12
015	Cement Distribution, Rail and Truck Loadout
016	Cement Packhouse
026	Coal Handling System
027	Clinker Handling and Storage
028	Raw Mill and Pyroprocessing System
029	Raw Material Handling

- 36. All of the listed emission units have at least one component that is subject to 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. The listed emission units shall comply with Subpart LLL only to the extent that the regulations apply to the facility or its operations.
- 37. Some of the listed emission units have at least one component that was subject to 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants (NSPS) when originally constructed. The listed emission units shall comply with Subpart F only to the extent that the applicable Subpart F requirements were not subsumed by 40 CFR 63, Subpart LLL.
- 38. The listed emission units shall comply with 40 CFR 60 Subpart A, General Provisions and 40 CFR 63, Subpart A, General Provisions only to the extent that the requirements apply to the facility or its operations.
- 39. Emissions Units 027 and 028 are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Emissions Unit 026 is subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants.
- 40. If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it.

[Rule 62-212.400 (2) (g) F.A.C.]

{This facility modification avoided preconstruction review pursuant to Paragraph 62-212.400, F.A.C., except for CO, by taking federally enforceable limitations on the capacity to emit certain criteria pollutants from each of the emission units listed above.}

SECTION IV FACILITY COMMON CONDITIONS

The Department adopted the provisions of the referenced NSPS and NESHAPS regulations from 40 CFR 60 and 40 CFR 63, respectively by reference into Rule 62-204.800, F.A.C. The provisions of these regulations are included in this permit as attached Appendices.

{Permitting Note: The numbering of the original rules has been preserved for ease of reference to the rules. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.}

TABLE OF CONTENTS OF APPENDICES (made part of this permit)

- Appendix A.** Citation Formats
- Appendix B.** General Conditions
- Appendix C.** Common Conditions (Emissions & Controls, Testing, Reporting and Recording)
- Appendix D.** Facility Fugitives Emissions Control
- Appendix E.** NSPS, Subpart A – General Requirements
- Appendix F.** NESHAP, Subpart A – General Requirements
- Appendix G.** 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants
- Appendix H.** 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants
- Appendix I.** 40 CFR 63, Subpart LLL - National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry – Major Sources

SECTION IV APPENDICES
TABLE OF CONTENTS

APPENDICES

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Common Conditions (Emissions & Controls, Testing, Reporting and Recording)

Appendix D. Facility Fugitive Emissions Control

Appendix E. NSPS – Subpart A, General Provisions Requirements

Appendix F. NESHAP – Subpart A, General Provisions Requirements

Appendix G. 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants

Appendix H. 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants

Appendix I. 40 CFR 63, Subpart LLL - National Emissions Standards for Hazardous Air
Pollutants from the Portland Cement Manufacturing Industry – Major Sources

SECTION IV APPENDIX A
CITATION FORMATS

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number
“001” identifies the specific permit project
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

SECTION IV APPENDIX B
GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
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.
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.
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.
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.
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.

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.

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.

SECTION IV APPENDIX B
GENERAL CONDITIONS

Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.
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 non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology for CO (X);
 - b. Determination of Prevention of Significant Deterioration for CO (X);
 - c. Compliance with New Source Performance Standards (X) and
 - d. Compliance with National Emissions Standards for Hazardous Air Pollutants (X).
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.
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.

SECTION IV. APPENDIX C
COMMON CONDITIONS

{Permitting Note: Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. 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(2), F.A.C.]
3. General Particulate Emission Limiting Standards. 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 of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
4. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]
5. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
6. Excess Emissions Allowed: 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. [Rule 62-210.700(1), F.A.C.]
7. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

8. Volatile Organic Compounds (VOC) or Organic Solvents (OS) Emissions: 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. [Rule 62-296.320(1), F.A.C.]
9. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

10. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
11. Unconfined Emissions of Particulate Matter:
- (1) 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.
 - (2) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
 - (3) Reasonable precautions include the following:
 - a. Paving and maintenance of roads, parking areas and yards.
 - b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - c. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - d. 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.
 - e. Landscaping or planting of vegetation.
 - f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
 - g. Confining abrasive blasting where possible.
 - h. Enclosure or covering of conveyor systems.
- Additional reasonable precautions applicable to this facility are included in Section III of the Permit under Subsection: Cement Plant Fugitives Emissions and Appendix D: Fugitive Dust Improvement Plan.
- (4) 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.]

TESTING REQUIREMENTS

12. 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. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
13. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating 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 maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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.

SECTION IV. APPENDIX C
COMMON CONDITIONS

Emissions testing shall be performed at the kiln/cooler main stack during a period when the kiln, precalciner, cooler, raw mill and preheater are operating simultaneously and under normal operating conditions. EPA-reference methods for sampling pollutants shall be as specified in 40 CFR 63, Appendix A. These emissions units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements and 40 CFR 63.1349, Performance Tests.

The permittee shall provide the DERM with a *protocol* that will outline the different fuel scenarios (% of total heat input) that this unit will be burning. Titan shall obtain the test data necessary to determine whether this kiln is capable of accommodating the burning of coal or petroleum coke and all of the other supplemental fuels specified on Section III, Specific Condition 9. Methods of Operation – Fuels (Pyroprocessing/Raw Mill System). The fuel scenarios tested shall represent the actual combustion percentage (% of total heat input) that is going to be maintained while burning supplemental fuels during normal operation. The frequency of testing shall be determined by the DERM.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

14. Calculation of Emission Rate: For each emissions performance test, 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.]

15. Test Performance Requirements: Tests shall be conducted in accordance with all applicable requirements of 40CFR60, Subpart A - General Provisions and 40CFR63, Subpart A – General Provisions. In the event that the facility fails any initial or annual performance test, a retest shall be conducted within 30 days of the test date of the failed test.

16. Applicable Test Procedures.

(a) Required Sampling Time.

1. 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.

2. Opacity Compliance Tests. When EPA Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a 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 opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

Exceptions to these requirements are as follows:

- a. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- b. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
- c. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached).

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

17. Determination of Process Variables

- 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.

[Rule 62-297.310(5), F.A.C.]

18. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Refer to Appendix SS-1 Stack Sampling Facilities, attached to this permit.

19. Test Notification: The owner or operator shall notify in writing to the Compliance Authority, at least *30 days* (initial) and *15 days* (annual) prior to the date on which each formal compliance test is to begin, of 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.]

20. Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in Rule 62-297.620, F.A.C.

21. 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.*

1. 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 fuel for a total of no more than 400 hours.

2. 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;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; or 100 tons per year or more of any other regulated air pollutant; and,

c. Each NESHAP pollutant, if there is an applicable emission standard.

3. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of 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.

(b) *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 may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate

SECTION IV. APPENDIX C
COMMON CONDITIONS

standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; 40 CFR 63.1349(c)]

22. **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 or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

RECORDS AND REPORTS

23. Records Retention: Upon request, the permittee shall furnish all records and plans required under DERM and FDEP rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the DERM. 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 for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by DERM or FDEP rule.

[Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.]

24. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Air Facilities Section of the DERM, within (1) working day (excluding weekends and legal holidays) 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 DERM may request a written summary report of the incident.

[Rules 62-4.130 and 62-210.700(6), F.A.C.]

25. Excess Emissions Malfunction Notification Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the DERM in accordance with Rule 62-4.130, F.A.C. In addition, a full written report on the malfunctions shall be submitted in a quarterly report.

[Rule 62-210.700(6), F.A.C.]

26. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to DERM, the Compliance Authority, by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

27. Central File Requirements: This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. Operators shall keep a daily Operation and Maintenance log to include, at a minimum, the following information:

- The data collected from in-stack monitoring instruments
- The records on daily feed rates and clinker production rate
- The amount and type of fuel burned
- Calibration logs for all instruments
- Maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit;
- The following fuel records shall be maintained for a minimum of five (5) years and made available upon request:
 1. Coal/Petroleum Coke
 - (a) The coal/petroleum coke usage rate in tons per hour on a 24-hour basis;
 - (b) The average sulfur content and heating value (Btu/lb) of each coal shipment based upon supplier analysis or analysis of a sample representative of the shipment (trainload).
 2. Liquid Fuels
 - (a) The fuel type (number) and usage rate in gal per day;
 - (b) Records of the sulfur content and heating value (Btu/gal) of each oil shipment based upon supplier analysis or analysis of a sample representative of the shipment.
 3. Natural Gas
 - (a) The fuel usage rate in MMBtu per day;

All measurements, records, and any other data required to be maintained by Titan shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the DERM upon request. DERM shall be notified in writing at least 15 days prior to the testing (auditing) of any emission measurement instrument required to be operated by these specific conditions in order to allow witnessing by authorized personnel.

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

SECTION IV. APPENDIX C
COMMON CONDITIONS

OTHER REQUIREMENTS

28. Used Oil and Grease: Used oil and grease burned at this facility shall not be a hazardous waste as defined by 40 CFR Part 261.3 or Rule 62-730.030, F.A.C. It shall not include fuels or blended fuels consisting in whole or in part of hazardous waste or which include mixture of any solid waste generated from the treatment, storage, or disposal of hazardous waste. These fuels shall be burned in compliance with Section 403.769(3), Florida Statutes.
29. Other Regulations: The owner or operator shall comply with applicable provisions of Rule 62-710, Used Oil Management and 40 CFR Parts 279, Standards for the Management of Used Oil.

APPENDIX D
Fugitive Dust Improvement Plan

Pursuant to Rule 62-296.320(4)(c)2., F.A.C., Reasonable Precautions for Emissions of Unconfined Particulate Matter, the permittee shall take the following additional specific reasonable precautions within the timeframes specified to control facility-wide emissions of unconfined particulate matter (PM) {see the scheduled timeframes immediately following each action}:

- a. The applicant completed a preliminary evaluation of changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to further reduce fugitive dust emissions. The specific actions below are required to be completed in order to improve traffic patterns.
 - i. The permittee shall reroute truck traffic associated with the Packhouse. A new entrance road shall be constructed by extending 106th Avenue north along the east side of the property, just east of the old ESPs. This road improvement will be implemented in cooperation with the City of Medley. Once the entrance road is completed, the limerock road from the Packhouse to 106th Avenue shall be paved. This will reduce truck traffic on the Main plant entrance road (off U.S. 27), and will reduce fugitive emissions from unpaved roads.
Anticipated Schedule: Dependent upon the City of Medley to improve 106th Avenue.
 - ii. The permittee shall work with the City of Medley to upgrade 102nd Road. This will reduce carry-in of road dust on trucks entering the Titan property from 102nd Road, and also improve the drainage of accumulation of silt within the roadway. *Schedule:* The permittee is currently working with City of Medley. Schedule will be dependent on the City of Medley.
 - iii. After these preliminary actions have been completed, the permittee shall submit a final evaluation of any further changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to reduce fugitive dust emissions.
- b. The permittee shall berm exposed areas of the plant to prevent truck traffic from traveling over such areas. *Schedule:* Already implemented and ongoing.
- c. The permittee shall install a wheel wash system in an area directly leading out of the Aggregate Plant. This area will also include a dewatering area for trucks which will assist in cutting down on the amount of drag-out from the facility. *Schedule:* Operational by April 30, 2006.
- d. The permittee shall take measures to minimize silt buildup on the paved road leading out of the Aggregate Plant. This will reduce silt re-entrainment and carryout by trucks. *Schedule:* Measures implemented beginning in October 2005 and finalized with the addition of the new water truck in December 2005.
- e. The permittee currently employs one (1) watering truck with a dedicated driver to provide water suppression on the paved roads in the plant. The permittee issued a purchase order for a second watering truck with pressure spray. This second truck will provide a more effective watering program to reduce fugitive PM emission throughout the facility. *Schedule:* Exact delivery date is unknown; expected by December 2005.
- f. The permittee shall operate road sweepers 5 days a week at the facility. Road sweepers shall be used on high traffic roads. *Schedule:* This sweeping program has already been implemented and is proving to be effective in reducing fugitive PM emissions.
- g. A sprinkler system shall be installed along the main haul road from the quarry to the Aggregate Plant. This will reduce fugitive PM emissions from this unpaved road. *Schedule:* Complete by December 20, 2005.

APPENDIX D
Fugitive Dust Improvement Plan

- h.** The permittee shall take measures to reduce fugitive PM emissions from Bulk Cement Loadout area. This area has been observed to experience visible dust emissions. Schedule: Evaluation of options no later than November 2005. The equipment associated with these improvements will be included in the 2006 Capital Improvement Plan to be implemented no later than the first half 2006.
- i.** The permittee shall make landscape upgrades to further enhance not only the aesthetics of the facility, but also to further decrease the wind erosion of unpaved areas. Schedule: To be developed.
- j.** Best Management Practices (BMPs) shall be implemented to minimize fugitive PM emissions from outside raw material storage piles (i.e., bauxite, fly ash, iron ore, etc.). The BMPs to be implemented are below:

 - i.** Raw material inventory shall be managed to minimize the time in storage;
 - ii.** Unloading and reclaiming of materials shall be curtailed during windy or dry conditions;
 - iii.** Drop heights of material shall be minimized;
 - iv.** Posting and enforcing speed limits along haul roads leading to the storage areas; and,
 - v.** Raw materials are normally high moisture content when received. Application of water or other dust suppressants shall be used as necessary to minimize visible emissions.

Schedule: Implement in October 2005.

- k.** The dust collector preventative maintenance crew developed an Operation and Maintenance (O&M) Program for all dust collectors at the facility. This will reduce the potential for dust collector malfunction and excess PM emissions. Schedule: The O&M Plan shall be implemented in August 2005.
- l.** Upgrades to the air slides on the package cement load-out and the new Packhouse shall be completed October 2005. This new system will eliminate a package load-out system designed and built in the early 1950's. Adjacent to this area a new clinker silo dust collecting system is being designed to improve dust collection for clinker handling. This will result in reducing fugitive dust emissions from these areas. Schedule: The equipment associated with these improvements will be included in the 2006 Capital Improvement Plan to be implemented no later than the second quarter 2006.
- m.** The permittee shall upgrade the finish mill systems. This will include installing a new finish mill (No. 6) and a dust suppression system. Once this system is in operation, one of the old finish mill systems will be permanently shut down. Schedule: Implement by October 2005 with completion by December of 2005.

The permittee shall submit quarterly progress reports to include a status report on each specific action implemented under this Appendix, **Conditions a through m**. The first quarterly report shall be submitted in January 2006, with updates every 3 months thereafter for a two-year period. The progress reports shall be submitted to the compliance authority (Miami-Dade County DERM) with copies to the SED Air Program and the Bureau of Air Regulation.

[Rule 62-296.320(4)(c)2., F.A.C., Rule 62-4.070(3), F.A.C.; Application received April 18, 2005; and, Fugitive Dust Improvement Plan dated August 19, 2005.]

SECTION IV APPENDIX E

NSPS – SUBPART A, GENERAL PROVISIONS REQUIREMENTS

This facility is subject to all applicable New Source Performance Standards (NSPS) in 40 CFR 60 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

40 CFR 60, Subpart A - NSPS General Provisions

The emission units covered under this permit shall comply with all the applicable General Provisions of Subpart A in the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are included in this permit.

SECTION IV APPENDIX F

NESHAP – SUBPART A, GENERAL PROVISIONS REQUIREMENTS

This facility is subject to all applicable National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Category in 40 CFR 63 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

40 CFR 63, Subpart A - NESHAPS General Provisions

The emission units covered under this permit shall comply with all the applicable General Provisions of Subpart A in the National Emissions Standards for Hazardous Air Pollutants including 40 CFR 63.4 (Circumvention), 40 CFR 63.5 (General Notification and Reporting Requirements), 40 CFR 63.6 (Compliance with Standards and Maintenance Requirements), 40 CFR 63.7 (Performance Tests), 40 CFR 63.8 (Monitoring Requirements), 40 CFR 63.9 (Notification Requirements), 40 CFR 63.10 (Record Keeping and Reporting Requirements) and 40 CFR 63.11 (Control Device Requirements). The General Provisions are part of this permit.

APPENDIX G
40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

[Last Updated: 2/7/02]

{Source: Federal Register dated 7/1/98, Revised 2/7/02 to reflect FR 10/17/00}

§ 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.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§ 60.61 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Portland cement plant* means any facility manufacturing portland cement by either the wet or dry process.

(b) *Bypass* means any system that prevents all or a portion of the kiln or clinker cooler exhaust gases from entering the main control device and ducts the gases through a separate control device. This does not include emergency systems designed to duct exhaust gases directly to the atmosphere in the event of a malfunction of any control device controlling kiln or clinker cooler emissions.

(c) *Bypass stack* means the stack that vents exhaust gases to the atmosphere from the bypass control device.

(d) *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.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20793, June 13, 1974; 53 FR 50363, Dec. 14, 1988]

§ 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.

APPENDIX G

40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

(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. [39 FR 20793, June 14, 1974, as amended at 39 FR 39874, Nov. 12, 1974; 40 FR 46258, Oct. 6, 1975]

§ 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) Each owner or operator of a kiln or clinker cooler subject to the provisions of this subpart using a positive-pressure fabric filter with multiple stacks, or a negative-pressure fabric filter with multiple stacks, or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by § 60.63(b), monitor visible emissions at least once per day by using a certified visible emissions observer. If the control device exhausts gases through a monovent, visible emission observations in lieu of a continuous opacity monitoring system are required. These observations shall be taken in accordance with EPA Method 9. Visible emissions shall be observed during conditions representative of normal operation. Observations shall be recorded for at least three 6-minute periods each day. In the event that visible emissions are observed for a number of emission sites from the control device with multiple stacks, Method 9 observations shall be recorded for the emission site with the highest opacity. All records of visible emissions shall be maintained for a period of 2 years.

(d) 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).

(e) The provisions of paragraphs (a), (b), and (c) of this section apply to kilns and clinker coolers for which construction, modification, or reconstruction commenced after August 17, 1971.

[36 FR 24877, Dec. 23, 1971, as amended at 53 FR 50363, Dec. 14, 1988]

§ 60.64 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 40 CFR 60 Appendix A or other methods and procedures as specified in this section, except as provided in § 60.8(b).

APPENDIX G
40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

(b) The owner or operator shall determine compliance with the particulate matter standard in § 60.62 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E=(c_s Qsd)/(P K)$$

where:

E = emission rate of particulate matter, kg/metric ton (lb/ton) of kiln feed.

C_s = concentration of particulate matter, g/dscm (gr/dscf).

Qsd = 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 (7000 gr/lb).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Qsd) 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 § 60.11 shall be used to determine opacity.

[54 FR 6666, Feb. 14, 1989]

§ 60.65 Recordkeeping and reporting requirements.

(a) Each owner or operator required to install a continuous opacity monitoring system under § 60.63(b) shall submit reports of excess emissions as defined in § 60.63(d). The content of these reports must comply with the requirements in § 60.7(c). Notwithstanding the provisions of § 60.7(c), such reports shall be submitted semi-annually.

(b) Each owner or operator monitoring visible emissions under § 60.63(c) shall submit semi-annual reports of observed excess emissions as defined in § 60.63(d).

(c) Each owner or operator of facilities subject to the provisions of § 60.63(c) shall submit semi-annual reports of the malfunction information required to be recorded by § 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.

(d) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, 42 U.S.C. 7411, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

[53 FR 50364, Dec. 14, 1988]

§ 60.66 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.

APPENDIX H
40 CFR 60, Subpart Y- Standards of Performance for Coal Preparation Plants

Updated 9/15/03

Source: Federal Register dated 1/15/76

§ 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 181 Mg (200 tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.

§ 60.251 Definitions.

As used in this subpart, all terms not defined herein have the meaning given them in the Act and in subpart A of this part.

(a) *Coal preparation plant* means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(b) *Bituminous coal* means solid fossil fuel classified as bituminous coal by ASTM Designation D388-77, 90, 91, 95, or 98a (incorporated by reference -- see § 60.17).

(c) *Coal* means all solid fossil fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM Designation D388-77, 90, 91, 95, or 98a (incorporated by reference -- see § 60.17).

(d) *Cyclonic flow* means a spiraling movement of exhaust gases within a duct or stack.

(e) *Thermal dryer* means any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere.

(f) *Pneumatic coal-cleaning equipment* means any facility which classifies bituminous coal by size or separates bituminous coal from refuse by application of air stream(s).

(g) *Coal processing and conveying equipment* means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts.

(h) *Coal storage system* means any facility used to store coal except for open storage piles.

(i) *Transfer and loading system* means any facility used to transfer and load coal for shipment.

APPENDIX H

40 CFR 60, Subpart Y- Standards of Performance for Coal Preparation Plants

§ 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.

(b) 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 pneumatic coal cleaning equipment, gases which:

- (1) Contain particulate matter in excess of 0.040 g/dscm (0.017 gr/dscf).
- (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, 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.

§ 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 ± 1.7 °C (± 3 °F).

(2) For affected facilities that use venturi scrubber emission control equipment:

(i) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 1 inch water gauge.

(ii) A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 5 percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator may be consulted for approval of alternative locations.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under § 60.13(b).

§ 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 particulate 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.

APPENDIX I
**40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the
Portland Cement Manufacturing Industry- Major Sources**

{Last updated 6/27/03}

Section

GENERAL

63.1340 Applicability and designation of affected sources.

63.1341 Definitions.

EMISSION STANDARDS AND OPERATING LIMITS

63.1342 Standards: General.

63.1343 Standards for kilns and in-line kiln/raw mills.

63.1344 Operating limits for kilns and in-line kiln/raw mills.

63.1345 Standards for clinker coolers.

63.1346 Standards for new and reconstructed raw material dryers.

63.1347 Standards for raw and finish mills.

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.

MONITORING AND COMPLIANCE PROVISIONS

63.1349 Performance testing requirements.

63.1350 Monitoring requirements.

63.1351 Compliance dates.

63.1352 Additional test methods.

NOTIFICATION, REPORTING AND RECORDKEEPING

63.1353 Notification requirements.

63.1354 Reporting requirements.

63.1355 Recordkeeping requirements.

OTHER

63.1356 Exemption from new source performance standards.

63.1357 Temporary, conditioned exemption from particulate and opacity standards.

63.1358 Implementation and Enforcement.

63.1359 [Reserved]

**Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement
Manufacturing Industry**

§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 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;

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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; and

(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.

§63.1341 Definitions.

All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in 40 CFR 63 Subpart A.

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

EMISSION STANDARDS AND OPERATING LIMITS

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

Table 1 to §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	<p>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]</p> <p>Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test. 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.</p>
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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

§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° C (400° F) or less.

(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.

(d) [Reserved]

(e) [Reserved]

§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,

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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).

(c) The owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique must operate the carbon injection system in accordance with paragraphs (c)(1) and (c)(2) of this section.

(1) The three-hour rolling average activated carbon injection rate shall be equal to or greater than the activated carbon injection rate determined in accordance with §63.1349(b)(3)(vi).

(2) The owner or operator shall either:

(i) Maintain the minimum activated carbon injection carrier gas flow rate, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with §63.7(c) of this part, or

(ii) Maintain the minimum activated carbon injection carrier gas pressure drop, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with §63.7(c).

(d) Except as provided in paragraph (e) of this section, the owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique must specify and use the brand and type of activated carbon used during the performance test until a subsequent performance test is conducted, unless the site-specific performance test plan contains documentation of key parameters that affect adsorption and the owner or operator establishes limits based on those parameters, and the limits on these parameters are maintained.

(e) The owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique may substitute, at any time, a different brand or type of activated carbon provided that the replacement has equivalent or improved properties compared to the activated carbon specified in the site-specific performance test plan and used in the performance test. The owner or operator must maintain documentation that the substitute activated carbon will provide the same or better level of control as the original activated carbon.

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(b) [Reserved]

§63.1346 Standards for new and reconstructed raw material dryers.

(a) *Brownfield/major sources.* No owner or operator of a new or reconstructed brownfield raw material dryer at a facility which is a major source subject to this subpart shall cause to be discharged into the atmosphere from the new or reconstructed raw material dryer any gases which exhibit opacity greater than ten percent.

(b) [Reserved]

(c) *Greenfield/major sources.* No owner or operator of a greenfield raw material dryer at a facility which is a major source subject to this subpart shall cause to be discharged into the atmosphere from the greenfield raw material dryer any gases which:

- (1) Contain THC in excess of 50 ppmvd, reported as propane, corrected to seven percent oxygen.
- (2) Exhibit opacity greater than ten percent.

§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.

§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; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent.

§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;

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

- (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:

$$E = (c_s Q_{sd}) / P \quad (\text{Eq 1})$$

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,

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

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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 Sec. 63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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

TABLE 1 to §63.1349. SUMMARY OF PERFORMANCE TEST REQUIREMENTS

Affected source and pollutant	Performance Test
New and existing kiln and in-line kiln/raw mill ^{b,c} PM	EPA Method 5 ^a
New and existing kiln and in-line kiln/raw mill ^{b,c} Opacity	COM if feasible ^{d,e} or EPA Method 9 visual opacity readings.
New and existing kiln and in-line kiln/raw mill ^{b,c,f,g} D/F	EPA Method 23 ^h
New greenfield kiln and in-line kiln/raw mill ^c THC	THC CEM (EPA PS-8A) ⁱ
New and existing clinker cooler PM	EPA Method 5 ^a
New and existing clinker cooler opacity	COM ^{d,j} or EPA Method 9 visual opacity readings
New and existing raw and finish mill opacity	EPA Method 9 ^{a,j}
New and existing raw material dryer and 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}
New greenfield raw material dryer THC	THC CEM (EPA PS-8A) ⁱ

- ^a Required initially and every 5 years thereafter.
- ^b Includes main exhaust and alkali bypass.
- ^c In-line kiln/raw mill to be tested with and without raw mill in operation.
- ^d Must meet COM performance specification criteria. If the fabric filter or electrostatic precipitator has multiple stacks, daily EPA Method 9 visual opacity readings may be taken instead of using a COM.
- ^e Opacity limit is 20 percent.
- ^f Alkali bypass is tested with the raw mill operating or not operating.
- ^g Temperature and (if applicable) activated carbon injection parameters 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 part 60 of this chapter.
- ^j Opacity limit is 10 percent.

(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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

§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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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 follow up 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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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 ± 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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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,

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(n) A summary of the monitoring requirements is given: **Table 1 to §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 kilns and in-line kiln raw mills at major sources (including alkali bypass)/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
Kilns and in-line kiln raw mills at major sources (including alkali bypass)/particulate matter	Particulate matter continuous emission monitoring system	Deferred
Kilns and in-line kiln raw mills at major sources (including alkali bypass) 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
Kilns and in-line kiln raw mills at major sources (including alkali bypass) D/F (continued)	Activated carbon injection rate monitor, if applicable	Install, operate, calibrate and maintain continuous activated carbon injection rate monitor; calculate three-hour rolling averages; verify calibration at least quarterly; install, operate, calibrate and maintain carrier gas flow rate monitor or carrier gas pressure drop monitor; calculate three-hour rolling averages; document carbon specifications
New greenfield kilns and in-line kiln raw mills at major sources/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 at major sources/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.
Raw mills and finish mills at major sources/opacity	Method 22 visible emissions test (This requirement does not apply to a raw mill or finish mill equipped with a continuous opacity monitor or bag leak detection system)	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
	Continuous opacity monitoring, if applicable	Install, operate, and maintain in accordance with general provisions and with PS-1. A six-minute average greater than 10% opacity is a violation
	Bag leak detection system, if applicable	Install, operate and maintain in accordance with Sec. 63.1350(m). Operate and maintain such that alarm is not activated and alarm condition does not exist for more than 4% of the total operating time in a 6-month period. If alarm sounds, initiate corrective action.
New greenfield raw material dryers at major sources/THC	Total hydrocarbon continuous emission monitor	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration
Raw material dryers; raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk	Method 22 visible emissions test	As specified in operation and maintenance plan

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

Affected Source/Pollutant or Opacity	Monitor Type/ Operation/Process	Monitoring Requirements
loading and unloading systems at major sources/opacity		

§63.1351 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is June 14, 2002.

(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 upon startup of operations, whichever is later.

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.

NOTIFICATION, REPORTING AND RECORDKEEPING

§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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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).

§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 submit progress reports as a condition of receiving an extension of compliance under §63.6(i) shall submit 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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

§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).

OTHER

§63.1356 Exemption from new source performance standards.

(a) Except as provided in paragraphs (a)(1) and (a)(2) of this section, any affected source subject to the provisions of this subpart is exempted from any otherwise applicable new source performance standard contained in subpart F or subpart OOO of part 60 of this chapter.

(1) Reserved

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(2) Reserved

(b) The requirements of subpart Y of part 60 of this chapter, "Standards of Performance for Coal Preparation Plants," do not apply to conveying system transfer points used to convey coal from the mill to the kiln that are associated with coal preparation at a portland cement plant that is a major source under this subpart.

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

§63.1358 Implementation and Enforcement.

(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.

§63.1359 [Reserved]

Florida Department of
Environmental Protection

Memorandum

TO: Michael G. Cooke, Director DARM
THRU: Trina L. Vielhauer, Chief BAR
FROM: A.A. Linero and Teresa Heron, South Permitting Section
DATE: November 18, 2005
SUBJECT: Titan Florida Pennsuco Cement Plant
DEP File No. 0250020-017-AC (PSD-FL-360)

Attached is the Final Permit PSD-FL-360 (0250020-017-AC) for the Titan Pennsuco Cement Plant in Medley, Miami-Dade County. The modification to the existing air permit is to increase long-term (annual) production at the recently modernized dry process line that started up in June 2004. This will be accomplished by removing restrictions on annual hours of operation on key equipment without changes to short-term (hourly or daily production limits).

An updated netting calculation was performed based on the most recent two full years that Titan operated the defunct wet process kilns (2002-2003). The project triggered PSD only for carbon monoxide. Titan took more restrictive limits on all other pollutants. For example, their NO_x limit to avoid PSD is 2.17 lb/ton of clinker on a long-term basis. With their version of staged combustion they can achieve this value without SNCR.

To net out of PSD for PM/PM₁₀, they took very restrictive limits on their process equipment and, more importantly, agreed to implement measures that will give the modernized facility a much cleaner look. The measures already taken or proposed include paving of all manufacturing areas at the cement plant, ready-mix plant, and concrete block plant. There has been substantial planting of grass, trees and vegetative berms. They have two water trucks, a wheel washing station and numerous other reasonable precautions and planned improvements.

Overall, the cement plant uses roughly 3,000,000 of the 10,000,000 tons per year of limestone quarried at the facility. The aggregate plant, is still "rough" but progressively improving. The dust control measures (including the upgrades to the process dust control equipment) incorporated into this permit are sufficient to insure the cement plant modernization project will net out of PSD. Miami-Dade DERM has reported to us the overall facility looks better than in the past. The modernized cement plant, the subject of this permit, is very much cleaner than the old cement plant. The ready mix and concrete block plants also look better.

We recommend issuance of the final permit.

AAL/th

Attachments

SENDER: COMPLETE

- Complete items 1, 2, and item 4 if Restricted Delivery is used.
- 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. Hardy Johnson, President
Florida Division
Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441

2. Article Number
(Transfer from service label)

7001 0320 0001 - 3692 3982

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

RETURN ON DELIVERY

Signature

- Agent
 Addressee

(B. Received by (Printed Name))

C. Date of Delivery

- 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

U.S. Postal Service

CERTIFIED MAIL RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

7001 0320 0001 3692 3982

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark
Here

Total Sent To
Street, or PO Box
City, State

Mr. Hardy Johnson, President
Florida Division
Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441

PS Form 3800, January 2001

See Reverse for Instructions

RECEIVED

NOV 02 2005

BUREAU OF AIR REGULATION



455 Fairway Drive
Deerfield Beach, FL 33441
(954) 481-2800
Fax (954) 421-0296
www.titanamerica.com

31-Oct-05

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Al Linero
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Public Notice for Production Increase – Titan Florida Pennsuco Cement Plant
DEP File no. – 0250020-017-AC

Dear Mr. Linero,

Pursuant to the requirements of Chapter 50, Florida Statutes, Titan Florida published the “Public Notice of Intent to Issue Air Construction Permit,” on October 15, 2005 in the Miami Herald. Attached is proof of publication as required by the statute.

If there are any questions, comments, or concerns regarding this notification please contact me at 954-425-4227 or 561-504-6787.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry Laneaster", is written over the typed name.

Terry Laneaster
Environmental Manager

Cc: Dave Buff, Golder

The Miami Herald

www.herald.com
www.elherald.com

PUBLISHED DAILY
MIAMI-DADE-FLORIDA

STATE OF FLORIDA
COUNTY OF MIAMI-DADE

Before the undersigned authority personally
appeared:

ORFINDA MORENO

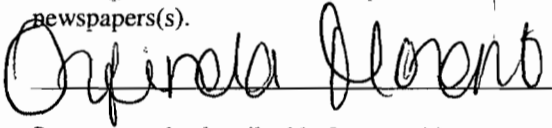
who on oath says that he/she is

CUSTODIAN OF RECORDS

of The Miami Herald, a daily newspaper published at
Miami in Miami-Dade County, Florida; that the
attached copy of advertisement was published in said
newspaper in the issues of:

October 15, 2005

Affiant further says that the said The Miami Herald
is a newspaper published at Miami, in the said
Miami-Dade County, Florida and that the said
newspaper has heretofore been continuously published
in said Miami-Dade County, Florida each day and has
been entered as second class mail matter at the post
office in Miami, in said Miami-Dade County, Florida,
for a period of one year next preceding the first
publication of the attached copy of advertisement;
and affiant further says that he 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
newspapers(s).



Sworn to and subscribed before me this
17th day of October 2005

My Commission

Expires: August 1, 2006

Silvia Sendra

Notary



**PUBLIC NOTICE
OF INTENT
TO ISSUE AIR
CONSTRUCTION
PERMIT**
DEP File No.
0250020-017-AC
Tarmac Florida LLC
- Titan Florida
Pennsoco Cement
Plant
Medley, Miami-Dade
County

The Department of
Environmental
Protection
(Department) gives
notice of its intent to
issue an Air
Construction Permit
to Tarmac America,
LLC, to increase
production at the
Titan Florida
Pennsoco Cement
Plant located at
11000 NW 121 Way,
Medley, Miami-Dade
County. A review
under the rules for
the Prevention of
Significant Deterioration
of Air Quality
(PSD) and a Best
Available Control
Technology (BACT)
determination were
required for carbon
monoxide (CO). The
applicant's name and
business address are
Tarmac America
LLC, 455 Fairway
Drive, Deerfield
Beach, Florida 33441.

In 1999 and 2001
air construction per-
mits were issued for
the modernization of
the Pennsoco Cement
Plant. The moderniza-
tion involved re-
placement of the two

wet process kilns and
clinker coolers with a
single 250 ton per
hour (TPH) kiln and
clinker cooler known
as Kiln 5 and Clinker
Cooler 5. There are
no other kilns or
clinker coolers in op-
eration at the facility.

Although the
capacity of the plant
was increased by
the modernization,
emissions per ton of
product were expected
to decrease com-
pared to the original
wet process. The pri-
mary reason is that
substantially less fuel
is required per unit of
product when using
the dry process ver-
sus the wet process.
This is largely be-
cause there is no
need to make raw
material slurry and
then evaporate the
water. The preheater/
calciner technology
offers better combus-
tion control of the
process and dry
scrubbing of sulfur
dioxide. The new
baghouses are more
efficient than previ-
ous particulate con-
trol equipment. A
PSD Review and
BACT determination
were not required be-
cause projected net
emission increases
were less than the re-
spective significant
emission rates (SER)
for all pollutants.

Kiln 5 and Cooler 5
started up in June
2004 and tested for
compliance with the
permit conditions in
October and
November 2004. The
Department issued a
permit in April 2005
to reflect the final
configuration of the
plant particularly with
respect to finish mills
and baghouses. Pres-
ently plant production
is restricted to
1,642,000 tons per
year (TPY) of clinker
which is substantially
less than can be pro-
duced by continuous
operation at 250 TPH.
Ancillary equipment
such as finish mills,
baghouses, coal
mills, etc. are similarly
limited or restricted by
restrictions in annual
hours of operation.

Tarmac requests to
increase the annual
clinker production
rate to 2,190,000 TPY
which is equal to
operation at 250 TPH
(8,760 hours per year)
at the permitted
short-term limit of
250 TPH. The company
requests removal of
restrictions on annual
hours of operation for
the ancillary equip-
ment needed to sup-
ply raw materials and
process and ship
product clinker and
cement. To do so
without requiring
PSD review and a
BACT determination
it is necessary to
show that facility
emissions increases
caused by the mod-
ernization do not ex-
ceed the annual SER
for each pollutant.

The company
provided estimates
showing that it can
restrict net emission
increases after the
production increase
to less than the annu-
al SER for nitrogen
oxides (NOx), sulfur
dioxide (SO₂), particu-
late matter (PM,
PM₁₀) and volatile
organic compounds
(VOC). They also pro-
vided hourly-hour
data for the first half
of 2005 showing pro-
gressively lower
emissions of NOx to
the level needed to
avoid the SER and
showed that the con-
tinuous emissions of
VOC and SO₂ will
yield annual emission
increases less than
the respective SER.
Annual PM/PM₁₀
tests were submitted
to show that the kiln
and cooler system
can comply with the
requested short-term
emission limit and
annual emissions to
meet the SER as
applicable to the
modernization.

Tarmac America
LLC has requested a
rolling 12-month NO_x
limit of 2.17 pounds
per ton of clinker (lb/
ton). This is the low-
est limit for any kiln
known to be in opera-
tion in the country.
SO₂ emissions from
the facility are mini-
mal because of virtu-
ally complete scrub-
bing of exhaust gases
by finely divided lime
in the calciner. One
effect of the modern-
ization is that SO₂ in-
crement has been ex-
panded in the nearby
Class I Everglades
National Park.

The Department
conducted a BACT
determination for CO
and set a limit of 2.0
lb CO/ton on a
30-day basis. This is
the lowest among re-
cent BACT determi-
nations in the state
and the country. It will
be achieved by use of
a calciner with a long
residence time to in-
sure complete burn-

out of CO and by us-
ing materials with
relatively low carbon
content. Modeling
was conducted that
showed that the addi-
tional CO emissions
will not cause ground
level increases in ex-
cess of the significant
impact levels of 1.8
to 0.45 parts per
million for the 1 and
8-hour averaging pe-
riods respectively.
Any CO impacts will
be insignificant espe-
cially compared with
nearby heavy traffic
on the Florida
Turnpike, U.S. 27,
and other major
traffic arteries.

PM/PM₁₀ and
VOC emissions are
also very low. While
process PM/PM₁₀
can be readily
controlled, the
Department request-
ed that Tarmac sub-
mit a plan to insure
that fugitive emis-
sions will not increase
as a result of in-
creased production.
The plan submitted
includes planting of
grass and trees,
watering roads and
paths, wheel washing
of transport vehicles
and a number of
other reasonable
precautions.

The Department
will accept written
comments concerning
the proposed permit
issuance action and
requests for a public
meeting for a period
of 30 days
from the date of
publication of
"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
comments filed shall
be made available
for public inspection.
If written
comments received
result in significant
change in the pro-
posed agency action,
the Department shall
revisit the proposed
permit and require, if
applicable, another
Public Notice.

The Department will
issue the permit with
the attached condi-
tions unless a timely
petition for an admin-
istrative hearing is
filed pursuant to
Sections 120.569 and
120.57 F.S., before
the deadline for filing
a petition. The proce-
dures for petitioning
for a hearing are set
forth in the Mediation
is not available in
this proceeding.

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 state the infor-
mation set forth be-
low and must be filed
(received) in the
Office of General
Counsel of the
Department at 3900
Commonwealth
Boulevard, Mail
Station # 35,
Tallahassee, Florida,
32319-3000. Informa-
tion set forth below
and must be filed
below and must be
filed (received) in the
Office of General
Counsel of the
Department at 3900
Commonwealth
Boulevard, Mail
Station # 35,
Tallahassee, Florida,
32319-3000.

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,
32319-3000. Informa-
tion set forth below
and must be filed
below and must be
filed (received) in the
Office of General
Counsel of the
Department at 3900
Commonwealth
Boulevard, Mail
Station # 35,
Tallahassee, Florida,
32319-3000.

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,
32319-3000.

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,
32319-3000.

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,
32319-3000.

the following infor-
mation: (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 determina-
tion; (c) A statement
of the petitioner re-
ceived notice of
the agency action
or proposed action;
(d) A statement of all
disputed issues of
material fact. If there
are none, the peti-
tioner must so indicate; (e)
A statement of the
ultimate facts al-
leged, as well as the
rules and statutes
which entitle the peti-
tioner to relief; (f) A
statement of the spe-
cific rules or statutes
the petitioner con-
tends require reversal
or modification of the
agency's proposed
action; and (g) A
statement of the relief
sought by the peti-
tioner and when peti-
tioner is stating pre-
cisely the action peti-
tioner wishes the
agency to take with
respect to the agen-
cy'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 other-
wise shall contain the
same information as
required by Rule
28-106.301.

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 differ-
ent from the position
taken by it in this
notice. Persons
whose substantial in-
terests will be affect-
ed by any such final
decision of the
Department on the
petition shall 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 dur-
ing normal business
hours: 8:00 a.m. to
5:00 p.m., Monday
through Friday,
except legal holidays,
at:

Dept. of
Environmental
Protection
Bureau of Air
Regulation
111 S. Magnolia
Drive, Suite 4
Tallahassee, Florida,
32301
Telephone:
(850) 488-0114
Fax: (850) 922-6979

Dept. of Environmental
Protection
Southeast District
Office
409 North Congress
Avenue
West Palm Beach,
Florida 33401
Telephone:
407/681-6600
Fax: 407/681-6755

Miami-Dade County
Department of
Environmental
Resources
Management
33 Southwest 2nd
Avenue, Suite 900
Miami, Florida
33150-1540
Telephone:
305/372-6925
Fax: 305/372-6954

The complete project
file includes the appli-
cations, technical eval-
uations, Draft Permit,
and the information
submitted by the re-
sponsible official, ex-
clusive of confidential
records under Section
403.111, F.S. Inter-
ested persons may
contact the Program
Administrator, South
Permitting Section at
111 S. Magnolia
Drive, Suite 4,
Tallahassee, Florida
32301, or call
850/921-9523,
for additional
information. Key
documents can be
viewed at www.
dep.state.fl.us/air/
permitting/
construction.htm by
clicking on the Titan
link.

PUBLISHED DAILY
MIAMI-DADE-FLORIDA

STATE OF FLORIDA
COUNTY OF MIAMI-DADE

Before the undersigned authority personally
appeared:

ORFINDA MORENO

who on oath says that he/she is

CUSTODIAN OF RECORDS

of The Miami Herald, a daily newspaper published at
Miami in Miami-Dade County, Florida; that the
attached copy of advertisement was published in said
newspaper in the issues of:

October 15, 2005

Affiant further says that the said The Miami Herald
is a newspaper published at Miami, in the said
Miami-Dade County, Florida and that the said
newspaper has heretofore been continuously published
in said Miami-Dade County, Florida each day and has
been entered as second class mail matter at the post
office in Miami, in said Miami-Dade County, Florida,
for a period of one year next preceding the first
publication of the attached copy of advertisement;
and affiant further says that he 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
newspapers(s).

[Signature]

Sworn to and subscribed before me this
17th day of October 2005

My Commission

Expires: August 1, 2006

[Signature]

Notary



PUBLIC NOTICE
OF INTENT
TO ISSUE AIR
CONSTRUCTION
PERMIT
DEP File No.
0250020-017-AC
Tarmac Florida LLC
- Titan Florida
Pensacola Cement
Plant
Medley, Miami-Dade
County

The Department of
Environmental
Protection (Department)
gives notice of its intent to
issue an Air Construction
Permit to Tarmac America,
LLC, to increase production
at the Titan Florida
Pensacola Cement
Plant located at
11000 NW 121 Way,
Medley, Miami-Dade
County. A review under the
rules for the Prevention of
Significant Deterioration
of Air Quality (PSD) and a
Best Available Control
Technology (BACT)
determination were
required for carbon
monoxide (CO). The
applicant's name and
business address are
Tarmac America
LLC, 465 Fairway
Drive, Deerfield
Beach, Florida 33441.

In 1999 and 2001
air construction
permits were issued for
the modernization of
the Pensacola Cement
Plant. The modernization
involved replacement of the two

wet process kilns and
clinker coolers with a
single 250 ton per
hour (TPH) kiln and
clinker cooler known
as Kiln 5 and Clinker
Cooler 5. There are
no other kilns or
clinker coolers in
operation at the facility.

Although the
capacity of the plant
was increased by
the modernization,
the emissions per
ton of product were
expected to decrease
compared to the
original wet process.
The primary reason
is that substantially
less fuel is required
per unit of product
when using the
dry process versus
the wet process.
This is true because
there is no need
to make raw
material slurry and
then evaporate the
water. The preheator
calciner technology
offers better combustion
control of the process
and the use of sulfur
dioxide. The new
baghouses are more
efficient than previous
equipment. PSD
Review and BACT
determinations were
not required because
projected net
emissions increases
were less than the
respective site
emission rates (SER)
for all pollutants.

Kiln 5 and Cooler 5
started up in June
2004 and tested for
compliance with the
permit conditions in
October and
November 2004. The
Department issued a
permit in April 2005
to reflect the
configuration of the
plant particularly with
respect to finish mills
and baghouses.
Production is
restricted to 1,422,000
tons per year (TPY)
of clinker which is
substantially less
than can be produced
by continuous
operation at 250 TPH.
Ancillary equipment
such as finish mills,
baghouses, etc. is
similarly limited or
restricted in annual
hours of operation.

Tarmac requests to
increase the annual
rate to 2,150,000 TPY
which is equal to
continuous operation
(8,780 hours per year)
with a short-term
limit of 250 TPH.
The company requests
removal of
restrictions on annual
hours of operation for
the ancillary
equipment needed to
supply raw materials
and process and ship
product clinker and
cement. To do so
without requiring a
PSD review and a
BACT determination
necessitates showing
that facility emissions
increases caused by
the modernization
do not exceed the
SER for each pollutant.

The company
estimates that the
restrictions on net
emission increases
after the production
increase to less than
the annual SER for
nitrogen oxides
(NOx), sulfur dioxide
(SO2), particulate
matter (PM/PM10),
and volatile organic
compounds (VOC).
They also provide
data for the first half
of 2005 showing
projected net
emissions of NOx to
be lower than the
SER and SO2 to
avoid the SER and
showed that the
concurrent emissions
of VOC and SO2 will
yield annual net
emissions less than
the respective SER.
Annual PM/PM10
tests were submitted
to show that the
kiln and cooler system
can comply with the
requested short-term
emission limit and
annual emissions to
meet the SER
applicable to the
modernization.

Tarmac America
LLC has requested a
rolling 12-month NOx
limit of 2.17 pounds
per ton of clinker (lb/
ton). This is the
lowest limit for any
kiln known to be in
operation in the
country. SO2
emissions from the
facility are minimal
because of virtually
complete scrubbing
of exhaust gases by
indirectly divided lime
in the calciner. One
effect of the
modernization is that
SO2 increment has
been exceeded in the
nearby Big
Everglades National
Park.

The Department
conducted a BACT
determination for CO
and set a limit of 2.0
lb CO/ton on a
30-day basis. This
is the lowest among
recent BACT
determinations in the
state and the country.
It will be achieved by
use of a calciner with
a long residence time to
insure complete
burn-

out of CO and by
using raw materials
with relatively low
carbon content.
Modeling was
conducted that
showed that the
additional CO
emissions will not
cause ground level
concentrations in
excess of the
significant impact
levels of 1.8 and
0.45 parts per
million for the 1
and 8-hour averaging
periods, respectively.
Any CO impacts will
be insignificant
especially compared
with nearby heavy
traffic on the Florida
Turnpike, U.S. 27,
and other major
traffic arteries.

PM/PM10 and
VOC emissions are
also very low. While
process PM/PM10
can be readily
controlled, the
Department requested
that Tarmac submit
a plan to insure that
Tarmac emissions
will not increase as
a result of
increased production.
The plan submitted
includes planting of
grass and trees,
watering of roads and
paths, wheel washes
of transport vehicles,
a number of other
reasonable
precautions.

The Department
will accept written
comments concerning
the proposed permit
issuance action and
requests for a public
hearing for a period
of thirty (30) days
from the date of
publication of the
"Public Notice of
Intent to Issue Air
Construction Permit."
Written comments
should be submitted
to the Department's
designated address at
Regulation at 2600
Blair Stone Road,
Mail Stop 05,
Tallahassee, FL
32324-0005. Any
written comments
filed shall be made
available for public
inspection. If written
comments received
result in a proposed
change in the
proposed agency action,
the Department shall
revise the proposed
agency action, if
applicable, another
Public Notice.

The Department
will prepare 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
proceedings for a
hearing are set forth
below. Mediation
will not be available
in this proceeding.

A person whose
substantial interests
are affected by the
proposed permitting
action may file a
petition for an
administrative hearing
proceeding (hearing)
under agency action
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,
32309-3000. Petitions
filed by the permit
applicant or any of
the parties listed
below must be filed
within fourteen days
of receipt of this
notice of intent.
Petitions filed by
any persons
other than those
entitled to written
notice under section
120.603 of the
Florida Statutes must
be filed within
fourteen days of
publication of the
public notice or
within fourteen
days of receipt of
this notice of intent,
whichever occurs
first. Under section
120.603, however,
any person who
asks the Department
for notice of agency
action may file a
petition within
fourteen days of
receipt of that
notice, regardless
of the date of
publication. 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
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 28-108.205
of the Florida
Administrative Code.

A petition that
disputes the material
facts on which the
Department's action
is based shall state
that no such facts
are in dispute. The
petitioner shall
also state 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
the 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. The
petitioner shall
also state 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
the petitioner
wishes the agency
to take with
respect to the
agency's proposed
action.

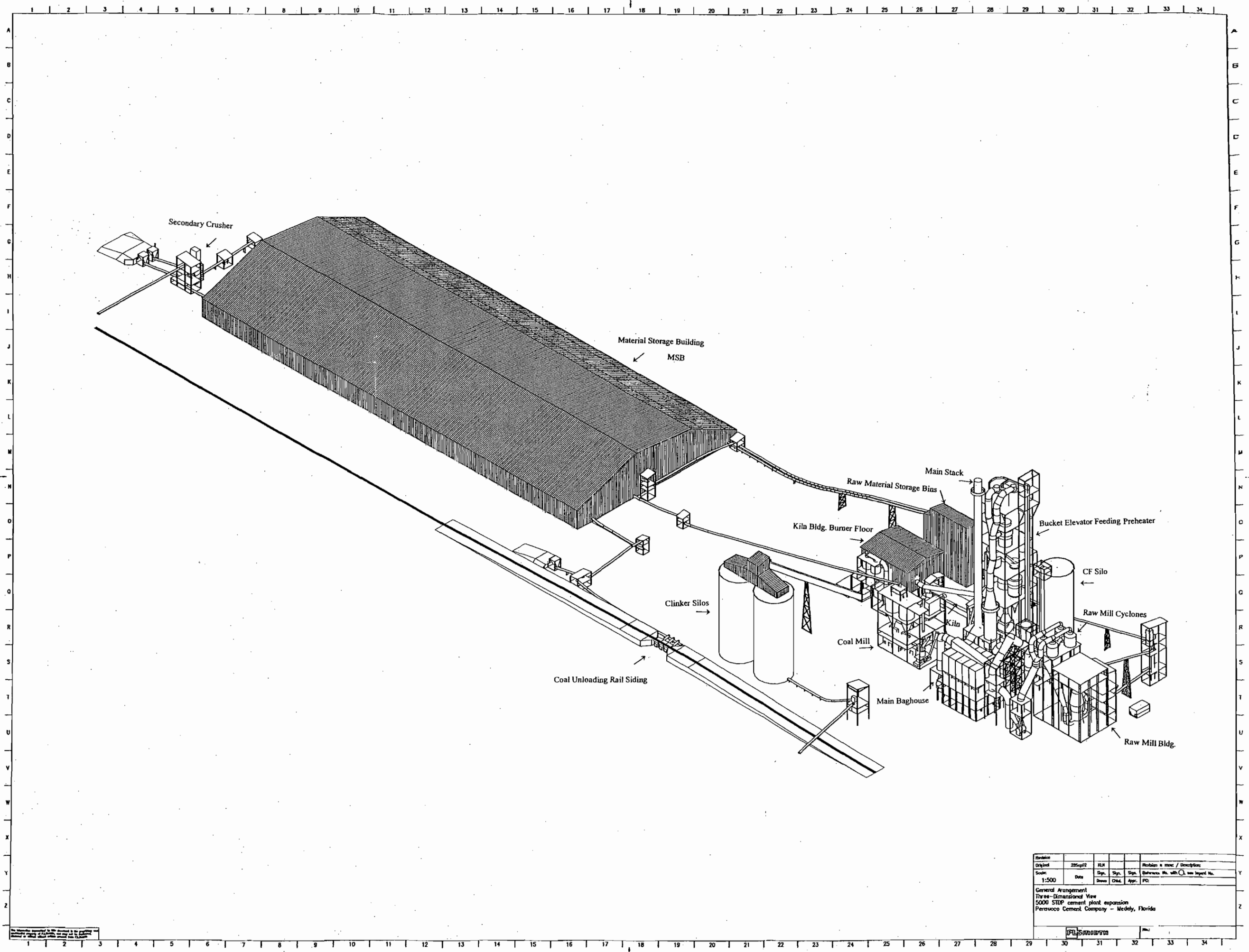
the following
information: (a) The
name and address
of each agency
affected and each
agency's file or
identification number,
if known; (b) The
name, address, and
telephone number of
the petitioner, the
name, address, and
telephone number of
the petitioner's
representative, if any,
which shall be the
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 the 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
petitioner must so
indicate; (e) A
concise statement
of the ultimate facts
alleged, as well as
the rules and
statutes which
entitle the petitioner
to relief; (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
the 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. The
petitioner shall
also state 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
the petitioner
wishes the agency
to take with
respect to the
agency's proposed
action.

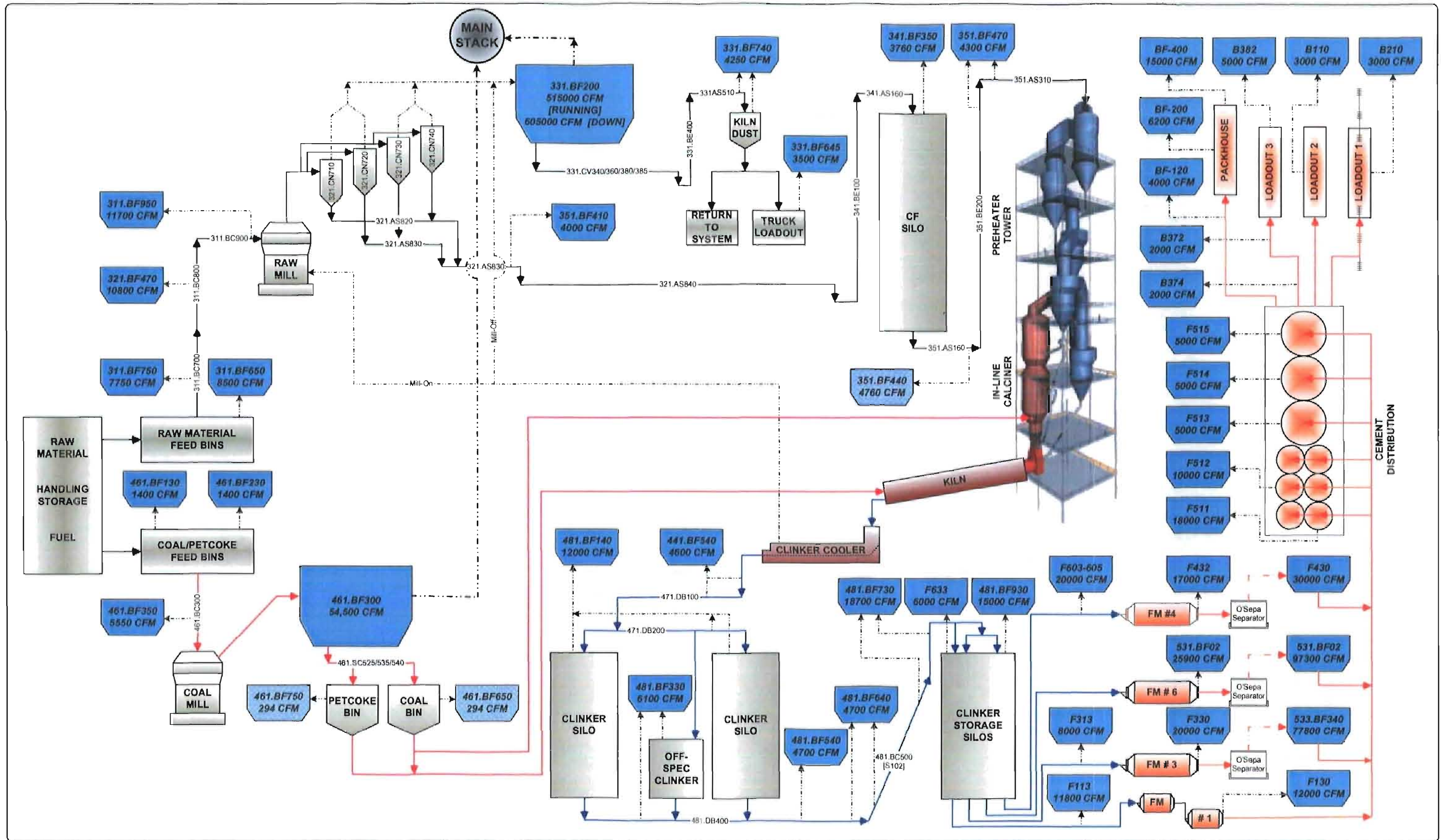
A complete project
file is available for
public inspection
during normal
business hours, 8:00 a.m.
to 5:00 p.m., Monday
through Friday,
except legal holidays,
at:

Dept. of
Environmental
Protection
Bureau of Air
Protection
111 S. Magnolia
Drive, Suite 4
Tallahassee, Florida,
32301
Telephone:
(850) 488-0114
Fax: (850) 922-6979
Dept. of Environmental
Protection
Southeast District
400 North Congress
Avenue
West Palm Beach,
Florida 33401
Telephone:
407/681-6800
Fax: 407/681-6755
Miami-Dade County
Department of
Environmental
Resources
Management
33 Southwest 2nd
Avenue, Suite 900
Miami, Florida
33130-1540
Telephone:
305/372-6925
Fax: 305/372-6954

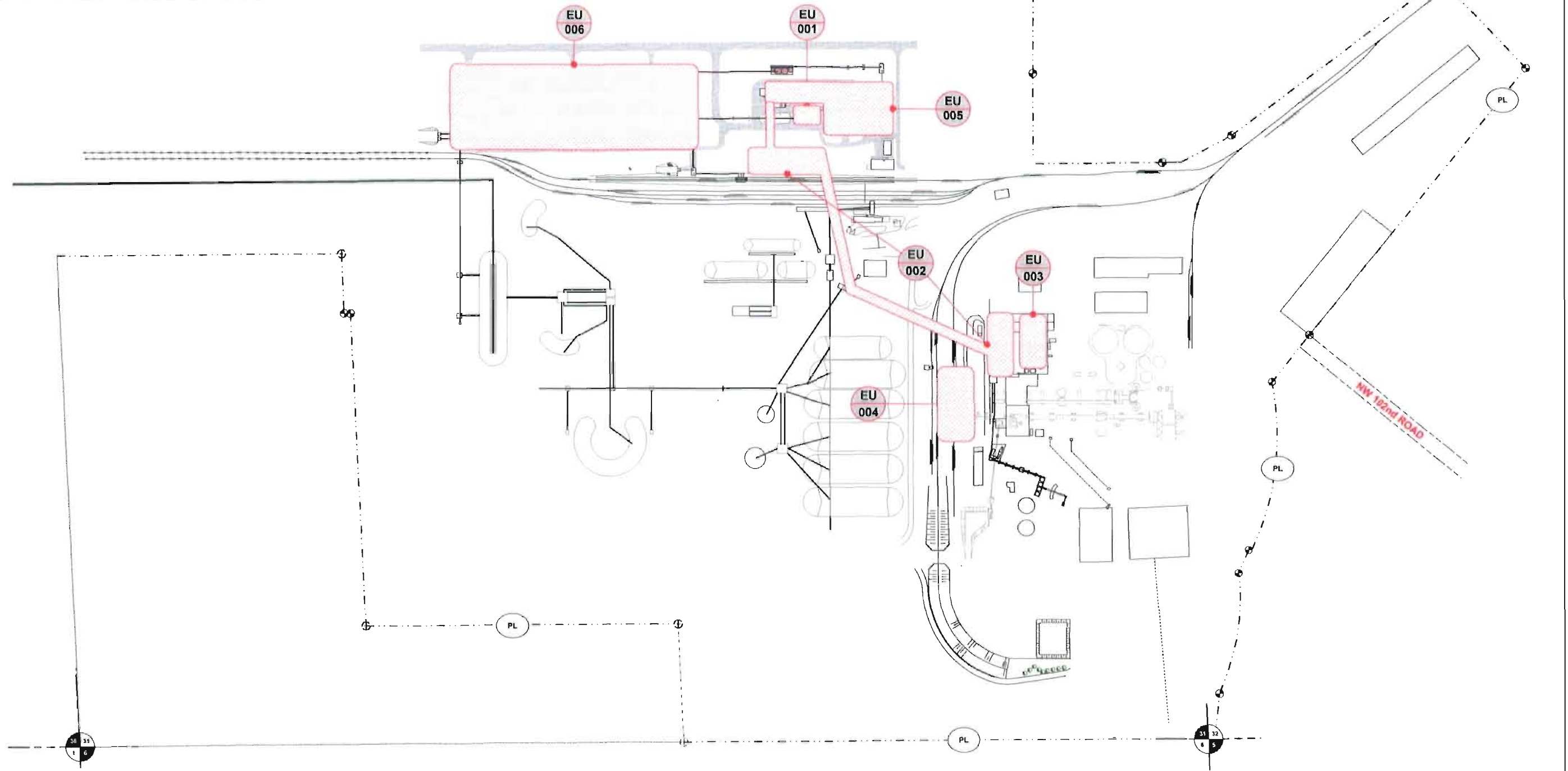
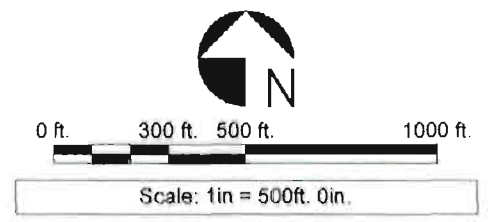
The complete project
file includes the
application, technical
evaluations, Draft Permit,
and the information
submitted by the
responsible official,
exclusive of confidential
records under Section
403.111, F.S. Interested
persons may
contact the Program
Administrator, South
Permitting Section, at
111 South Magnolia
Drive, Suite 4
Tallahassee, Florida
32301, or
850/922-9523,
for additional
information. Key
documents can be
viewed at
www.dep.state.fl.us/air/
permitting/
construction.htm by
clicking on the Titan
link.



Revision	28502	JLM			Revision in name / Description
Design					
Scale	1:500	Date	Drawn	Checked	Approved
General Arrangement Three-Dimensional View 5000 STDP cement plant expansion Persecco Cement Company - Medley, Florida					



DESCRIPTION <h3 style="text-align: center;">PROCESS FLOW DIAGRAM</h3>	TITLE: PENNSUCO CEMENT	
	FILENAME: FL007-CEM-PK5 FLOWDIAGRAM.VSD	
	LAST REVISION DATE: 4/15/2005	



DESCRIPTION

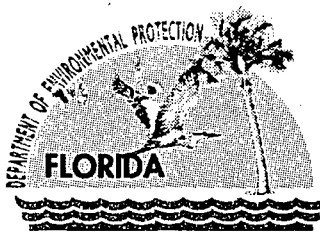
FACILITY PLOT PLAN
PK5 CONSTRUCTION

TITLE: **PENNSUCO CEMENT**

FILENAME: 0537511/4/4.4/TM-FI-C1

LAST REVISION DATE: 4/15/2005





Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

October 12, 2005

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Hardy Johnson, President
Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441

Re: DEP File No. 0250020-017-AC
Production Increase – Titan Florida Pennsuco Cement Plant

Dear Mr. Johnson:

Enclosed is one copy of the Air Construction Permit to increase production at the Titan Florida Pennsuco Cement Plant located at 11000 NW 121 Way, Medley, Miami-Dade County. The Department's Intent to Issue Air Construction Permit, the Technical Evaluation and Preliminary Determination, and the "Public Notice of Intent to Issue Air Construction Permit" are also included.

The "Public Notice" must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, such as a newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in denial of the permit modification.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, Program Administrator, at the letterhead address. If you have any questions regarding this matter, please contact Mr. Linero at (850)921-9523.

Sincerely,

A handwritten signature in black ink that reads "Trina Vielhauer".

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/aal

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

DEP File No. 0250020-017-AC
Tarmac Florida LLC – Titan Florida Pennsuco Cement Plant
Medley, Miami-Dade County

The Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Tarmac America, LLC. to increase production at the Titan Florida Pennsuco Cement Plant located at 11000 NW 121 Way, Medley, Miami-Dade County. A review under the rules for the Prevention of Significant Deterioration of Air Quality (PSD) and a Best Available Control Technology (BACT) determination were required for carbon monoxide (CO). The applicant's name and business address are Tarmac America LLC., 455 Fairway Drive, Deerfield Beach, Florida 33441.

In 1999 and 2001 air construction permits were issued for the modernization of the Pennsuco Cement Plant. The modernization involved replacement of the two wet process kilns and clinker coolers with a single 250 ton per hour (TPH) kiln and clinker cooler known as Kiln 5 and Clinker Cooler 5. There are no other kilns or clinker coolers in operation at the facility.

Although the capacity of the plant was increased by the modernization, emissions per ton of product were expected to decrease compared to the original wet process. The primary reason is that substantially less fuel is required per unit of product when using the dry process versus the wet process. This is largely because there is no need to make raw material slurry and then evaporate the water. The preheater/calcliner technology offers better combustion control of the process and dry scrubbing of sulfur dioxide. The new baghouses are more efficient than previous particulate control equipment. A PSD Review and BACT determination were not required because projected net emission increases were less than the respective significant emission rates (SER) for all pollutants.

Kiln 5 and Cooler 5 started up in June 2004 and tested for compliance with the permit conditions in October and November 2004. The Department issued a permit in April 2005 to reflect the final configuration of the plant particularly with respect to finish mills and baghouses. Presently plant production is restricted to 1,642,000 tons per year (TPY) of clinker which is substantially less than can be produced by continuous operation at 250 TPH. Ancillary equipment such as finish mills, baghouses, coal mills, etc. is similarly limited or is limited by restrictions in annual hours of operation.

Tarmac requests to increase the annual clinker production rate to 2,190,000 TPY which is equal to continuous operation (8,760 hours per year) at the permitted short-term limit of 250 TPH. The company requests removal of restrictions on annual hours of operation for the ancillary equipment needed to supply raw materials and process and ship product clinker and cement. To do so without requiring PSD review and a BACT determination it is necessary to show that facility emissions increases caused by the modernization do not exceed the annual SER for each pollutant.

The company provided estimates showing that it can restrict net emission increases after the production increase to less than the annual SER for nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM/PM₁₀), and volatile organic compounds (VOC). They also provided hour-by-hour data for the first half of 2005 showing progressively lower emissions of NO_x to the level needed to avoid the SER and showed that the continuous emissions of VOC and SO₂ will yield annual emission increases less than the respective SER. Annual PM/PM₁₀ tests were submitted to show that the kiln and cooler system can comply with the requested short-term emission limit and annual emissions to meet the SER applicable to the modernization.

Tarmac America LLC has requested a rolling 12-month NO_x limit of 2.17 pounds per ton of clinker (lb/ton). This is the lowest limit for any kiln known to be in operation in the country. SO₂ emissions from the facility are minimal because of virtually complete scrubbing of exhaust gases by finely divided lime in the calciner. One effect of the modernization is that SO₂ increment has been expanded in the nearby Class I Everglades National Park.

The Department conducted a BACT determination for CO and set a limit of 2.0 lb CO/ton on a 30-day basis. This is the lowest among recent BACT determinations in the state and the country. It will be achieved by use of a calciner with a long residence time to insure complete burnout of CO and by using raw materials with relatively low carbon content. Modeling was conducted that showed that the additional CO emissions will not cause ground level increases in excess of the significant impact levels of 1.8 and 0.45 parts per million for the 1 and 8-hour averaging periods respectively. Any CO impacts will be insignificant especially compared with nearby heavy traffic on the Florida Turnpike, U.S. 27, and other major traffic arteries.

PM/PM₁₀ and VOC emissions are also very low. While process PM/PM₁₀ can be readily controlled, the Department requested that Tarmac submit a plan to insure that fugitive emissions will not increase as a result to increased production. The plan submitted includes planting of grass and trees, wetting of roads and paths, wheel washing of transport vehicles and a number of other reasonable precautions.

(Public Notice to be Published in the Newspaper)

The Department will accept written comments concerning the proposed permit issuance action and requests for a public meeting for a period of thirty (30) days from the date of publication of "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.

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 filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. 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 of the Florida Administrative Code.

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, as well as the rules and statutes which entitle the petitioner to relief; (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.

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:

Dept. of Environmental Protection Bureau of Air Regulation 111 S. Magnolia Drive, Suite 4 Tallahassee, Florida, 32301 Telephone: (850) 488-0114 Fax: (850) 922-6979	Dept. of Environmental Protection Southeast District Office 400 North Congress Avenue West Palm Beach, Florida 33401 Telephone: 407/681-6600 Fax: 407/681-6755	Miami-Dade County Department of Environmental Resources Management 33 Southwest 2 nd Avenue, Suite 900 Miami, Florida 33150-1540 Telephone: 305/372-6925 Fax: 305/372-6954
--	---	--

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator, South Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-9523, for additional information. Key documents can be viewed at www.dep.state.fl.us/air/permitting/construction.htm by clicking on the Titan link.

(Public Notice to be Published in the Newspaper)

WRITTEN NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

*In the Matter of an Application
for Air Construction Permit by:*

Mr. Hardy Johnson, President Tarmac America, LLC 445 Fairway Drive Deerfield Beach, Florida 33441	DEP File No. 0250020-017-AC Titan Florida Pennsuco Cement Plant Production Increase Miami-Dade County, Florida
--	---

Applicant: The applicant's name and business address are Tarmac America, LLC., 455 Fairway Drive, Deerfield Beach, Florida 33441.

Facility Location: 11000 NW 121 Way, Medley, Miami-Dade County, Florida.

Project: On April 18, 2005 (revised September 30) the applicant submitted an application for an air construction permit to increase long-term (annual) production while maintaining permitted short-term (daily) production at the Titan Florida Pennsuco Cement Plant. The project will be accomplished by removing restrictions on annual hours of operation on key equipment.

This facility is subject to applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. Details of the project are provided in the application and in the enclosed "Technical Evaluation and Preliminary Determination".

Permitting Authority: Applications for processing air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, and 62-213 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an Air Construction Permit, pursuant to the Rules for the Prevention of Significant Deterioration of Air Quality (PSD) is required to increase production at the facility. The Department of Environmental Protection, Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: Florida Department of Environmental Protection, Bureau of Air Regulation, 111 South Magnolia Drive, Suite 4, Tallahassee, Florida, 32301. The Permitting Authority's mailing address is: Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, Mail Station #5505. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. Copies of the project file are also available at the following offices: Florida Department of Environmental Protection, Southeast District Office, 400 North Congress Avenue, West Palm Beach, Florida 33401. Telephone is 561/681-6774, facsimile is 561/681-6791. Miami-Dade County Department of Environmental Resources Management, Air Facilities Section, 33 SW 2nd Avenue, Suite 900. Telephone is 305/372-6925; facsimile is 305/372-6954.

Notice of Intent to Issue Air Construction Permit: The Permitting Authority gives notice of its intent to issue an Air Construction Permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact

air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit" (Public Notice). The Public 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 by this project. The newspaper used must meet 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 above address or phone number. Pursuant to Rule 62-110.106(5), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within seven (7) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments and requests for a public meeting concerning the proposed Draft Permit for a period of thirty (30) days from the date of publication of the Public Notice. Written comments must be provided to the Permitting Authority at the above address, e-mail or facsimile. Any written comments filed will be made available for public inspection. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Petitions: 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 with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. 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 Permitting Authority'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 rights will be affected by the agency determination; (c) A statement of how and when the 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 state; (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 the 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 Permitting Authority'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 Permitting Authority's final action may be different from the position taken by it in this Public 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.

Mediation: Mediation is not available for this proceeding.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

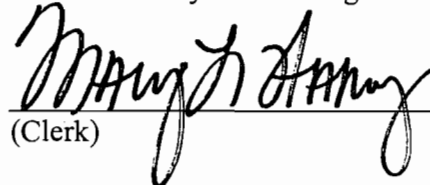
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Construction Permit" package (including the "Technical Evaluation and Preliminary Determination", "DRAFT Air Construction Permit", and "Public Notice of Intent to Issue Air Construction Permit") was sent by certified mail (*) and copies were mailed by U.S. Mail or electronic mail before the close of business on 10/14/05 to the persons listed below.

Hardy Johnson, Tarmac America*
Terry Lancaster, Titan America
David A. Buff, P.E., Golder
Patrick Wong, Miami-Dade DERM
Darrel Graziani, DEP SED
Jim Little, EPA Region 4
John Bunyak, National Park Service

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.



(Clerk)

10/14/05
(Date)

**TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION
(INCLUDING DRAFT BACT DETERMINATION FOR CO)**

**TARMAC AMERICA LLC.
TITAN FLORIDA PENNSUCO CEMENT PLANT
MIAMI-DADE COUNTY, FLORIDA**

**Annual Production Increase
From Modernized Dry Process Cement Plant**

DEP File No. 0250020-017-AC (PSD-FL-360)

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

October 12, 2005

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

I. APPLICANT NAME AND ADDRESS

Mr. Hardy Johnson, President
Tarmac America, LLC, Florida Business
445 Fairway Drive
Deerfield Beach, Florida 33441

II. FACILITY INFORMATION

A. FACILITY LOCATION

Tarmac America LLC, a subsidiary of Titan America LLC, operates a cement and building materials facility at 11000 NW 121 Way, Medley, Miami-Dade County. The facility includes a quarry, cement plant, ready-mix plant, and block plant operated by Titan/Tarmac's Florida Business Unit that includes Titan Florida Aggregate, Titan Florida Cement, Tarmac Block and Tarmac Ready-Mix. Titan Florida's Pennsuco Cement Plant is located on the site.

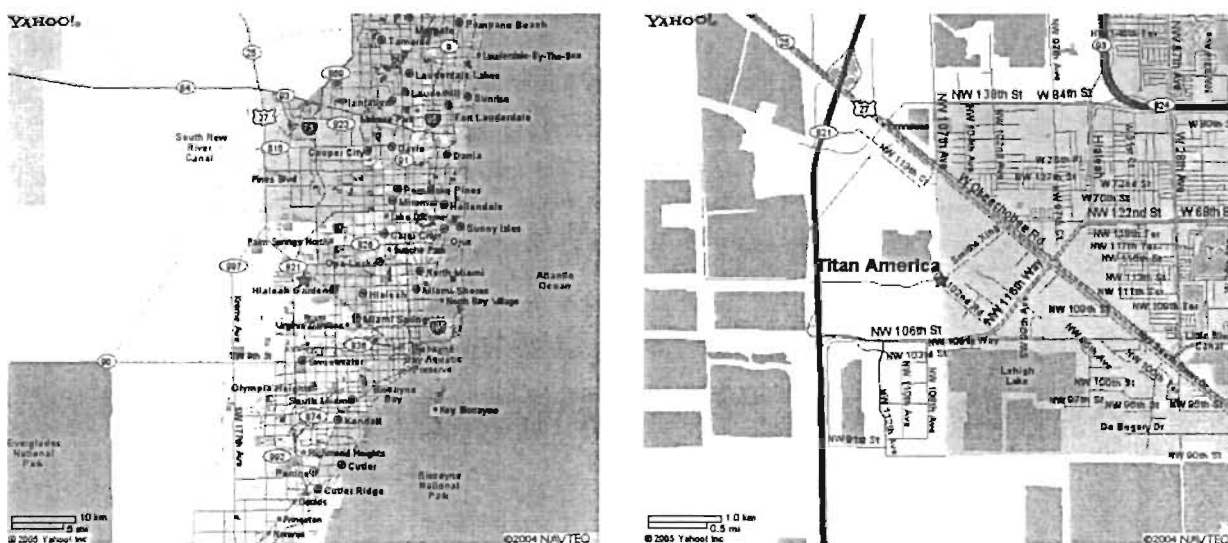


Figure 1. Titan Florida Pennsuco Cement Plant in Medley, Miami-Dade County

This site is approximately 30 kilometers from the Everglades National Park, a Prevention of Significant Deterioration (PSD), Class I Area, and is within an ozone (O₃) maintenance area in Miami-Dade County.

B. FACILITY CLASSIFICATION CODE (SIC)

Major Group No. 32, Clay, Glass, and Concrete Products
Industry Group No. 324 Cement, Hydraulic
Industry No. 3241 Cement, Hydraulic

C. FACILITY CATEGORY

The Titan Florida Pennsuco Cement Plant (Titan) directly emits more than 100 TPY of several regulated air pollutants and has the potential to emit at least 10 TPY of at least one hazardous air pollutant (HAP) or 25 TPY of all HAPs. Therefore it is classified as a "Major Source of Air Pollution or Title V Source," per the definitions in Rule 62-212.200, F.A.C.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

This industry is listed in Table 212.400-1, "Major Facilities Categories", Rule 62-212.400, F.A.C., PSD. Stack and fugitive emissions of over 100 TPY of carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO₂), nitrogen oxides (NO_x), or particulate matter (PM/PM₁₀) characterize the existing installation as a Major Facility per the definitions in Rule 62-210.200, F.A.C.

Per Table 212.400-2, "Regulated Air Pollutants – Significant Emission Rates" (SER's), modifications at Major Facilities resulting in emissions increases greater than 40 TPY of NO_x or SO₂, 7 TPY of sulfuric acid mist (SAM), 25/15 TPY of PM/PM₁₀, 3 TPY of fluorides, 1200 pounds per year (lb/yr) of lead or 200 lb/yr of mercury require review pursuant to the PSD rules. Pollutants triggering the mentioned SER's require a determination of Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

A previously approved modernization project was not subject to PSD and BACT because the differences between emission increases from the new line and emission reductions due to shutdown of the old wet process lines were less than the SER's. This is primarily due to the lower fuel requirements per unit of product characteristic of the dry processes, better particulate control equipment, and inherent dry scrubbing of sulfur dioxide in the calciner.

III. MODERNIZATION PROJECT

The Miami-Dade Department of Environmental Resources Management (DERM) issued a permit to Titan on May 1, 2001 to modernize the plant by replacing the wet process pyroprocessing lines with modern dry process technology including a preheater and calciner (PH/C). The 2001 permit was actually a modification and re-issuance of a permit issued in 1999 for a modernization project that was smaller in scope.

The dry process PH/C kiln is one of the most fuel-efficient cement pyroprocessing technologies currently available. Thermal efficiencies are superior with the PH/C kiln and the amount of fuel combusted per ton of clinker produced is greatly reduced in comparison with the wet process.

The modernized cement plant was permitted to produce up to 250 tons per hour (TPH) of clinker and an annual (12-month) production rate of 1,642,500 TPY of clinker. The major equipment at the plant includes a PH/C kiln, a clinker cooler, raw mill, finish mills, silos, conveyers, and particulate control/dust collection. The cement product is stored in silos and shipped in bags or in bulk by rail or truck.

A description of the modernization project was provided in the Technical Evaluation and Preliminary Determination prepared by DERM and dated April 28, 1999. Titan completed basic construction of the dry process kiln line in June of 2004. Compliance tests were conducted in October and November 2004. The Department of Environmental Protection (Department) issued Air Construction Permit 0250014-016-AC on May 31, 2005 to reflect the final physical configuration of the modernization project.

The Department is presently reviewing a Title V Operation Permit Renewal Application that incorporates past changes at the facility other than the modernization project, other previously approved projects at the facility and which anticipates issuance of the present Air Construction Permit Application.

IV. EMISSIONS UNIT SYSTEM PROCESS DESCRIPTIONS

Raw Material Handling Unit System

Raw materials used in the cement production process include mineral aggregates (ash, bauxite, gypsum, etc.) and limestone. The Pennsuco facility includes a limestone quarry with a primary crusher (Allis Chalmers) and a secondary crusher (FFE Minerals). The quarry produces approximately 10,000,000 TPY of which over 2,000,000 TPY are conveyed to the cement plant materials storage building via 1.2 mile conveyor system. The materials storage building is a 95-foot A-frame structure and occupies an area of 18 acres. Stockpiled limestone is reclaimed by means of a continuous pile reclaimer, and then transferred to the Limestone Feed Bins.

The mineral aggregates and fuels such as bauxite, mill scale, coal, and petroleum coke are delivered to the site by means of truck or railcar, and are stored in temporary piles. The materials are reclaimed via front-end loader and then dropped into a choke feed hopper. From the feed hopper, the materials are conveyed into the materials storage building. The mineral aggregates are then reclaimed by means of a continuous pile reclaimer, and then transferred via a 1,500 foot conveyor to the mineral aggregates feed bins. PM emissions from the limestone and mineral aggregates feed bins and conveying system are controlled by a single baghouse (Equipment ID No. 311.BF650).

Following is a very simplified process flow diagram of a preheater/calcliner kiln that is useful for discussing the details of the Titan Florida Pennsuco Plant. The figure was borrowed from an excellent study (Greer 2005 for PCA) assessing how pollution control strategies for a given pollutants influence (increase or decrease) emissions of other pollutants.

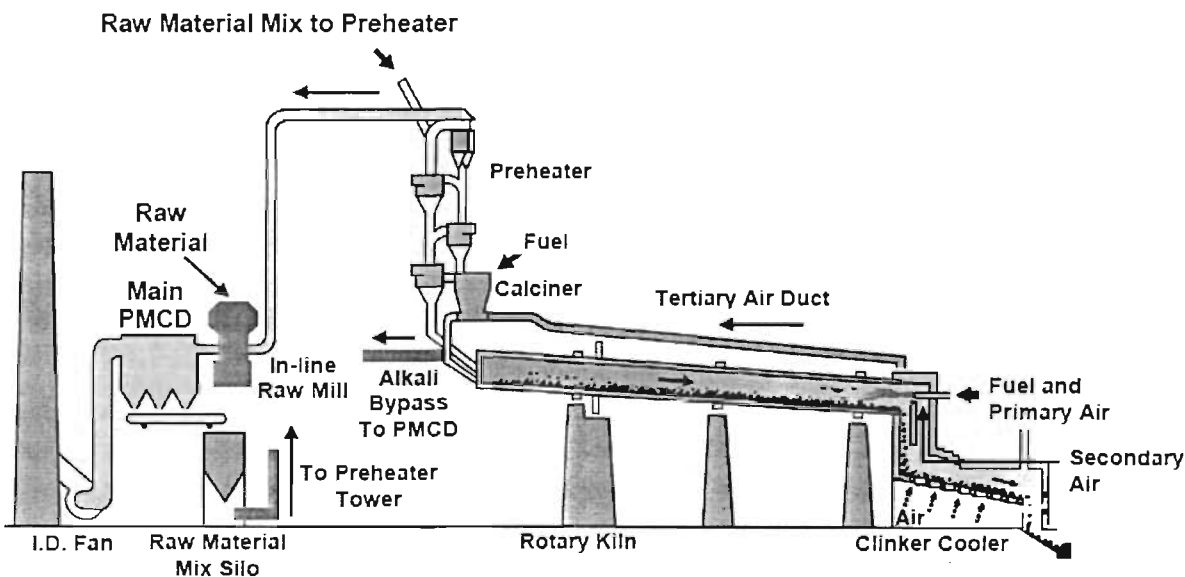


Figure 2. Process Diagram of Dry Process Preheater/Calcliner Pyroprocessing System

Three baghouses control PM emissions from the conveying system located between the raw materials feed bins (not shown) and the raw mill (Equipment ID Nos. 311.BF750, 321.BF470, and 311.BF950).

Pyroprocessing System

Pyroprocessing includes all of components that emit through the main stack shown on the left hand side of the above diagram. The emissions unit consists of the coal mill (not shown), raw mill, feed silo, preheater, calciner, kiln, clinker cooler, and the kiln dust system. The Titan Florida Pennsuco Plant does not have an alkali bypass.

Raw materials from the limestone and mineral aggregates feed bins enter the 400 TPH (F.L. Smidth) raw mill, where the material is ground to size and the moisture content is reduced. Heat for drying within the raw mill is supplied from the calciner/kiln exhaust gas after passing through the preheater. From the Raw mill, the material is blown to a series of mechanical cyclones that recover most of the material. The cyclones are visible on the right hand side of the figure shown below.

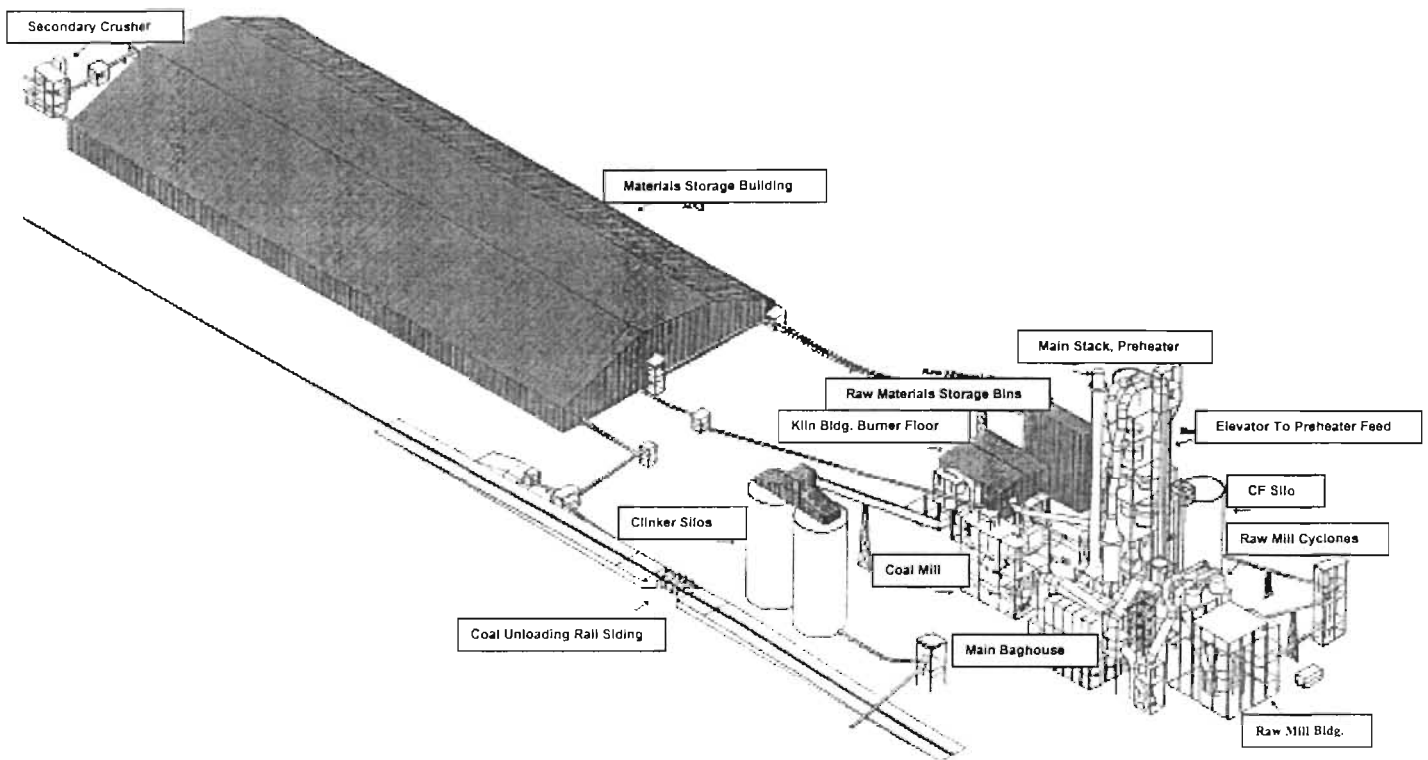


Figure 3. Titan Florida Pennsuco Cement Plant. Medley, Miami-Dade County

The exhaust from the cyclones passes through the main particulate matter control device (PMCD) which is the main stack baghouse (Equipment ID No. 331.BF200). The gases are drawn through the induced draft fan and discharged to the 410-foot main stack that is adjacent to the preheater as shown in the above diagram. When the raw mill is off, exhaust gas leaving the preheater is bypassed to a conditioning tower that cools the gases and then to the main baghouse. Pictures of the main stack baghouse and the raw mill building are shown in the figure on the following page.

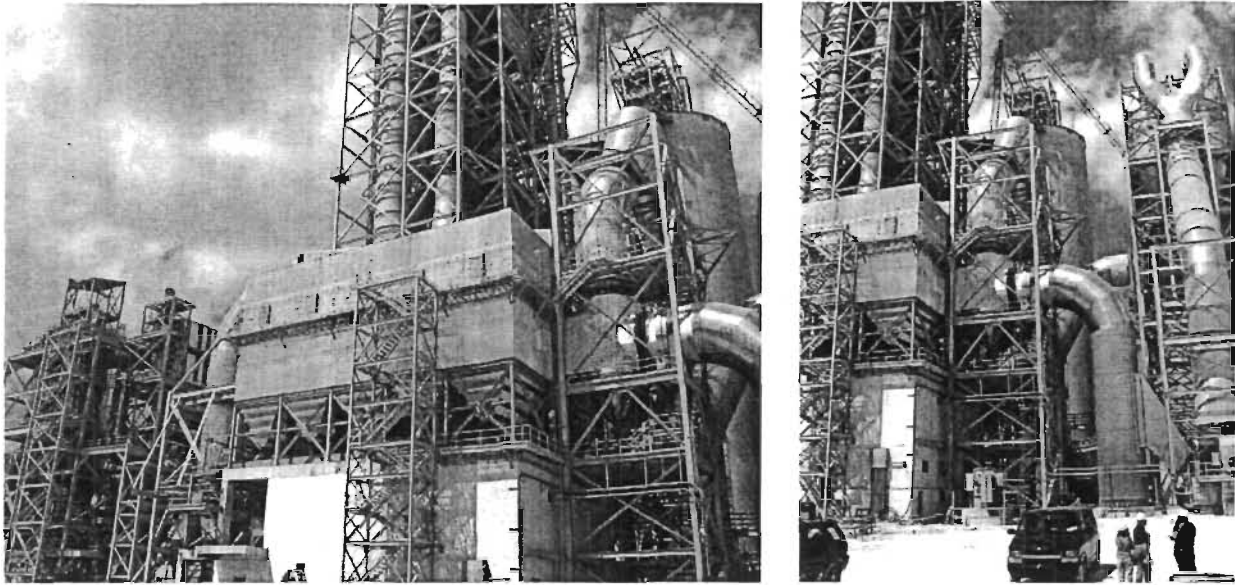


Figure 4. Lower Preheater, Main Stack Baghouse, Ducting From Raw Mill Cyclones

The properly milled and sized raw material is pneumatically conveyed to the preheater feed silo, which is controlled by a baghouse (Equipment ID No. 341.BF350). Material from the feed silo, known as raw meal, is then conveyed to and introduced at the five-stage preheater tower. The conveying system is controlled by two baghouses (Equipment ID Nos. 351.BF440 and 351.BF470).

The raw meal passes through the preheater/calcliner/kiln system. Initially, fixed moisture is released from the raw meal. Then the raw meal is calcined (conversion of limestone fraction to lime). Finally the calcined meal is sintered in the kiln to produce clinker nodules. The kiln is a two-pier, 65 meter horizontally oriented cylinder and is 5 meters in diameter.

Coal/petcoke is fed to both the medium temperature calciner burner and the high temperature kiln burner to provide heat for the process. Hot air from the kiln hood and clinker cooler provides secondary combustion air to the main kiln burner and tertiary air to the calciner to support calcination and complete burnout.

Kiln dust captured in the main stack baghouse (331.BF740) is conveyed to a storage bin. From the storage bin, the kiln dust is returned to the process in an enclosed system or is loaded out to truck. The conveying operation and the storage bin are controlled by a baghouse (Equipment ID No. 331.BF740). The truck loadout operation is also controlled by a baghouse Equipment ID No. 331.BF645).

Clinker Handling and Storage Unit System

Clinker leaving the kiln is cooled in an F.L. Smidth 4x5 cross bar cooler. The cooled clinker is transferred to one of two clinker storage silos. PM emissions from the conveying and transfer operations are controlled by two baghouses (Equipment ID Nos. 441.BF540 and 481.BF140). Any off-specification clinker is stored in the off-spec clinker silo, which is controlled by a baghouse (Equipment ID No. 481.BF330).

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The clinker is then transferred to one of twelve clinker storage silos that were associated with the previous wet process cement plant. These transfer and storage operations are controlled by a total of six baghouses (Equipment ID Nos. 481.BF330, 481.BF540, 481.BF640, 481.BF740, 481.BF930, and F633).

Finish Mill Unit System

The Finish Mills Nos. 1, 3, 4 and 6 include a number of conveyors used to transfer clinker and gypsum in and out of one or a series of ball mills. The ground clinker from the ball mills is transferred to cement separators for sizing of the product, using an air classification system. The processed clinker, now in a granular or powdered form, may then be cooled or sent directly to storage.

A total of ten (10) baghouses are used to control PM emissions from the conveyor systems and from the grinding operations (Equipment ID Nos. F113, F130, F313, F330, 533.BF340, F432, F430, F728, 536.BF500 and 536.BF340). Three of the baghouses (533.BF340, F728, and 536.BF340) are part of the O'Sepa separator systems, and act as product conveyance/collection devices.

Cement Storage, Loadout and Packhouse Unit System

Cement from the finish mills is sent to storage silos. From the storage silos, the cement is transferred to one of several operations for delivery, including a combination rail/truck loadout, two truck-only loadouts, or a bagging operation (packhouse).

PM emissions from the cement storage silos (12) are controlled by five baghouses (Equipment ID Nos. F511, F512, F513, F514, and F515). Rail/truck Loadout Unit #1 is controlled by a baghouse (Equipment ID No. B110); Truck Loadout Unit #2 is controlled by a baghouse (Equipment ID No. B210); Truck Loadout Unit #31 is controlled by three baghouses (Equipment ID Nos. B372, B374, and B382); and the packhouse is controlled by three baghouses (Equipment ID Nos. BF120, BF205, and BF400).

Coal Handling Unit System

Two solid fuels, coal and petroleum coke (petcoke), are utilized in the new cement plant at Titan Florida Pennsuco Cement Plant. These fuels are delivered by rail and transferred from the railcars using a bottom-dump system, where they are gravity fed into an underground hopper and onto a belt conveyor. Two additional conveyor-to-conveyor transfer points exist between the railcar unloading operation and the materials storage building. Each of these transfer points is enclosed. Inside the materials storage building, coal and petcoke are transferred from the conveyor belt entering the building to an automatic stacker, where the fuel is transferred onto the storage piles inside the building.

Coal or petcoke are reclaimed from the storage pile using an automatic reclaimer and transferred by belt conveyor to the coal and petcoke feed bins. These transfer points and the coal/petcoke feed bins are controlled using two baghouses (Equipment ID Nos. 461.BF130 and 461.BF230).

Occasionally, when the materials storage building is at capacity, coal/pet coke is temporarily stored on the ground. A front-end loader is used to move the coal from a separate railcar unloading operation to a storage pile. As capacity is available in the materials storage building, the front-end loader is used to reclaim coal from the pile and transfer it to railcars where it is processed normally (bottom-dumped from railcar and transferred to the materials storage building). Up to one-third of the total coal throughput could be handled in this way.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

From the feed bins, coal and petcoke are transferred to the coal mill for grinding. PM emissions from the transfer points of the feed bins to the coal mill are controlled by using a baghouse (Equipment ID No. 461.BF350). In the coal mill, the coal/pet coke is ground, and is then blown to a baghouse (Equipment ID No. 461.BF300), which acts as a product separator. Exhaust gases from the baghouse are vented to the plant main stack.

The ground coal/pet coke collected in the coal mill baghouse is transferred to a coal surge bin or a petcoke surge bin. PM emissions from this transfer operation are controlled using two identical baghouses (Equipment ID Nos. 461.BF650 and 461.BF750). These surge bins are used to feed the kiln and preheater/calcliner.

V. APPLICANT'S REQUEST

DEP received an application (0250014-017-AC) from Titan on April 18, 2005 to increase annual production rates and operating hours approved under previous construction permits related to the modernization project.

Titan application (since modified) requested the following changes:

- Increase annual production of clinker from 1,642,500 tons per year (TPY) to 2,190,000 TPY.
- Increase annual cement (i.e. clinker plus interground material such as gypsum) from 1,800,000 TPY to 2,400,000 TPY.
- Remove restrictions on annual hours of operation from sources as necessary to achieve the target annual clinker and cement production.
- Finalize reconfiguration of the finish mill baghouses from 12 to 10.
- Reduce short-term particulate matter (PM/PM₁₀) emission limits from the preheater/calcliner/kiln/raw mill (pyroprocessing system) emanating from the main stack.
- Reduce short-term PM/PM₁₀ emission limits from various baghouses serving finish mills and material transfer points.
- Replace short-term NO_x, CO, SO₂, and VOC pyroprocessing emission limitations in terms of lb/ton of clinker with lower long-term values while avoiding net significant emissions increase compared with emissions from the old wet process. (Not able to avoid for CO)
- Reconcile and adjust visible emission standards and mass emission rate limits originating from several previous permits, 40 CFR 63 Subpart LLL, and the Department's rule for opacity testing in lieu of mass emissions testing.

No changes to the permitted 250 TPH maximum 24-hr clinker production rate are requested. The final configuration for the finish mill and cement packhouse baghouses is reflected in the application.

VI. PERMITTED EMISSIONS, PRODUCTION RATES AND COMPLIANCE TESTS

The following table is a summary of the key emission limits and production rates presently applicable to the dry process line when operating at 250 TPH. The values are from the 2001 Air Construction Permit issued for the modernization project. Certain long-term limits that are not shown also apply and are presented in subsequent sections.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Table 1. Emission and Production Limits Applicable to Pyroprocessing Line Main Stack

Pollutant	Emission Limits (production basis)	Emission or Production Limits (mass per time basis)	Emissions or Production (Tons per Year)
PM	0.125 lb/ton kiln _{ph} feed	53.1 lb/hr	175
PM ₁₀	0.105 lb/ton kiln _{ph} feed	42.0 lb/hr	147
SO ₂ (24-hr)	1.28 lb/ton clinker	320 lb/hr	806
NO _x (24-hr)	2.88 lb/ton clinker	720 lb/hr	1,953
CO (24-hr)	2.3 lb/ton clinker	576 lb/hr	1,457
VOC (24-hr)	0.16 lb/ton clinker	40 lb/hr	155
H ₂ SO ₄	0.09 lb/ton clinker	2.24 lb/hr	8.68
Mercury (Hg)			229 lb/yr (base + 199 lb/yr)
Dioxin/furan	Per Subpart LLL		
Lead (Pb)			1,293 lb/yr (base+1,199 lb/yr)
Clinker (24-hr)		250 TPH	1,642,500
Coal/Petcoke		30 TPH	
Petcoke		20 TPH	

During the periods October 20-22, November 4-5, and November 16-19, 2004 Titan conducted the initial emission in-stack tests as required by their air construction permit and other applicable regulations. Typically, for new cement plants, these tests are conducted under conditions representative of the manufacturer performance guarantees and under its supervision. The table on the following page is a summary of the emission tests conducted in October and November 2004 while producing 222.2 TPH of clinker.

All of the in-stack tests indicated compliance with the permitted limits. Following are some items of note:

- PM/PM₁₀ is extremely low especially considering that the plant configuration treats kiln and cooler emissions together rather than through separate stacks.
- NO_x emissions are very low. For example, they are approximately equal to emissions at Suwannee American Cement where NO_x emissions are controlled by a selective non-catalytic reduction (SNCR) system.
- SO₂ emissions were significant prior to the modernization, but are now virtually zero due to the effective dry scrubbing mechanism in the calciner.
- CO emissions are very low especially for a process that depends on an aggressive reducing atmosphere to control NO_x emissions. This is due to the long retention calciner time to complete char combustion and burn out CO.
- The dioxin/furan results are the lowest measured to date.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Table 2. Results of Emission Tests conducted on Pyroprocessing Line Main Stack. (2004)

Pollutant	Permit Limit	Result
PM/PM ₁₀ (Raw Mill Up)	0.125/0.105 lb/ton ph kiln feed	0.028 lb/ton ph kiln feed
PM/PM ₁₀ (Raw Mill Down)	0.125/0.105 lb/ton ph kiln feed	0.021 lb/ton ph kiln feed
NO _x	2.88 lb/ton clinker	2.00 lb/ton clinker
SO ₂	1.28 lb/ton clinker	~ 0
CO	2.3 lb/ton clinker	0.51 lb/ton clinker
VOC	0.16 lb/ton clinker	0.12 lb/ton clinker
H ₂ SO ₄	0.009 lb/ton clinker	0.005 lb/ton clinker
Lead (Pb)	1,293 lb/yr	~ 96 lb/yr (at measured rate)
Mercury (Hg)	229 lb/yr	~ 52 lb/yr (at measured rate)
Dioxin/Furan (Raw Mill up)	0.4 ng/dscm @7% O ₂ *	0.013 ng TEQ/dscm @7% O ₂
Dioxin/Furan (Raw Mill Down)	0.2 ng/dscm @7% O ₂ +	0.010 ng TEQ/dscm @7% O ₂

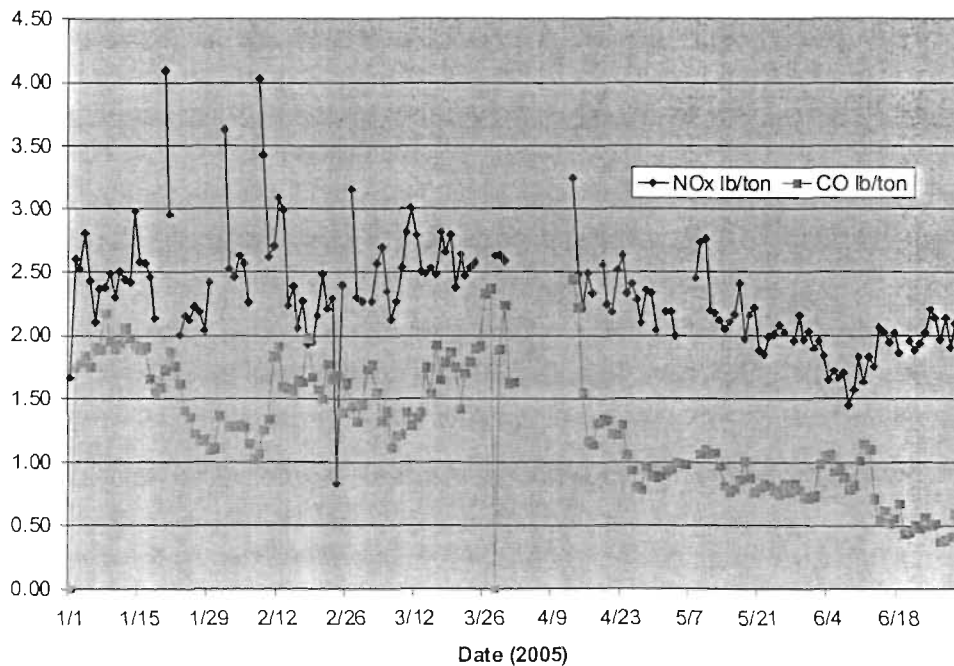
* Standard Baghouse Inlet Temperature < 400 F⁰

+ Standard Baghouse Inlet Temperature > 400 F⁰

VII. DATA FROM CONTINUOUS EMISSIONS MONITORING SYSTEMS (CEMS)

The following chart is a summary of NO_x and CO CEMS emission data in terms of pounds per ton of clinker (lb/ton) for the first six months of 2005.

Figure 5. NO_x and CO Emissions (lb/ton) from Pyroprocessing Line (Jan. – June 2005)

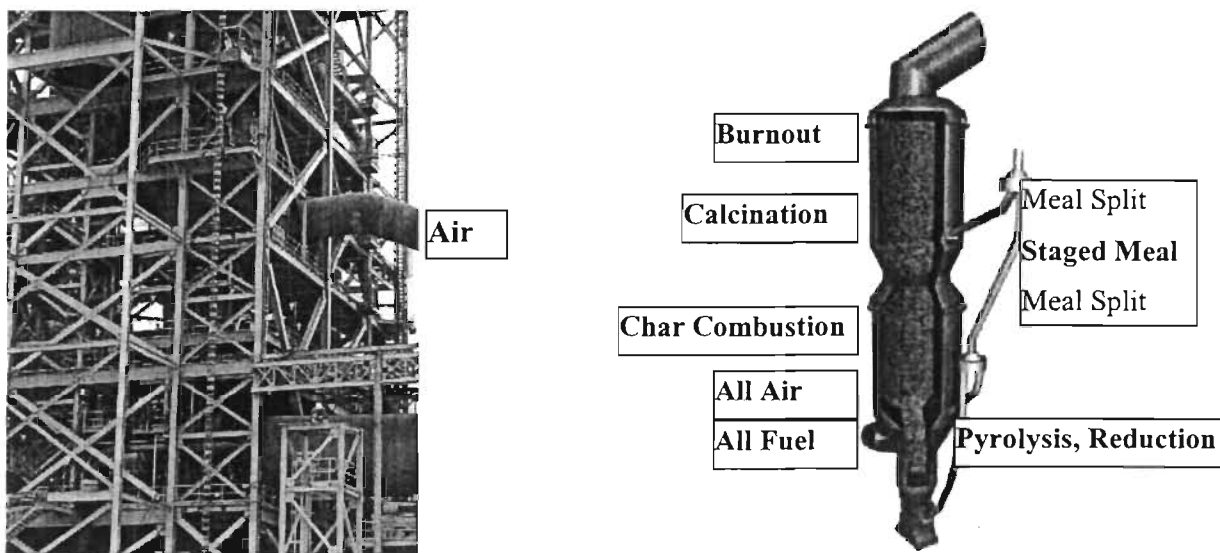


TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

During the first quarter of 2005, NO_x and CO emissions were greater than they were during the compliance/acceptance testing conducted in October 2004. During the second quarter of 2005 there was progressive improvement in NO_x and CO emission characteristics. By the end of June 2005, Titan demonstrated that it can operate the pyroprocessing line at the low long-term emissions rate needed to obtain the requested annual production increase without necessarily triggering PSD and at emission rates similar to those obtained during the initial compliance/acceptance tests performed in October 2005.

It is commonly believed that NO_x and CO are inversely related for many processes. However it is possible to operate certain kinds of kilns such that both NO_x and CO can be reduced simultaneously to a point. This typically involves creation of a relatively high temperature reducing atmosphere in the lower calciner and a high temperature oxidizing atmosphere higher in the calciner. The arrangement at Titan Florida Pennsuco is shown in the following figure.

Figure 6. Titan Florida Pennsuco - Sequenced Fuel, Air, and Meal (FLS Low NO_x) Calciner

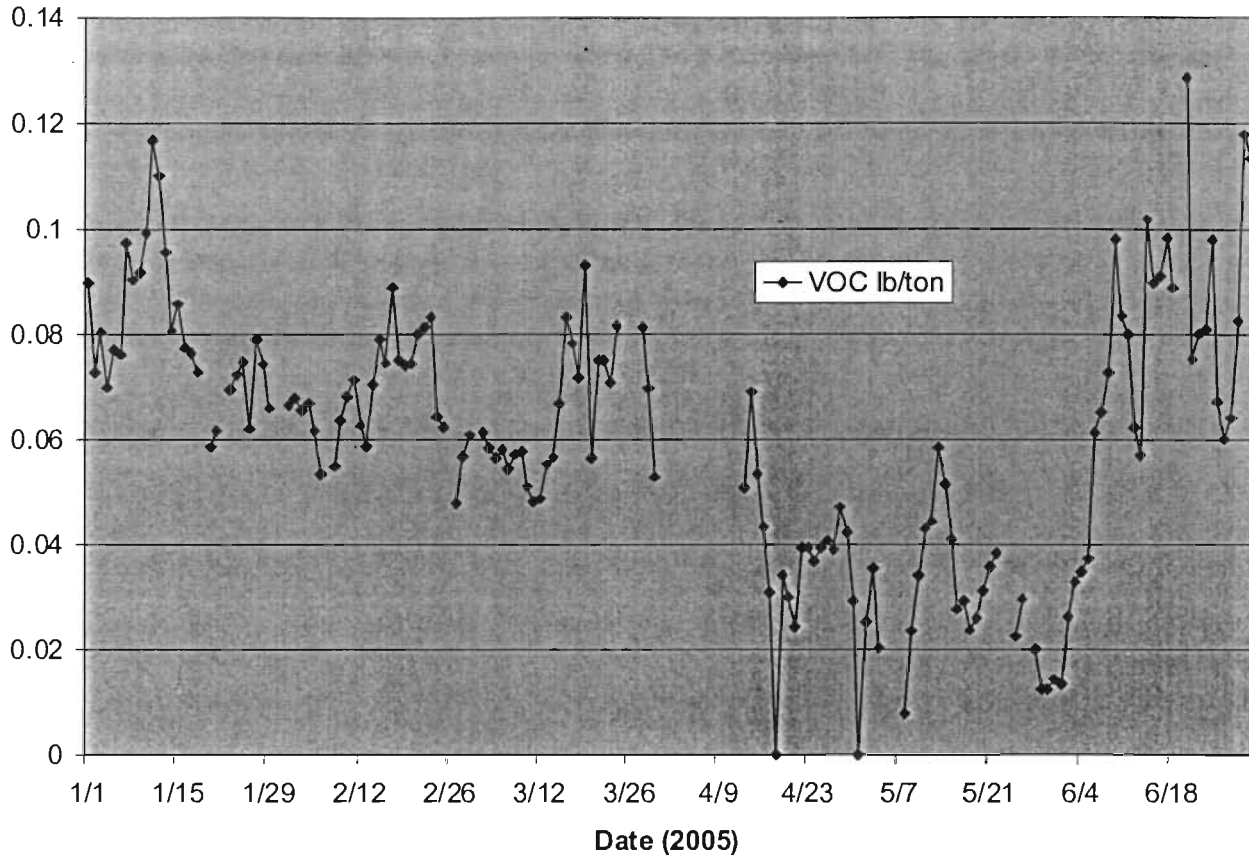


The necessary conditions are achieved by the manner in which fuel, air, and meal are introduced into the calciner. All fuel is introduced into the riser duct, then all hot tertiary air is introduced into the lower calciner. Raw meal is split and introduced in a staged manner. This provides for the temperature control and raw meal catalysis to maximize NO_x destruction and then promote char burnout and CO oxidation.

According to Titan representatives, they have been making slight changes to the pre-heater to allow material to flow smoother. They have worked on the (meal) splitter and made more C3S cement and less C2S (thus requiring less intense burning). The operators have learned to handle the system more smoothly, which makes it run better.

The following chart is a summary of VOC emissions over the same period. The pattern is similar to those of NO_x and CO until June when an increase is apparent. In general, VOC emissions from preheater/calciner kilns are caused by organic matter present in raw materials. VOC emissions did not exceed the permitted limit that are in-turn substantially less than the maximum achievable control technology (MACT) standard of approximately 0.3 to 0.4 lb THC/ton allowed by 40 CFR 63, Subpart LLL from new kilns at greenfield sites.

Figure 6. VOC Emissions (lb/ton clinker) from Pyroprocessing Line (January – June 2005)



SO₂ data were also made available to the Department, but are too low to plot in a meaningful manner. The reason is that virtually all fuel sulfur is scrubbed out in the calciner and there is virtually no sulfur in the raw materials that could otherwise be roasted off in the preheater.

VIII. PROPOSED EMISSION, PRODUCTION LIMITS FROM PYROPROCESSING

The table on the following page is a list of the emission and production limits proposed by Titan for the pyroprocessing system. They reflect the revisions submitted on September 30 to reflect selection of 2002-2003 as the baseline period by the Department and PSD applicability for CO.

The key changes compared with existing requirements are replacement of higher short-term lb/ton limits with lower 12-month averaged emission limits for NO_x, SO₂, CO, and VOC, while keeping the existing 24-hour lb/hr values. Compliance would be demonstrated using the continuous emission monitoring system (CEMS) for NO_x, SO₂, CO, and VOC. The other key change is lower PM/PM₁₀ limits.

Comparison of the proposed emission limits in Table 3 with the stack test results in Table 2 and the CEMS data in Figures 4 and 6 indicates that the proposed emission rates can be attained with varying margins of safety.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Table 3. Applicant's Revised Emission and Production Limits From Pyroprocessing

Pollutant	Emission Limits (production basis)	Emission or Production Limits (mass per time basis)	Emissions or Production (Tons per Year)
PM	0.067 lb/ton kiln _{ph} feed	28.5 lb/hour	125
PM ₁₀	0.056 lb/ton kiln _{ph} feed	23.9 lb/hr	105
SO ₂ (24-hr)		320 lb/hr	
SO ₂ (12-mon)	0.50 lb/ton clinker		548
NO _x (24-hr)		720 lb/hr	
NO _x (12-mon)	2.17 lb/ton clinker		2,376
CO (24-hr)		576 lb/hr	
CO (30-day)	2.0 lb/ton clinker		2,190
VOC (24-hr)		40 lb/hr	
VOC (12-mon)	0.16 lb/ton clinker		175
H ₂ SO ₄	0.011 lb/ton clinker	2.7 lb/hr	12
Mercury (Hg)			229 lb/yr (base + 199 lb/yr)
Dioxin/furan	Per Subpart LLL		
Lead (Pb)			1,293 lb/yr (base+1,199 lb/yr)
Clinker (24-hr)		250 TPH	2,190,000
Coal/petcoke		30 TPH	
Petcoke		20 TPH	

IX. RULE APPLICABILITY

This facility is located in Miami-Dade County, which is an area presently in attainment for all criteria pollutants in accordance with Rule 62-204.360, F.A.C. While in attainment with the ozone (O₃) ambient air quality standard, the area is a "maintenance area" for this pollutant.

The project as originally proposed was not subject to a PSD review and BACT determination pursuant to Rule 62-212.400 F.A.C. because the estimated net emission increases for each pollutant did not exceed the significance emission rates given in Table 62-212.400-2, F.A.C. Titan subsequently requested PSD review and a BACT determination because the Department determined that the annual CO emissions estimated by Titan do result in a net significant emission increase of CO as described in sections below.

This facility is subject to the Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAPs) requirements that are listed in 40 CFR 63, Subpart LLL. The kiln is considered to be a new kiln at a brownfield site.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

This facility shall comply with all applicable provisions of the following regulations:

40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 51, Subpart Y	Standards of Performance for Coal Preparation Plants
40 CFR 60, Subpart A	General Provisions
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants
40 CFR 63, Subpart A	General Provisions
40 CFR 63 Subpart LLL	National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry – Major Sources
40 CFR 64	Compliance Assurance Monitoring Rule

The emission units affected by this modification shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Chapter 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.570	Test Reports
Rule 62-297.520	EPA Continuous Monitor Performance Specifications
Rule 62-297.701	Portland Cement Plants

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

X. METHOD OF ESTIMATING EMISSION INCREASES AND DECREASES

As a major source, a physical modification or change in method of operation of this facility resulting in no significant net emissions increases is not subject to PSD review and does not require a BACT determination. It is clear that the production increase is a physical change or change in method of operation because it involves relaxation of a federally enforceable annual production limit that can cause increases in annual emissions.

Significant net emissions increase is defined in Rule 62-212.400, F.A.C as follows:

Significant Net Emissions Increase – A significant net emissions increase of a pollutant regulated under the Act is a net emissions increase equal to or greater than the applicable significant emission rate listed in Table 212.400-2, Regulated Air Pollutants – Significant Emission Rates.

The significant emission rates (SER) are included in Table 4 on the following page. The meaning of a net emissions increase is given in Rule 62-212.400, F.A.C. as:

Net Emissions Increase – A modification to a facility results in a net emissions increase when, for a pollutant regulated under the Act, the sum of all of the contemporaneous creditable increases and decreases in the actual emissions of the facility, including the increase in emissions of the modification itself and any increases and decreases in quantifiable fugitive emissions, is greater than zero.

Contemporaneous emissions increases and decreases are described in the following definition:

Contemporaneous Emissions Changes – An increase or decrease in the actual emissions or in the quantifiable fugitive emissions of a facility is contemporaneous with a particular modification if it occurs within the period beginning five years prior to the date on which the owner or operator of the facility submits a complete application for a permit to modify the facility and ending on the date on which the owner or operator of the modified facility projects the new or modified emissions unit(s) to begin operation. The date on which any increase in the actual emissions or in the quantifiable fugitive emissions of the facility occurs is the date on which the owner or operator of the facility begins, or projects to begin, operation of the emissions unit(s) resulting in the increase. The date on which any decrease in the actual emissions or in the quantifiable fugitive emissions of the facility occurs is the date on which the owner or operator of the facility completes, or is committed to complete through a federally enforceable permit condition, a physical change in or change in the method of operation of the facility resulting in the decrease.

The definition of actual emissions is given in Rule 62-210.200, F.A.C. (definitions) as follows:

Actual Emissions – The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:

- (a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.*

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The contemporaneous creditable emissions changes are given in the following table. The primary basis of creditable reductions is the shutdown of the wet process pyroprocessing lines in 2004 (basis 2002-2003). The primary basis of the creditable increases is the startup (2004) of the dry process line as modified by the present (2005) request to increase annual production.

Table 4. Net Emissions Increases and Decreases, Comparisons with Respective PSD SER

Pollutant	Increases Dry Process at Proposed Capacity (TPY)	Decreases Slag Dryer & Wet Process Shutdown Actual Emissions (TPY)	Net Increases and (Decreases) (TPY)	PSD Significant Emission Rate (TPY)
PM	355	385	(30)	25
PM ₁₀	321	307	14	15
SO ₂	548	514	34	40
NO _x	2,376	2,344	32	40
CO	2,190	1,323	867	100
VOC	175	145	30	40
H ₂ SO ₄ (SAM)	12	19	(7)	7
Hg	229 lb/yr	30 lb/yr	199 lb/yr	200 lb/yr
Pb	1,293 lb/yr	94 lb/yr	1,199 lb/yr	1,200

Source: Titan America's information received in April 2005 and July

The increases shown from the dry process include: the contemporaneous increases caused by the modernization that started up in 2004; the additional increases caused by the proposed production increase project; and the increases caused by relocation and expansion of a 32 million block per year grey block plant to an 85 million block per year plant.

Actual SO₂ emissions from the modernized plant are likely to be much lower (near zero) based on the emission test results discussed in the previous section. It will be necessary to comply with an emission rate of 0.50 lb SO₂/ton of clinker to avoid triggering PSD. This will be very easy to accomplish given previous technical discussion given above. In fact, typical SO₂ emissions will be less than 0.10 lb SO₂/ton of clinker.

Given the inherent scrubbing of SO₂ in the calciner, the potential for SAM formation is minimal. Almost all possible SAM escaping the preheater would be scrubbed by very finely divided limestone in the moist environment of the raw mill.

Although Titan requested a limit based on future emissions of 12 TPY, they demonstrated emissions equivalent to 5.5 TPY and a likely *reduction* of about 13 rather than the 7 TPY value in the table. These factors and the expectation of *lower* emissions from the dry process are sufficient to provide reasonable assurance that SAM annual emissions will not trigger PSD for SAM. No emission limit will be included for SAM. There is no expectation of significant SAM emission increases.

PM/PM₁₀ emissions measured from the main kiln stack were less than half of the proposed limit. Past PM pyroprocessing emissions were estimated by actual stack measurements. PM₁₀ emissions were estimated to be 84% of PM. However in the future, total PM compliance will be determined by meeting the PM₁₀ limitation. For example, measured PM will be demonstrated annually to be less

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

than the proposed limit of 0.067 lb PM/ton kiln_{ph} feed *and* less than the proposed PM₁₀ limit of 0.056 lb PM₁₀/ton kiln_{ph} feed.

By adhering to the PM₁₀ limit (rather than conducting separate tests for PM and PM₁₀) emissions of PM will actually be controlled to 105 TPY or less (rather than 125 TPY per Table 3). Consequently PM₁₀ emissions will be controlled to a value even lower than 105 TPY.

The maximum values for Hg and Pb emission increases from the dry process were presumed to be 199 and 1,199 lb/yr respectively. They were included in the present permit to insure PSD is not triggered. The emissions tests conducted in late 2004 equate to annual total Hg and Pb emissions of 60 and 108 lb/yr respectively. Extrapolation to annual emissions estimates suggests an increase in Hg of only 30 lb/yr and only 15 lb/yr of Pb, compared with the past actual emissions of 30 and 94 lb/yr. The increases are substantially less than the SER's for Hg and Pb of 199 and 1,199 lb/yr respectively.

Despite the low Hg emissions, the Department will keep an emission limitation for Hg because of its variable nature in fuels and raw materials. Hg builds up within the preheater and is ultimately emitted via the main stack. No limit is necessary for Pb because emissions are low, it is effectively removed by the baghouse, and it is incorporated into the clinker to a high degree.

NO_x emissions are likely to be close to the proposed emission limits needed to avoid triggering PSD. The proposed long term emission rate is 2.17 lb NO_x/ton of clinker. This level was achieved based on operation during June 2005 and during the compliance/acceptance testing conducted October 2004. There is likely sufficient flexibility based on the calciner design to allow for continuous long-term operation to meet this rate on a 12-month basis.

The Department concluded that there will be a net significant emission increase only for CO. After discussions with Titan representatives, they requested that the Department conduct a PSD review and a determination of best available control technology (BACT) in lieu of further downward adjustment of the CO limit. The analysis is provided in the following section.

XI. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW FOR CO

Best Available Control Technology is defined at Paragraph 62-210.200 (Definitions), F.A.C. as:

“Best Available Control Technology” or “BACT” - An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.

- (a) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.*
- (b) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.*

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Paragraph 62-212.400(6), F.A.C., describes the manner by which the Department conducts its BACT determinations as follows:

- (a) *BACT Determination. Following receipt of a complete application for a permit to construct an emissions unit or facility which requires a determination of Best Available Control Technology (BACT), the Department shall make a determination of Best Available Control Technology during the permitting process. 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) or 40 CFR Part 61 (National Emission 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.*

For reference, the U.S. EPA requires that BACT determinations conducted by its own offices and by states delegated to conduct BACT determinations under its PSD rules at 40 CFR 52.21 must be determined using the "top-down" approach. The Department is not required to use this methodology because it has an EPA-approved State Implementation Plan (SIP) at 40 CFR 52, Subpart K that includes the BACT definition and procedure described above. However the Department's BACT definition and determination process generally achieve the same outcome and do not preclude Top/Down methodology.

Under the Top/Down 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:

1. Identify alternative control technologies;
2. Eliminate technically infeasible options;
3. Rank remaining control technologies by control effectiveness;
4. Evaluate most effective controls; and
5. Select BACT.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

A BACT determination cannot 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). This project is subject to such standards as described above. Neither of the key standards applicable to portland cement plants (40 CFR 60, Subpart F and 40 CFR 63, Subpart LLL) includes a limitation on CO emissions.

CO is a pollutant formed by the incomplete combustion of carbon in the fuels fired during pyroprocessing or by partial combustion of carbonaceous fractions in raw materials (such as fly ash) in the preheater. Emissions of CO are generally controlled by:

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; and
4. Varying degrees of calciner sizes and duct lengths to complete burnout.

The lowest CO value in any cement plant 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 and unusually high carbonaceous matter in the limestone and to avoid PSD. The system consists of 11 RTO modules and covers an area equal to a "football field". Natural gas is used to heat the system. The RTO destroys VOC as well and is considered the "Top" control.

TXI recently applied to the Texas Environmental Quality Board to turn off the RTO system outside of the ozone season. A settlement was reached with petitioners opposed to the TXI request and requires that the RTO system be used year-round. However the tentative applicable CO and VOC limits will be revised as follows:

Table 5. Agreement Regarding RTO and CO, VOC Limits at TXI Midlothian Plant

ELEMENTS OF AGREEMENT			
	Existing permit	TXI's Request	Agreed-upon permit
Total hydrocarbons	44 TPY	603 TPY	< 84 TPY
Carbon monoxide	370 TPY	7,743 TPY	2,190 TPY

SOURCE: Mediated agreement with TXI, Blue Skies Alliance, Downwinders At Risk and 22 Midlothian residents

According to the agreement, the effective CO limits at the TXI project will be equivalent to 1.56 lb CO/ton clinker as an annual tonnage factor (2,190 TPY) rather than a technological limit. The VOC limit (as total hydrocarbons – THC) is equivalent to an impressive 0.06 lb VOC/ton of although it was doubled. For reference, the company would have increased annual VOC emissions nearly 14-fold by turning off the RTO system half of the time.

An RTO system at Titan would be far too costly on the basis of total capital costs and cost per ton of CO removed. It would actually be less expensive to implement control on raw materials and net out of PSD.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

F.L. Smidth provided a guarantee of 1.77 lb CO/ton of clinker on an annualized basis for the Titan Pennsuco modernization project. A value of 0.5 lb CO/ton was achieved during the compliance/acceptance tests conducted in October 2004. According to Figure 4, the 1.77 value can often be achieved even on a 24-hour basis. In fact lower values approaching 0.50 lb CO/ton of clinker (equal to the compliance/acceptance test result) were achieved in June 2005. This lower value reflects the ultimate capability of the sequenced fuel, air, and meal calciner with the long burnout loop described in Section VI above. To consistently achieve 0.50 lb CO/ton, there must be minimal carbonaceous material in the raw materials.

The Department believes that a limit of 2.0 lb CO/ton of clinker is appropriate for BACT on a 30-day basis with CEMS for demonstrating compliance. This is among the most stringent BACT CO limits issued to-date in the United States. It is important to emphasize that the calciner was specifically designed to achieve very low NO_x and CO emissions. The value of 2.0 lb/ton allows for as much as 1.5 lb CO/ton of clinker from the raw materials given that CO at the bottom cyclone (exit from calciner and burnout loop) is on the order of 0.5 lb/ton of clinker. If a high degree of petcoke use or high production causes greater CO concentrations in the exhaust leaving the bottom cyclone, it would be necessary for Titan to scale back carbonaceous matter in the raw materials.

The greatest possibility of high CO emissions is related to introduction of high carbon fly ash at the preheater feed. Titan recently announced that it is conducting tests on high carbon residue from a fly ash beneficiation process operated by their affiliate, Separation Technologies, Inc. The purpose of the tests is to ultimately use the material (following Department approval) as a fuel in the calciner or kiln at Titan Florida Pennsuco. That would at least assure burnout of the carbonaceous fraction.

The Department is proposing averaging times for SO₂ and VOC on a 30-day basis to achieve as much consistency as possible with the averaging time for CO. This will facilitate use of the procedures described for continuous monitoring at cement plants subject to Subpart LLL. Although Subpart LLL does not require monitoring by CEMS for these pollutants from new kilns at brownfield sites, the procedures are familiar to cement plant operators.

The NO_x averaging time will be on a 12-month basis. The limit is already aggressive for a kiln relying on staged combustion to reduce NO_x. The convenience of a 30-day limit for the above-mentioned CEMS requirements is outweighed by the need to have an averaging time that facilitates year-round compliance.

XII. PSD REVIEW FOR CARBON MONOXIDE

A PSD review is required for CO when predicted emissions are expected to be greater than 100 TPY. However, no short-term emission increases were requested and the same maximum emission rate of 576 lb/hr will continue to apply.

CO is a criteria pollutant and has only *de minimis* monitoring levels, significant impact levels and Ambient Air Quality Standards defined for it. There are no applicable air quality increments for CO for either the surrounding Class II area or the nearby Everglades National Park Class I area.

The PSD Review included modeling performed by both the applicant and the Department. The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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 stack associated with this project all satisfied the good engineering practice (GEP) stack height criteria.

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 Miami, Florida and twice-daily upper air soundings from West Palm Beach. The 5-year period of meteorological data was from 1987 through 1991.

The *de minimis* monitoring ambient impact level for CO is 575 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) on an 8-hour basis. If the predicted concentrations are above this *de minimis* level, a preconstruction monitoring analysis is required. The maximum predicted 8-hour concentration from this modification is $31.0\mu\text{g}/\text{m}^3$. Therefore, a preconstruction monitoring analysis is not required.

A significant impact analysis is performed on CO to determine if the project can even cause an increase in ground level concentrations greater than the Significant Impact Levels (SIL's). In order to conduct a significant impact analysis, the applicant uses the proposed project's emissions at worst-load conditions as inputs to the model. The highest predicted short-term concentrations predicted by the modeling are then compared to the appropriate SIL's for the PSD Class II Area.

If this modeling at worst-load conditions shows ground-level increases less than the SILs, the applicant is exempted from conducting any further modeling. If the modeled concentrations from the project exceed the SILs, then additional modeling including emissions from all facilities or projects (multi-source modeling) is required to determine the proposed project's impacts compared to the AAQS or PSD increments.

Modeling to determine significance in the PSD Class II area in the vicinity of the project was conducted using facility fence-line receptors with 50-meter spacing; discrete receptors with 100-meter spacing from the fence-line to 2.5 kilometers; and discrete receptors with 250 meter spacing extending out 5 kilometers. Over 3700 receptors were used in the Class II modeling.

The applicant's initial CO air quality impact analyses for this project indicated that maximum predicted impacts from all pollutants are less than the applicable SIL's for the Class II area (i.e. all areas except ENP). The modeling conducted indicated that the maximum ground-level CO concentration caused by stack emissions is $115\mu\text{g}/\text{m}^3$ on a 1-hour basis and $31\mu\text{g}/\text{m}^3$ on an 8-hour basis. Both values are less than the CO SIL values of 2000 and $500\mu\text{g}/\text{m}^3$ (1.8 and 0.45 ppm) for the 1 and 8-hour averaging periods respectively. Therefore, no further modeling is required for CO.

There are applicable 1-hour and 8-hour National Ambient Air Quality Standards (NAAQS) of 35 and 8 parts per million (ppm) respectively. These values equate to 40,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 10,000 $\mu\text{g}/\text{m}^3$. The values may be exceeded no more than one time per year.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

There is a CO monitor located at 16000 South Dixie Highway. Although it is some distance from Medley, it is reasonably representative of the background industrial and traffic related CO concentration in Miami-Dade County. The highest values from 2004 are 3.6 and 2.9 ppm for the 1 and 8-hour CO averaging times. To exceed the NAAQS, the ground-level CO concentrations from the stack at Titan would have to exceed approximately 31 ppm on a 1-hour basis or 5 ppm on an 8-hour basis.

The stack emissions predicted would add less than 1 ppm to the estimated 1 and 8-hour maximum background values of 3.6 and 2.9 ppm.

To be conservative, the Department modeled CO impacts on a basis of 1152 lb/hr, which is double the applicant's potential emission rate of 576 lb/hr. The predicted impacts from this modeling are 230.8 $\mu\text{g}/\text{m}^3$ on a 1-hour basis and 62 $\mu\text{g}/\text{m}^3$ on an 8-hour basis. These impacts are still below the *de minimis* level, the SIL's and when added to the background concentrations, the NAAQS.

The conclusion is that the stack emissions will not cause or contribute to a violation of the NAAQS for CO and that the impact is less than the respective SIL's. As previously mentioned, this analysis presumes that all stack emissions are caused by the present project even though no short-term increases will occur and the benefits of the shutdown of the wet process kilns were not considered.

Although PSD was not triggered for SO_2 , there are some noteworthy benefits from the modernization project and the re-evaluation of baseline emissions. As a result of the new baseline, lower emissions are required for SO_2 . The final values (0.50 lb SO_2 /ton of clinker and 514 TPY) are significantly less than originally proposed. Actual emissions are nearly zero. This has the effect of expanding both Class I and Class II increments for this pollutant whether they are calculated on the basis of potential emissions or actual emissions.

XIII. OTHER CONSIDERATIONS – FUGITIVE EMISSIONS

The modernized Titan Pennsuco Plant will produce much more cement than produced using the wet process kilns. Emissions from the main baghouse exhausting through a single stack will be much less and much less visible than the four old electrostatic precipitators stacks that served the two wet process kilns and two coolers.

Projects have been implemented to improve the existing finish mills and their control equipment as well as conveyers and attendant particulate control equipment. However, there was still some concern that fugitive emissions can increase such that the project would not avoid the requirement of PSD review and BACT for PM/PM₁₀. The reason is that increased operations necessarily require additional intake and shipment of raw materials, fuel, and product.

According to Titan, the amount of material quarried will likely remain at about the same level (on the order of 10,000,000 TPY) even though the use at the cement plant will increase to potentially 3,000,000 TPY (roughly amount needed to make 2,190,000 TPY of clinker). This additional material conveyed to the process will reduce the amount of traffic through the plant to the quarry to pick up limestone for delivery to users outside of the facility.

Following is the fugitive emissions control plan submitted by Titan for the purposes of providing reasonable assurances that PM/PM₁₀ emissions will not increase significantly and trigger PSD. Additionally the measures represent the reasonable precautions to minimize nuisance dust generation.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

FUGITIVE DUST IMPROVEMENT PLAN TITAN AMERICA PENNSUCO PLANT

Titan America has, over the last three years, completed projects not only in the cement plant but also within the entire facility that has contributed to a significant reduction in fugitive dust emissions. It is estimated that the reduction in fugitive dust emissions could be as high as approximately 25 to 30 percent of total particulate matter (PM) emissions.

The new preheater/calcliner/kiln has reduced point source PM emissions by approximately 5 tons per year (TPY) by eliminating the dust insufflation system (old system that sought to return cement kiln dust or CKD to the process). However, this system was a significant source of fugitive dust emissions due to the transfer of the insufflated dust by front-end loaders. The new system has eliminated CKD dust load-out and the truck traffic involved in this operation.

The new dry process system has also eliminated the four (4) electrostatic precipitators (ESPs) on the old wet process kilns and clinker coolers, and replaced them with a single baghouse. Titan has also reduced fugitive dust emissions by significantly reducing outside storage and handling of raw materials and fuels. Whereas these materials were stored completely outside in the past and moved by front-end loader, the majority of these are now stored in the new raw material and fuel storage building, and moved primarily by stacker/reclaimer and covered conveyor belts.

Titan has reduced truck traffic within the aggregate facility by approximately 20 percent by selling less trucked aggregate product to other companies within the area. Traffic patterns within the facility have been changed to keep more trucks on concrete surfaces within the loadout and Packhouse part of the facility.

Approximately 3 miles of concrete paving has also been added to the facility, further reducing fugitive emissions. Two watering trucks are now serving the entire facility. Dedicated berm areas have been established throughout the facility to further reduce wind erosion from ground areas.

Titan is also committed to completing the following items within the time frames specified:

1. Titan is evaluating further changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to further reduce fugitive dust emissions. Specifically:
 - Titan will reroute truck traffic associated with the Packhouse. A new entrance road will be constructed by extending 106th Avenue north along the east side of the property, just east of the old ESPs. This road improvement will be implemented in cooperation with the City of Medley. Once the entrance road is completed, the limerock road from the Packhouse to 106th Avenue will be paved. This will reduce truck traffic on the Main plant entrance road (off U.S. 27), and will reduce fugitive emissions from unpaved roads. Anticipated schedule: dependent upon the City of Medley to improve 106th Avenue.
 - Titan is working with the City of Medley to upgrade 102nd Road. This will reduce carry-in of road dust on trucks entering the Titan property from 102nd Road, and also improve the drainage and reduce the accumulation of silt within the roadway. Schedule: Titan is currently working with the City of Medley. Schedule will be dependent on the City of Medley.
 - Titan has already bermed certain exposed areas of the plant to prevent truck traffic from traveling over such areas. Schedule: already implemented and ongoing.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

2. Titan will install a wheel wash system in an area directly leading out of the Aggregate Plant. This area will also include a dewatering area for trucks which will assist in cutting down on the amount of drag-out from the facility. Schedule: operational by April 30, 2006.
3. Titan currently employs one (1) watering truck with a dedicated driver to provide water suppression on the paved roads in the plant. Titan has just issued a purchase order for the upgrade of an existing quarry truck to include watering capability with pressure spray. This second truck will provide a more effective watering program to reduce fugitive PM emission throughout the facility. Schedule: exact completion date of the upgrade is unknown; expected by December 2005.
4. Titan will take measures to minimize silt buildup on the paved road leading out of the Aggregate Plant. This will reduce silt re-entrainment and carryout by trucks. Schedule: measures implemented beginning in October 2005 and finalized with the addition of the second water truck in December 2005.
5. Titan is committing to continuing to operate a road sweeper 5 days a week at the facility. This sweeping program has already been implemented and is proving to be effective in reducing fugitive PM emissions.
6. A sprinkler system will be installed along the main haul road from the quarry to the Aggregate Plant. This will reduce fugitive PM emissions from this unpaved road. Schedule: complete by December 20, 2005.
7. Titan will take measures to reduce fugitive PM emissions from Bulk Cement Loadout area. This area has been observed to experience visible dust emissions. Schedule: evaluation of options no later than November 2005. The equipment associated with these improvements is included in the 2006 Capital Improvement Plan to be implemented no later than the first quarter 2006.
8. Titan has committed to landscape upgrades to further enhance not only the aesthetics of the facility, but also to further decrease the wind erosion of unpaved areas. Schedule: to be developed.
9. Best Management Practices (BMP) will be implemented to minimize fugitive PM emissions from outside raw material storage piles (i.e., bauxite, fly ash, iron ore, etc.). The BMPs are presented below:
 - Raw material inventory will be managed to minimize the time in storage.
 - Unloading and reclaiming of materials will be curtailed during windy or dry conditions;
 - Drop heights of material will be minimized;
 - Posting and enforcing speed limits along haul roads leading to the storage areas.
 - Raw materials are normally high moisture content when received. However, application of water or other dust suppressants will be used as necessary to minimize visible emissions.Schedule: Implement in October 2005.
10. The dust collector preventative maintenance crew has developed an Operation and Maintenance Program for all dust collectors at the facility. This will reduce the potential for dust collector malfunction and excess PM emissions. The O&M Plan will be implemented in August 2005.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

11. Upgrades to the air slides on the package cement load-out and the new Packhouse will be completed within the next 2 months. This new system will eliminate a package load-out system designed and built in the early 1900's. Adjacent to this area, a new clunker silo distribution system is being designed to improve the distribution of clinker to the storage silos before the finish mills. This will result in reducing fugitive dust emissions from these areas. Schedule: implement by November 2005.
12. The last project Titan is in the process of completing is to upgrade the finish mill systems. This will include installing a new finish mill (No. 6) and a dust suppression system. Once this system is in operation, one of the old finish mill systems will be permanently shut down. Schedule: implement by October 2005 with completion by December of 2005.

Titan proposes to submit semi-annual progress reports to update this Fugitive Dust Improvement Plan and report on the progress of measures to be implemented. The first semi-annual report will be submitted in January 2006, with updates every 6 months thereafter for a two-year period.

DEPARTMENT ASSESSMENT

Partial implementation of the described plan has already resulted in obvious improvements at the Titan Florida Pennsuco Cement Plant. The Department determined that the facility is a major source of hazardous air pollutants (HAP) and subject to certain monitoring requirements of 40 CFR 63, Subpart LLL - National Emission Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry.

Subpart LLL requires more self monitoring of visible emissions, documentation, and response than previously required. These additional requirements and the Fugitive Emission Plan provide an extra margin of safety to the reasonable assurance needed by the Department to conclude that the project will not trigger PSD for PM/PM₁₀.

The Department will include the Fugitive Emission Plan submitted by the applicant in the permit. In addition the Department will include in the permit, reasonable precautions required by or developed pursuant to its regulations at Paragraph 62-296.320(4)(c)2, F.A.C.

XIV. CONCLUSION

The Department has reasonable assurance that the Titan Florida Pennsuco Cement Plant will achieve the emission limits given above to avoid significant emission increases for all pollutants with the exception of CO. The Department has reasonable assurance that Titan will comply with the Department's BACT determination for CO. Additionally the Department has reasonable assurance that the projects (including the modernization and the subsequent production increase) will not cause or contribute to a violation of an ambient air quality standard or increment.

The permit to increase production will include an update and re-issuance of the modernization permit. Additionally some changes will be made to improve readability and to specify CEMS requirements related to the revised emission limits.

The attached draft permit will be distributed together with an Intent to Issue and a Public Notice with a 30-day comment period.

PERMITTEE:

Tarmac America, LLC.
455 Fairway Drive
Deerfield Beach, Florida 33441

Permit No.	0250020-017-AC (PSD-FL-360)
Project:	Production Increase
SIC:	3241 Cement, Hydraulic
Expires:	April 30, 2006

Authorized Representative:
Hardy Johnson, President
Tarmac America LLC

PROJECT AND LOCATION:

The project is a production increase from 1,642,500 tons per year (TPY) to 2,190,000 TPY of clinker at the recently modernized dry process Titan Florida Pennsuko Cement Plant in Medley Florida. The project involves no additional physical modifications and involves removal of annual production restrictions and limitations on hours of operation on a number of emissions units.

This permit is issued pursuant to the Rules for the Prevention of Significant Deterioration (PSD). It authorizes the production increase, the various changes in hours of operation, and final emission limits including best available control technology (BACT) for carbon monoxide (CO). This permit includes certain provisions from the previous permits related to the modernization project as revised by the present project. It reflects the final as-built configuration, production limits, emissions limits, shut down of the wet process lines, applicable rules, compliance assurance provisions, etc.

The Titan Florida Pennsuko Cement Plant is located at 11000 NW 121 Way, Medley, Miami-Dade County. UTM coordinates are Zone 17; 562.8 km E; 2861.7 km N.

STATEMENT OF BASIS:

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The above named permittee is authorized to construct/operate the facility 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).

Attached appendices and documents made a part of this permit:

Appendices A through I	Section IV of Permit – Table of Content, Appendices
------------------------	---

Michael G. Cooke, Director
Division of Air Resource
Management

SECTION I. GENERAL INFORMATION

FACILITY DESCRIPTION

Tarmac America LLC operates the Titan Florida Pennsuko facility in Medley, Miami-Dade County. The facility consists of:

- A 10,000,000 tons per year (TPY) on-site limestone quarry that supplies approximately 3,000,000 TPY to the adjacent cement plant and the remainder to other users;
- A dry process portland cement plant that consumes up to 3,723,000 TPY of limestone and mineral aggregate and is permitted to produce no more than 2,190,000 TPY of clinker and approximately 2,400,000 TPY of portland cement;
- A ready-mix concrete plant; and
- An 85,000 block per day grey concrete block plant.

CEMENT PLANT DESCRIPTION

This permit relates to the dry process portland cement plant which, by this permit is permitted to increase annual production from 1,642,500 TPY to 2,190,000 TPY of clinker. Modernization of the plant included startup of the dry pyroprocessing line in 2004 and shutdown of the two wet process lines in the same year. The portland cement plant includes the following main components:

- An 8-acre, 95-foot high "A-frame" raw materials storage building (MSB);
- Raw material and fuel piles stored outside and inside of the MSB. The piles consist of blended limestone, alumina source (e.g. bauxite), iron source (e.g. mill scale), high lime limestone, coal, and petroleum coke;
- Materials handling equipment including bridge reclaimers, stackers, belt conveyors, conveyor from the MSB to the raw mill, control system/analyzer, etc.
- An F.L. Smidth nominal 400 dry tons per hour (TPH) Model 52/4 Raw mill and F.L. Smidth nominal 15,000 ton blending silo;
- An F.L. Smidth Rotax kiln that is 65 meters long and 5 meters in diameter;
- An F.L. Smidth 5-stage "Low NO_x" in-line calciner (ILC) with sequenced fuel and air introduction and meal staging;
- An F.L. Smidth 4x5 cross bar clinker cooler;
- An F.L. Smidth Airtec ten-compartment baghouse with 690 bags per compartment;
- An F.L. Smidth nominal 35 TPH coal (and petroleum coke) mill;
- Four finish mills including a new F.L. Smidth finish mill consisting of four ball mills; and
- Cement storage, truck/rail loadout and packhouse.

RELEVANT DOCUMENTS

The construction permit application 0250020-017-AC to increase annual production was received on April 18, 2005. It was revised and made complete by a submittal dated September 30, 2005 requesting issuance of the permit pursuant to the PSD Rules at Paragraph 62-212.400, F.A.C.

The documents listed below are not part of this permit; however, they are specifically related to the modernization project and to the present permitting action:

- Construction Permit 0250020-008-AC issued October 21, 1999.
- Construction Permit 0250020-010-AC issued May 1, 2001.
- Construction Permit 0250020-016-AC issued May 31, 2005.

SECTION I. GENERAL INFORMATION

EMISSIONS UNITS

This permit addresses the following Emissions Units at the portland cement plant:

ARMS Emission Unit No.	EMISSION UNIT DESCRIPTION
010	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6
014	Cement Storage Silos 1 through 12
015	Cement Distribution, Rail and Truck Loadout
016	Cement Packhouse
026	Coal Handling System
027	Clinker Handling and Storage
028	Raw Mill and Pyroprocessing System
029	Raw Material Handling
031	Fugitive Emissions - Transportation, Miscellaneous Transfers, Storage

REGULATORY CLASSIFICATION

Title III: The Department has determined that the facility is a major source of hazardous air pollutants (HAP).

Title V: 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/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY.

PSD: This facility is within an industry included in the list of the 28 Major Facility Categories per Table 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, F.A.C., Prevention of Significant Deterioration (PSD). The proposed project is subject to PSD because annual CO emissions will increase by an amount greater than the significant emission rate of 100 TPY given in Table 212.400-2.

NSPS: This facility operates units that were originally subject to the following New Source Performance Standards in 40 CFR 60 adopted and incorporated by reference in Rule 62-204.800, F.A.C.: Subpart A (General Provisions); Subpart F (Portland Cement Plants); Subpart Y (Coal Preparation Plants); and Subpart OOO (Nonmetallic Mineral Processing Plants). Pursuant to 40 CFR 63.1356(a), any affected source subject to the major source provisions of Subpart LLL is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart F or 40 CFR 60, Subpart OOO.

NESHAP: This facility operates units subject to the following National Emission Standards for Hazardous Air Pollutants in 40 CFR 63 adopted and incorporated by reference in Rule 62-204.800, F.A.C.: Subpart A (General Provisions); and Subpart LLL (Portland Cement Manufacturing Industry).

SECTION II. ADMINISTRATIVE REQUIREMENTS

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Florida Department of Environmental Protection's Bureau of Air Regulation located at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400 and phone number 850/488-0114.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to: Air Quality Management Division, Miami-Dade County Department of Environmental Resources Management, 33 Southwest Second Avenue, Suite 900, Miami, Florida 33130-1540. Copies shall also be submitted to: Air Resource Section, Southeast District Office, Florida Department of Environmental Protection, 400 North Congress Avenue, West Palm Beach, Florida 33401 (Telephone: 561/681-6600).
3. General Conditions: The owner and operator are subject to, and shall operate under the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403, F.S. [Rule 62-4.160, F.A.C.]
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 24- Code of Miami-Dade-County, Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; 40 CFR 60; and 40 CFR 63. 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.]
5. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]
6. Completion of Construction: Construction on the modernized cement plant is essentially complete and the new pyroprocessing line has already been tested for compliance with the conditions of the previous air construction permit. On-going construction activities include completion of a new mill and on-going fugitive emissions projects. The permit expiration date is April 30, 2006 and will allow operation of the plant while the Department of Environmental Protection processes the Title V Operation Renewal Permit.
7. New or Additional Conditions: 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.]
8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
9. Title V Permit: This permit authorizes construction/modification of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee applied for a Title V Operation Permit Renewal that anticipated the present air construction permit. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT RAW MATERIAL HANDLING SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
029	Raw Material Handling Operations

The raw material handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. 311.BF650	Dust collector for limestone and mineral aggregate feed bins/conveying
Baghouse I.D. 311.BF750	Dust collector for raw material conveyance from feed bins to raw mill
Baghouse I.D. 311.BF470	Dust collector for raw material conveyance from feed bins to raw mill
Baghouse I.D. 311.BF950	Dust collector for raw material conveyance from feed bins to raw mill

Operational Requirements

1. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Application received April 18, 2005]
2. Raw Material Handling System Throughput Specification: The maximum dry throughput rate is 3,723,000 TPY. The owner or operator shall record all throughput rates on a rolling 12-month basis, and maintain records for a minimum of 5 years. [Application received April 18, 2005; Permit 0250020-016-AC; Rules 62-4.070(3); and 62-213.440, F.A.C.]

Emissions Limitations and Performance Standards

3. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) except that the applicable standard is 5% instead of 10%.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 13 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.}

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

4. Raw Mill Monitoring: The owner or operator of a raw mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCDs (PM control devices) of these affected sources, in accordance with the procedures of Method 22 of Appendix A, 40 CFR Part 60 and as required by 40 CFR 63.1350(e), Subpart LLL.

[Rules 62-4.070(3) and 40 CFR 63.1350, Monitoring Requirements]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT PYROPROCESSING AND RAW MILL SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
026	Pyroprocessing and Raw Mill System Operations

The pyroprocessing and raw mill system are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D: 331.BF200	Main Stack & dust collector for preheater/kiln/cooler/raw mill/coal mill
Baghouse I.D: 331.BF740	Dust collector for kiln dust conveyance and storage bin
Baghouse I.D: 341.BF350	Dust collector for preheater feed silo
Baghouse I.D: 351.BF440	Dust collector for raw meal conveyance from feed silo to preheater
Baghouse I.D: 351.BF470	Dust collector for raw meal conveyance from feed silo to preheater
Baghouse I.D: 331.BF645	Dust collector for truck loadout of kiln dust

Operational Requirements

- Hours of Operation:** This emissions unit system is allowed to operate 8760 hours per year. [Applicant request - application received April 18, 2005, Rule 62-210.200, F.A.C., Definitions – Potential to Emit (PTE)]
- Pyroprocessing System Production Limits:** The maximum production of clinker shall not exceed 250 TPH on a 24-hour block average and 2,190,000 TPY. [Rule 62-210.200, (Definitions – Potential to Emit), F.A.C.; Applicant request in application received April 18, 2005]
- Fuels:** Allowable fuels fired in the pyroprocessing/raw mill emission unit consist of natural gas, bituminous coal, petroleum coke, No. 2 fuel oil with used oil blend and No. 6 fuel oil with used oil blend. Fuel oil includes on-spec used oil (refer to definition in specific condition 15).
{There is no heat input limitation. For reference, the design heat input capacities of the kiln burner and calciner burner are 290 million Btu per hour (mmBtu/hr) and 385 mmBtu/hr respectively. The clinker production limit effectively limits PTE.}

Emissions Limitations and Performance Standards

- Visible Emissions Limits:** Visible emissions are limited to 5 percent from each of the above listed baghouses, except for the main stack baghouse, I.D.331.BF200. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) except that the applicable standard is 5% instead of 10%.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points, except for the *main stack*, in this emission unit system will be less than 7 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL}

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

9. Main Stack - Pyroprocessing/Raw Mill Emission Limits: Emissions exiting the main stack from the Pyroprocessing/Raw Mill system shall not exceed the limits shown in the following table:

PARAMETER	EMISSION LIMIT	AVERAGING TIME	COMPLIANCE METHOD	LIMIT BASIS
Opacity ⁶	10 Percent	6 minute block	COMS, Method 9	PTE, Avoid PSD 40 CFR Subpart LLL
PM ⁶	0.067 lb/ton of dry kiln feed	3 hours ⁵	Annual Method 5	PTE, Avoid PSD 40 CFR Subpart LLL
	28.5 lb/hr			
PM ₁₀ ⁶	0.056 lb/ton of dry kiln feed	3 hours ⁵	Annual Method 5	PTE, Avoid PSD 40 CFR Subpart LLL
	23.9 lb/hr			
SO ₂	0.50 lb/ton of clinker	30 days ²	CEMS	PTE, Avoid PSD
	320 lb/hour	24 hours ¹		
NO _x (as NO ₂)	2.17 lb/ton of clinker	12-months ²	CEMS	PTE, Avoid PSD
	720 lb/hour	24 hours ¹		
CO	2.0 lb/ton of clinker	30 days ²	CEMS	BACT
	576 lb/hour ¹	24 hours ¹		
VOC ⁴	0.16 lb/ton of clinker ²	30 days ²	CEMS	PTE, Avoid PSD
	40 lb/hour	24 hours ¹		
Mercury (Hg)	229 lb/yr (base + 199 lb/yr)	12-month	Fuels, Materials ⁸	PTE, Avoid PSD
Temperature ⁷	Baghouse Temperature (T) ≤ T during Dioxin/Furan Tests	Continuous		40 CFR 63, Subpart LLL
Dioxin/Furan	0.2 ng TEQ/dscm (T ≥ 204 °C)	3 hours	30 Months, Method 23	40 CFR 63, Subpart LLL
	0.4 ng TEQ/dscm (T < 204 °C)			

- 1 Compliance with the short-term emission limit for SO₂, NO_x, CO, and VOC shall be based on a 24-hour rolling average computed in accordance with Specific Condition 15. Compliance with lb/hr SO₂ emissions limitations in this condition will insure compliance with Miami-Dade County Code, Section 24-17(2)(a) limiting emissions to 1.2 lb SO₂/MMBtu heat input when solid fuel is fired, or 0.8 lb SO₂/MMBtu heat input when liquid fuel is fired, based on a 24 hour average
- 2 Compliance with the long-term emission limit for SO₂, CO, and VOC shall be based on a 30 operating-day block average computed in accordance with Specific Condition 15.
- 3 Compliance with the long-term emission limit for NO_x shall be based on 12 month rolling average computed in accordance with Specific Condition 15.
- 4 VOC emissions shall be expressed as propane.
- 5 The averaging times for PM and PM₁₀ correspond to the required length of sampling for the initial and subsequent emission tests. Compliance demonstration with these limits shall be conducted pursuant to 40 CFR 63.1349(b)(1).
- 6 Compliance with the Opacity, PM and PM₁₀ permit limits given for in-line kiln/raw mill will insure compliance with applicable limits from 40 CFR 63, Subpart LLL for the in-line kiln/raw mill, and clinker cooler, and 40 CFR 60, Subpart Y for the coal mill.
- 7 The temperature requirements for the operation of in-line kiln/raw mill are in accordance with 40 CFR 63.1344(a) & (b), and 63.1349(b)(3)(iv).
- 8 Determined by raw materials and fuels entering the process. Refer to Condition 10.

[Applicant BACT information for CO and request to escape PSD for other criteria pollutants; Rules 62-4.070(3) and 62-212.400, F.A.C.; 40 CFR 63.1343 and 63.1345; Application received April 18, 2005 and revised September 30, 2005].

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

10. Mercury Emissions from the Pyroprocessing/Raw Mill System: Mercury emissions exiting the main stack from the Pyroprocessing/Raw Mill system shall not exceed 229 pounds per year on a 12-month rolling basis. Mercury

[Rules 62-4.070(3) and 62-210.200, F.A.C. (definitions – Potential to Emit), Avoid PSD]

Test Methods, Monitoring and Procedures

11. Determination of Clinker Production Rate during Testing: Prior to any emission testing to demonstrate compliance with any emission limit, the permittee shall determine the clinker production rate for the test according to the equation in Specific Condition 18. The permittee shall notify the DERM of the preheater kiln feed rate and the factor used to determine the clinker production rate in advance of the commencement of any test(s). The rate of clinker production shall be used to determine compliance with all clinker-based emission limits in the permit for that test.

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

12. Testing Procedures and Methods: In addition to the CEMS or COMS compliance requirements listed in Condition 10, the main stack & dust collector, Baghouse I.D. 331.BF200, serving the preheater/kiln/cooler/raw mill/coal mill shall be tested according to the EPA Methods and at the frequencies listed below:

POLLUTANT	TEST METHOD	FREQUENCY
PM/PM ₁₀	5	Annual
Opacity	9	Annual
SO ₂	6 or 6C	Annual ¹
NO _x (as NO ₂)	7 or 7E	Annual ¹
CO	10	Annual ¹
VOC	25 or 25A	Annual ¹
Dioxins/Furans	23	30 months

1. 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.

[Rules 62-4.070(3), 62-297.310(7), and 62-212.400, F.A.C.; Permit 0250020-016-AC]

13. Feed or Fuel Changes and D/F Performance Testing: The owner or operator shall notify the compliance authority 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 loss on ignition (LOI) characteristic of the fly ash; a change between non-beneficiated fly ash and beneficiated fly ash. Based on the information provided, the compliance authority 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.]

14. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) in the in-line kiln/raw mill stack to measure and record the emissions of NO_x, SO₂, CO, and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEMS

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

systems shall express the results in units of pounds per ton of clinker produced, and pounds per hour. Emissions of VOC shall be reported in units of the standards (lb/hour, lb/ton clinker) and ppmvd as propane corrected to 7% oxygen.

- a. *Compliance Demonstration:* Compliance with the short-term emission limits for NO_x, SO₂, CO, and VOC shall be based on a 24-hour rolling average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 valid hourly averages. Compliance with the long-term emission limits for SO₂, CO, and VOC shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. For purposes of the SO₂, CO, and VOC long-term emission limits, an operating day is any day that the kiln produces clinker or fires fuel.
 - b. *Compliance with the long-term NO_x emissions limit:* Compliance with the long-term NO_x emission limit shall be based on a 12 month rolling average that shall be recomputed each month as the arithmetic average of that month and the preceding 11 months. Each monthly average shall be computed by averaging all valid hourly averages occurring within each calendar month.
 - c. *Valid Hourly Averages:* Each hourly average shall be computed as the arithmetic average of the data points generated by the CEM system. Data points must be generated at least once per minute. For an hourly average to be considered valid, at least two data points separated by a period of 15 minutes or more must be used to compute the hourly average.
 - Hours during which there is no preheater feed and no fuel fired to the kiln systems are not valid.
 - Hours during which the plant is firing fuel but producing no clinker are valid, but these hours are excluded from the production-normalized emission rate computation (pounds per ton of dry preheater feed or pounds per ton of clinker). These hours are included in any pollutant mass emission rate computation (pounds per hour).
 - d. *Data Availability:* During each semiannual (six-month) period, CEM system valid hourly averages shall be obtained for at least 90 percent of the operating hours for which the plant is producing clinker. If the CEM system does not obtain valid hourly averages for 90 percent or more of the operating hours per semiannual period for which the plant is producing clinker, the permittee shall submit a semiannual excess emissions and continuous monitoring system performance report. This report must include corrective actions, and it shall be submitted within 30 days following the end of each semiannual reporting period.
 - e. *Compliance Assurance:* CEM system breakdowns, malfunctions, repairs, calibration checks, zero adjustments, and span adjustments all result in periods during which CEM system data are not obtained. During such periods in excess of 120 hours per calendar quarter, the permittee shall assure compliance with the emissions standards of this permit through stack tests, alternative monitoring systems, or other methods as approved by the Department.
15. Continuous Emissions Monitor System (CEMS) Requirements: All CEM systems shall be installed, operational, recording and continuously transmitting available data prior to the initial startup of the kiln and shall be certified within 60 days after achieving the maximum production rate at which the plant will be operated, but not later than 180 days after initial startup. The monitoring systems shall be certified in accordance with the appropriate Performance Specification in 40 CFR 60 Appendix B. The systems shall comply with the requirements for continuous monitoring systems found in the general provisions of 40 CFR 63, Subpart A including development of a quality control program. Data on monitoring equipment specifications, manufacturer, type calibration and maintenance requirements, and the proposed location of each monitor shall be provided to the DERM for review at least 45 days prior to replacement of any CEMS. [Rules 62-4.070 (3) and 62-204.800, F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

16. Material Balance Records 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 fuel oil 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.

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

On-Specification Used Fuel Oil

17. Limits and Test Methods Applicable to On-Spec Fuel Oil:

- a. "Non-hazardous 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 shall not be fired.

CONSTITUENT/PROPERTY	LIMIT	TEST METHOD ²
Arsenic	5 ppm	EPA SW-846 (3040-7130)
Cadmium	2 ppm	EPA SW-846 (3040-7130)
Chromium	10 ppm	EPA SW-846 (3040-7130)
Lead	100 ppm	EPA SW-846 (3040-7130)
Total Halogens	<1,000 ppm ¹	ASTM E442
PCBs	<50 ppm	ASTM D4059
Flash-Point	100 °F (minimum)	ASTM D93
Sulfur	% by weight (informational)	ASTM D2622, D4294-90, or both D4057-88 & D129-91
Heat of Combustion	Btu/gal (informational)	ASTM D240-76
Density	Lb/gal (informational)	ASTM D1298-80

- 1. 40 CFR 279.10(b)(1)(ii) *Rebuttable presumption for used oil*. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of 40 CFR part 261. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of 40 CFR part 261). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 512-1800 (document number 955-001-00000-1"). If successfully rebutted for used oil up to 4000 ppm total halogens, used oil up to 4000 ppm maximum total halogens may be fired.
- 2. Other test methods may be used only after receiving written approval from the DERM.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- b. *Analysis of used oil fuel.* The permittee may determine that the used oil to be burned for energy recovery meets the fuel specifications of §279.11 by performing analyses, or obtaining copies of analyses or other information, documenting that the used oil fuel meets the specifications.
- c. *Record retention.* The permittee must keep copies of analyses of the used oil (or other information used to make the determination) for five years.
- d. *Fuel Analysis for On-specification Used Oil Requirements.* Fuel analysis shall be in accordance with 40 CFR 266.43(b)(1) & (6). A sample shall be taken from the outlet of the blend tank on the first working day (i.e., Monday-Friday; exceptions: holidays) of each month, if any used oil was placed in the blend tank the previous month; or, the sample can be taken directly from the used oil mobile collection tank after final collection and prior to the time of initial transfer; but, that sampling frequency shall be no less than quarterly and the sampling methodology shall have been established with the DERM, Miami-Dade County prior to sampling. Upon taking a sample, the sample shall be analyzed for the following constituent/property and associated unit and using the following test methods (or their latest version):
- e. *Submission of Samples.* The results of each sample analysis (on the laboratory's letterhead) shall be submitted to the DERM within 30-days after the sample is taken and analyzed.
- f. The results of each sample analysis (on the laboratory's letterhead) shall be submitted to the DERM within 30 days after a sample is taken and analyzed.

[DERM requirements. Rule 62-4.070(3), F.A.C., 40 CFR 279.11, which is adopted by reference in Rule 62-710.210(2), F.A.C., 40 CFR 279.72, 40 CFR 63.1343 and 63.1345, Application received April 18, 2005]

18. Used Oil Usage Records: In order to document compliance with the used oil limitations, the following requirements shall be adhered to as a minimum:
 - a. *Transfers to Storage Tank.* The dates and quantities of both on-specification used oil and purchased fuel oil transferred to the in-line kiln/raw mill's storage tank shall be reported quarterly (i.e., Jan.-Mar., April-June, July-Sept., and Oct.-Dec.) to the DERM and due during the month following the ending quarter.
 - b. *Recordkeeping.* When burning used oil, records shall be maintained in accordance with applicable provisions of 40 CFR 279, Subpart B and Subpart G (July 1, 1996 version), Standards For The Management of Used Oil and Chapter 62-710, F.A.C.
 - c. *Delivery Receipts.* The following shall be recorded on the delivery receipt:
 - the use of tamper proof seals on the delivery receipt
 - the volume of fuel delivery
 - a cross reference to the analysis which establishes that the used oil meets EPA used oil fuel specifications
 - the results of the screening analysis
 - the name of the person performing the test
 - the specific test kit used
 - the amount of oil sampled
 - the amount and name of the solution used to dilute the oil
 - d. *Delivery Procedures.* The following procedures shall be implemented:
 - On and off specification used oil that is delivered without a delivery receipt containing all the above information, or which is not properly sealed, or for which the delivery receipt does not

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

contain all the necessary information, is not to be accepted and the DERM is to be notified by phone immediately (with written confirmation to follow), if such a delivery is attempted.

- Verification by signature on the delivery receipt shall be provided by plant personnel that the delivery truck arrived on site with all seals intact. As delivered samples of all used oil fuel received shall be accumulated through each quarter for each supplier.

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

Process and Production Recordkeeping

19. Production Rate Recording: The owner or operator shall record the preheater kiln feed rate using the F.L. Smidth automated preheater feed weighing device and record the daily clinker production. The clinker production rate for the purposes of determining compliance with Specific Condition 6, shall be determined as the product of Preheater Kiln Feed and the Loss on Ignition (LOI) factor. LOI for the preheater kiln feed is based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker or fires fuel. The calculation shall be expanded as need to consider the additional feed points and LOI.

DRAFT

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT CLINKER HANDLING & STORAGE SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
027	Clinker Handling & Storage System

The clinker handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I. D: 441.BF540	Conveyance/transfer from cooler to new clinker silos and off-spec silo
Baghouse I. D: 481.BF140	Conveyance/transfer/storage for new clinker silos and off-spec silo
Baghouse I. D: 481.BF330	Storage from off-spec silo and conveyance from new clinker silos
Baghouse I. D: 481.BF540	Conveyance from new clinker silos and off-spec silo to old clinker storage
Baghouse I. D: 481.BF640	Conveyance from new clinker and off-spec silos to old clinker storage area
Baghouse I. D: 481.BF730	Conveyance/transfer to old clinker area and storage clinker silos 2,5,17,18
Baghouse I. D: 481.BF930	Storage clinker silos 21, 22, 23, 26, 27, 28
Baghouse I.D: F-633	Storage clinker silos 12, 19, 20

Operational Requirements

20. Hours of Operation: This emissions unit is allowed to operate 8760 hours per year. Production is automatically limited by the clinker production limits established in Specific Condition 6 for the pyroprocessing system. [Applicant request Application received April 18, 2005]

Emissions Limitations and Performance Standards

21. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) except that the applicable standard is 5% instead of 10%.

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and 0.01 gr/acf (Baghouse F-633). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM10 for all emission points in this emission unit system will be less than 19.70 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM10. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL. [Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT FINISH MILLS SYSTEM

This system addresses the following emissions units.

ARMS E.U. No.	DESCRIPTION
011	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6

The finish mill handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. F-113	Dust collector – Finish Mill No. 1 – Feeder
Baghouse I.D. F-130	Dust collector – Finish Mill No. 1 – Mill Sweep
Baghouse I.D. F-313	Dust collector – Finish Mill No. 3 – Feeder
Baghouse I.D. F-332	Dust collector – Finish Mill No. 3 – Mill Sweep
Baghouse I.D. 533.BF340	Dust collector – Finish Mill No. 3 - O-Sepa Cement Separator
Baghouse I.D. F-432	Dust collector – Finish Mill No. 4 - Belt conveyor/Separator
Baghouse I.D. F-430	Dust collector – Finish Mill No. 4 - Ball Mill/Mill Sweep
Baghouse I.D. F-728	Dust collector – Finish Mill No. 4 - O-Sepa Cement Separator
Baghouse I.D. 536.BF340	Dust collector – Finish Mill No. 6 - O-Sepa Cement Separator
Baghouse I.D. 536.BF500	Dust collector – Finish Mill No. 6 - Sweep

Operational Requirements

- 22. Hours of Operation: These emissions unit system is allowed to operate 8,760 hours per year. [Application received April 18, 2005.]
- 23. Finish Mill Process Rates: The maximum total hourly process rate of cement is 359TPH on a 24-hour block average. The individual process rates are 25 TPH (F-113/F-130); 84 TPH (533.BF340/F-313 / F-332) and 140 TPH (F-430 / F-432 / F-728). The owner or operator shall record all hourly process rates, and maintain records for a minimum of 5 years.
[Application received April 18, 2005, Rules 62-4.070(3); and 62-213.440, F.A.C.]

Emissions Limitations and Performance Standards

- 24. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63, Section 63.1350(a)(4)(i), (ii), (iii) and (iv) except that the applicable standard is 5% instead of 10%.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and 0.01 gr/acf (F-113; F-130; F-313; F-330; F-430; F-432). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 133.83 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL}

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

Monitoring Requirements

25. Finish Mill Monitoring: 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 (PM control devices) of these affected sources, in accordance with the procedures of Method 22 of Appendix A, 40 CFR Part 60 and as required by 40 CFR 63.1350(e), Subpart LLL.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350, Monitoring Requirements]

DRAFT

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT PRODUCTS STORAGE SILOS/ PACKHOUSE/ LOADOUT SYSTEM

This system addresses the following emissions units.

ARMS E.U. No.	DESCRIPTION
014	Cement Storage
015	Cement Distribution Rail/Truck Loadout
016	Cement Packhouse

The cement handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. F-511	Dust collector - Cement Silos 1-6
Baghouse I.D. F-512	Dust collector - Cement Silos 7-9
Baghouse I.D. F-513	Dust collector - Cement Silo 10
Baghouse I.D. F-514	Dust collector - Cement Silo 11
Baghouse I.D. F-515	Dust collector - Cement Silo 12
Baghouse I.D. B-110	Dust collector - Bulk Loadout Unit 1 (Rail/Truck).
Baghouse I.D. B-210	Dust collector - Bulk Loadout Unit 2 (Truck).
Baghouse I.D. B-372	Dust collector - Bulk Loadout Unit 3 - Line 1
Baghouse I.D. B-374	Dust collector - Bulk Loadout Unit 3 - Line 2
Baghouse I.D. B-382	Dust collector - Bulk Loadout Unit 3 - Line 3
Baghouse I.D. B-120	Dust collector - Packhouse
Baghouse I.D. B-205	Dust collector - Packhouse
Baghouse I.D. B-400	Dust collector - Packhouse

Operational Requirements

- 26. Hours of Operation: These emissions units are allowed to operate 8,760 hours per year. [Requested by applicant April 18, 2005. Permit 0250020-016-AC]
- 27. Cement Storage Silo/Packhouse/Loadout Process and Production Design Specifications: The maximum process input rate to each cement silo and loadout operation is 500 TPH on a 24-hour block average. The maximum production rate of cement in the Packhouse is 170 TPH on a 24-hour block average. [Permit 0250020-016-AC. Requested by applicant April 18, 2005]

Emissions Limitations and Performance Standards

- 28. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be determined in the manner described in 40 CFR 63, Section 63.1350(a)(4)(i), (ii), (iii) and (iv) except that the applicable standard is 5% instead of 10%.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.01 grains/actual cubic foot (gr/acf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 31.24 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL}

[Rules 62-4.070(3), 62-212.400, F.A.C. and 40 CFR 63.1348]

DRAFT

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT COAL HANDLING SYSTEM

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
026	Coal and Petroleum Coke Handling System

The provisions of 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants and 40 CFR 60, Subpart A- General Provisions are applicable to this process emissions unit system (Appendix H attached).

The coal handling operations are controlled by the following baghouses:

EMISSION POINT	DESCRIPTION
Baghouse I.D. 461-BF300	Coal Mill ¹
Baghouse I.D. 461-BF130	Dump Hopper (Transfer)
Baghouse I.D. 461-BF230	Conveyors (2) (Transfer) & Coal/Petroleum Coke Feed Bins
Baghouse I.D. 461-BF750	Coke/Petroleum Coke (Transfer) Surge Bin Feeder).
Baghouse I.D. 461-BF650	Coal (Transfer) / Surge Bin (Feeder)
Baghouse I.D. 461.BF350	Coal Mill Feed

1. This emissions unit discharges to the common (main) stack. The Clinker Cooler which is limited to 10% opacity, discharges to the common (main) stack and therefore determines the opacity limit for this emissions unit. Total PM/PM₁₀ emissions from Pyroprocessing/Raw Mill/Coal Mill Systems shall not exceed 130.3 and 109.5 TPY respectively.

All of the above process emissions units, except for the dump hopper with baghouse 461-BF130, are subject to 40 CFR 60, Subpart Y, NSPS for Coal Preparation Plants (Appendix H attached).

Operational Requirements

29. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Application submitted in April 18, 2005]
30. Coal/Petroleum Coke Maximum Usage: The maximum combined usage of coal and petroleum coke is 30 TPH on a 24-hour block average and 263,000 TPY. The maximum petroleum coke usage rate shall not exceed 20 TPH on a 24-hour block average. Daily records of usage must be kept on site and retained for a minimum of 5 years.
[Rule 62-210.200 & 62-4.070(3) F.A.C., Applicant request; Rule 62-4.070(3), F.A.C.]

Emissions Limitations and Performance Standards

31. Visible Emissions Limits: Visible emissions are limited to 5 percent from each of the above listed baghouses. Compliance shall be demonstrated by EPA Reference Method 9 and the procedures specified in 40 CFR 60.11.

For the coal mill main, baghouse 461-BF300, the opacity shall not exceed 10%. Compliance shall be demonstrated pursuant to EPA Reference Method 9. Annual emissions of PM/PM₁₀ for the kiln/cooler/coal mill main stack shall not exceed 110 TPY

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

{Note: The applicant advised that the baghouses are designed to control particulate emissions to 0.0095 grains/dry standard cubic foot (gr/dscf) and to 0.01 grains/actual cubic foot (gr/acf) (for baghouses 461-BF300; 461.BF350). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM₁₀ for all emission points in this emission unit system will be less than 3.10 TPY. This annual emission estimate is part of the facility-wide netting calculation to escape PSD applicability for PM/PM₁₀. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 60, Subpart Y}

[40 CFR 60, Subpart Y; Rules 62-297.620(4), F.A.C., 62-4.070(3), and 62-212.400, F.A.C. and 40 CFR 63.1348]

32. Particulate and Fugitive Emissions: Particulate and fugitive emissions from coal handling facilities shall be minimized by following the procedures listed below:

- a. All conveyers and transfer points shall be enclosed or covered to preclude particulate emissions (except those directly associated with coal stacking/reclaiming).
- b. Coal storage piles shall be shaped, compacted and oriented to minimize wind erosion.
- c. Water sprays or chemical wetting agents and stabilizers shall be applied to storage piles, handling equipment, etc., during dry periods as necessary to all facilities to maintain an opacity of less than 20 percent at the property line for fugitive emission sources.

[Rule 62-296.320(4)(c), F.A.C.; 62-4.070(3)]

DRAFT

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMENT PLANT FUGITIVE EMISSIONS

This system addresses the following emissions unit.

ARMS E.U. No.	DESCRIPTION
031	Fugitive Emissions – Transportation, Miscellaneous Transfers, and Storage

Unregulated Emissions Unit and/or Activities. This is an emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

Vehicular traffic and coal, petcoke, and raw material transfer points generate fugitive PM emissions from the handling, transfer, and storage between the unloading areas and the storage building. The activities are listed in the following table:

ACTIVITY	DESCRIPTION	ESTIMATED EMISSIONS (PM and PM ₁₀) ¹
Coal Handling	Drop Operations	0.17 and 0.059 TPY
Coal Handling	Vehicular Traffic	6.9 and 2.4 TPY
Raw Material Blending	Drop Operations	1.6 and 0.6 TPY
Raw Material Blending	Vehicular Traffic	14 and 4.9 TPY
Total Quantifiable Emissions	Fugitive Emissions	23 and 8 TPY

- The estimates given were included in calculations by the applicant demonstrating that the modernization and production increase projects do not trigger PSD. It is not practicable to actually measure the emissions directly. Reasonable assurance that these emissions are controlled to the levels given above is by adherence to the Reasonable Precautions listed below.

[Application received April 18, 2005; Rule 62-4.070(3), F.A.C.]

- Reasonable Precautions for Emissions of Unconfined Particulate Matter: This facility is subject to applicable requirements of Rule 62-296.320(4)(c)1, 2, 3, & 4, F.A.C. Refer to Appendix C: Common Conditions.
- Additional Reasonable Precautions for Emissions of Unconfined Particulate Matter: Pursuant to Rule 62-296.320(4)(c)2, F.A.C, the permittee shall implement the following additional reasonable precautions at this facility:

PERSONNEL

- All plant operators shall be trained in the facilities basic environmental compliance and shall perform visual inspections of stockpiled 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.
- To effectively control dust by road sweepers, provide operators training on proper operation. Proper operation includes going slow (5 mph or less) and having the water nozzles effectively controlling dust when sweeping roads.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

ROADS

- c. Reduce speed limit (5 to 10 mph) on the unpaved haul roads to ensure effective reduction of emissions from trucks.
- d. Clean and maintain paved road surfaces, which includes removing silt build-up, repairing all potholes, sweeping on a daily basis and utilizing a water truck to control visible emissions.
- e. Pave the manufacturing area, the block area, raw materials roads, and the access roadways for the facility with asphalt or concrete.
- f. Maintain dedicated berm areas that have been established throughout the facility to further reduce wind erosion from ground areas.
- g. Install a sprinkler system to reduce dust along the aggregate road between the pits and the storage building.
- h. Improve the main entrance to the plant by establishing green areas between the railroad tracks and the security gate. Refer to Appendix D: Facility Fugitives Emissions Control.

MATERIALS

- i. Store raw materials and fuels in a storage building, and move primarily by stacker/reclaimer and covered conveyor belts.
- j. Install water spray bars at each unenclosed material and fuel conveyor. The spray bars 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.
- k. Install water supply lines, hoses and sprinklers near all stockpiled materials, coal and petroleum coke stockpiles.
- l. Store all materials, coal and petroleum coke at the plant under roof on compacted clay or concrete, or in enclosed vessels.
- m. Increase storage area for coal handling to accommodate additional inventory.
- n. Implement a cleaning process inside buildings to minimize dust.
- o. Unloading and reclaiming of materials will be curtailed during windy or dry conditions.
- p. Raw materials will be managed to minimize their time in storage.

TRUCKS

- q. Install a wheel wash system and a dewatering area at the unpaved aggregate plant entrance/exit. In addition, install sufficient wheel wash system(s) at the facility entrance/exit to ensure bulk transport trucks leaving the plant shall travel through a wheel wash that removes particulate matter from vehicle tires, before traveling on the facility's access roadways.
- r. Cover and secure transport trucks entering and leaving the facility with tarpaulins to prevent spillage. Advise drivers and companies of need to continue compliance outside of the facility.
- s. Keep trucks on concrete surfaces within the loadout and the Cement Packhouse part of the facility.
- t. Use concrete or asphalt paved roads.
- u. Use watering trucks (facility should have at least 2) and road's vacuum sweepers to serve the entire facility.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

[Rule 62-296.320(4)(c)2.,F.A.C., Rule 62-4. 070(3)F.A.C., Application received April 18, 2005 and, Fugitive Dust Improvement Plan dated August 19, 2005]

35. Facility Fugitive Emissions Control: The owner or operator shall implement the Facility Fugitive Emissions Control Plan attached as Appendix D. The permittee shall submit quarterly progress reports to include a status report on each specific action implemented under Appendix D (part of the permit). The first quarterly report shall be submitted in January 2006, with updates every 3 months thereafter for a two-year period. The progress reports shall be submitted to the Compliance Authority (Miami-Dade County DERM).

DRAFT

SECTION IV FACILITY COMMON CONDITIONS

CEMENT PLANT EMISSIONS UNITS APPLICABLE RULES COMMON CONDITIONS

The following conditions are applicable to the following emissions units as required:

ARMS Emission Unit No.	EMISSION UNIT DESCRIPTION
010	Finish Mill No. 1
012	Finish Mill No. 3
013	Finish Mill No. 4
030	Finish Mill No. 6
014	Cement Storage Silos 1 through 12
015	Cement Distribution, Rail and Truck Loadout
016	Cement Packhouse
026	Coal Handling System
027	Clinker Handling and Storage
028	Raw Mill and Pyroprocessing System
029	Raw Material Handling

36. All of the listed emission units have at least one component that is subject to 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. The listed emission units shall comply with Subpart LLL only to the extent that the regulations apply to the facility or its operations.
37. Some of the listed emission units have at least one component that was subject to 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants (NSPS) when originally constructed. The listed emission units shall comply with Subpart F only to the extent that the applicable Subpart F requirements were not subsumed by 40 CFR 63, Subpart LLL.
38. The listed emission units shall comply with 40 CFR 60 Subpart A, General Provisions and 40 CFR 63, Subpart A, General Provisions only to the extent that the requirements apply to the facility or its operations.
39. Emissions Units 027 and 028 are subject to Rule 62-296.701, F.A.C., Portland Cement Plants. Emissions Unit 026 is subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants.
40. If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it.

[Rule 62-212.400 (2) (g) F.A.C.]

{This facility modification avoided preconstruction review pursuant to Paragraph 62-212.400, F.A.C., except for CO, by taking federally enforceable limitations on the capacity to emit certain criteria pollutants from each of the emission units listed above.}

SECTION IV FACILITY COMMOM CONDITIONS

The Department adopted the provisions of the referenced NSPS and NESHAPS regulations from 40 CFR 60 and 40 CFR 63, respectively by reference into Rule 62-204.800, F.A.C. The provisions of these regulations are included in this permit as attached Appendices.

{Permitting Note: The numbering of the original rules has been preserved for ease of reference to the rules. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.}

TABLE OF CONTENTS OF APPENDICES (made part of this permit)

- Appendix A.** Citation Formats
- Appendix B.** General Conditions
- Appendix C.** Common Conditions (Emissions & Controls, Testing, Reporting and Recording)
- Appendix D.** Facility Fugitives Emissions Control
- Appendix E.** NSPS, Subpart A – General Requirements
- Appendix F.** NESHAP, Subpart A – General Requirements
- Appendix G.** 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants
- Appendix H.** 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants
- Appendix I.** 40 CFR 63, Subpart LLL - National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry – Major Sources

DRAFT

SECTION IV APPENDICES

TABLE OF CONTENTS

APPENDICES

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Common Conditions (Emissions & Controls, Testing, Reporting and Recording)

Appendix D. Facility Fugitive Emissions Control

Appendix E. NSPS – Subpart A, General Provisions Requirements

Appendix F. NESHAP – Subpart A, General Provisions Requirements

Appendix G. 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants

Appendix H. 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants

Appendix I. 40 CFR 63, Subpart LLL - National Emissions Standards for Hazardous Air
Pollutants from the Portland Cement Manufacturing Industry – Major Sources

SECTION IV APPENDIX A
CITATION FORMATS

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number
“001” identifies the specific permit project
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

SECTION IV APPENDIX B
GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
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.
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.
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.
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.
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.

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.

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.

SECTION IV APPENDIX B
GENERAL CONDITIONS

Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.
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 non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (X);
 - b. Determination of Prevention of Significant Deterioration (X);
 - c. Compliance with New Source Performance Standards (X) and
 - d. Compliance with National Emissions Standards for Hazardous Air Pollutants (X).
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.
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.

SECTION IV. APPENDIX C
COMMON CONDITIONS

{Permitting Note: Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. 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(2), F.A.C.]
3. General Particulate Emission Limiting Standards. 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 of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
4. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]
5. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
6. Excess Emissions Allowed: 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. [Rule 62-210.700(1), F.A.C.]
7. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}
8. Volatile Organic Compounds (VOC) or Organic Solvents (OS) Emissions: 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. [Rule 62-296.320(1), F.A.C.]
9. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

10. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
11. Unconfined Emissions of Particulate Matter:
- (1) 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.
 - (2) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
 - (3) Reasonable precautions include the following:
 - a. Paving and maintenance of roads, parking areas and yards.
 - b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - c. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - d. 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.
 - e. Landscaping or planting of vegetation.
 - f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
 - g. Confining abrasive blasting where possible.
 - h. Enclosure or covering of conveyor systems.
- Additional reasonable precautions applicable to this facility are included in Section III of the Permit under Subsection: Cement Plant Fugitives Emissions and Appendix J: Fugitive Emissions Control.
- (4) 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.]

TESTING REQUIREMENTS

12. 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. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
13. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating 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 maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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.

SECTION IV. APPENDIX C
COMMON CONDITIONS

Emissions testing shall be performed at the kiln/cooler main stack during a period when the kiln, precalciner, cooler, raw mill and preheater are operating simultaneously and under normal operating conditions. EPA-reference methods for sampling pollutants shall be as specified in 40 CFR 63, Appendix A. These emissions units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements and 40 CFR 63.1349, Performance Tests.

The permittee shall provide the DERM with a *protocol* that will outline the different fuel scenarios (% of total heat input) that this unit will be burning. Titan shall obtain the test data necessary to determine whether this kiln is capable of accommodating the burning of coal or petroleum coke and all of the other supplemental fuels specified on Section III, Specific Condition 9. Methods of Operation – Fuels (Pyroprocessing/Raw Mill System). The fuel scenarios tested shall represent the actual combustion percentage (% of total heat input) that is going to be maintained while burning supplemental fuels during normal operation. The frequency of testing shall be determined by the DERM.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

14. Calculation of Emission Rate: For each emissions performance test, 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.]
15. Test Performance Requirements: Tests shall be conducted in accordance with all applicable requirements of 40CFR60, Subpart A - General Provisions and 40CFR63, Subpart A – General Provisions. In the event that the facility fails any initial or annual performance test, a retest shall be conducted within 30 days of the test date of the failed test.
16. Applicable Test Procedures.

(a) *Required Sampling Time*.

1. 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.
2. Opacity Compliance Tests. When EPA Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a 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 opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

Exceptions to these requirements are as follows:

- a. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- b. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
- c. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

(b) *Minimum Sample Volume*. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) *Required Flow Rate Range*. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) *Calibration of Sampling Equipment*. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached).

(e) *Allowed Modification to EPA Method 5*. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

17. Determination of Process Variables

- 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.

[Rule 62-297.310(5), F.A.C.]

18. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Refer to Appendix SS-1 Stack Sampling Facilities, attached to this permit.

19. Test Notification: The owner or operator shall notify in writing to the Compliance Authority, at least *30 days* (initial) and *15 days* (annual) prior to the date on which each formal compliance test is to begin, of 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.]

20. Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in Rule 62-297.620, F.A.C.

21. 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.*

1. 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 fuel for a total of no more than 400 hours.

2. 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;
- b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; or 100 tons per year or more of any other regulated air pollutant; and,
- c. Each NESHAP pollutant, if there is an applicable emission standard.

3. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of 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.

(b) *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 may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate

SECTION IV. APPENDIX C
COMMON CONDITIONS

standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; 40 CFR 63.1349(c)]

22. 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 or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

SECTION IV. APPENDIX C
COMMON CONDITIONS

RECORDS AND REPORTS

23. Records Retention: Upon request, the permittee shall furnish all records and plans required under DERM and FDEP rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the DERM. 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 for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by DERM or FDEP rule.

[Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.]

24. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Air Facilities Section of the DERM, within (1) working day (excluding weekends and legal holidays) 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 DERM may request a written summary report of the incident.

[Rules 62-4.130 and 62-210.700(6), F.A.C.]

25. Excess Emissions Malfunction Notification Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the DERM in accordance with Rule 62-4.130, F.A.C. In addition, a full written report on the malfunctions shall be submitted in a quarterly report.

[Rule 62-210.700(6), F.A.C.]

26. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to DERM, the Compliance Authority, by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

27. Central File Requirements: This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. Operators shall keep a daily Operation and Maintenance log to include, at a minimum, the following information:

- The data collected from in-stack monitoring instruments
- The records on daily feed rates and clinker production rate
- The amount and type of fuel burned
- Calibration logs for all instruments
- Maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit;
- The following fuel records shall be maintained for a minimum of five (5) years and made available upon request:
 1. Coal/Petroleum Coke
 - (a) The coal/petroleum coke usage rate in tons per hour on a 24-hour basis;
 - (b) The average sulfur content and heating value (Btu/lb) of each coal shipment based upon supplier analysis or analysis of a sample representative of the shipment (trainload).
 2. Liquid Fuels
 - (a) The fuel type (number) and usage rate in gal per day;
 - (b) Records of the sulfur content and heating value (Btu/gal) of each oil shipment based upon supplier analysis or analysis of a sample representative of the shipment.
 3. Natural Gas
 - (a) The fuel usage rate in MMBtu per day;

All measurements, records, and any other data required to be maintained by Titan shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the DERM upon request. DERM shall be notified in writing at least 15 days prior to the testing (auditing) of any emission measurement instrument required to be operated by these specific conditions in order to allow witnessing by authorized personnel.

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

SECTION IV. APPENDIX C
COMMON CONDITIONS

OTHER REQUIREMENTS

28. Used Oil and Grease: Used oil and grease burned at this facility shall not be a hazardous waste as defined by 40 CFR Part 261.3 or Rule 62-730.030, F.A.C. It shall not include fuels or blended fuels consisting in whole or in part of hazardous waste or which include mixture of any solid waste generated from the treatment, storage, or disposal of hazardous waste. These fuels shall be burned in compliance with Section 403.769(3), Florida Statutes.
29. Other Regulations: The owner or operator shall comply with applicable provisions of Rule 62-710, Used Oil Management and 40 CFR Parts 279, Standards for the Management of Used Oil.

APPENDIX D
Facility Fugitive Emissions Control

Fugitive Dust Improvement Proposed Plan

Pursuant to Rule 62-296.320(4)(c)2., F.A.C., Reasonable Precautions for Emissions of Unconfined Particulate Matter, the permittee shall take the following additional specific reasonable precautions within the timeframes specified to control facility-wide emissions of unconfined particulate matter (PM) {see the scheduled timeframes immediately following each action}:

- a. The applicant completed a preliminary evaluation of changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to further reduce fugitive dust emissions. The specific actions below are required to be completed in order to improve traffic patterns.
 - i. The permittee shall reroute truck traffic associated with the Packhouse. A new entrance road shall be constructed by extending 106th Avenue north along the east side of the property, just east of the old ESPs. This road improvement will be implemented in cooperation with the City of Medley. Once the entrance road is completed, the limerock road from the Packhouse to 106th Avenue shall be paved. This will reduce truck traffic on the Main plant entrance road (off U.S. 27), and will reduce fugitive emissions from unpaved roads. Anticipated Schedule: Dependent upon the City of Medley to improve 106th Avenue.
 - ii. The permittee shall work with the City of Medley to upgrade 102nd Road. This will reduce carry-in of road dust on trucks entering the Titan property from 102nd Road, and also improve the drainage of accumulation of silt within the roadway. Schedule: The permittee is currently working with City of Medley. Schedule will be dependent on the City of Medley.
 - iii. After these preliminary actions have been completed, the permittee shall submit a final evaluation of any further changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to reduce fugitive dust emissions.
- b. The permittee shall berm exposed areas of the plant to prevent truck traffic from traveling over such areas. Schedule: Already implemented and ongoing.
- c. The permittee shall install a wheel wash system in an area directly leading out of the Aggregate Plant. This area will also include a dewatering area for trucks which will assist in cutting down on the amount of drag-out from the facility. Schedule: Operational by April 30, 2006.
- d. The permittee shall take measures to minimize silt buildup on the paved road leading out of the Aggregate Plant. This will reduce silt re-entrainment and carryout by trucks. Schedule: Measures implemented beginning in October 2005 and finalized with the addition of the new water truck in December 2005.
- e. The permittee currently employs one (1) watering truck with a dedicated driver to provide water suppression on the paved roads in the plant. The permittee issued a purchase order for a second watering truck with pressure spray. This second truck will provide a more effective watering program to reduce fugitive PM emission throughout the facility. Schedule: Exact delivery date is unknown; expected by December 2005.
- f. The permittee shall operate road sweepers 5 days a week at the facility. Road sweepers shall be used on high traffic roads. Schedule: This sweeping program has already been implemented and is proving to be effective in reducing fugitive PM emissions.
- g. A sprinkler system shall be installed along the main haul road from the quarry to the Aggregate Plant. This will reduce fugitive PM emissions from this unpaved road. Schedule: Complete by December 20, 2005.

APPENDIX D
Facility Fugitive Emissions Control

h. The permittee shall take measures to reduce fugitive PM emissions from Bulk Cement Loadout area. This area has been observed to experience visible dust emissions. Schedule: Evaluation of options no later than November 2005. The equipment associated with these improvements will be included in the 2006 Capital Improvement Plan to be implemented no later than the first half 2006.

i. The permittee shall make landscape upgrades to further enhance not only the aesthetics of the facility, but also to further decrease the wind erosion of unpaved areas. Schedule: To be developed.

j. Best Management Practices (BMPs) shall be implemented to minimize fugitive PM emissions from outside raw material storage piles (i.e., bauxite, fly ash, iron ore, etc.). The BMPs to be implemented are below:

- i. Raw material inventory shall be managed to minimize the time in storage;
- ii. Unloading and reclaiming of materials shall be curtailed during windy or dry conditions;
- iii. Drop heights of material shall be minimized;
- iv. Posting and enforcing speed limits along haul roads leading to the storage areas; and,
- v. Raw materials are normally high moisture content when received. Application of water or other dust suppressants shall be used as necessary to minimize visible emissions.

Schedule: Implement in October 2005.

k. The dust collector preventative maintenance crew developed an Operation and Maintenance (O&M) Program for all dust collectors at the facility. This will reduce the potential for dust collector malfunction and excess PM emissions. Schedule: The O&M Plan shall be implemented in August 2005.

l. Upgrades to the air slides on the package cement load-out and the new Packhouse shall be completed October 2005. This new system will eliminate a package load-out system designed and built in the early 1950's. Adjacent to this area a new clinker silo dust collecting system is being designed to improve dust collection for clinker handling. This will result in reducing fugitive dust emissions from these areas. Schedule: The equipment associated with these improvements will be included in the 2006 Capital Improvement Plan to be implemented no later than the second quarter 2006.

m. The permittee shall upgrade the finish mill systems. This will include installing a new finish mill (No. 6) and a dust suppression system. Once this system is in operation, one of the old finish mill systems will be permanently shut down. Schedule: Implement by October 2005 with completion by December of 2005.

The permittee shall submit quarterly progress reports to include a status report on each specific action implemented under this Appendix , **Conditions a through m**. The first quarterly report shall be submitted in January 2006, with updates every 3 months thereafter for a two-year period. The progress reports shall be submitted to the compliance authority (Miami-Dade County DERM) with copies to the SED Air Program and the Bureau of Air Regulation.

[Rule 62-296.320(4)(c)2., F.A.C., Rule 62-4.070(3), F.A.C.; Application received April 18, 2005; and, Fugitive Dust Improvement Plan dated August 19, 2005.]

SECTION IV APPENDIX E

NSPS – SUBPART A, GENERAL PROVISIONS REQUIREMENTS

This facility is subject to all applicable New Source Performance Standards (NSPS) in 40 CFR 60 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

40 CFR 60, Subpart A - NSPS General Provisions

The emission units covered under this permit shall comply with all the applicable General Provisions of Subpart A in the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are included in this permit.

SECTION IV APPENDIX F

NESHAP - SUBPART A, GENERAL PROVISIONS REQUIREMENTS

This facility is subject to all applicable National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Category in 40 CFR 63 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

40 CFR 63, Subpart A - NESHAPS General Provisions

The emission units covered under this permit shall comply with all the applicable General Provisions of Subpart A in the National Emissions Standards for Hazardous Air Pollutants including 40 CFR 63.4 (Circumvention) , 40 CFR 63.5 (General Notification and Reporting Requirements, 40 CFR 63.6 (Compliance with Standards and Maintenance Requirements), 40 CFR 63.7 (Performance Tests), 40 CFR 63.8 (Monitoring Requirements), 40 CFR 63.9 (Notification Requirements), 40 CFR 63.10 (Record Keeping and Reporting Requirements) and 40 CFR 63.11 (Control Device Requirements).. The General Provisions are part of this permit.

APPENDIX G

40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

[Last Updated: 2/7/02]

{Source: Federal Register dated 7/1/98, Revised 2/7/02 to reflect FR 10/17/00}

§ 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.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§ 60.61 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Portland cement plant* means any facility manufacturing portland cement by either the wet or dry process.

(b) *Bypass* means any system that prevents all or a portion of the kiln or clinker cooler exhaust gases from entering the main control device and ducts the gases through a separate control device. This does not include emergency systems designed to duct exhaust gases directly to the atmosphere in the event of a malfunction of any control device controlling kiln or clinker cooler emissions.

(c) *Bypass stack* means the stack that vents exhaust gases to the atmosphere from the bypass control device.

(d) *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.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20793, June 13, 1974; 53 FR 50363, Dec. 14, 1988]

§ 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.

APPENDIX G

40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

(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. [39 FR 20793, June 14, 1974, as amended at 39 FR 39874, Nov. 12, 1974; 40 FR 46258, Oct. 6, 1975]

§ 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) Each owner or operator of a kiln or clinker cooler subject to the provisions of this subpart using a positive-pressure fabric filter with multiple stacks, or a negative-pressure fabric filter with multiple stacks, or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by § 60.63(b), monitor visible emissions at least once per day by using a certified visible emissions observer. If the control device exhausts gases through a monovent, visible emission observations in lieu of a continuous opacity monitoring system are required. These observations shall be taken in accordance with EPA Method 9. Visible emissions shall be observed during conditions representative of normal operation. Observations shall be recorded for at least three 6-minute periods each day. In the event that visible emissions are observed for a number of emission sites from the control device with multiple stacks, Method 9 observations shall be recorded for the emission site with the highest opacity. All records of visible emissions shall be maintained for a period of 2 years.

(d) 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).

(e) The provisions of paragraphs (a), (b), and (c) of this section apply to kilns and clinker coolers for which construction, modification, or reconstruction commenced after August 17, 1971.

[36 FR 24877, Dec. 23, 1971, as amended at 53 FR 50363, Dec. 14, 1988]

§ 60.64 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 40 CFR 60 Appendix A or other methods and procedures as specified in this section, except as provided in § 60.8(b).

APPENDIX G

40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants

(b) The owner or operator shall determine compliance with the particulate matter standard in § 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 (gr/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 (7000 gr/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 § 60.11 shall be used to determine opacity.

[54 FR 6666, Feb. 14, 1989]

§ 60.65 Recordkeeping and reporting requirements.

(a) Each owner or operator required to install a continuous opacity monitoring system under § 60.63(b) shall submit reports of excess emissions as defined in § 60.63(d). The content of these reports must comply with the requirements in § 60.7(c). Notwithstanding the provisions of § 60.7(c), such reports shall be submitted semi-annually.

(b) Each owner or operator monitoring visible emissions under § 60.63(c) shall submit semi-annual reports of observed excess emissions as defined in § 60.63(d).

(c) Each owner or operator of facilities subject to the provisions of § 60.63(c) shall submit semi-annual reports of the malfunction information required to be recorded by § 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.

(d) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, 42 U.S.C. 7411, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

[53 FR 50364, Dec. 14, 1988]

§ 60.66 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.

APPENDIX H
40 CFR 60, Subpart Y- Standards of Performance for Coal Preparation Plants

Updated 9/15/03

Source: Federal Register dated 1/15/76

§ 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 181 Mg (200 tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.

§ 60.251 Definitions.

As used in this subpart, all terms not defined herein have the meaning given them in the Act and in subpart A of this part.

(a) *Coal preparation plant* means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(b) *Bituminous coal* means solid fossil fuel classified as bituminous coal by ASTM Designation D388-77, 90, 91, 95, or 98a (incorporated by reference -- see § 60.17).

(c) *Coal* means all solid fossil fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM Designation D388-77, 90, 91, 95, or 98a (incorporated by reference -- see § 60.17).

(d) *Cyclonic flow* means a spiraling movement of exhaust gases within a duct or stack.

(e) *Thermal dryer* means any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere.

(f) *Pneumatic coal-cleaning equipment* means any facility which classifies bituminous coal by size or separates bituminous coal from refuse by application of air stream(s).

(g) *Coal processing and conveying equipment* means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts.

(h) *Coal storage system* means any facility used to store coal except for open storage piles.

(i) *Transfer and loading system* means any facility used to transfer and load coal for shipment.

APPENDIX H

40 CFR 60, Subpart Y- Standards of Performance for Coal Preparation Plants

§ 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.

(b) 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 pneumatic coal cleaning equipment, gases which:

- (1) Contain particulate matter in excess of 0.040 g/dscm (0.017 gr/dscf).
- (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, 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.

§ 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 ± 1.7 °C (± 3 °F).

(2) For affected facilities that use venturi scrubber emission control equipment:

(i) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 1 inch water gauge.

(ii) A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 5 percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator may be consulted for approval of alternative locations.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under § 60.13(b).

§ 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 particulate 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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the
Portland Cement Manufacturing Industry- Major Sources

{Last updated 6/27/03}

Section

GENERAL

63.1340 Applicability and designation of affected sources.

63.1341 Definitions.

EMISSION STANDARDS AND OPERATING LIMITS

63.1342 Standards: General.

63.1343 Standards for kilns and in-line kiln/raw mills.

63.1344 Operating limits for kilns and in-line kiln/raw mills.

63.1345 Standards for clinker coolers.

63.1346 Standards for new and reconstructed raw material dryers.

63.1347 Standards for raw and finish mills.

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.

MONITORING AND COMPLIANCE PROVISIONS

63.1349 Performance testing requirements.

63.1350 Monitoring requirements.

63.1351 Compliance dates.

63.1352 Additional test methods.

NOTIFICATION, REPORTING AND RECORDKEEPING

63.1353 Notification requirements.

63.1354 Reporting requirements.

63.1355 Recordkeeping requirements.

OTHER

63.1356 Exemption from new source performance standards.

63.1357 Temporary, conditioned exemption from particulate and opacity standards.

63.1358 Implementation and Enforcement.

63.1359 [Reserved]

Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement
Manufacturing Industry

§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 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;

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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; and

(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.

§63.1341 Definitions.

All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in 40 CFR 63 Subpart A.

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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 Dibenzop-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

EMISSION STANDARDS AND OPERATING LIMITS

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

Table 1 to §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	<p>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]</p> <p>Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test. 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.</p>
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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the
Portland Cement Manufacturing Industry- Major Sources

§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° C (400° F) or less.

(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.

(d) [Reserved]

(e) [Reserved]

§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,

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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).

(c) The owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique must operate the carbon injection system in accordance with paragraphs (c)(1) and (c)(2) of this section.

(1) The three-hour rolling average activated carbon injection rate shall be equal to or greater than the activated carbon injection rate determined in accordance with §63.1349(b)(3)(vi).

(2) The owner or operator shall either:

(i) Maintain the minimum activated carbon injection carrier gas flow rate, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with §63.7(c) of this part, or

(ii) Maintain the minimum activated carbon injection carrier gas pressure drop, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with §63.7(c).

(d) Except as provided in paragraph (e) of this section, the owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique must specify and use the brand and type of activated carbon used during the performance test until a subsequent performance test is conducted, unless the site-specific performance test plan contains documentation of key parameters that affect adsorption and the owner or operator establishes limits based on those parameters, and the limits on these parameters are maintained.

(e) The owner or operator of an affected source subject to a D/F emission limitation under §63.1343 that employs carbon injection as an emission control technique may substitute, at any time, a different brand or type of activated carbon provided that the replacement has equivalent or improved properties compared to the activated carbon specified in the site-specific performance test plan and used in the performance test. The owner or operator must maintain documentation that the substitute activated carbon will provide the same or better level of control as the original activated carbon.

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the
Portland Cement Manufacturing Industry- Major Sources

(b) [Reserved]

§63.1346 Standards for new and reconstructed raw material dryers.

(a) *Brownfield/major sources.* No owner or operator of a new or reconstructed brownfield raw material dryer at a facility which is a major source subject to this subpart shall cause to be discharged into the atmosphere from the new or reconstructed raw material dryer any gases which exhibit opacity greater than ten percent.

(b) [Reserved]

(c) *Greenfield/major sources.* No owner or operator of a greenfield raw material dryer at a facility which is a major source subject to this subpart shall cause to be discharged into the atmosphere from the greenfield raw material dryer any gases which:

- (1) Contain THC in excess of 50 ppmvd, reported as propane, corrected to seven percent oxygen.
- (2) Exhibit opacity greater than ten percent.

§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.

§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; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent.

§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;

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

- (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:

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

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,

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

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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 Sec. 63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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

TABLE 1 to §63.1349. SUMMARY OF PERFORMANCE TEST REQUIREMENTS

Affected source and pollutant	Performance Test
New and existing kiln and in-line kiln/raw mill ^{b,c} PM	EPA Method 5 ^a
New and existing kiln and in-line kiln/raw mill ^{b,c} Opacity	COM if feasible ^{d,e} or EPA Method 9 visual opacity readings.
New and existing kiln and in-line kiln/raw mill ^{b,c,f,g} D/F	EPA Method 23 ^h
New greenfield kiln and in-line kiln/raw mill ^c THC	THC CEM (EPA PS-8A) ⁱ
New and existing clinker cooler PM	EPA Method 5 ^a
New and existing clinker cooler opacity	COM ^{d,j} or EPA Method 9 visual opacity readings
New and existing raw and finish mill opacity	EPA Method 9 ^{a,j}
New and existing raw material dryer and 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}
New greenfield raw material dryer THC	THC CEM (EPA PS-8A) ⁱ

- ^a Required initially and every 5 years thereafter.
- ^b Includes main exhaust and alkali bypass.
- ^c In-line kiln/raw mill to be tested with and without raw mill in operation.
- ^d Must meet COM performance specification criteria. If the fabric filter or electrostatic precipitator has multiple stacks, daily EPA Method 9 visual opacity readings may be taken instead of using a COM.
- ^e Opacity limit is 20 percent.
- ^f Alkali bypass is tested with the raw mill operating or not operating.
- ^g Temperature and (if applicable) activated carbon injection parameters 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 part 60 of this chapter.
- ^j Opacity limit is 10 percent.

(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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

§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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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 follow up 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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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 ± 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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(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,

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(n) A summary of the monitoring requirements is given: **Table 1 to §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 kilns and in-line kiln raw mills at major sources (including alkali bypass)/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
Kilns and in-line kiln raw mills at major sources (including alkali bypass)/particulate matter	Particulate matter continuous emission monitoring system	Deferred
Kilns and in-line kiln raw mills at major sources (including alkali bypass)/ 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
Kilns and in-line kiln raw mills at major sources (including alkali bypass)/ D/F (continued)	Activated carbon injection rate monitor, if applicable	Install, operate, calibrate and maintain continuous activated carbon injection rate monitor; calculate three-hour rolling averages; verify calibration at least quarterly; install, operate, calibrate and maintain carrier gas flow rate monitor or carrier gas pressure drop monitor; calculate three-hour rolling averages; document carbon specifications
New greenfield kilns and in-line kiln raw mills at major sources/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 at major sources/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.
Raw mills and finish mills at major sources/opacity	Method 22 visible emissions test (This requirement does not apply to a raw mill or finish mill equipped with a continuous opacity monitor or bag leak detection system)	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
	Continuous opacity monitoring, if applicable	Install, operate, and maintain in accordance with general provisions and with PS-1. A six-minute average greater than 10% opacity is a violation
	Bag leak detection system, if applicable	Install, operate and maintain in accordance with Sec. 63.1350(m). Operate and maintain such that alarm is not activated and alarm condition does not exist for more than 4% of the total operating time in a 6-month period. If alarm sounds, initiate corrective action.
New greenfield raw material dryers at major sources/THC	Total hydrocarbon continuous emission monitor	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration
Raw material dryers; raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk	Method 22 visible emissions test	As specified in operation and maintenance plan

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

Affected Source/Pollutant or Opacity	Monitor Type/ Operation/Process	Monitoring Requirements
loading and unloading systems at major sources/opacity		

§63.1351 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is June 14, 2002.

(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 upon startup of operations, whichever is later.

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.

NOTIFICATION, REPORTING AND RECORDKEEPING

§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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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).

§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 submit progress reports as a condition of receiving an extension of compliance under §63.6(i) shall submit 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

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

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.

§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).

OTHER

§63.1356 Exemption from new source performance standards.

(a) Except as provided in paragraphs (a)(1) and (a)(2) of this section, any affected source subject to the provisions of this subpart is exempted from any otherwise applicable new source performance standard contained in subpart F or subpart OOO of part 60 of this chapter.

(1) Reserved

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry- Major Sources

(2) Reserved

(b) The requirements of subpart Y of part 60 of this chapter, "Standards of Performance for Coal Preparation Plants," do not apply to conveying system transfer points used to convey coal from the mill to the kiln that are associated with coal preparation at a portland cement plant that is a major source under this subpart.

§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.

APPENDIX I

40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the
Portland Cement Manufacturing Industry- Major Sources

§63.1358 Implementation and Enforcement.

(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.

§63.1359 [Reserved]

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. Hardy Johnson, President
 Florida Division
 Tarmac America, LLC
 455 Fairway Drive
 Deerfield Beach, Florida 33441

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent
 Addressee

B. Received by (*Printed Name*) C. Date of Delivery

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 1919

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

7001 0320 0001 3692 1919

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark
 Here

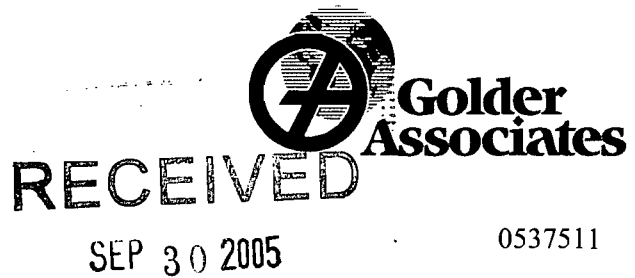
Mr. Hardy Johnson, President
 Florida Division
 Tarmac America, LLC
 455 Fairway Drive
 Deerfield Beach, Florida 33441

PS Form 3800, January 2001

See Reverse for Instructions

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



September 29, 2005

Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

Attention: Mr. Alvaro Linero, P.E., South Permitting Section Administrator

RE: TITAN AMERICA PENNSUCO CEMENT PLANT
DEP FILE NO. 0250020-017-AV
APPLICATION TO INCREASE PRODUCTION

Dear Mr. Linero:

Based on our recent discussions, Titan is submitting the following and attached additional information in order to allow the Department to continue to process Titan's application for a production rate increase for the Pennsuco cement plant. Since the project now triggers Prevention of Significant Deterioration (PSD) for carbon monoxide (CO) emissions, a check in the amount of \$7,500 is enclosed. The additional information being submitted is described below.

1. The PSD baseline emissions will be the years 2002 and 2003, the last 2 full years that the old wet process cement plant operated. Therefore, these emissions form the basis of determining PSD applicability for the project. With the new baseline emissions, potential emissions from the main kiln stack (raw mill/coal mill/pyroprocessing system) have been revised to avoid PSD review for all pollutants except CO. Nitrogen oxide (NO_x) emissions have been adjusted to 2.17 pounds per ton (lb/ton) clinker on a 30-day rolling average. Volatile organic compounds (VOC) emissions are now 0.16 lb/ton clinker for both the short-term and annual averaging times. Particulate matter (PM) emissions have been reduced slightly to 0.067 lb/ton dry kiln feed. Lastly, based on your recommendations, we are revising the CO emissions to reflect a 30-day rolling average of 2.0 lb/ton clinker, reflecting best available control technology (BACT).
2. Attached are revised Tables 2-6 and 3-4 reflecting the above changes.
3. Attached are the revised application form pages reflecting these changes.
4. As we discussed, Golder Associates has performed a CO air quality modeling analysis of the main stack emissions at the new cement plant. The main stack has a stack height of 410 feet, an exit diameter of 14 feet, an exit temperature of 200 degrees Fahrenheit (°F), and a flowrate of 515,000 acfm. The modeled CO emission rate is 576 pounds per hour (lb/hr). The building downwash analysis included 7 structures that have to potential to influence the wind flow at the stack (see attached artist's rendering).

All air dispersion modeling was performed as per EPA guidelines, using the ISCST3 model. Five years of meteorological data (1987-1991) were used in the modeling analysis. Surface data was collected from the Miami International Airport and upper air data from National Weather Service stations in West Palm Beach.

A Cartesian receptor grid was used in the modeling analysis with the following spacing:

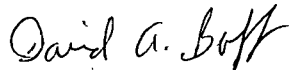
- Along the nearest facility property boundary – 50 meters
- From the property boundary out to 2.5 km from the facility – 100 meters
- From 2.5 to 5.0 km from the facility – 250 meters

The air modeling results are presented in Table 1. As indicated, the highest predicted 1-hour and 8-hour CO impacts are well below EPA Class II Significant Impact Levels. Air modeling files are being forwarded to you via email.

Thank you for consideration of this information. If you have any questions, please contact me at (352) 336-5600 or via email at smarks@golder.com.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P.E., Q.E.P.
Principal Engineer

SRM/all

cc: Al Townsend
T. Lancaster
Miami-Dade Co.

L092905

FACILITY INFORMATION

Professional Engineer Certification

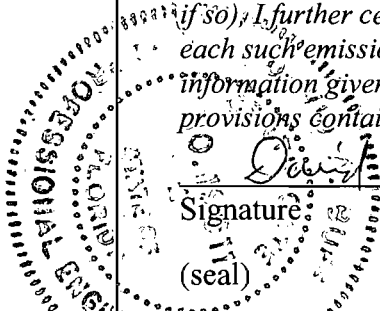
1. Professional Engineer Name: David A. Buff
Registration Number: 19011

2. Professional Engineer Mailing Address...
Organization/Firm: Golder Associates Inc.**
Street Address: 6241 NW 23rd Street, Suite 500
City: Gainesville State: FL Zip Code: 32653

3. Professional Engineer Telephone Numbers...
Telephone: (352) 336-5600 ext.545 Fax: (352) 336-6603

4. Professional Engineer Email Address: dbuff@golder.com

5. Professional Engineer Statement:
I, the undersigned, hereby certify, except as particularly noted herein, that:*
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.
(3) If the purpose of this application is to obtain a Title V air operation permit (check here if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.
(4) If the purpose of this application is to obtain an air construction permit (check here if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.
(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.
Signature: David A. Buff Date: 9/29/05
(seal)



* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #0001670

RECEIVED

SEP 30 2005

BUREAU OF AIR REGULATION

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Raw Mill and Pyroprocessing Unit

3. Emissions Unit Identification Number: **028**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Pyroprocessing consists of the preheater/calcliner, kiln, and cooler.

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

**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: 028		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 7 baghouse stacks. See Attachment TM-EU4-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 410 feet	7. Exit Diameter: 14 feet	
8. Exit Temperature: 200 °F	9. Actual Volumetric Flow Rate: 515,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Data for main stack. Representative of clinker production with raw mill operating. With raw mill down, parameters are 605,000 acfm @ 500°F. See Attachment TM-EU4-C15 for stack parameters for other sources.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [1] of [8]
Sulfur Dioxide - SO₂

**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: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 320 lb/hour 548 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Below Reference:		7. Emissions Method Code: 2	
8. Calculation of Emissions: 24 Hour: 1.28 lb SO₂/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 320 lb SO₂/hr Annual: 0.50 lb SO₂/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 548 TPY SO₂			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Part B, Table 2-6.			

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [1] of [8]
Sulfur Dioxide - SO₂

**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 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 320 lb/hr	4. Equivalent Allowable Emissions: 320 lb/hour tons/year
5. Method of Compliance: SO₂ CEMS	
6. Allowable Emissions Comment (Description of Operating Method): *Allowable emissions on a 24-hour average basis.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.50 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 548 tons/year
5. Method of Compliance: SO₂ CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Annual limit based on 30-day rolling average.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.2 lb/MMBtu	4. Equivalent Allowable Emissions: 810 lb/hour tons/year
5. Method of Compliance: EPA Method 6	
6. Allowable Emissions Comment (Description of Operating Method): Additional SO₂ limit when liquid fuel is fired (24-hour average). Miami-Dade Co. Code, Section 24-17(2)(a).	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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: 30.1 lb/hour 131.7 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.067 lb/ton dry kiln feed (DKF) Reference: Proposed limit	7. Emissions Method Code: 0
8. Calculation of Emissions: Main Stack – Hourly: 425 TPH DKF x 0.067 lb/ton clinker = 28.5 lb/hr Main Stack – Annual: 3,723,000 TPY DKF x 0.067 lb/ton x ton/2,000 lb = 124.7 TPY Other Baghouses: 1.6 lb/hr; 7.0 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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 4

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.067 lb/ton dry kiln feed (DKF)	4. Equivalent Allowable Emissions: 28.5 lb/hour 124.7 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from main stack only.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.3 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 127.5 lb/hour 558.5 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.1344. For kiln only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 42.5 lb/hour 186.2 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.1345. For cooler only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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 **4** of **4**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 1.6 lb/hour 7.0 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from baghouses other than main stack baghouse 331.BF200.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [3] of [8]
Particulate Matter - PM₁₀

**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: PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 25.5 lb/hour 111.8 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 84 percent of PM Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: 84 percent of PM for Main Stack 100 percent of PM for other baghouses	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [3] of [8]
Particulate Matter - PM₁₀

**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 2

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.056 lb/ton dry kiln feed (DKF)	4. Equivalent Allowable Emissions: 23.9 lb/hour 104.8 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from main stack only. See Part B, Tables 2-5 and 2-6.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 100 percent of PM	4. Equivalent Allowable Emissions: 1.6 lb/hour 7.0 tons/year
5. Method of Compliance: Annual Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from baghouses other than main stack baghouse 331.BF200.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [4] of [8]
Dioxin/Furans - DIOX

**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: DIOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.46x10⁻⁷ lb/hour 1.51x10⁻⁶ tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.4 ng/dscm @ 7% O₂ Reference: 40 CFR 63.1343(b)(3)	7. Emissions Method Code: 0
8. Calculation of Emissions: 0.4 ng TEQ/dscm x (1 lb/454g) x (1 g/10⁹ ng) x 230,911 dscf/min x (m³/35.3 ft³) x 60 min/hr = 3.46x10⁻⁷lb/hr 3.46x10⁻⁷ lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1.51x10⁻⁶ TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Emissions are from main stack. Flow rate based on 360,637 dscfm @ 12% O₂ = 230,911 dscfm @ 7% O₂.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [4] of [8]
Dioxin/Furans - DIOX

**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

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.4 ng/dscm @ 7% O₂	4. Equivalent Allowable Emissions: 3.46x10⁻⁷ lb/hour 1.51x10⁻⁶ tons/year
5. Method of Compliance: EPA Method 23	
6. Allowable Emissions Comment (Description of Operating Method): Based on limit in Permit No. 0250020-010-AC and Rule 40 CFR 63.1343(b)(3).	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [5] of [8]
Nitrogen Oxides - NO_x

**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:
3. Potential Emissions: 720 lb/hour 2,376 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See Below Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: 24-Hour: 2.88 lb NO_x/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 720 lb NO_x/hr Annual: 2.17 lb NO_x/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 2,376 TPY NO_x	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [6] of [8]
Carbon Monoxide - CO

**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: 576 lb/hour 2,190 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See Below Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: 24-Hour: 2.3 lb CO/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 576 lb CO/hr Annual: 2.0 lb CO/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 2,190 TPY CO	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [6] of [8]
Carbon Monoxide - CO

**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 **2**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.3 lb/ton CP	4. Equivalent Allowable Emissions: 576 lb/hour tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Allowable based on 24-hour block average. Annual average limit is 1.33 lb/ton clinker product.	

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.0 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 2,190 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Annual limit in lb/ton clinker based on 30-day rolling average.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [7] of [8]
Volatile Organic Compounds - VOC

**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: 40 lb/hour 175 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Permit Limit Reference: Permit No. 0250020-016-AC	7. Emissions Method Code: 0
8. Calculation of Emissions: 24-Hour: 0.16 lb VOC/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 40 lb/hr Annual: 0.16 lb VOC/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 175 TPY VOC	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [7] of [8]
Volatile Organic Compounds - VOC

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 40 lb/hr	4. Equivalent Allowable Emissions: 40 lb/hour tons/year
5. Method of Compliance: VOC CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Allowable based on 24-hour block average.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.16 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 175 tons/year
5. Method of Compliance: VOC CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit in lb/ton clinker based on 12-month rolling average.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [8] of [8]
Sulfuric Acid Mist - SAM

**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: SAM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 2.70 lb/hour 11.8 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.0108 lb/ton clinker Reference: Vendor Information	7. Emissions Method Code: 2
8. Calculation of Emissions: Short-term: 0.0108 lb SAM/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 2.70 lb/hr Annual: 0.0108 lb SAM/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 11.8 TPY SAM	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATIONSection [4]
Raw Mill and Pyroprocessing Unit**POLLUTANT DETAIL INFORMATION**Page [8] of [8]
Sulfuric Acid Mist - SAM**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

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Table 2-6. Dry Kiln, Cooler, and Raw Mill (EU ID No. 028) Potential Emissions Vented From the Main Stack: **2,190,000 TPY Clinker (revised 9-28-05)**

Pollutant	Proposed Increase in Production				Current Permit Limits		
	Emission Factor	Activity Factor	Emission Rate		lb/ton ^b	lb/hr	TPY
			lb/hr	TPY			
<u>24-Hour</u>							
Particulate Matter (PM) ^a	0.067 lb/ton DKF	425 TPH DKF	28.5	--	0.125	50	--
Particulate Matter (PM10) ^a	84% of PM	--	23.9	--	84% of PM	42	--
Sulfur Dioxide	1.28 lb/ton CP	250 TPH CP	320	--	1.28	320	--
Nitrogen Oxides	2.88 lb/ton CP	250 TPH CP	720	--	2.88	720	--
Carbon Monoxide	--	250 TPH CP	576	--	--	576	--
Volatile Organic Compounds	0.16 lb/ton CP	250 TPH CP	40	--	0.16	40	--
Sulfuric Acid Mist	0.0108 lb/ton CP	250 TPH CP	2.7	--	0.0108	2.24	--
Dioxin/Furan	0.4 ng/dscm TEQ	230,911 dscf/min ^c	3.46E-07	--	--	--	--
<u>Annual Average</u>							
Particulate Matter (PM) ^a	0.067 lb/ton DKF	3,723,000 TPY DKF	--	124.7	0.125	--	175
Particulate Matter (PM10) ^a	84% of PM	--	--	104.8	84% of PM	--	147
Sulfur Dioxide	0.50 lb/ton CP	2,190,000 TPY CP	--	548	0.98	--	806
Nitrogen Oxides	2.17 lb/ton CP	2,190,000 TPY CP	--	2,376	2.38	--	1,953
Carbon Monoxide	2.0 lb/ton CP	2,190,000 TPY CP	--	2,190	1.77	--	1,457
Volatile Organic Compounds	0.16 lb/ton CP	2,190,000 TPY CP	--	175	0.189	--	155
Sulfuric Acid Mist	0.0108 lb/ton CP	2,190,000 TPY CP	--	11.8	0.0108	--	8.68
Dioxin/Furan	3.46E-07 lb/hr	8,760 hr/yr	--	1.51E-06	--	--	--

DKF = Dry Kiln Feed

CP = Clinker Production

TPH = tons per hour

TPY = tons per year

^a Includes Coal Mill (EU ID No. 001) emissions during concurrent operation of Kiln/Cooler/Raw Mill and Coal Mill.

^b 24-hour limits are based on 250 TPH clinker production rate.

^c Flow rate @ 7% O₂.

Table 3-4. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification: 2,190,000 TPY Clinker (revised 9-29-05)

Pollutant	PSD Baseline Emissions (TPY) ^a						Future Potential Emissions (TPY)				Net Increase in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources ^e	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Material Handling Fugitive Sources	Total			
Particulate Matter [PM(TSP)]	41.13	99.16 ^b	199.50	1.35	43.96	385.1	124.7	207.9	22.7	355.3	-29.8	25	No
Particulate Matter (PM ₁₀)	34.97	84.29 ^b	171.20	1.15	15.39	307.0	104.8	207.9	8.0	320.6	13.6	15	No
Sulfur Dioxide	42.74	471.60	--	NR	--	514.3	548	--	--	548	33.7	40	No
Nitrogen Dioxide	516.70	1,827.28	--	NR	--	2,344.0	2,376	--	--	2,376	32.0	40	No
Carbon Monoxide	71.94	1,251.24	--	NR	--	1,323.2	2,190	--	--	2,190	866.8	100	Yes
Volatile Organic Compounds	27.78	117.39 ^c	--	NR	--	145.2	175	--	--	175	29.8	40	No
Sulfuric Acid Mist	0.30	18.86 ^d	--	NR	--	19.16	11.8	--	--	11.8	-7.3	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	--	0.0465	0.0071	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	--	0.0149	-0.0087	0.1	No

NR = not reported

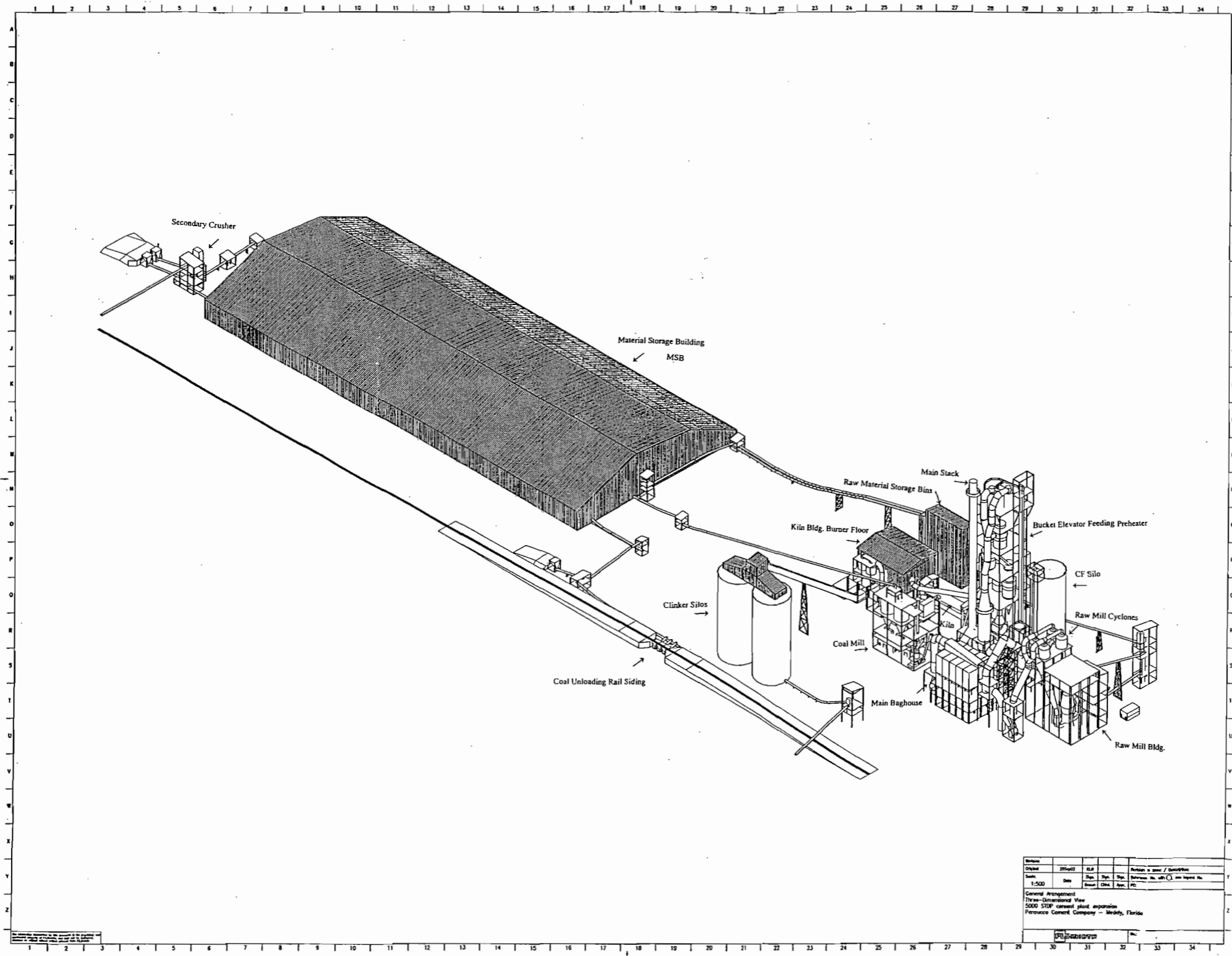
NEG = Negligible.

^a Based on average of 2002-2003 AOR data,^b For PM/PM10, only 2003 data used since 2002 was not representative.^c Based on historic test data using 2002-2003 production data.^d Not reported on AOR. Based on 4% of SO₂ emissions.^e Not quantified in AOR. Used 1996-1997 baseline emissions based on 2002-2003 emissions being at least as high.

Table 1. Maximum CO Concentrations Predicted for Titan Peniusco Dry Process Cement Plant
Compared to the EPA Class II Significant Impact Levels

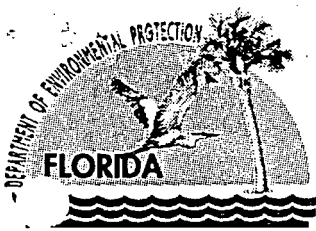
Averaging Time	Year	Concentration ^a (ug/m ³)	Receptor Location (m)		Period Ending (YYMMDDHH)	EPA Class II Significant Impact Levels (ug/m ³)
			X	Y		
8-Hour	1987	31.0	880.3	-73.9	87081116	500
	1988	18.8	-2750	0	88091716	
	1989	19.6	-1800	-400	89050316	
	1990	28.0	-1900	800	90071116	
	1991	21.6	-2100	1400	91081216	
1-Hour	1987	115.4	-200	-1000	87091412	2,000
	1988	83.9	-1200	-300	88062911	
	1989	113.6	910.4	-36.9	89051811	
	1990	97.4	600	-800	90070711	
	1991	89.2	-1143.6	600.8	91081111	

^a Highest predicted concentration using the ISCST3 model and 5 years of meteorological data



Revision								
Checked	2/2/62	SLB						Part of a set of drawings
Draft			Scale	Sheet	Drawn	Checked	Appr.	See notes on this set
	1:500							
General Arrangement								
Three-Dimensional View								
5000 STIP camera plot, expansion								
Perruccio Cement Company - Medley, Florida								

This drawing is the property of Perruccio Cement Company and should not be loaned, copied, or otherwise reproduced without the written consent of the company.



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

May 18, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Hardy Johnson
President, Florida Division
Tarmac America
455 Fairway Drive
Deerfield Beach, Florida 33441

Re: DEP File No. 0250020-017-AC
Pennsuco Cement Plant

Dear Mr. Johnson:

The Department received your application to increase the annual feed rate and clinker production rate at the Miami Cement Plant. We appreciated the opportunity to meet with environmental and plant personnel in April to discuss the status of this request. Based on the review of the application, the Department has determined that the application is incomplete and requires the submittal of additional information as described below.

Following are the items required to process the annual production increase application.

1. Test Results

Particulate Matter (PM)/ and or Opacity Test Results of Materials Handling Point Sources (all baghouses) as stated in Section III- Subsection C, Specific Condition of Permits 0250020-010-AC and 0250020-016. Please submit a summary of these test results. We received the summary of the test reports dated January 12, 2005 for the *main stack*. We are reviewing this report.

2. Fugitive Emissions Evaluation:

During a recent site visit, Department personnel observed visible fugitive emissions from the unloading, handling, and loading of raw materials as well as vehicular traffic over unpaved roads. As these types of activities tend to increase with increased production, please submit your plans to mitigate these additional impacts.

3. Submission of five year contemporaneous emission calculations.

This relates to the information submitted in Table 3-4 as "Net Changes in Emissions and PSD Significant Emissions Rates". The original permit issued in 1999 for the modernization relied on a tabulation of emissions reductions (shutdowns of old wet systems) and increases (including the new dry system) so that net emissions reductions were achieved. This production increase application relies again on a comparison of the same past actual emissions (1998 and previous years) to future potential emissions after the production increase. Updated contemporaneous emission calculations are required based on reductions and increases from 2000 to 2004, inclusive.

"More Protection, Less Process"

Printed on recycled paper.

4. Missing Baghouse Design Specifications

Submit missing baghouse design specifications as indicated in Permit 0250014-016-AC.

5. Continuous Emissions Monitoring (CEM) Data

Submit recent (6-months) electronic file of the CEM and COMS data for all pollutants subject to Continuous Emissions Monitoring requirements.

6. Process Description

Please submit a brief description of the operations conducted at each process subsystem (i.e, finish mill system, coal handling system, pyroprocessing/raw mill system, clinker handling system, coal handling system, cement products system)

[Basis is: Permit 0250014-010-AC and Permit 0250014-016-AC; Rule 62-4.070, F.A.C., Standards for Issuing and Denying Permits; and Rule 62-212.400, F.A.C., Prevention of Significant Deterioration]

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. Please note that per Rule 62-4.055(1): "The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions regarding this matter, please call me at 850/921-9523 or Teresa Heron at 850/921-9529.

Sincerely,



A. A. Linero, Program Administrator
South Permitting Section

601
//

Cc: Scott Quaas, Titan
David Buff, P.E.
H. Patrick Wong, Miami-Dade-DERM

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL USA 32653
Telephone (352) 336-5600
Fax (352) 336-6603
www.golder.com



RECEIVED

JUL 22 2005

BUREAU OF AIR REGULATION

0537511

July 22, 2005

Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. A. A. Linero, Program Administrator, South Permitting Section

RE: TITAN AMERICA PENNSUCO CEMENT PLANT
DEP FILE NO. 0250020-017-~~AA~~ Ac
APPLICATION TO INCREASE PRODUCTION

Dear Mr. Linero:

Titan America has received the Department's request for additional information (RAI) dated May 18, 2005. On behalf of Titan, please find below responses to each of the Department's requests. The responses are based in part on our meeting with you and your staff on June 29, 2005, in Tallahassee. The responses are presented in the same order as in the RAI.

1. Test Results

Please see attached table which summarizes the latest VE tests conducted on all the sources located at Pennsuco for which VE testing was required.

2. Fugitive Emissions Evaluation

Titan has met with its Pennsuco cement plant and aggregate plant managers and extensively discussed improvements which could be implemented to further reduce potential fugitive dust emissions from the facility. The result from this meeting is the attached "Fugitive Dust Improvement Plan". The Plan details the improvements Titan has already implemented with the startup of the new dry process cement plant, and the improvements planned to be undertaken in the future.

3. Submission of five year contemporaneous calculations

Based on our meeting of June 29, it was agreed that the original PSD baseline emissions (1996-1997) would be retained as the basis of determining PSD applicability for the project. From Golder's review of the historic emissions data reported in the AORs for the facility, it was determined that using future years for the PSD baseline (2000-2004) would result in some pollutants having a lower baseline while other pollutants (such as NO_x) would have a higher baseline. Overall, it was agreed that there would be no benefit in choosing a new baseline period for PSD applicability, and it would not result in significantly different emission rates for the new dry process plant.



4. Missing Baghouse Design Specifications

The following baghouse design specifications were identified as being missing from permit no. 0250020-016-AC. These were for the following:

- a. Clinker handling & Storage System (EU 027) – Clinker Silos 21-23 and 26-28 – baghouse F633
- b. Finish Mills (EU 012) – Finish Mill No. 3 – O-Sepa Cement Separator – baghouse 533.BF340
- c. Packhouse – all baghouses
- d. Raw Material Handling (EU 029) – Lime/Gyp Silos – baghouse 232.BF01

The missing information for items a., b., and c. above are attached. For item d., the Lime/Gyp Silos, these have been eliminated (were never constructed and will not be constructed). Note that for baghouse F633, the design air flow rate (1,500 cfm) is less than that contained in the permit application (6,000 cfm). However, we prefer to retain the previously submitted calculation of PM emissions as this will be conservative and result in insignificant change in PM emissions from the project. As an alternative, you may wish to make the change in the PM emissions yourself.

5. Continuous Emissions Monitoring (CEM) Data

Please see attached summary of CEMS and COMS data from the new dry process plant's main stack. These data represent 24-hour averages. These data have also been sent to you electronically.


6. Process Description

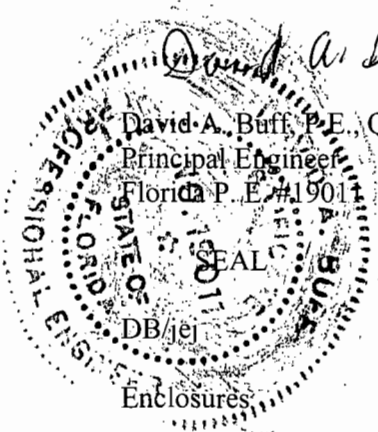
Process descriptions for each emissions unit have been developed and are attached.

As discussed in our meeting, Titan would like to proceed in a timely manner in order to receive a final construction permit no later than October 1, 2005. Thank you for consideration of this information. If you have any questions, please do not hesitate to call me at (352)336-5600.

Sincerely,

GOLDER ASSOCIATES INC.


David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #1901



Enclosures

cc: T. Lancaster
A. Townsend
Miami-Dade County DERM
S. McCann



Visible Emissions Observations Summary

EU ID.	BF Unit ID	EU Source	Model	CFM	VE Date	Opacity
010	F-130	Finish Mill #1	468 AMT	12000	12/16/04	0%
010	F-113	Finish Mill #1	16FF-10-20	11800	12/16/04	0%
011	F-230	Finish Mill #2	468 AMT	12000	12/17/04	0%
011	F-213	Finish Mill #2	16FF-10-20	11800	12/17/04	0%
012	F-313	Finish Mill #3	196S-10-20	8000	12/16/04	0%
012	F-330	Finish Mill #3	702 AMT	20000	12/16/04	0%
012	F-332	Finish Mill #3	390 AMT	13500	12/16/04	0%
013	F-430	Finish Mill #4	6 zone #96	30000	12/16/04	0%
013	F-432	Finish Mill #4	5 zone #48	17000	12/16/04	0%
013	F-728	Finish Mill #4	6 zone #96	20000	12/16/04	0%
014	F-511	Cement Storage	2 zone #78	18000	12/17/04	0%
014	F-512	Cement Storage	156 AMT	10000	12/17/04	0%
014	F-513	Cement Storage	121S-10-20B	5000	12/17/04	0%
014	F-514	Cement Storage	121S-10-20B	5000	12/17/04	0%
014	F-515	Cement Storage	121S-10-20B	5000	12/17/04	0%
015	B-110	Bulk Cement Loadout	120 AMT	3000	12/16/04	0%
015	B-210	Bulk Cement Loadout	120 AMT	3000	12/17/04	0%
015	B-372	Bulk Cement Loadout	36S-8-30-C	2000	12/16/04	0%
015	B-374	Bulk Cement Loadout	36S-8-30-C	2000	12/16/04	0%
015	B-382	Bulk Cement Loadout	121S-10-20C	5000	12/16/04	0%
016	B-621	Packhouse	2 zone #78	12000	12/17/04	0%
026	461.BF130	Coal System	36TAX10FM	1400	12/21/04	0%
026	461.BF230	Coal System	36TAX10FM	1400	12/21/04	0%
026	461.BF350	Coal System	121CX10	5550	12/21/04	0%
026	461.BF650	Coal System	800/7	294	12/21/04	0%
026	461.BF750	Coal System	800/7	294	12/21/04	0%
027	K-633	Clinker Handling & Storage	HE-66	1500	12/16/04	0%
027	441.BF540	Clinker Handling & Storage	100C10	4600	12/20/04	0%
027	481.BF140	Clinker Handling & Storage	196C10	12000	12/16/04	0%
027	481.BF330	Clinker Handling & Storage	100C10	6100	12/16/04	0%
027	481.BF540	Clinker Handling & Storage	100C10	4700	12/16/04	0%
027	481.BF640	Clinker Handling & Storage	100C10	4700	12/16/04	0%
027	481.BF730	Clinker Handling & Storage	304C10	18700	12/16/04	0%
027	481.BF930	Clinker Handling & Storage	304C10	15000	12/16/04	0%
028	331.BF645	Pyroprocessing	MVL54H	3500	not operating	0%
028	331.BF740	Pyroprocessing	100C10	4250	12/21/04	0%
028	341.BF350	Blending & Kiln Feed	64C10	3760	12/21/04	0%
028	351.BF410	Blending & Kiln Feed	64C10	4000	12/21/04	0%
028	351.BF440	Blending & Kiln Feed	100C10	4760	12/21/04	0%
028	351.BF470	Blending & Kiln Feed	100C10	4100	12/20/04	0%
029	311.BF650	Raw Mill Feed & Grinding	144C10	8500	12/17/04	0%
029	311.BF750	Raw Mill Feed & Grinding	144C10	7750	12/17/04	0%
029	311.BF950	Raw Mill & Feed Grinding	225C10	11700	12/20/04	0%
029	321.BF470	Raw Mill & Feed Grinding	225C10	10800	12/21/04	0%

* all VEO's Method 9 -- 30 minutes

FUGITIVE DUST IMPROVEMENT PLAN
TITAN AMERICA PENNSUCO PLANT
July 2005

Titan America (TA) has, over the last three years, completed projects not only in the cement plant but also within the entire facility that has contributed to a significant reduction in fugitive dust emissions. It is estimated that the reduction in fugitive dust emissions could be as high as approximately 25 to 30 percent of total particulate matter (PM) emissions.

The new preheater/calcliner/kiln has reduced point source PM emissions by approximately 5 tons per year (TPY) by eliminating the dust insufflation system. However, this system was a significant source of fugitive dust emissions due to the transfer of the insufflated dust by front-end loaders. The new system has eliminated cement kiln dust load-out and the truck traffic involved in this operation.

The new dry process system has also eliminated the four (4) electrostatic precipitators (ESPs) on the old wet process kilns and clinker coolers, and replaced them with a single baghouse. TA has also reduced fugitive dust emissions by significantly reducing outside storage and handling of raw materials and fuels. Whereas these materials were stored completely outside in the past and moved by front-end loader, they are now stored in the new raw material and fuel storage building, and moved primarily by stacker/reclaimer and covered conveyor belts.

TA has reduced truck traffic within the aggregate facility by approximately 20 percent by selling less trucked aggregate product to other companies within the area. Traffic patterns within the facility have been changed to keep more trucks on concrete surfaces within the loadout and Packhouse part of the facility.

Approximately 3 miles of concrete paving has also been added to the facility, further reducing fugitive emissions. Two watering trucks are now serving the entire facility. Dedicated berm areas have been established throughout the facility to further reduce wind erosion from ground areas.

TA has also committed to completing the following items within the next 18 to 24 months:

- TA is evaluating further changes and improvements to the traffic patterns at the facility, as well as the need for additional paving, in order to further reduce fugitive dust emissions.
- TA is planning to install a wheel wash system in an area directly leading out of the aggregate facility. This area will also include a dewatering area for trucks which will assist in cutting down on the amount of drag-out from the facility.
- The dust collector preventative maintenance crew is in the process of developing and implementing an Operation and Maintenance Program for all dust collectors at the facility. Upgrades to the air slides on the cement load-out and the new Packhouse will be completed within the next 2 months. This new system will eliminate a package load-out system designed and built in the early 1900's. Within this area a new clunker silo distribution system is being designed to improve the distribution of clunker to areas of the plant. This will result in reducing fugitive dust emissions from these areas.
- The last project TA is in the process of completing is to upgrade the finish mill systems. This will include installing a new finish mill (No. 6) and a dust suppression system. Once this system is in operation, one of the old finish mill systems will be permanently shut down.
- Finally, TA has committed to landscape upgrades to further enhance not only the aesthetics of the facility, but also to further decrease the wind erosion of unpaved areas.

Table 1. Missing Control Equipment Information

Source ID	Baghouse ID No.	Manufacturer	Model No.	Flow Rate		Cloth Area (ft ²)	Air to Cloth Ratio
				(acfm)	(dscfm)		
<u>Clinker Handling & Storage System (EU 027)</u>							
Clinker Silos 21-23 and 26-28	F633	Norblo	HE-66	1,500	--	1,040	1.4
<u>Finish Mills (EU 012)</u>							
Finish Mill No. 3 (O-Sepa Cement Separator)	533.BF340	Fuller	1110S12(6)	77,800	65,307	20,923	3.7



Pennsuco Cement
Packhouse Baghouse Descriptions

Control Equipment Information for Packhouse

	BF-120	BF-200	BF-400
ID No:	100TA8	144TA8	304C10
Model:	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "C" Series Jet Pulse
Make:	4,000 acfm	6,200 acfm	15,000 acfm
Design Air Volume:	275°F Max.	275°F Max.	250°F
Design Air Temperature:	Cement	Cement	Cement
Dust:	≤ 5.0 grains per ACF	≤ 5.0 grains per ACF	≤ 5.0 grains per ACF
Inlet Grain Loading:	0.01 grains per ACF	0.01 grains per ACF	0.01 grains per ACF
Outlet Grain Loading:	1,047 ft ²	1,508 ft ²	3,958 ft ²
Total Filter Area:	3.82:1	4.11 to 1	3.8 to 1
Air to Cloth Ratio:	140 FPM	158 FPM	
Interstitial Velocity:	6' 2½" x 6' 2½"	7' 6½" x 7' 4½"	11' - 11" x 9' - 6"
Baghouse Foot Print:	23' 5" from hopper flange to top of Handrail	15' 10" from hopper flange to top of Handrail	34' - 1"
Overall Height:	10 to 20 scfm @90 psig and 200 milliseconds	15 to 30 scfm @ 90 psig and 200 milliseconds	
Compressed Air Used:	Top	Top	Side
Filter Access:	100 bags	144 bags	304 bags
Filter Quantity:	5" Diameter x 96" long	5" Diameter x 96" long	5" Diameter x 120" long
Filter Size:	+/- 20" w.c.	+/- 20" w.c.	+/- 20" w.c.
Design Pressure:			

Summary of Titan America CEMS/COMS Data for New Raw Mill/Preheater/Kiln System (Main Stack)

Note: all values are 24-hour averages

	Opacity	Clinker Prod.	SO2	NOx	VOC	CO	PMCD
	%	short TPH	lb/hr	lb/hr	lb/hr	lb/ton	Inlet Temp. 3-hr °F
1-Jan-05	3.8	222.5		369.9	20.0	1.74	214.5
2-Jan-05	3.0	215.8	0.1	559.9	15.7	1.79	232.0
3-Jan-05	3.4	221.2		557.8	17.8	1.84	301.6
4-Jan-05	3.5	211.6		593.4	14.8	1.75	210.6
5-Jan-05	3.2	225.8		548.3	17.4	1.92	255.0
6-Jan-05	3.4	225.7		474.1	17.2	1.89	277.3
7-Jan-05	4.5	225.6		533.5	22.0	2.18	331.6
8-Jan-05	3.9	224.6		533.0	20.3	1.96	208.1
9-Jan-05	4.7	227.6		566.3	20.9	1.90	223.0
10-Jan-05	4.0	223.6		515.1	22.2	1.94	235.6
11-Jan-05	4.0	224.2		562.1	26.2	2.06	325.7
12-Jan-05	4.1	224.4		546.8	24.7	1.98	275.1
13-Jan-05	3.0	209.1		506.6	20.0	1.92	330.1
14-Jan-05	3.8	202.9		603.6	16.4	1.89	209.6
15-Jan-05	4.1	226.1		582.1	19.4	1.91	247.4
16-Jan-05	4.4	225.8		579.5	17.5	1.66	228.7
17-Jan-05	4.8	223.8		549.9	17.1	1.55	232.8
18-Jan-05	4.7	222.1		474.5	16.2	1.59	246.9
19-Jan-05	3.8	194.9				1.73	339.1
20-Jan-05	3.9	153.8	0.4	629.1	9.0	1.87	263.5
21-Jan-05	4.5	188.4		556.1	11.6	1.76	225.2
22-Jan-05	3.9	203.4				1.62	258.1
23-Jan-05	4.4	218.5		437.4	15.2	1.41	218.2
24-Jan-05	4.2	224.0		481.6	16.2	1.35	220.5
25-Jan-05	4.3	220.7		467.0	16.5	1.23	232.4
26-Jan-05	3.6	206.2		459.0	12.8	1.18	283.6
27-Jan-05	4.0	204.0		445.4	16.1	1.18	227.5
28-Jan-05	3.8	212.7		432.8	15.8	1.10	225.3
29-Jan-05	3.9	216.7		524.4	14.3	1.11	263.7
30-Jan-05	3.9	190.4				1.37	370.7
31-Jan-05							
1-Feb-05	4.9	183.3	0	664.2	12.2	1.29	217.5
2-Feb-05	4.5	198.9	0	503.2	13.5	1.28	241.7
3-Feb-05	4.1	198.4	0	487.7	13.0	1.30	247.9
4-Feb-05	4.6	201.6	0	529.4	13.5	1.28	258.9
5-Feb-05	4.5	199.8	0	512.7	12.3	1.15	245.7
6-Feb-05	4.8	187.3	0	423.7	10.0	1.03	210.4
7-Feb-05	3.9	176.9	0			1.08	344.1
8-Feb-05	4.0	167.7	0	675.3	9.2	1.26	254.1
9-Feb-05	3.7	174.7	0	598.7	11.1	1.35	232.4
10-Feb-05	3.7	180.3	0	471.6	12.3	1.83	241.3
11-Feb-05	3.9	180.9	0	489.5	12.9	1.92	267.0
12-Feb-05	4.3	181.7	0	561.2	11.4	1.59	233.8
13-Feb-05	3.7	192.6	0	576.1	11.3	1.58	206.3
14-Feb-05	3.6	216.9	0	484.4	15.3	1.56	232.7
15-Feb-05	3.4	216.5	0	516.5	17.1	1.64	253.1
16-Feb-05	3.5	221.3	0	456.2	16.5	1.63	194.0
17-Feb-05	3.9	209.0	0	474.8	18.6	1.98	296.2
18-Feb-05	4.3	223.9	0	433.1	16.8	1.67	193.6
19-Feb-05	3.9	225.7	0	439.4	16.7	1.58	226.2
20-Feb-05	4.4	225.6	0	485.5	16.8	1.50	248.3
21-Feb-05	4.0	208.4	0	517.2	16.7	1.78	301.1
22-Feb-05	4.0	206.8	0	457.5	16.8	1.66	242.8
23-Feb-05	3.6	213.6	0	488.3	17.8	1.69	251.9

Summary of Titan America CEMS/COMS Data for New Raw Mill/Preheater/Kiln System (Main Stack)

Note: all values are 24-hour averages

	Opacity	Clinker Prod.	SO2	NOx	VOC	CO	PMCD
	%	short TPH	lb/hr	lb/hr	lb/hr	lb/ton	Inlet Temp. 3-hr °F
24-Feb-05	3.2	212.9	0	176.1	13.7	1.39	239.0
25-Feb-05	2.5	205.7	0	493.2	12.8	1.62	224.2
26-Feb-05	3.0	211.7	0			1.45	230.2
27-Feb-05	3.6	152.7	0	481.4	7.3	1.32	270.3
28-Feb-05	3.7	197.7	0	454.4	11.2	1.46	207.5
1-Mar-05	3.2	195.6	0	444.4	11.9	1.73	273.2
2-Mar-05			0			1.77	
3-Mar-05	2.5	195.6	0	444.2	12.0	1.55	211.9
4-Mar-05	1.5	202.0	0	518.5	11.8	1.33	236.3
5-Mar-05	1.1	196.7	0	529.7	11.1	1.40	223.3
6-Mar-05	1.3	215.1	0	505.3	12.5	1.12	231.2
7-Mar-05	1.5	216.6	0	459.5	11.8	1.21	267.7
8-Mar-05	1.8	211.7	0	479.9	12.1	1.22	264.6
9-Mar-05	2.1	190.5	0	483.3	11.0	1.40	469.9
10-Mar-05	2.4	184.5	0	518.5	9.4	1.30	244.2
11-Mar-05	2.6	176.2	0	529.4	8.5	1.36	274.0
12-Mar-05	2.0	168.5	0	469.3	8.2	1.40	249.1
13-Mar-05	2.1	179.2	0	448.5	9.9	1.75	237.8
14-Mar-05	2.1	187.4	0	466.3	10.6	1.54	253.8
15-Mar-05	2.1	181.0	0	458.1	12.1	1.93	261.1
16-Mar-05	2.0	194.4	0	481.6	16.2	1.65	220.2
17-Mar-05	2.4	186.6	0	525.1	14.6	1.80	280.2
18-Mar-05	2.5	185.3	0	492.2	13.3	1.87	410.4
19-Mar-05	2.4	192.0	0	535.8	17.9	1.75	225.3
20-Mar-05	2.7	214.3	0	509.1	12.1	1.42	190.6
21-Mar-05	2.0	206.3	0	543.8	15.5	1.70	289.1
22-Mar-05	2.1	210.1	0	520.1	15.8	1.79	218.0
23-Mar-05	2.0	217.8	0	553.2	15.4	1.90	206.5
24-Mar-05	1.7	215.8	0	556.2	17.6	1.92	203.5
25-Mar-05	1.0	208.3	0			2.33	309.5
26-Mar-05			0			2.37	
27-Mar-05			0			0.00	
28-Mar-05	1.3	211.6	0	555.7	17.2	1.89	195.1
29-Mar-05	1.8	221.0	0	581.7	15.4	2.24	278.8
30-Mar-05	1.3	206.2	0	533.0	10.9	1.63	217.2
31-Mar-05	1.2	200.6	0			1.63	261.8
1-Apr-05							
2-Apr-05							
3-Apr-05							
4-Apr-05							
5-Apr-05							
6-Apr-05							
7-Apr-05							
8-Apr-05							
9-Apr-05							
10-Apr-05							
11-Apr-05							
12-Apr-05	0.7	146.4				2.45	270.6
13-Apr-05	1.3	184.7	0.9	599.3	9.4	2.23	293.5
14-Apr-05	1.1	205.7	0.1	509.9	14.2	1.55	252.2
15-Apr-05	1.1	200.6	0.1	444.1	10.7	1.17	269.8
16-Apr-05	1.1	205.2	0.1	510.8	8.9	1.14	222.5
17-Apr-05	1.1	208.2	0.1	486.1	6.4	1.31	234.1
18-Apr-05	1.5	209.6				1.35	210.3

Summary of Titan America CEMS/COMS Data for New Raw Mill/Preheater/Kiln System (Main Stack)

Note: all values are 24-hour averages

	Opacity	Clinker Prod.	SO2	NOx	VOC	CO	PMCD
	%	short TPH	lb/hr	lb/hr	lb/hr	lb/ton	Inlet Temp. 3-hr °F
19-Apr-05	1.0	193.5	0	495.4	6.6	1.34	219.5
20-Apr-05	1.0	210.8	0	474.7	6.3	1.23	222.9
21-Apr-05	1.1	210.6	0.2	459.5	5.1	1.22	214.7
22-Apr-05	1.2	200.7	0.3	505.3	7.9	1.30	332.1
23-Apr-05	1.0	200.9	0.4	529.2	7.9	1.06	231.6
24-Apr-05	1.0	201.4	0.3	469.8	7.4	0.94	237.9
25-Apr-05	1.2	200.8	0	484.3	7.9	0.81	195.6
26-Apr-05	0.8	188.8	0.4	431.5	7.7	0.78	248.6
27-Apr-05	0.8	200.8	0.3	421.0	7.8	0.97	234.7
28-Apr-05	1.2	202.0	0.3	476.6	9.5	0.89	228.6
29-Apr-05	0.8	206.1	0.1	480.6	8.7	0.88	200.6
30-Apr-05	0.8	209.2	0.4	425.9	6.1	0.90	204.5
1-May-05	0.7	211.4	0			0.94	225.1
2-May-05	1.3	209.9	0.2	459.2	5.3	0.96	240.5
3-May-05	1.2	209.9	0.5	458.2	7.4	1.00	301.3
4-May-05	1.0	213.2	0.6	425.7	4.3	1.00	213.5
5-May-05	1.0	229.7				0.98	205.9
6-May-05							
7-May-05							
8-May-05	1.0	180.6	0	443.5	1.4	1.07	248.2
9-May-05	1.0	175.1	0	478.5	4.1	1.11	253.4
10-May-05	1.0	187.8	0	517.6	6.4	1.07	266.4
11-May-05	1.3	211.5	0	464.6	9.1	1.08	239.4
12-May-05	1.3	214.2	0	466.5	9.5	0.97	213.2
13-May-05	1.3	217.3	0	459.8	12.7	0.82	236.6
14-May-05	1.4	223.5	0.1	457.4	11.5	0.77	194.9
15-May-05	1.5	225.3	0.1	474.9	9.2	0.79	205.9
16-May-05	1.5	217.1	0.1	470.7	6.0	0.87	269.0
17-May-05	1.5	174.6	0	420.1	5.1	1.01	241.5
18-May-05	1.7	202.5	0	399.5	4.8	0.88	259.5
19-May-05	1.8	212.5	1	458.8	5.5	0.77	233.4
20-May-05	1.9	199.4	1.8	442.7	6.2	0.81	235.1
21-May-05	1.9	209.8	2.1	393.8	7.5	0.83	210.4
22-May-05	1.9	216.0	2.3	398.9	8.3	0.82	211.5
23-May-05	2.4	205.2	2.3	407.7		0.78	246.0
24-May-05	2.3	211.7	3.5	424.9	0.0	0.75	226.6
25-May-05	2.6	214.1	0	445.9	4.8	0.83	873.9
26-May-05	2.6	209.4	0	423.1	6.2	0.76	210.5
27-May-05	2.7	209.1				0.83	244.5
28-May-05	2.5	210.0	0	410.5	4.2	0.78	203.9
29-May-05	3.0	216.7	0	467.0	2.7	0.73	206.7
30-May-05	2.6	219.0	0	429.7	2.7	0.72	204.9
31-May-05	2.7	225.7	1.4	458.0	3.2	0.73	201.4
1-Jun-05	2.8	223.3	3.3	423.2	3.0	0.99	193.3
2-Jun-05	3.1	222.0	3.3	433.5	5.8	1.06	328.1
3-Jun-05	3.7	226.1	1.6	415.4	7.4	1.07	241.7
4-Jun-05	3.6	221.5		364.3	7.7	0.93	213.7
5-Jun-05	3.9	226.1		388.1	8.4	0.96	211.1
6-Jun-05	3.7	220.3		366.1	13.5	0.88	202.8
7-Jun-05	4.4	210.0		356.9	13.7	0.79	254.1
8-Jun-05	3.5	221.5		319.8	16.1	0.82	218.9
9-Jun-05	2.7	221.2		346.4	21.7	1.02	327.6
10-Jun-05	1.9	205.6		375.0	17.2	1.15	204.4
11-Jun-05	2.1	210.1		342.4	16.8	1.11	199.0

Summary of Titan America CEMS/COMS Data for New Raw Mill/Preheater/Kiln System (Main Stack)

Note: all values are 24-hour averages

	Opacity	Clinker Prod.	SO2	NOx	VOC	CO	PMCD
	%	short TPH	lb/hr	lb/hr	lb/hr	lb/ton	Inlet Temp. 3-hr °F
12-Jun-05	2.7	219.7		400.7	13.7	0.72	204.7
13-Jun-05	3.0	227.9	0.6	398.2	13.0	0.55	201.3
14-Jun-05	2.8	224.8	1.8	463.4	22.9	0.62	271.1
15-Jun-05	2.7	223.9	1.2	452.4	20.1	0.53	212.5
16-Jun-05	2.7	217.3	1.6	422.7	19.8	0.56	346.7
17-Jun-05	2.8	186.1	2.4	375.0	18.3	0.68	232.9
18-Jun-05	2.2	205.5	2.1	381.9	18.3	0.45	200.2
19-Jun-05	2.6	215.7				0.46	203.2
20-Jun-05	3.0	223.8	1.1	437.4	28.8	0.51	194.0
21-Jun-05	2.9	226.9		426.1	17.1	0.49	197.0
22-Jun-05	2.9	223.3		431.6	17.9	0.57	196.9
23-Jun-05	2.8	218.4		440.0	17.7	0.51	332.7
24-Jun-05	3.3	215.3		474.1	21.1	0.52	285.2
25-Jun-05	3.1	212.3		453.8	14.3	0.38	199.2
26-Jun-05	3.0	218.0		428.7	13.1	0.40	195.1
27-Jun-05	3.3	218.4		467.0	14.0	0.42	193.5
28-Jun-05	3.7	218.9		415.8	18.1	0.60	234.5
29-Jun-05	3.6	217.0		454.2	25.6	0.76	222.9
30-Jun-05	3.8	207.0		463.0	23.5	0.74	292.0

PROCESS DESCRIPTIONS

Coal Handling (EU 026)

Two solid fuels, coal and petroleum coke (petcoke), are utilized in the new cement plant at Titan's Pennsuco facility. These fuels are delivered by rail and transferred from the railcars using a bottom-dump system, where they are gravity fed into an underground hopper and onto a belt conveyor. Two additional conveyor-to-conveyor transfer points exist between the railcar unloading operation and the Materials Storage Building. Each of these transfer points is enclosed. Inside the Materials Storage Building, coal and petcoke are transferred from the conveyor belt entering the building to an automatic stacker, where the fuel is transferred onto the storage piles inside the building.

As needed, coal or petcoke is reclaimed from the storage pile using an automatic reclaimer and transferred by belt conveyor to the Coal and Petcoke Feed Bins. These transfer points and the Coal/Pet Coke Feed Bins are controlled using two baghouses (Equipment ID Nos. 461.BF130 and 461.BF230).

Occasionally, when the Materials Storage Building is at capacity, coal/pet coke is temporarily stored on the ground. A front-end loader is used to move the coal from a separate railcar unloading operation to a storage pile. As capacity is available in the Materials Storage Building, the front-end loader is used to reclaim coal from the pile and transfer it to railcars where it is processed normally (bottom-dumped from railcar and transferred to the Materials Storage Building). Up to one-third of the total coal throughput could be handled in this way.

From the feed bins, coal and petcoke are transferred to the Coal Mill for grinding. PM emissions from the transfer points of the feed bins to the Coal Mill are controlled by using a baghouse (Equipment ID No. 461.BF350). In the Coal Mill, the coal/pet coke is ground, and is then blown to a baghouse (Equipment ID No. 461.BF300), which acts as a product separator. Exhaust gases from the baghouse are vented to the plant Main Stack.

The ground coal/pet coke collected in the Coal Mill baghouse is transferred to a coal surge bin or a pet coke surge bin. PM emissions from this transfer operation are controlled using two identical baghouses (Equipment ID Nos. 461.BF650 and 461.BF750). These surge bins are used to feed the kiln and preheater/calciner.

Raw Material Handling

Raw materials used in the cement production process include mineral aggregates (ash, bauxite, gypsum, etc.) and limestone. Limestone is supplied from the adjacent Aggregate Plant, and is conveyed to the Materials Storage Building where it is stockpiled. The limestone is then reclaimed by means of a continuous pile reclaimer, and then transferred to the Limestone Feed Bins.

The mineral aggregates are delivered to the site by means of truck or railcar, and are stored in temporary piles. The materials are reclaimed via frontend loader and then dropped into a choke feed hopper. From the feed hopper, the materials are conveyed into the Materials Storage Building. The mineral aggregates are then reclaimed by means of a continuous pile reclaimer, and then transferred to the Mineral Aggregates Feed Bins. PM emissions from the Limestone and Mineral Aggregates Feed Bins and conveying system are controlled by a single baghouse (Equipment ID No. 311.BF650).

Raw materials are next conveyed to the Raw Mill. Three baghouses control PM emissions from the conveying system located between the Feed Bins and the Raw Mill (Equipment ID Nos. 311.BF750, 321.BF470, and 311.BF950).

Raw Mill and Pyroprocessing Unit

This emissions unit consists of the Raw Mill, Clinker Feed Silo, Preheater/Calciner/Kiln, Clinker Cooler, and the Kiln Dust system. Raw materials from the Limestone and Mineral Aggregates Feed Bins enter the Raw Mill, where the material is ground to size and the moisture content is reduced. Heated air is supplied from the Clinker Cooler exhaust gases. From the Raw Mill, the material is blown to a series of mechanical cyclones, which recover the material. The exhaust streams from the cyclones pass through a baghouse (the Main Stack baghouse, Equipment ID No. 331.BF200), before being discharged to the Main Stack.

The properly sized raw material is pneumatically conveyed to the Clinker Feed silo, which is controlled by a baghouse (Equipment ID No. 341.BF350). Material from the Clinker Feed Silo is then conveyed to the Preheater Tower. The conveying system is controlled by two baghouses (Equipment ID Nos. 351.BF440 and 351.BF470). The material then passes through the Preheater/Calciner/Kiln system, where chemical reactions convert the raw materials into clinker.

Coal/pet coke is fed to both the Calciner and the Kiln to provide heat for the process. Clinker produced from the process is then conveyed to the Clinker Silos.

Exhaust gases from the system pass from the Kiln to the Calciner and then to the Preheater in order to utilize the available heat in the gases. These gases are then sent through the Clinker Cooler and then on to the Raw Mill (when operating) or to the Main Stack baghouse (Raw Mill off-line).

Kiln dust captured in the Main Stack baghouse (331.BF740) is conveyed to a storage bin. From the storage bin, the kiln dust is returned to the process in an enclosed system or is loaded out to truck. The conveying operation and the storage bin are controlled by a baghouse (Equipment ID No. 331.BF740). The truck loadout operation is also controlled by a baghouse Equipment ID No. 331.BF645).

Clinker Handling and Storage

Clinker from the pyroprocessing unit is cooled in the Clinker Cooler. From the Clinker Cooler, the clinker is transferred to one of two clinker storage silos. PM emission from the conveying and transfer operations are controlled by two baghouses (Equipment ID Nos. 441.BF540 and 481.BF140). Any off-specification clinker is stored in the off-spec clinker silo, which is controlled by a baghouse (Equipment ID No. 481.BF330).

The clinker is then transferred to one of twelve clinker storage silos that were associated with the previous wet process cement plant. These transfer and storage operations are controlled by a total of six baghouses (Equipment ID Nos. 481.BF330, 481.BF540, 481.BF640, 481.BF740, 481.BF930, and F633).

Finish Mills

The Finish Mills Nos. 1, 3, 4 and 6 include a number of conveyors used to transfer clinker in and out of one or a series of ball mills. The ground clinker from the ball mills is transferred to cement separators for sizing of the product, using an air classification system. The processed clinker, now in a granular or powdered form, may then be cooled or sent directly to storage.

A total of twelve baghouses are used to control PM emissions from the conveyor systems and from the grinding operations (Equipment ID Nos. F113, F130, F313, F330, 533.BF340, F603,

F604, F605, F432, F430, 536.BF500 and 536.BF340). Three of the baghouses (533.BF340, F430, and 536.BF340) are part of the O'Sepa separator systems, and act as product conveyance/collection devices.

Cement Storage, Loadout and Packhouse

Cement from the finish mills is sent to storage silos. From the storage silos, the cement is transferred to one of several operations for delivery, including a combination rail/truck loadout, two truck-only loadouts, or a bagging operation (Packhouse).

PM emissions from the Cement Storage Silos (12) are controlled by five baghouses (Equipment ID Nos. F511, F512, F513, F514, and F515). Rail/Truck Loadout Unit #1 is controlled by a baghouse (Equipment ID No. B110); Truck Loadout Unit #2 is controlled by a baghouse (Equipment ID No. B210); Truck Loadout Unit #31 is controlled by three baghouses (Equipment ID Nos. B372, B374, and B382); and the Packhouse is controlled by three baghouse (Equipment ID Nos. BF120, BF205, and BF400).

RECEIVED

APR 18 2005

BUREAU OF AIR REGULATION

**APPLICATION TO INCREASE PRODUCTION
FOR PENNSUCO CEMENT PLANT
TITAN AMERICA, LLC
MEDLEY, FLORIDA**

**Prepared For:
Titan America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441**

**Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

April 2005

0537511

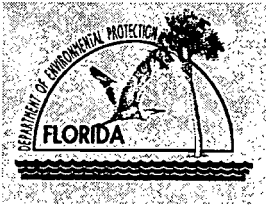
DISTRIBUTION:

4 Copies – FDEP

2 Copies – Titan America, Inc.

2 Copies – Golder Associates Inc.

APPLICATION



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: Titan America, LLC	
2. Site Name: Pennsuco	
3. Facility Identification Number: 0250020	
4. Facility Location...: Street Address or Other Locator: 11000 N.W. 121 Way City: Medley County: Dade Zip Code: 33178	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Scott Quaas, Environmental Manager	
2. Application Contact Mailing Address... Organization/Firm: Titan America, LLC Street Address: 455 Fairway Drive City: Deerfield Beach State: FL Zip Code: 33441	
3. Application Contact Telephone Numbers... Telephone: (954) 425-4165 ext. Fax: (954) 480-9352	
4. Application Contact Email Address: squaas@titanamerica.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	4-14-05
2. Project Number(s):	0250020-017-AE
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

Air construction permit.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this document is to modify the Pennsuko Cement Plant to increase the maximum clinker production rate from 1,642,500 to 2,190,000 TPY, and to modify the operational parameters necessary to accommodate this increase.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
026	Coal Handling System	AC1C	
027	Clinker Handling and Storage	AC1C	
010, 012, 013, 030	Finish Mill Nos. 1, 3, 4, and 6	AC1C	
028	Raw Mill and Pyroprocessing Unit	AC1C	
029	Raw Materials Handling	AC1C	
014, 015, 016	Cement Storage/Packhouse/Loadout	AC1C	

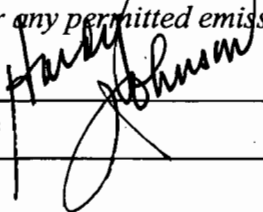
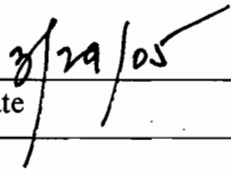
Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Hardy Johnson, President, Florida Division
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Tarmac America, LLC Street Address: 455 Fairway Drive City: Deerfield Beach State: FL Zip Code: 33441
3. Owner/Authorized Representative Telephone Numbers... Telephone: (954) 481-2800 ext. Fax: (954) 421-0296
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement: <i>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.</i>  _____ Signature  _____ Date

APPLICATION INFORMATION

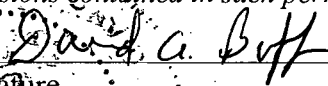
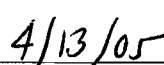
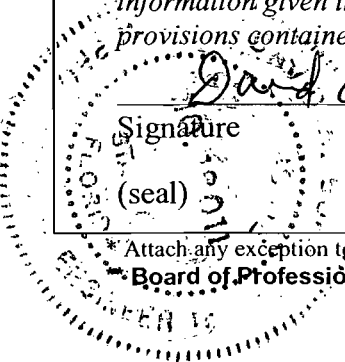
Application Responsible Official Certification

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:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> 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. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: <p>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.</p> <p>_____ Signature</p> <p>_____ Date</p>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 545 Fax: (352) 336-6603
4. Professional Engineer Email Address: dbuff@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  _____ Signature  _____ Date 

* Attach any exception to certification statement.

Board of Professional Engineers Certificate of Authorization #00001670

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 562.8 North (km) 2861.7		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 25/52/30 Longitude (DD/MM/SS) 80/22/30	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 32	6. Facility SIC(s): 3241, 3271, 3273
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Scott Quaas, Environmental Manager
2. Facility Contact Mailing Address... Organization/Firm: Titan America, LLC Street Address: 455 Fairway Drive City: Deerfield Beach State: FL Zip Code: 33441
3. Facility Contact Telephone Numbers: Telephone: (954) 425-4165 ext. Fax: (954) 480-9352
4. Facility Contact Email Address: squaas@titanamerica.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C1 <input type="checkbox"/> Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C3 <input type="checkbox"/> Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: <input checked="" type="checkbox"/> Attached, Document ID: Part B
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-CC3
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

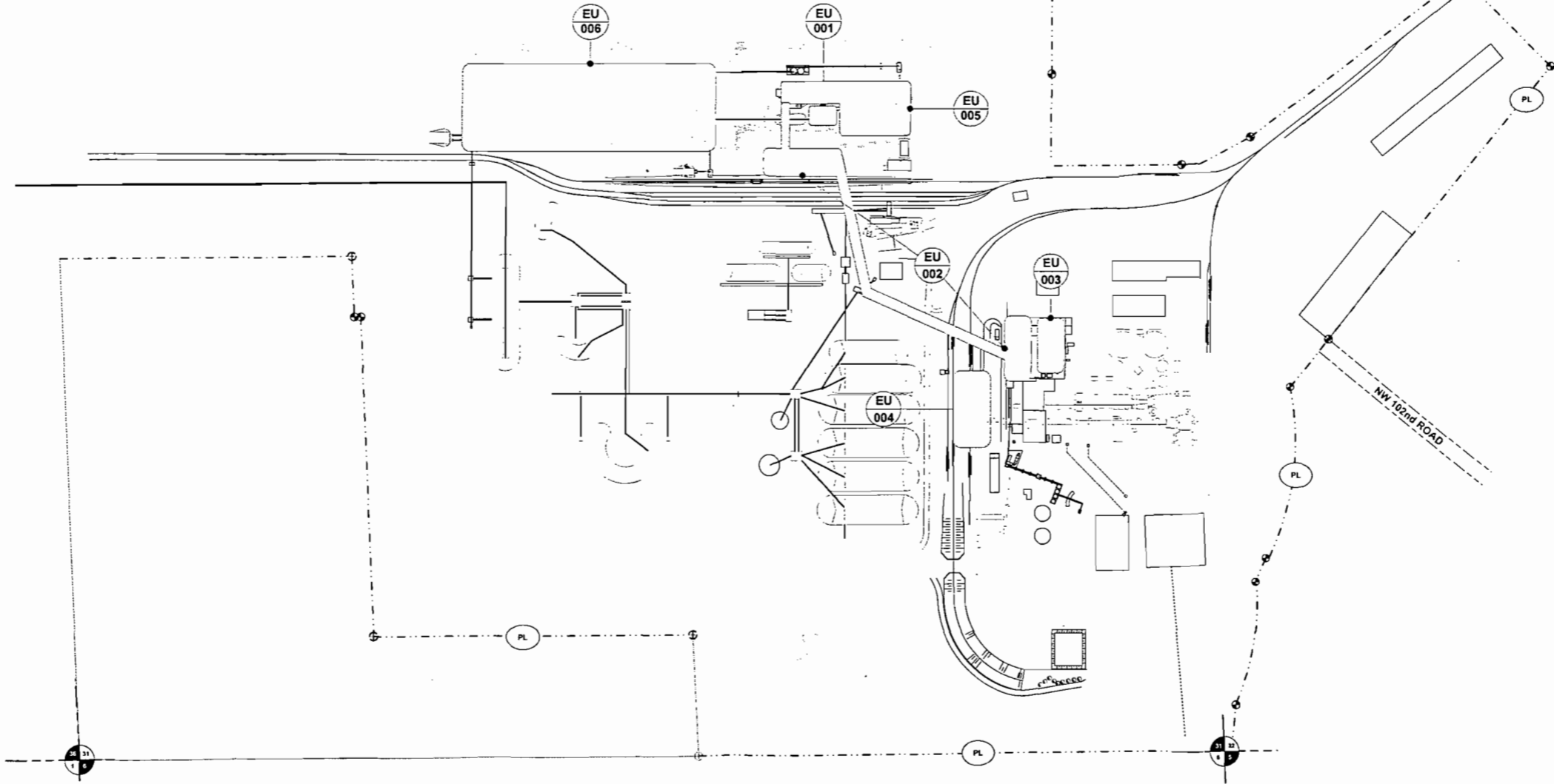
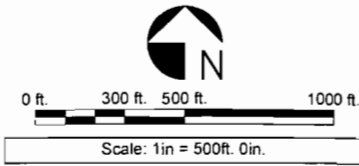
Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
 Attached, Document ID: _____
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
 Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____
 Equipment/Activities On site but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-FI-C1

FACILITY PLOT PLAN



DESCRIPTION

**FACILITY PLOT PLAN
PK5 CONSTRUCTION**

TITLE: **PENNSUCO CEMENT**

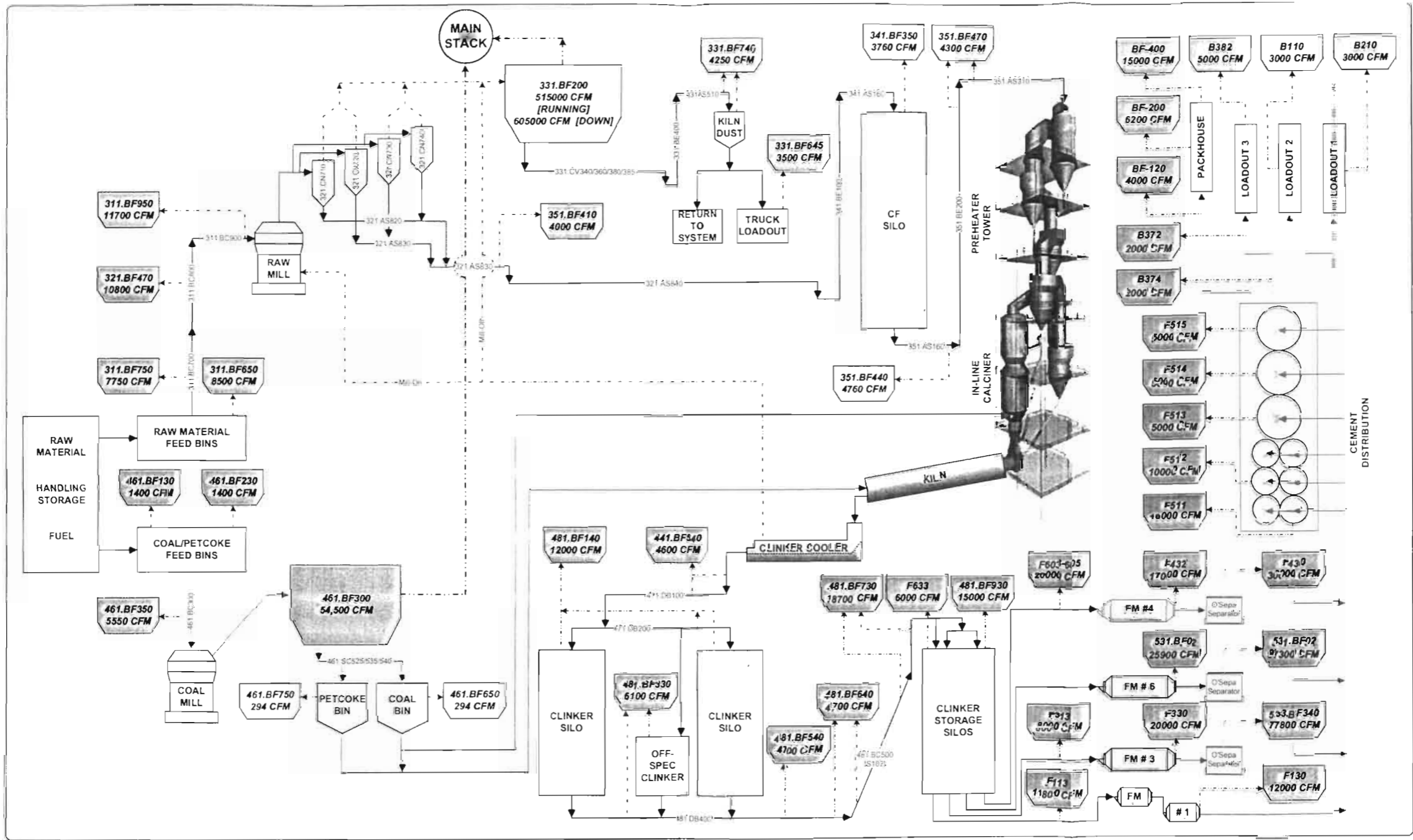
FILENAME: 0537511/4/4.4/TM-FI-C1

LAST REVISION DATE: 4/15/2005

Tarmac 
A Titan America Business

ATTACHMENT TM-FI-C2

PROCESS FLOW DIAGRAM



DESCRIPTION

**PROCESS
FLOW DIAGRAM**

TITLE: PENNSCO CEMENT

FILENAME: FL007-CEM-PK5 FLOWDIAGRAM.VSD

LAST REVISION DATE: 4/15/2005



ATTACHMENT TM-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER**

ATTACHMENT TM-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS
OF UNCONFINED PARTICULATE MATTER

The owner or operators shall not cause, let, permit, suffer, or allow the emissions of unconfined particulate matter (PM) from any source whatsoever, including, but not limited to, 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.

Titan will employ reasonable precautions to control emissions of unconfined PM. These reasonable precautions may include, but are not limited to, the following:

1. Paving and maintenance of roads, parking areas, and yards;
2. Applying water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
3. Applying asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stockpiles, and similar activities;
4. Removing PM from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne;
5. Confining abrasive blasting where possible;
6. Landscaping and planting of vegetation;
7. Using hoods, fans, filters, and similar equipment to contain, capture, and/or vent PM;
8. Enclosing or covering of conveyor systems;
9. Storing all materials, coal, and petroleum coke at the plant under roof on compacted clay or concrete or in enclosed vessels;
10. Locating water supply lines, hoses, and sprinklers near all unenclosed materials to prevent unconfined PM emissions; and
11. Installing tire wash for bulk transport trucks leaving the plant, to remove PM from vehicle tires before traveling on the facility's access roadways.

ATTACHMENT TM-FI-CC3

RULE APPLICABILITY ANALYSIS

ATTACHMENT TM-FI-CC3
RULE APPLICABILITY ANALYSIS

FACILITY

62-210.700(1) Excess Emissions
62-210.700(4) Excess Emissions
62-210.700(5) Excess Emissions
62-210.700(6) Excess Emissions
62-296.320(4) General Visible Emissions Std.
62-296.320(4)(c) - Unconfined Emissions
Dade County – Sec. 24-17
40 CFR 63.1353(a) – NESHAPs Subpart LLL- Notifications
40 CFR 63.1353(b) – NESHAPs Subpart LLL- Notifications
40 CFR 63.1354 – NESHAPs Subpart LLL - Reporting
40 CFR 63.1355 – NESHAPs Subpart LLL - Recordkeeping
40 CFR 63 – NESHAPs Subpart A – General Provisions

COAL HANDLING SYSTEM (EU ID No. 026)

40 CFR 60.11(b) General NSPS Requirements
40 CFR 60.11(c) General NSPS Requirements
40 CFR 60.11(d) General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.252(c) Subpart Y
40 CFR 60.254(a)
40 CFR 60.254(b)(2)
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
62-296.320(4)(a) Process Weight Table

CLINKER HANDLING AND STORAGE (EU ID No. 027)

62-296.320(4)(b) Visible Emissions
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

FINISH MILLS (EU ID Nos. 010, 012, 013, 030)

62-296.320(4)(a) Process Weight Standard
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1347 – NESHAPs Subpart LLL – Standards for Raw and Finish Mills
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring

- 40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
- 40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
- 40 CFR 63 – NESHAPs Subpart A – General Provisions

RAW MILL AND PYROPROCESSING (EU ID No. 028)

- 62-296.320(4)(a) Process Weight Table
- 62-296.407 Portland Cement Plants
- 62-296.507(4)(b)8 RACT Requirements for Major VOC and NO_x Emitting Facilities
- 40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
- 40 CFR 63.1343 – NESHAPs Subpart LLL – Standards for Kilns/Raw Mills
- 40 CFR 63.1344 – NESHAPs Subpart LLL – Operating Limits for Kilns/Raw Mills
- 40 CFR 63.1345 – NESHAPs Subpart LLL – Standards for Clinker Coolers
- 40 CFR 63.1347 – NESHAPs Subpart LLL – Standards for Raw and Finish Mills
- 40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
- 40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
- 40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
- 40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
- 40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
- 40 CFR 63 – NESHAPs Subpart A – General Provisions

RAW MATERIAL HANDLING (EU ID No. 029)

- Rule 62-297.620(4), F.A.C. - 5% Opacity Limit in Lieu of Stack Testing
- 40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
- 40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
- 40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
- 40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
- 40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
- 40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
- 40 CFR 63 – NESHAPs Subpart A – General Provisions

CEMENT STORAGE, LOADOUT AND PACKHOUSE (EU ID Nos. 014, 015, 016)

- Rule 62-297.620(4), F.A.C. - 5% Opacity Limit in Lieu of Stack Testing
- 40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
- 40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
- 40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
- 40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
- 40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
- 40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
- 40 CFR 63 – NESHAPs Subpart A – General Provisions

EMISSIONS UNIT INFORMATION

Section [1]
Coal Handling System

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

**Section [1]
Coal Handling System**

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Coal Handling System

3. Emissions Unit Identification Number: **026**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Emissions unit consists of Coal Handling System for the Pyroprocessing Operation, including coal/petcoke feed bins, coal mill, and storage bins.

EMISSIONS UNIT INFORMATION

**Section [1]
Coal Handling System**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (6)

Process Enclosure

2. Control Device or Method Code(s): **018, 054**

EMISSIONS UNIT INFORMATION

Section [1]
Coal Handling System

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 263,000
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: 24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment: Maximum process rate reflects coal/petroleum coke throughput.

EMISSIONS UNIT INFORMATION

**Section [1]
Coal Handling System**

**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: EU 026		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: See Attachment TM-EU1-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 420 feet	7. Exit Diameter: 14 feet	
8. Exit Temperature: 176 °F	9. Actual Volumetric Flow Rate: 54,500 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: 45,245 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Refer to Attachment TM-EU1-C15 for point specific data. Data above reflect coal mill exit gas emitted through main stack.			

EMISSIONS UNIT INFORMATION

Section [1]
 Coal Handling System

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 2**

1. Segment Description (Process/Fuel Type): Mineral Products; Bulk Material Stockpiles: Coal.		
2. Source Classification Code (SCC): 3-05-103-03		3. SCC Units: Tons Processed
4. Maximum Hourly Rate: 30	5. Maximum Annual Rate: 263,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum permitted 24-hour block average usage rate is 30 TPH. These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Mineral Products; Bulk Material Conveyors; Coal.		
2. Source Classification Code (SCC): 3-05-101-03		3. SCC Units: Tons Processed
4. Maximum Hourly Rate: 30	5. Maximum Annual Rate: 263,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum permitted 24-hour block average usage rate is 30 TPH. These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.		

EMISSIONS UNIT INFORMATION

Section [1]
Coal Handling System

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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: 7.51 lb/hour 10.2 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See note below Reference:		7. Emissions Method Code: 2	
8. Calculation of Emissions: Includes 0.71 lb/hr and 3.1 TPY from the baghouses, and 6.80 lb/hr and 7.1 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Table 3-3 and Appendix A of Part B.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1]
Coal Handling System

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 or 0.01 gr/dscf	4. Equivalent Allowable Emissions: 0.71 lb/hour 3.10 tons/year
5. Method of Compliance: EPA Method 9 Test.	
6. Allowable Emissions Comment (Description of Operating Method): Applies to baghouses only. See Table 2-1 in Part B for calculation of potential emissions. Note that Coal Mill emissions are included in allowable for Main Stack emissions.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.59 p^{0.62}	4. Equivalent Allowable Emissions: 29.6 lb/hour 116.7 tons/year
5. Method of Compliance: EPA Method 9 Test.	
6. Allowable Emissions Comment (Description of Operating Method): Applies to Coal Mill only. Calculated based on maximum 24-hour block average usage rates of 30 TPH and 263,000 TPY. However, emissions from the coal mill are controlled using a baghouse to 0.01 gr/dscf.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
Coal Handling System

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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: PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.1 lb/hour 5.6 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See note below Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: Includes 0.71 lb/hr and 3.1 TPY from the baghouses, and 2.39 lb/hr and 2.5 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses; see Table 2-1 in Part B. For fugitive PM emission calculations, see Table 3-3 and Appendix A of Part B.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Coal Handling System

Page [2] of [2]
Particulate Matter - PM₁₀

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 or 0.01 gr/dscf	4. Equivalent Allowable Emissions: 0.71 lb/hour 3.1 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applicable to baghouses only. Note that Coal Mill emissions are included in allowable for Main Stack emissions.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Applies to all baghouses. Coal Mill baghouse subject to 40 Part 60, Subpart Y.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Permit No. 0250020-016-AC. Applies to Coal Mill baghouse only (461.BF300).	

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Permit No. 0250020-016-AC. Applies to all baghouses except Coal Mill baghouse (461.BF300). Based on Rule 62-297.620(4) in lieu of stack testing.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part B <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Coal Handling System

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]

ATTACHMENT TM-EU1-C15

EMISSION POINT COMMENT

Attachment TM-EU1-C15. Summary of Stack Parameter Data for the Coal Handling System (EU 026)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Coal/pet coke feed bin	461.BF130	126	0.75 x 0.83	1,400	92
Coal/pet coke feed bin	461.BF230	126	0.75 x 0.84	1,400	92
Coal mill	461.BF300	420	14	54,500 ^a	176
Coal mill feed	461.BF350	75	1.00 x 1.25	5,500	92
Coal bin	461.BF650	67	0.42	294	178
Pet Coke bin	461.BF750	67	0.42	294	178

^a The coal mill vents through the plant main stack. Flow rate represents coal mill exhaust gas only.

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Clinker Handling and Storage

3. Emissions Unit Identification Number: **027**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: _____ MW

11. Emissions Unit Comment:
Emission unit consists of Clinker Handling and Storage systems for the Pyroprocessing Operation and Clinker Silos 2, 5, 12, 17-21, 23, 26, and 28.

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (8)

Process Enclosures

2. Control Device or Method Code(s): **018, 054**

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

**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: EU 027		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 8 baghouse stacks. See Attachment TM-EU2-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: H	6. Stack Height: 113 feet	7. Exit Diameter: feet	
8. Exit Temperature: 250 °F	9. Actual Volumetric Flow Rate: 18,700 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: 13,906 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Data presented above reflects Baghouse 481.BF730. Refer to Attachment TM-EU2-C15 for stack parameters for other baghouses.			

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Clinker Transfer.		
2. Source Classification Code (SCC): 3-05-006-16		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 250	5. Maximum Annual Rate: 2,190,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Note: maximum rates reflect transfer of clinker. Maximum hourly rate is 24-hour block average.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Clinker Storage Silos.		
2. Source Classification Code (SCC):		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 250	5. Maximum Annual Rate: 2,190,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Rates refer to tons of clinker produced. Maximum hourly rate is 24-hour block average.		

EMISSIONS UNIT INFORMATION

Section [2]
Clinker Handling and Storage

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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: 4.5 lb/hour 19.7 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.0095 gr/dscf or 0.01 gr/acf Reference: Manufacturer Design		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Table 2-2.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
Clinker Handling and Storage

Page [1] of [2]
Particulate Matter Total - PM

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 or 0.01 gr/dscf	4. Equivalent Allowable Emissions: 4.5 lb/hour 19.7 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): See Table 2-2 in Part B for potential emission calculations.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
Clinker Handling and Storage

Page [2] of [2]
Particulate Matter - PM₁₀

**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: PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 4.5 lb/hour 19.7 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: Assumed to be the same as PM emissions. See Table 2-2 in Part B for emission calculations.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
Clinker Handling and Storage

Page [2] of [2]
Particulate Matter - PM₁₀

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 or 0.01 gr/dscf	4. Equivalent Allowable Emissions: 4.5 lb/hour 19.7 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual VE test using EPA Method 9.	
5. Visible Emissions Comment: Based on Permit No. 0250020-016-AC and Rule 40 CFR 63.1348.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual VE test using EPA Method 9.	
5. Visible Emissions Comment: Based on Permit No. 0250020-016-AC. Based on Rule 62-297.620(4), in lieu of stack testing for PM.	

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part B <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Clinker Handling and Storage

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]

ATTACHMENT TM-EU2-C15

EMISSION POINT COMMENT

Attachment TM-EU2-C15. Summary of Stack Parameter Data for the Clinker Handling and Storage System (EU 027)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Clinker silos 21-23 and 26-28	F633	130	1.0 ^a	6,000	77
Clinker transfer	441.BF540	53	12 x 15	4,600	250
Clinker silos	481.BF140	185	19 x 13	12,000	250
Clinker transfer	481.BF540	44	12 x 15	4,700	250
Clinker bins	481.BF330	103	16 x 19	6,100	250
Clinker transfer	481.BF640	42	12 x 15	4,700	250
Clinker transfer	481.BF730	113	23 x 33	18,700	250
Clinker silos	481.BF930	113	20 x 30	15,000	250

^aDiameter of round stack.

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Finish Mill Nos. 1, 3, 4, and 6

3. Emissions Unit Identification Number: **010, 012, 013, and 030**

4. Emissions Unit Status Code: C	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
 Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Emission unit consists of Finish Mill Nos. 1 (EU 010), 3 (EU 012), 4 (EU 013), and 6 (EU 030).

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (12)

Process Enclosure

2. Control Device or Method Code(s): **018, 054**

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

**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: EU 010, 012, 013, 030		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 12 baghouse stacks. See Attachment TM-EU3-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V		6. Stack Height: 85 feet	
		7. Exit Diameter: 4.50 feet	
8. Exit Temperature: 169 °F		9. Actual Volumetric Flow Rate: 77,800 acfm	
		10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: 65,307 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack data representative of O-Sepa Separator baghouse stack on Finish Mill No. 3 (Equipment ID No. 533.BF340). Refer to Attachment TM-EU3-C15 for stack parameters for other baghouses.			

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Clinker Grinding.		
2. Source Classification Code (SCC): 3-05-006-17		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 359	5. Maximum Annual Rate: 3,144,840	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual rate based on 8,760 hours per year of operation. Maximum hourly rate is 24-hour block average.		

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:		

EMISSIONS UNIT INFORMATION

Section [3]
 Finish Mill Nos. 1, 3, 4, and 6

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
 Particulate Matter Total - PM

**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: 24.3 lb/hour 106.5 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Part B, Table 2-3 Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Table 2-3.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [3]
Finish Mill Nos. 1, 3, 4, and 6

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/dscf	4. Equivalent Allowable Emissions: 10.65 lb/hour 46.66 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to all baghouses except Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses. See Part B, Table 2-3 for emission calculations.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 13.66 lb/hour 59.83 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Permit limit applies to Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses 531.BF01 and 531.BF02. See Part B, Table 2-3 for emission calculations.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
 Finish Mill Nos. 1, 3, 4, and 6

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
 Particulate Matter - PM₁₀

**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: PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 24.3 lb/hour 106.5 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: Assumed to be the same as PM emissions; see Part B, Table 2-3.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]
Finish Mill Nos. 1, 3, 4, and 6

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/dscf	4. Equivalent Allowable Emissions: 10.65 lb/hour 46.66 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to all baghouses except Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses. See Part B, Table 2-3 for emission calculations.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 13.66 lb/hour 59.83 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Permit limit applies to Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses 531.BF01 and 531.BF02. See Part B, Table 2-3 for emission calculations.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual visible emissions test using EPA Method 9.	
5. Visible Emissions Comment: BACT determination from Permit PSD-FL-236 for Finish Mill No. 4 only. Also applicable to all baghouses per Rule 62-297.620(4) in lieu of stack testing.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: 40 CFR 63.1347. MACT, applicable to all Finish Mills.	

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual visible emissions test using EPA Method 9.	
5. Visible Emissions Comment: Applies to Finish Mill No. 1. Rule 62-296.320(4)(b).	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part B <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Finish Mill Nos. 1, 3, 4, and 6

Additional Requirements Comment

[Empty box for Additional Requirements Comment]

ATTACHMENT TM-EU3-C15

EMISSION POINT COMMENT

Attachment TM-EU3-C15. Summary of Stack Parameter Data for the Finish Mills (EU 010, 012, 013, 030)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Finish Mill No. 1 Baghouse	F113	106	1.00	11,800	110
Finish Mill No. 1 Baghouse	F130	106	1.00	12,000	110
Finish Mill No. 3 Baghouse	F330	106	1.50	20,000	110
Finish Mill No. 3 Baghouse	F332	106	1.50	13,500	110
Finish Mill No. 3 Baghouse	533.BF340	84.6	4.50	77,800	169
Finish Mill No. 4 Baghouse	F432	106	2.00	17,000	110
Finish Mill No. 4 Baghouse	F605	106	2.00	4,000	110
Finish Mill No. 4 Baghouse	F603	106	1.00	8,000	110
Finish Mill No. 4 Baghouse	F430	106	1.00	30,000	110
Finish Mill No. 4 Baghouse	F604	106	1.00	8,000	110
Finish Mill No. 6 Baghouse	531.BF01	--	--	97,300	110
Finish Mill No. 6 Baghouse	531.BF02	--	--	25,900	110

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Raw Mill and Pyroprocessing Unit

3. Emissions Unit Identification Number: **028**

4. Emissions Unit Status Code:
A

5. Commence Construction Date:

6. Initial Startup Date:

7. Emissions Unit Major Group SIC Code:
32

8. Acid Rain Unit?
 Yes
 No

9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

Pyroprocessing consists of the preheater/calcliner, kiln, and cooler.

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (7)

Process Enclosure

2. Control Device or Method Code(s): **016, 054**

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

**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: 028		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 7 baghouse stacks. See Attachment TM-EU4-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 420 feet	7. Exit Diameter: 14 feet	
8. Exit Temperature: 294 °F	9. Actual Volumetric Flow Rate: 515,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Data for main stack. Representative of clinker production with raw mill operating. With raw mill down, parameters are 605,000 acfm @ 500°F. See Attachment TM-EU4-C15 for stack parameters for other sources.			

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 8**

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Raw Material Grinding and Drying.		
2. Source Classification Code (SCC): 3-05-006-13		3. SCC Units: Raw Feed Produced
4. Maximum Hourly Rate: 425 (dry)	5. Maximum Annual Rate: 3,723,000 (dry)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Segment refers to raw dry feed produced from raw mill, based on 250 TPH clinker production.		

Segment Description and Rate: Segment 2 of 8

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Kilns.		
2. Source Classification Code (SCC): 3-05-006-06		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 250	5. Maximum Annual Rate: 2,190,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Segment refers to clinker production. Maximum hourly rate is 24-hour block average.		

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 3 of 8**

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing; Dry Process; Clinker Cooler.		
2. Source Classification Code (SCC): 3-05-006-14		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 250	5. Maximum Annual Rate: 2,190,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Segment refers to clinker through clinker cooler.		

Segment Description and Rate: Segment 4 of 8

1. Segment Description (Process/Fuel Type): In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer (Bituminous Coal).		
2. Source Classification Code (SCC): 3-90-002-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 30	5. Maximum Annual Rate: 263,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 3.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 25
10. Segment Comment: Maximum annual rate based on 2,190,000 TPY clinker. Maximum hourly rate is 24-hour block average. Includes coal and petroleum coke.		

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 5 of 8

1. Segment Description (Process/Fuel Type): In-process Fuel Use; Industrial Processes; General-Coke.		
2. Source Classification Code (SCC): 3-90-008-99		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 20.3	5. Maximum Annual Rate: 177,828	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 5.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 28.4
10. Segment Comment: Refers to petroleum coke.		

Segment Description and Rate: Segment 6 of 8

1. Segment Description (Process/Fuel Type): In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 2 Fuel Oil with Used Oil Blend.		
2. Source Classification Code (SCC): 3-90-005-02		3. SCC Units: 1,000 Gallons Burned
4. Maximum Hourly Rate: 4.86	5. Maximum Annual Rate: 31,914	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 138.8
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 7 of 8**

1. Segment Description (Process/Fuel Type): In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 6 Fuel Oil with Used Oil Blend.		
2. Source Classification Code (SCC): 3-90-004-02		3. SCC Units: 1,000 Gallons Burned
4. Maximum Hourly Rate: 4.44	5. Maximum Annual Rate: 29,185	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.0	8. Maximum % Ash:	9. Million Btu per SCC Unit: 152
10. Segment Comment:		

Segment Description and Rate: Segment 8 of 8

1. Segment Description (Process/Fuel Type): In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer; Natural Gas.		
2. Source Classification Code (SCC): 3-90-006-02		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.68	5. Maximum Annual Rate: 4,436	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,000
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [1] of [8]
Sulfur Dioxide - SO₂

**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: 320 lb/hour 806 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See Below Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: 1.28 lb SO ₂ /ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 320 lb SO ₂ /hr 0.736 lb SO ₂ /ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 806 TPY SO ₂	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Part B, Table 2-6.	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [1] of [8]
Sulfur Dioxide - SO₂

**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 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 320 lb/hr	4. Equivalent Allowable Emissions: 320 lb/hour tons/year
5. Method of Compliance: SO₂ CEMS	
6. Allowable Emissions Comment (Description of Operating Method): *Allowable emissions on a 24-hour average basis.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.736 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 806 tons/year
5. Method of Compliance: SO₂ CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Annual limit based on 12-month rolling average.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.2 lb/MMBtu	4. Equivalent Allowable Emissions: 810 lb/hour tons/year
5. Method of Compliance: EPA Method 6	
6. Allowable Emissions Comment (Description of Operating Method): Additional SO₂ limit when liquid fuel is fired (24-hour average). Miami-Dade Co. Code, Section 24-17(2)(a).	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [1] of [8]
Sulfur Dioxide - SO₂

**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 4 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.8 lb/MMBtu	4. Equivalent Allowable Emissions: 540 lb/hour tons/year
5. Method of Compliance: EPA Method 6	
6. Allowable Emissions Comment (Description of Operating Method): Additional SO₂ limit when liquid fuel is fired (24-hour average). Miami-Dade Co. Code, Section 24-17(2)(a).	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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: 39.85 lb/hour 174.5 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Comment Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Tables 2-5 and 2-6.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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 4

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.090 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 38.3 lb/hour 167.5 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from main stack only.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.3 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 127.5 lb/hour 558.5 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.1344. For kiln only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 42.5 lb/hour 186.2 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.1345. For cooler only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [2] of [8]
Particulate Matter Total - PM

**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 4 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 1.6 lb/hour 7.0 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from baghouses other than main stack baghouse 331.BF200.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [3] of [8]
Particulate Matter - PM₁₀

**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: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 33.7 lb/hour 147.7 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Part B, Table 2-5 Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Tables 2-5 and 2-6.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [3] of [8]
Particulate Matter - PM₁₀

**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 2

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.076 lb/ton dry Kiln feed	4. Equivalent Allowable Emissions: 32.1 lb/hour 140.7 tons/year
5. Method of Compliance: Annual Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from main stack only. See Part B, Tables 2-5 and 2-6.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 100 percent of PM	4. Equivalent Allowable Emissions: 1.6 lb/hour 7.0 tons/year
5. Method of Compliance: Annual Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to emissions from baghouses other than main stack baghouse 331.BF200.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [4] of [8]
Dioxin/Furans - DIOX

**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: DIOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.46x10⁻⁷ lb/hour 1.51x10⁻⁶ tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.4 ng/dscm @ 7% O₂ Reference: 40 CFR 63.1343(b)(3)	7. Emissions Method Code: 0
8. Calculation of Emissions: 0.4 ng TEQ/dscm x (1 lb/454g) x (1 g/10⁹ ng) x 230,911 dscf/min x (m³/35.3 ft³) x 60 min/hr = 3.46x10⁻⁷ lb/hr 3.46x10⁻⁷ lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1.51x10⁻⁶ TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Emissions are from main stack. Flow rate based on 360,637 dscfm @ 12% O₂ = 230,911 dscfm @ 7% O₂.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [4] of [8]
Dioxin/Furans - DIOX

**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

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.4 ng/dscm @ 7% O₂	4. Equivalent Allowable Emissions: 3.46x10⁻⁷ lb/hour 1.51x10⁻⁶ tons/year
5. Method of Compliance: EPA Method 23	
6. Allowable Emissions Comment (Description of Operating Method): Based on limit in Permit No. 0250020-010-AC and Rule 40 CFR 63.1343(b)(3).	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [5] of [8]
Nitrogen Oxides - NO_x

**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:
3. Potential Emissions: 720 lb/hour 2,300 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See Below Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: 2.88 lb NO_x/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 720 lb NO_x/hr 2.1 lb NO_x/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 2,300 TPY NO_x	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [5] of [8]
Nitrogen Oxides - NO_x

**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 3

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 720 lb/hr, 24-hr average	4. Equivalent Allowable Emissions: 720 lb/hour tons/year
5. Method of Compliance: NO_x CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Proposed permit limit. Equivalent allowable emissions are emissions out of main stack.	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.1 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 2,300 tons/year
5. Method of Compliance: NO_x CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Annual limit in lb/ton based on 12-month rolling average.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.0 lb/MMBtu	4. Equivalent Allowable Emissions: 1,350 lb/hour 5,913 tons/year
5. Method of Compliance: NO_x CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit based on Rule 62-296.570(4)(b)8. Maximum heat input is 675 MMBtu/hr.	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [6] of [8]
Carbon Monoxide - CO

**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: 575 lb/hour 1,456 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See Below Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: 2.3 lb CO/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 575 lb CO/hr 1.33 lb CO/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 1,456 TPY CO	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

Page [6] of [8]
Carbon Monoxide - CO

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.3 lb/ton CP	4. Equivalent Allowable Emissions: 575 lb/hour tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Allowable based on 24-hour block average. Annual average limit is 1.33 lb/ton clinker product.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.33 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 1,456 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Annual limit in lb/ton clinker based on 12-month rolling average.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [7] of [8]
Volatile Organic Compounds - VOC

**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: 40 lb/hour 153 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Permit Limit Reference: Permit No. 0250020-016-AC	7. Emissions Method Code: 0
8. Calculation of Emissions: 0.16 lb VOC/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 40 lb/hr 0.14 lb VOC/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 153 TPY VOC	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [7] of [8]
Volatile Organic Compounds - VOC

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 40 lb/hr	4. Equivalent Allowable Emissions: 40 lb/hour tons/year
5. Method of Compliance: VOC CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Allowable based on 24-hour block average.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: ESC PSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.14 lb/ton clinker	4. Equivalent Allowable Emissions: lb/hour 153 tons/year
5. Method of Compliance: VOC CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit in lb/ton clinker based on 12-month rolling average.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
Raw Mill and Pyroprocessing Unit

POLLUTANT DETAIL INFORMATION

Page [8] of [8]
Sulfuric Acid Mist - SAM

**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: SAM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 2.70 lb/hour 11.8 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.0108 lb/ton clinker Reference: Vendor Information	7. Emissions Method Code: 2
8. Calculation of Emissions: 0.0108 lb SAM/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 2.70 lb/hr 0.0108 lb SAM/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 11.8 TPY SAM	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATIONSection [4]
Raw Mill and Pyroprocessing Unit**POLLUTANT DETAIL INFORMATION**Page [8] of [8]
Sulfuric Acid Mist - SAM**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0108 lb/ton clinker	4. Equivalent Allowable Emissions: 2.70 lb/hour 11.8 tons/year
5. Method of Compliance: EPA Methods 5 and 8	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: COMS or EPA Method 9.	
5. Visible Emissions Comment: Rule 40 CFR 63.1342 for the main/common stack and 40 CFR 63.1348 for the other baghouse stacks.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 4

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: 40 CFR 63, Subpart LLL.	

Continuous Monitoring System: Continuous Monitor 2 of 4

1. Parameter Code: NO_x	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Required by permit condition.	

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **4**

1. Parameter Code: SO₂	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Required by permit condition.	

Continuous Monitoring System: Continuous Monitor **4** of **4**

1. Parameter Code: VOC	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Required by permit condition.	

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-EU4-I2 <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part B <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]

Raw Mill and Pyroprocessing Unit

Additional Requirements Comment

--

ATTACHMENT TM-EU4-C15

EMISSION POINT COMMENT

Attachment TM-EU4-C15. Summary of Stack Parameter Data for the Raw Mill and Pyroprocessing System (EU 028)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Kiln/Cooler/Raw Mill	331.BF200	420	14	515,000 ^a	294 ^a
Kiln Dust bin	331.BF740	125	1.00 x 1.25	4,250	300
Clinker Feed Blend silo	341.BF350	241	0.92 x 1.08	3,760	178
Raw feed transfer	351.BF410	84	0.92 x 1.08	4,000	178
Raw feed transfer	351.BF440	45	1.00 x 1.25	4,760	178
Raw feed transfer	351.BF470	353	1.00 x 1.25	4,100	175
Kiln Dust Truck Loadout	331.BF645	46	0.83	3,500	175

^aWhen raw mill is operating; parameters are 605,000 acfm and 500°F when raw mill is down.

ATTACHMENT TM-EU4-I2

FUEL ANALYSIS OR SPECIFICATION

Attachment TM-EU4-12. Fuel Analysis Specification

Parameter	No. 6 Residual Fuel Oil	Coal	Petroleum Coke	No. 2 Distillate Fuel Oil
Moisture	--	8.5%	12%	--
Density	8.0 lb/gal	--	--	7.2 lb/gal
Heating Value	152,000 Btu/gal	12,500 Btu/lb	14,200 Btu/lb	138,800 Btu/gal
Nitrogen	0.5%	1.1%	--	0.5%
Sulfur	2% Max	3.5%	5.5%	0.5% Max
Ash/Inorganic	0-10	20%	1.0%	0-10

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Raw Material Handling

3. Emissions Unit Identification Number: **029**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Raw material feed storage silos and handling.

EMISSIONS UNIT INFORMATION

**Section [5]
Raw Material Handling**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (4)

Process Enclosures

2. Control Device or Method Code(s): **018, 054**

EMISSIONS UNIT INFORMATION

Section [5]

Raw Material Handling

**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: EU 029		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 4 baghouses. See Attachment TM-EU5-C15.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: H	6. Stack Height: 92 feet		7. Exit Diameter: 1.58 x 1.58 feet
8. Exit Temperature: 92 °F	9. Actual Volumetric Flow Rate: 8,500 acfm		10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: 8,130 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters are for Baghouses 311.BF650. See Attachment TM-EU5-C15 for stack parameters of other baghouses.			

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Raw Material Transfer		
2. Source Classification Code (SCC): 3-05-006-12		3. SCC Units: Tons Transferred or Handled
4. Maximum Hourly Rate: 425	5. Maximum Annual Rate: 3,723,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Process rate is material feed on a dry basis. Equivalent to 250 TPH and 2,190,000 TPY clinker production.		

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:		

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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: 18.01 lb/hour 28.63 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference: Applicant Request		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Table 2-7 and Part B, Appendix A. Includes 2.97 lb/hr and 13.00 TPY from baghouses, and 15.04 lb/hr and 15.63 TPY of fugitive PM emissions from raw material handling.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 2.97 lb/hour 13.0 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to the baghouses only.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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: PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 8.24 lb/hour 18.48 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: See Part B, Table 2-7 and Part B, Table A-3. Includes 2.97 lb/hr and 13.00 TPY of PM emissions from the baghouses, and 5.27 lb/hr and 5.48 TPY of fugitive PM emissions from raw material handling.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 2.97 lb/hour 13.0 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Applies to baghouses only.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [5]

Raw Material Handling

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Opacity limitation of 5 percent in lieu of stack testing; applies to baghouses only. Rule 62-297.620(4), F.A.C.	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.320(4)(b). Applies to sources other than baghouse exhausts.	

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: 40 CFR 63.1348 for baghouse stacks.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [5]
Raw Material Handling

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [5]

Raw Material Handling

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part B <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

**Section [5]
Raw Material Handling**

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [5]

Raw Material Handling

Additional Requirements Comment

ATTACHMENT TM-EU5-C15

EMISSION POINT COMMENT

Attachment TM-EU5-C15. Summary of Stack Parameter Data for the Raw Material Handling and Storage (EU 029)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Raw Material Feed Bins	311.BF650	92	19 x 19	8,500	92
Raw Material Feed Bins	311.BF750	17	18 x 27	7,750	92
Raw Material Feed Bins	321.BF470	100	17 x 21	10,800	108
Raw Material Feed Bins	311.BF950	68	20 x 30	11,700	108

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Cement Storage Silos 1-12, Packhouse & Bulk Loadout Units 1-3

3. Emissions Unit Identification Number: **014, 015, and 016**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 32	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Original ARMS ID Nos. are 014, 016, and 015, for the Cement Silos, Packhouse, and Bulk Loadout units Nos. 1, 2, and 3, respectively.

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouses (13)

Process Enclosures

2. Control Device or Method Code(s): **018, 054**

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

**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: EU 014, 015, 016		2. Emission Point Type Code: 3			
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: 13 baghouses. See Attachment TM-EU6-C15.					
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:					
5. Discharge Type Code: V		6. Stack Height: 200 feet		7. Exit Diameter: 1 feet	
8. Exit Temperature: 200 °F		9. Actual Volumetric Flow Rate: 18,000 acfm		10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: 45,245 dscfm			12. Nonstack Emission Point Height: feet		
13. Emission Point UTM Coordinates... Zone: East (km): North (km):			14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)		
15. Emission Point Comment: Stack parameters are for Baghouses F-511. Refer to Attachment TM-EU6-C15 for stack parameters of other baghouses.					

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing Dry Process; Cement storage silos		
2. Source Classification Code (SCC): 3-05-006-18		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 500	5. Maximum Annual Rate: 2,400,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Hourly rate refers to combined rate to all cement silos as stated in Permit No. 0250020-016-AC. Annual rate reflects total cement production from 2,190,000 TPY of clinker production.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Mineral Products; Cement Manufacturing Dry Process; Cement Loadout		
2. Source Classification Code (SCC): 3-05-006-19		3. SCC Units: Tons Cement Produced
4. Maximum Hourly Rate: 500	5. Maximum Annual Rate: 2,400,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Hourly rate refers to combined rate to all cement Loadout units as stated in Permit No. 0250020-016-AC. Annual rate reflects total cement production from 2,190,000 TPY clinker production. Packhouse loadout rate limited to 170 tons/hr.		

EMISSIONS UNIT INFORMATION

Section [6]
Cement Storage, Packhouse & Loadout

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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: 7.13 lb/hour 31.2 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.01 gr/acf Reference: Manufacturer Info.		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Table 2-4.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [6]
Cement Storage, Packhouse & Loadout

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter Total - PM

**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

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/acf	4. Equivalent Allowable Emissions: 7.13 lb/hour 31.2 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [6]
Cement Storage, Packhouse & Loadout

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 7.13 lb/hour 31.2 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.01 gr/acf Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: See Part B, Table 2-4.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [6]
Cement Storage, Packhouse & Loadout

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Particulate Matter - PM₁₀

**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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/acf	4. Equivalent Allowable Emissions: 7.13 lb/hour 31.2 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/acf	4. Equivalent Allowable Emissions: 0.52 lb/hour 2.26 tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit applies only to Cement Silos 7-9, Baghouse F-512, per PSD-FL-236.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: 5-percent opacity in lieu of stack test. Rule 62-297.620(4), F.A.C.	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual VE test, EPA Method 9	
5. Visible Emissions Comment: 40 CFR 63.1348.	

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-FI-C2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: TM-EU6-I3 <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable <p>Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.</p>
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [6]

Cement Storage, Packhouse & Loadout

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]

ATTACHMENT TM-EU6-B6

OPERATING CAPACITY COMMENT

Table TM-EU6-B6. Individual Maximum Process Rates for Cement Storage/Loadout/Packhouse
(EU ID 004), Titan America, Pennsuco.

Source	Maximum Operating Hours (hr/yr)	Maximum Process Rate	
		(TPH)	(TPY) (a)
Cement Silos 1-6	8,760	500	2,400,000
Cement Silos 7-9	8,760	500	2,400,000
Cement Silo 10-12	8,760	500	2,400,000
Bulk Loadout Unit 1	8,760	500	2,400,000
Bulk Loadout Unit 2	8,760	500	2,400,000
Bulk Loadout Unit 3	8,760	500	2,400,000
Packhouse	8,760	170	1,489,200

(a) Represents hourly process rate times 8,760 hr/yr, or 2,400,000 TPY total cement production, whichever is less.

Notes:

Process rate limit for all silo's combined is 500 TPH.

Process rate limit for all loadout unit's combined is 500 TPH.

ATTACHMENT TM-EU6-C15

EMISSION POINT COMMENT



Pennsuco Cement
Cement Storage/Loadout/Packhouse Baghouse Descriptions

Attachment TM-EU6-C15.

Summary of Stack Parameter Data for the Cement Storage/Loadout/Packhouse Baghouses

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter ^a (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Cement Silos 1-6	F-511	200	1	18,000	200
Cement Silos 7-9	F-512	200	1	10,000	200
Cement Silo 10	F-513	200	1	5,000	200
Cement Silo 11	F-514	200	1	5,000	200
Cement Silo 12	F-515	200	1	5,000	200
Bulk Loadout - Unit 1	B-110	30	1	3,000	200
Bulk Loadout - Unit 2	B-210	30	1	3,000	200
Bulk Loadout - Unit 3	B-372	12	1	2,000	200
Bulk Loadout - Unit 3	B-374	12	1	2,000	200
Bulk Loadout - Unit 3	B-382	86	1	5,000	200
Packhouse	BF-120	30	1.5	4,000	275
Packhouse	BF-200	60	1.5	6,200	275
Packhouse	BF-400	50	1.5	15,000	250

^a Stack for baghouses B-110 and B-210 are circular; all other baghouse stacks are rectangular. For rectangular stacks, approximate effective stack diameter is shown.

ATTACHMENT TM-EU6-I3

**DETAILED DESCRIPTION
OF CONTROL EQUIPMENT**

Attachment TM-EU6-I3a. Control Equipment Information for Cement Storage and Loadout Baghouses, Titan America, Pennsco

Source ID	Baghouse ID	Manufacturer	Model No.	Number of Bags	Flow Rate (acfm)	Cloth Area (ft ²)	Air to Cloth Ratio
Cement Silos 1-6	F-511	Fuller	2 zone #78	156	18,000	1,625	11.1
Cement Silos 7-9	F-512	Norblo	156 AMT	156	10,000	2,142	4.7
Cement Silo 10	F-513	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Cement Silo 11	F-514	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Cement Silo 12	F-515	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Bulk Loadout Unit 1	B-110	Norblo	120 AMT	120	3,000	1,650	1.8
Bulk Loadout Unit 2	B-210	Norblo	120 AMT	120	3,000	1,650	1.8
Bulk Loadout Unit 3 Line 1	B-372	Mikropul	36S-8-30-C	36	2,000	340	5.9
Bulk Loadout Unit 3 Line 2	B-374	Mikropul	36S-8-30-C	36	2,000	340	5.9
Bulk Loadout Unit 3 Airslide	B-382	Mikropul	121S-10-20C	121	5,000	1,424	3.5



Pennsuco Cement
Packhouse Baghouse Descriptions

Attachment TM-EU6-I3b.
 Control Equipment Information for Packhouse

	BF-120	BF-200	BF-400
ID No:	100TA8	144TA8	304C10
Model:	100TA8	144TA8	304C10
Make:	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "C" Series Jet Pulse
Design Air Volume:	4,000 acfm	6,200 acfm	15,000 acfm
Design Air Temperature:	275°F Max.	275°F Max.	250°F
Dust:	Cement	Cement	Cement
Inlet Grain Loading:	= 5.0 grains per ACF	= 5.0 grains per ACF	= 5.0 grains per ACF
Outlet Grain Loading:	0.01 grains per ACF	0.01 grains per ACF	0.01 grains per ACF
Total Filter Area:	1,047 ft ²	1,508 ft ²	3,958 ft ²
Air to Cloth Ratio:	3.82:1	4.11 to 1	3.8 to 1
Interstitial Velocity:	140 FPM	158 FPM	
Baghouse Foot Print:	6' 2½" x 6' 2½"	7' 6½" x 7' 4½"	11' - 11" x 9' - 6"
Overall Height:	23' 5" from hopper flange to top of Handrail	15' 10" from hopper flange to top of Handrail	34' - 1"
Compressed Air Used:	10 to 20 scfm @90 psig and 200 milliseconds	15 to 30 scfm @ 90 psig and 200 milliseconds	
Filter Access:	Top	Top	Side
Filter Quantity:	100 bags	144 bags	304 bags
Filter Size:	5" Diameter x 96" long	5" Diameter x 96" long	5" Diameter x 120" long
Design Pressure:	+/- 20" w.c.	+/- 20" w.c.	+/- 20" w.c.

PART B

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 PROJECT DESCRIPTION.....	3
2.1 COAL HANDLING.....	3
2.2 CLINKER HANDLING AND STORAGE	5
2.3 FINISH MILLS.....	5
2.4 CEMENT STORAGE, LOADOUT AND PACKHOUSE.....	6
2.5 RAW MILL AND PYROPROCESSING UNIT.....	6
2.6 RAW MATERIAL HANDLING.....	7
3.0 SOURCE APPLICABILITY	8
3.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS.....	8
3.2 NEW SOURCE PERFORMANCE STANDARDS.....	8
3.3 FLORIDA EMISSION STANDARDS.....	9
3.4 MODIFICATION/PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW	9
3.4.1 REQUIREMENTS.....	9
3.4.2 PSD APPLICABILITY.....	10
4.0 SUMMARY OF PERMIT LIMITS FOR MAIN STACK	12

TABLES

Table 2-1	Coal Handling System (EU ID No. 026) Potential Emission Rates
Table 2-2	Clinker Handling and Storage System (EU ID No. 027) Potential Emission Rates
Table 2-3	Finish Mills (EU ID Nos. 010, 012, 013, and 030) Potential Emission Rates
Table 2-4	Cement Storage/Loadout/Packhouse (EU ID Nos. 014, 015, and 016) Potential Emission Rates
Table 2-5	Raw Mill and Pyroprocessing Unit System (EU ID No. 028) Potential PM/PM ₁₀ Emission Rates
Table 2-6	Dry Kiln, Cooler, and Raw Mill (EU ID No. 028) Potential Emissions Vented from the Main Stack
Table 2-7	Raw Material Handling and Storage System (EU ID No. 006) Potential Emission Rates
Table 3-1	PSD Significant Emission Rates and <i>De Minimis</i> Monitoring Concentrations
Table 3-2	Future Maximum Annual Emissions from Material Handling Point Sources, Titan, Pennsuco

TABLE OF CONTENTS

Table 3-3	Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Titan
Table 3-4	Net Change in Emissions and PSD Significant Emission Rates, Titan Cement Plant Modification

APPENDICES

Appendix A	Future Fugitive Dust Emissions
Appendix B	Basis of Original Baseline Emission Calculations from June 1998 Application

1.0 INTRODUCTION

Titan America Inc. (formally Tarmac) currently operates a Portland cement plant located in Medley, Dade County, Florida, near Miami. The dry process cement plant was constructed under Air Construction Permit No. 0250020-010-AC, issued by Miami-Dade County Department of Environmental Resources Management (DERM) on May 1, 2001.

In March 2004, Titan submitted an application to modify Air Construction Permit No. 0250020-010-AC to reflect the final engineering and actual equipment installed at the Pennsuco facility. That application included the following revisions to Air Construction Permit No. 0250020-010-AC:

1. Retention of Finish Mills Nos. 1 and 2 (at that time, Titan did not intend to install Finish Mill No. 6);
2. Construction of a new O-Sepa System on Finish Mill No. 3;
3. Revisions to the new clinker storage silo transfer system; and
4. Corrections to the physical and operating parameters for a number of baghouses currently contained in the referenced Air Construction Permits to reflect the actual equipment to be installed.

On February 7, 2005, after a series of correspondence between the Florida Department of Environmental Protection (FDEP) and Titan regarding this application, Golder Associates Inc. (Golder) submitted a letter to FDEP summarizing a number of facility or operational modifications to the pending construction permit application, including the following:

1. Removal of the majority of emissions from the Coal Mill from Emission Unit 001, since these emissions are vented to the Main Stack which is part of Emission Unit 005. Since the emission limit for the Main Stack is a function of the amount of dry kiln feed, Titan requested that the Coal Mill be permitted to operate for 400 hours when the kiln was down. Emissions associated with this 400 hours of operation were retained in Emission Unit 001.
2. Removal of Baghouse Nos. K347 and K447 associated with the Clinker Handling System (Emission Unit 002).
3. Modification of the operation of the finish mills to include Finish Mill Nos. 1, 3, 4, and 6.

A draft construction permit for these modifications was issued by FDEP on April 5, 2005 (Permit No. 0250020-016-AC).

The purpose of the current application is to modify Air Construction Permit No. 0250020-016-AC to increase the permitted production rate of clinker from 1,642,500 to 2,190,000 tons per year (TPY). This will in turn increase the finished cement production rate to a maximum of 2,400,000 TPY. To accommodate the increased production rate, an increase in the permitted operating hours for several emission units will be required. No change to the maximum permitted 24-hour clinker production rate of 250 tons per hour (TPH) is being requested. However, the operating hours of all sources permitted to operate less than 8,760 hours per year (hr/yr) (for example, the Finish Mills and Packhouse) have been increased to 8,760 hr/yr to accommodate the increase in annual clinker and cement production.

In order to not increase overall facility particulate matter (PM) emissions from those in Permit No. 0250020-016-AC, the PM emission limit for the main stack (coal mill and raw mill/kiln/cooler emission point) is being reduced. In addition, final baghouse specifications for the Packhouse are reflected in the application.

This report is organized into two additional sections. A project description, including emission estimates, is presented in Section 2.0. A regulatory applicability analysis is presented in Section 3.0.

2.0 PROJECT DESCRIPTION

The Pennsuco cement plant consists of the following emissions units, which are addressed in draft Air Construction Permit No. 0250020-016-AC:

Emission Unit ID No.	System	Emission Unit Description
026	Coal Handling	Coal and Pet Coke Feed Bins, Coal Mill, Coal and Pet Coke Handling and Storage System
027	Clinker Handling and Storage	Clinker Transfer from Burner Building, Clinker Silos, Clinker Transfer, and Clinker Bins
010, 012, 013, 030	Finish Mills	Finish Mills Nos. 1, 3, 4, and 6
014, 015, 016	Cement Storage, Loadout, and Packhouse	Cement Silos Nos. 1 through 12, Bulk Loadout Unit Nos. 1 through 3, and Packhouse
028	Raw Mill and Pyroprocessing Unit	Raw Mill, and Pyroprocessing System consisting of the Preheater, Calciner, Kiln, and Cooler
029	Raw Material Handling	Raw Material Storage Silos and Handling System

Each of these emission units will be modified as a result of this application. The extent of these modifications is described in the following sections, organized by emissions unit.

2.1 COAL HANDLING

Two solid fuels, coal and petroleum coke (petcoke), are utilized in the new cement plant at Titan's Pennsuco facility. Originally, these fuels were to be delivered by rail and stored in separate temporary piles. A front-end loader was to be used to transfer coal and petcoke to a dump hopper. From the dump hopper, each fuel was to be transferred to separate feed bins using conveyors.

These fuels are still delivered by rail, but now they are transferred from the railcars using a bottom-dump system, where they are gravity fed into an underground hopper and onto a belt conveyor. Two additional conveyor-to-conveyor transfer points exist between the railcar unloading operation and the Materials Storage Building. Each of these transfer points is enclosed. Inside the Materials Storage Building, coal and petcoke are transferred from the conveyor belt entering the building to an automatic stacker, where the fuel is transferred onto the storage piles inside the building.

As needed, coal or petcoke is transferred from the storage pile using an automatic reclaiming to the Coal and Petcoke Feed Bins. Subsequent transfer points associated with coal handling after the Materials Storage Building are controlled using the baghouses described in Emissions Unit 026.

Occasionally, when the Materials Storage Building is at capacity, coal is temporarily stored on the ground. A front-end loader is used to move the coal from a separate railcar unloading operation to a storage pile. As capacity is available in the Materials Storage Building, the front-end loader is used to reclaim coal from the pile and transfer it to railcars where it is processed normally (bottom-dumped from railcar and transferred to the Materials Storage Building). Up to one-third of the total coal throughput could be handled in this way.

Vehicular traffic and coal and petcoke transfer points are sources of fugitive PM emissions from the handling, transfer, and storage of coal and petcoke between the railcar unloading area and the storage building. Emission estimates for these fugitive sources are presented in Appendix A.

PM emissions from the transfer of the fuels from the Materials Storage Building to each coal feed bin are controlled using two baghouses (Equipment ID No. 461.BF130 and 461.BF230). From the feed bins, coal and petcoke are transferred to the coal mill for grinding. PM from the transfer points of the feed bins to the coal mill are controlled by using a third baghouse (Equipment ID No. 461.BF350). PM emissions from the coal grinding operation are controlled using a fourth baghouse (Equipment ID No. 461.BF300). The dust collected in baghouse 461.BF300 is recycled back to the coal mill. Ground coal/petcoke is then transferred to two coal/petcoke surge bins. PM emissions from this transfer operation are controlled using two identical baghouses (Equipment ID Nos. 461.BF650 and 461.BF750). These surge bins are used to feed the kiln and preheater/calciner.

Emission sources associated with the coal and petcoke handling and storage system are currently permitted to operate 7,884 hr/yr, with the exception of the baghouses used to control emissions from the transfer of coal/petcoke from the storage piles to the feed bins (Equipment ID Nos. 461.BF130 and 461.BF230), which are permitted to operate up to 4,000 hr/yr. Air Construction Permit No. 0250020-016-AC limits the maximum combined usage of coal/petcoke to 30 TPH on a 24-hour block average and 190,000 TPY annually. The use of petcoke only is limited to 20 TPH, 24-hour block average.

Titan is not proposing to change the configuration of the coal and petcoke handling and storage system as described in Air Construction Permit No. 0250020-016-AC. However, Titan now intends to remove the permitted limit on operating hours for all the sources associated with this emissions unit and increase the annual permitted usage of coal and petcoke from 190,000 to 263,000 TPY.

A summary of the operating parameters and proposed emission limits for each baghouse associated with Emission Unit 026 is presented in Table 2-1. A flow diagram of the revised Coal Handling emissions unit is presented in the application form, Attachment TA-FI-C2. Notice that because Titan is now requesting that the sources vented through the Main Stack be permitted to operate continuously, Titan's request in the pending permit that the Coal Mill be permitted to operate for 400 hours when the Main Stack was down, is no longer needed. As such, the Coal Mill emissions have been removed from Table 2-1, since it vents to the Main Stack and once this permit is issued can do so continuously regardless of the operational status of the pyroprocessing equipment.

2.2 CLINKER HANDLING AND STORAGE

Clinker from the pyroprocessing unit will be cooled in the new Clinker Cooler. From the Clinker Cooler, the clinker is stored in one of two clinker storage silos then conveyed to one of twelve clinker storage silos.

Titan does not intend to modify the process or control equipment associated with this emission unit as part of this application. Titan does request that the permitted hours of operation for the emission sources and baghouses associated with this emissions unit not be limited. Additionally, Titan requests that the permitted maximum annual clinker throughput of this emission unit be increased from 1,942,500 to 2,190,000 TPY.

A summary of the operating parameters and emission rates associated with the requested modifications to the Clinker Handling and Storage System is presented in Table 2-2.

2.3 FINISH MILLS

The permitted finish mills include a number of conveyors used to transfer clinker in and out of one or a series of ball mills. The ground clinker from the ball mills is transferred to a cement separator for sizing of the product, using an air classification system. The processed clinker, now in a granular or

powdered form, may then be cooled or sent directly to storage. Baghouses are used to control PM emissions from the conveyor systems and from the grinding operations.

The pending draft Air Construction Permit application includes Finish Mill Nos. 1, 3, 4, and 6, and limits the hours of operation of each finish mill to 7,884 hr/yr. Titan is now requesting to increase the annual hours of operation for each finish mill to 8,760 hr/yr.

A summary of the operating parameters and emission rates associated with the Finish Mills is presented in Table 2-3. Note, that other than the change in annual operating hours, the information presented in Table 2-3 has not changed from the pending construction permit.

2.4 CEMENT STORAGE, LOADOUT AND PACKHOUSE

Cement from the finish mills will be sent to storage silos. From the storage silos the cement will be transferred to one of several operations for delivery, including a combination rail/truck load out, two truck loadouts, or a bagging operation. The configuration of process equipment, as described in draft Air Construction Permit No. 0250020-016-AC, will not be changed as a result of this application, except for the following final engineering and actual equipment installed for the packhouse changes at the Pennsuco facility.:

- The Packhouse will have three (3) dust collectors instead of one;
- The Packhouse will be permitted to operate 8,760 hr/yr; and
- The maximum production rate for the Packhouse will increase to 170 TPH as a 24-hour block average.

A summary of the operating parameters and emission rates associated with the Cement Storage, Loadout, and Packhouse is presented in Table 2-4.

2.5 RAW MILL AND PYROPROCESSING UNIT

Titan is not proposing to change the configuration of the Raw Mill and Pyroprocessing Unit, as described in draft Air Construction Permit No. 0250020-016-AC. The PM emission limit for the Main Stack for the Raw Mill and Pyroprocessing Unit in the pending Air Construction Permit application is 0.125 pounds per ton (lb/ton) of dry kiln feed (DKF) and 53.13 lb/hr. This corresponds to an hourly dry kiln feed rate of 425 TPH.

Titan is requesting to increase the amount of clinker produced by this facility from 1,642,500 to 2,190,000 TPY, which is equivalent to 3,723,000 TPY of DKF. Titan is not requesting an increase in the kiln process feed rate of 425 TPH (dry basis) on a 24-hour block average basis. To maintain overall facility annual PM emissions at or below currently permitted rates, Titan will accept a PM emission limit for the Main Stack of 0.090 lb/ton of DKF. As shown in Table 2-5, potential hourly and annual PM emissions using this emission limit are 38.3 lb/hr and 167.5 TPY, respectively.

A summary of the Main Stack emission rates associated with the Kiln/Cooler/Raw Mill is presented in Table 2-6. Short-term (24-hour average) and annual emissions of sulfur dioxide, carbon monoxide, and volatile organic compounds will not increase over those in the draft Air Construction Permit No. 0250020-016-AC. However, it is proposed to increase the annual nitrogen oxides emissions to 2,300 TPY, based on the increase in clinker production. Even with this increase in annual emissions, the equivalent annual average emission factor for nitrogen oxides will decrease from 2.36 lb/ton clinker to 2.10 lb/ton clinker. The permitted short-term (24-hour average) nitrogen oxides emission limit of 720 lb/hr will not increase.

2.6 RAW MATERIAL HANDLING

Titan is not proposing to change the configuration of the Raw Material Handling operation as described in the pending draft permit, except for the deletion of the Lime/Gypsum Silo. However, Titan is requesting to increase the permitted annual process rate of raw materials from 3,260,000 to 3,723,000 TPY (dry). To accommodate this increase, Titan requests that the process equipment associated with this emission unit be permitted to operate continuously.

Fugitive PM emissions are generated from the handling of cement additives and limestone. Previously, 200,000 TPY of additives were required to produce 1,642,500 TPY of clinker. To produce 2,190,000 TPY of clinker, 266,700 TPY of additives will be required. Fugitive PM emissions from material transfer operations and vehicular traffic are estimated in Tables A-1 and A-3, respectively. Fugitive PM emissions from material transfer operations for limestone are estimated in Table A-1.

Table 2-1. Coal Handling System (EU ID No. 026) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature (°F)	Potential PM/PM ₁₀ Emission Rate ^a			
				acfm	dscfm		gr/dscf	lb/hr	TPY	
Coal/pet coke feed bin	461.BF130	New	8,760	1,400	1,339	92	0.0095	0.11	0.48	
Coal/pet coke feed bin	461.BF230	New	8,760	1,400	1,339	92	0.0095	0.11	0.48	
Coal mill feed	461.BF350	New	8,760	5,500	5,261	92	0.01	0.45	1.98	
Coal mill	461.BF300	New	8,760	54,500	45,245	176	0.01	N/A ^b	N/A ^b	
Coal bin	461.BF650	New	8,760	294	243	178	0.0095	0.02	0.09	
Pet coke bin	461.BF750	New	8,760	294	243	178	0.0095	0.02	0.09	
Revised Potential Emission Rates =								0.71	3.10	

^a PM₁₀ emission rate calculated as 100 percent of PM emission rate.

^b The existing emission limit for the Main Stack (see Tables 2-5 and 2-6 for emissions from the Raw Mill and Pyroprocessing) of 0.090 lb/ton of dry clinker product includes emissions from the Coal Mill, which are also vented through the Main Stack.

Table 2-2. Clinker Handling and Storage System (EU ID No. 027) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature (°F)	Potential PM/PM ₁₀ Emission Rate ^a			
				acfm	dscfm		gr/dscf	gr/acf	lb/hr	TPY
Clinker transfer	441.BF540	New	8,760	4,600	3,421	250	0.0095	--	0.28	1.22
Clinker Silos	481.BF140	New	8,760	12,000	8,924	250	0.0095	--	0.73	3.18
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.0095	--	0.37	1.62
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.0095	--	1.13	4.96
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	6,000	--	77	--	0.01	0.51	2.25
Clinker silos	481.BF930	New	8,760	15,000	11,155	250	0.0095	--	0.91	3.98
Revised Potential Emission Rates =									4.50	19.70

^a PM₁₀ emission rate calculated as 100 percent of PM emission rate.

Table 2-3. Finish Mills (EU ID Nos. 010, 012, 013, and 030) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature (°F)	Potential PM/PM ₁₀ Emission Rate ^a			
				acfm	dscfm		gr/dscf	gr/acf	lb/hr	TPY
				Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.0095	--	5.32	23.29
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00
Finish Mill No. 6 Baghouse	531.BF01	New	8,760	97,300	80,905	--	0.0095	--	6.59	28.86
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	--	0.0095	--	1.75	7.68
Revised Potential Emission Rates =									24.31	106.49

^a PM₁₀ emission rate calculated as 100 percent of PM emission rate.



Pennsuco Cement
Cement Storage/Loadout/Packhouse Baghouse Descriptions

Table 2-4. Cement Storage/Loadout/Packhouse (EU ID Nos. 014, 015, and 016) Potential Emission Rates: **2,400,000 TPY Cement**

Emission Unit	Baghouse ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Potential PM/PM10 Emission Rate ^a		
					gr/acf	lb/hr	TPY
Cement Silos 1-6	F-511	Existing	8,760	18,000	0.01	1.54	6.76
Cement Silos 7-9	F-512	Existing	8,760	10,000	0.01	0.86	3.75
Cement Silo 10	F-513	Existing	8,760	5,000	0.01	0.43	1.88
Cement Silo 11	F-514	Existing	8,760	5,000	0.01	0.43	1.88
Cement Silo 12	F-515	Existing	8,760	5,000	0.01	0.43	1.88
Bulk Loadout - Unit 1	B-210	Existing	8,760	3,000	0.01	0.26	1.13
Bulk Loadout - Unit 2	B-110	Existing	8,760	3,000	0.01	0.26	1.13
Bulk Loadout - Unit 3	B-372	Existing	8,760	2,000	0.01	0.17	0.75
Bulk Loadout - Unit 3	B-374	Existing	8,760	2,000	0.01	0.17	0.75
Bulk Loadout - Unit 3	B-382	Existing	8,760	5,000	0.01	0.43	1.88
Packhouse	BF-120	New	8,760	4,000	0.01	0.34	1.50
Packhouse	BF-200	New	8,760	6,200	0.01	0.53	2.33
Packhouse	BF-400	New	8,760	15,000	0.01	1.29	5.63
Revised Potential Emission Rates =						7.13	31.24

^a PM₁₀ emission rate calculated as 100 percent of PM emissions.

Table 2-5. Raw Mill and Pyroprocessing Unit System (EU ID No. 028) Potential PM/PM₁₀ Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature (°F)	Potential PM Emission Rate			Potential PM ₁₀ Emission Rate	
				acfm	dscfm		gr/dscf	lb/hr	TPY	lb/hr	TPY
Kiln/Cooler/Raw Mill ^d	331.BF200	New	8,760	515,000	360,637	294	^a	38.3 ^d	167.5 ^d	32.1 ^{b,d}	140.7 ^{b,d}
Kiln Dust Bin	331.BF740	New	8,760	4,250	2,953	300	0.0095	0.24	1.05	0.24 ^c	1.05 ^c
Clinker Feed Blend Silo	341.BF350	New	8,760	3,760	3,112	178	0.0095	0.25	1.11	0.25 ^c	1.11 ^c
Raw Feed Transfer	351.BF410	New	8,760	4,000	3,310	178	0.0095	0.27	1.18	0.27 ^c	1.18 ^c
Raw Feed Transfer	351.BF440	New	8,760	4,760	3,939	178	0.0095	0.32	1.40	0.32 ^c	1.40 ^c
Raw Feed Transfer	351.BF470	New	8,760	4,100	3,409	175	0.0095	0.28	1.22	0.28 ^c	1.22 ^c
Kiln Dust Truck Loadout	331.BF645	New	8,760	3,500	2,910	175	0.0095	0.24	1.04	0.24 ^c	1.04 ^c
Revised Potential Emission Rates =								39.85	174.54	33.73	147.73
Revised Potential Emission Rates without Kiln/Cooler/Raw Mill =								1.6	7.0	1.6	7.0

^a Emission rate based on an emission factor of 0.090 lb/ton of dry kiln feed. See Table 2-6.

^b PM₁₀ emission rate calculated as 84 percent of PM emission rate.

^c PM₁₀ emission rate calculated as 100 percent of PM emission rate.

^d Includes emissions from the Coal Mill (EU ID No. 001) when the Kiln/Cooler/Raw Mill and Coal Mill are operating simultaneously.

Table 2-6. Dry Kiln, Cooler, and Raw Mill (EU ID No. 028) Potential Emissions Vented from the Main Stack: **2,190,000 TPY Clinker**

Pollutant	Proposed Increase in Production		Emission Rate		Current Permit Limits		
	Emission Factor	Activity Factor	lb/hr	TPY	lb/ton ^b	lb/hr	TPY
		<u>24-Hour</u>					
Particulate Matter (PM) ^a	0.090 lb/ton DKF	425 TPH DKF	38.3	--	0.125	50	--
Particulate Matter (PM10) ^a	84% of PM	--	32.1	--	84% of PM	42	--
Sulfur Dioxide	1.28 lb/ton CP	250 TPH CP	320	--	1.28	320	--
Nitrogen Oxides	2.88 lb/ton CP	250 TPH CP	720	--	2.88	720	--
Carbon Monoxide	2.3 lb/ton CP	250 TPH CP	575	--	2.30	576	--
Volatile Organic Compounds	0.16 lb/ton CP	250 TPH CP	40	--	0.16	40	--
Sulfuric Acid Mist	0.0108 lb/ton CP	250 TPH CP	2.7	--	0.0108	2.24	--
Dioxin/Furan	0.4 ng/dscm TEQ	230,911 dscf/min ^c	3.46E-07	--	--	--	--
		<u>Annual Average</u>					
Particulate Matter (PM) ^a	0.090 lb/ton DKF	3,723,000 TPY DKF	--	167.5	0.125	--	175
Particulate Matter (PM10) ^a	84% of PM	--	--	140.7	84% of PM	--	147
Sulfur Dioxide	0.736 lb/ton CP	2,190,000 TPY CP	--	806	0.98	--	806
Nitrogen Oxides	2.1 lb/ton CP	2,190,000 TPY CP	--	2,300	2.38	--	1,953
Carbon Monoxide	1.33 lb/ton CP	2,190,000 TPY CP	--	1,456	1.77	--	1,457
Volatile Organic Compounds	0.14 lb/ton CP	2,190,000 TPY CP	--	153	0.189	--	155
Sulfuric Acid Mist	0.0108 lb/ton CP	2,190,000 TPY CP	--	11.8	0.0108	--	8.68
Dioxin/Furan	3.46E-07 lb/hr	8,760 hr/yr	--	1.51E-06	--	--	--

DKF = Dry Kiln Feed
CP = Clinker Production
TPH = tons per hour
TPY = tons per year

^a Includes Coal Mill (EU ID No. 001) emissions during concurrent operation of Kiln/Cooler/Raw Mill and Coal Mill.

^b 24-hour limits are based on 250 TPH clinker production rate.

^c Flow rate @ 7% O₂.

Table 2-7. Raw Material Handling and Storage System (EU ID No. 006) Potential Emission Rates: **2,190,000 TPY**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature (°F)	Potential PM/PM ₁₀ Emission Rate ^a			
				acfm	dscfm		gr/dscf	lb/hr	TPY	
Raw Material Feed Bins	311.BF650	New	8,760	8,500	8,130	92	0.0095	0.66	2.90	
Raw Material Handling	311.BF750	New	8,760	7,750	7,413	92	0.0095	0.60	2.64	
Raw Material Handling	321.BF470	New	8,760	10,800	10,039	108	0.0095	0.82	3.58	
Raw Material Handling	311.BF950	New	8,760	11,700	10,876	108	0.0095	0.89	3.88	
Revised Potential Emission Rates =								2.97	13.00	

^a PM₁₀ emission rate calculated as 100 percent of PM emission rate.

3.0 SOURCE APPLICABILITY

3.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The new dry process cement plant at Pennsuco is subject to the provisions of Title 40, Part 63, Subpart LLL, National Emission Standards for Hazardous Air Pollutants (NESHAPs) from the Portland Cement Manufacturing Industry. The NESHAPs is applicable to all Portland cement manufacturing plants that are major or area sources of HAPs. At this time, Titan America is not refuting the presumption that the Pennsuco is a major source of HAPs, although future testing may demonstrate that is an area source.

Subpart LLL establishes emission limits for brownfield sites and for greenfield sites. Pennsuco is a brownfield site since kilns were in operation at the site prior to March 24, 1998. Subpart LLL sets emission limits for PM, opacity, and dioxin/furan for kilns and in-line kilns/raw mills located at brownfield sites. PM and opacity limits are set for clinker coolers, while opacity limits are set for all raw mills and finish mills, and for material handling points (each raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; and raw material dryer).

3.2 NEW SOURCE PERFORMANCE STANDARDS

The kiln, cooler, raw mill, finish mills, clinker handling and storage system, and cement storage/packhouse/loadout system at Pennsuco are potentially subject to 40 CFR 60, Subpart F, New Source Performance Standards for Portland Cement Plants. However, 40 CFR 63, Subpart LLL, contains a provision that exempts any affected source subject to Subpart LLL from meeting the NSPS in 40 CFR 60, Subpart F. Therefore, the NSPS in Subpart F are not applicable to the Pennsuco facility.

The Coal Handling system included in Air Construction Permit No. 0250020-016-AC is subject to 40 CFR 60, Subpart Y, New Source Performance Standards for Coal Preparation Plants. Subpart Y states that the opacity shall not exceed 20 percent for coal processing, conveying, storage, transfer, and loading systems. These requirements will also apply to the revised Coal Handling system described in this application.

3.3 FLORIDA EMISSION STANDARDS

The State of Florida emission limiting standards potentially applicable to the Pennsuco cement plant are contained in Rules 62-296.407 and 62-296.701 of the Florida Administrative Code (F.A.C.). Paragraph (1) of Rule 62-296.407 applies to existing kilns and coolers, therefore paragraph (1) does not apply to the new dry process kiln and cooler. Paragraph (2) limits particulate matter emissions to 0.3 lb/ton of feed for new kilns and 0.1 lb/ton of feed for new coolers. Paragraph (3) states that the test method for particulate emissions shall be EPA Method 5. These requirements will apply to the dry process cement plant described in this application.

The Pennsuco plant is not located in a particulate matter air quality maintenance area or in the area of influence of such an air quality maintenance area, therefore Rule 62-296.701 does not apply.

3.4 MODIFICATION/PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW

3.4.1 REQUIREMENTS

Federal Prevention of Significant Deterioration (PSD) requirements are contained in Title 40, Code of Federal Regulations (CFR), Part 52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted PSD regulations (Chapter 62-212.400, F.A.C.) that essentially are identical to the federal regulations. PSD regulations require that all new major stationary sources or major modifications to existing major sources of air pollutants regulated under the Clean Air Act (CAA) be reviewed and a construction permit issued. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by EPA and PSD approval authority in Florida has been granted to FDEP.

A "major facility" is defined under Florida's PSD regulations as any one of 28 named source categories that has the potential to emit 100 TPY or more of any pollutant regulated under the CAA, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under the CAA. A "source" is defined as an identifiable piece of process equipment or emissions unit. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant, considering the application of control equipment and any other federally enforceable limitations on the source's capacity. A "major modification" is defined under PSD regulations as a change at an existing major stationary facility that increases emissions by greater than significant amounts. PSD significant emission rates are shown in Table 3-1.

3.4.2 PSD APPLICABILITY

Titan has previously obtained air construction permits for the new dry process cement plant. Titan is now seeking to modify the latest revision of those permits. Since Titan is seeking to relax federally enforceable conditions on production capacity and operating hours contained in a previous construction permit, PSD applicability for the proposed modification must be determined "as though construction had not yet commenced on it" (Rule 62-212.400(2)(g), F.A.C.). Therefore, the revised potential-to-emit of the modified facility must be compared to the original "baseline" PSD emissions for the existing cement plant, as presented in the original June 1998 air permit application.

The revised potential-to-emit for the new cement plant emission units are presented in Tables 2-1 through 2-7. A summation of potential emissions from the material handling point sources is presented in Table 3-2. This summation includes emissions from all emission units except for the kiln/cooler/raw mill (Main Stack) emissions and the quantifiable fugitive emissions from the facility.

Fugitive dust emissions from the Coal Handling System and Raw Material Handling System associated with the new cement plant will be affected by the proposed modification, as compared to the original June 1998 application. This is due to an increase in the coal/petcoke throughput from 190,000 to 263,000 TPY, as reflected in Permit No. 0250020-016-AC and an increase in raw material throughput from 3,200,000 TPY (dry) to 3,723,000 TPY (dry). Estimated future potential fugitive dust emissions from these sources are summarized in Table 3-3. Detailed calculations are presented in Appendix A. These calculations are based on the same methodology and equations used in the 1998 application.

The revised PSD source applicability analysis is presented in Table 3-4. The PSD baseline emissions are the same as those included in the 1998 application for the new cement plant. For convenience, the basis of these emissions is repeated in Appendix B.

The PSD applicability analysis includes the slag dryer. At the time of the 1998 application, the new slag dryer at Titan Pennsuco was under a construction permit. Since it had just recently started operations, its PSD baseline future emissions are equivalent to its allowable or potential emissions. The basis for these emissions is presented Appendix B. Titan will not operate the slag dryer in the future.

As shown in Table 3-4, the revised PSD applicability analysis shows the net change in emissions of all PSD regulated pollutants is below the respective PSD significant emission rates. As a result, the proposed modification is not subject to PSD review.

Table 3-1. PSD Significant Emission Rates and *De Minimis* Monitoring Concentrations

Pollutant	Significant Emission Rate (TPY)	De Minimis Monitoring Concentration ^a ($\mu\text{g}/\text{m}^3$)
Sulfur Dioxide	40	13, 24-hour
Particulate Matter [PM(TSP)]	25	NA
Particulate Matter (PM ₁₀)	15	10, 24-hour
Nitrogen Dioxide	40	14, annual
Carbon Monoxide	100	575, 8-hour
Volatile Organic Compounds (Ozone)	40	100 TPY ^b
Lead	0.6	0.1, 3-month
Sulfuric Acid Mist	7	NM
Total Fluorides	3	0.25, 24-hour
Total Reduced Sulfur	10	10, 1-hour
Reduced Sulfur Compounds	10	10, 1-hour
Hydrogen Sulfide	10	0.2, 1-hour
Mercury	0.1	0.25, 24-hour
MWC Organics	3.5×10^{-6}	NM
MWC Metals	15	NM
MWC Acid Gases	40	NM
MSW Landfill Gases	50	NM

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is less than *de minimis* monitoring concentrations.

NA = Not applicable.

NM = No ambient measurement method established; therefore, no *de minimis* concentration has been established.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

MWC = Municipal waste combustor

MSW = Municipal solid waste

^a Short-term concentrations are not to be exceeded.

^b No *de minimis* concentration; an increase in VOC emissions of 100 TPY or more will require a monitoring analysis for ozone.

Sources: 40 CFR 52.21.
Rule 62-212.400, F.A.C.

Table 3-2. Future Maximum Annual Emissions from Material Handling Point Sources, Tarmac, Pennsuco: **2,190,000 TPY Clinker**

Emission Unit ID	Emission Source	Baghouse ID	Emission Basis	Potential Annual PM Emission Rate (TPY)	Potential Annual PM ₁₀ Emission Rate (TPY)
026	Coal Handling/Coal Mill System	6 baghouses	See Table 2-1	3.10	3.10
027	Clinker Handling and Storage	8 Baghouses	See Table 2-2	19.70	19.70
010, 012, 013, 030	Finish Mill Nos. 1, 3, 4, and 6	12 baghouses	See Table 2-3	106.49	106.49
014, 015, 016	Cement Storage, Packhouse, & Loadout	13 Baghouses	See Table 2-4	31.24	31.24
028	Raw Mill and Pyroprocessing without Kiln/Cooler/Raw Mill	6 Baghouses	See Table 2-5	7.00	7.00
029	Raw Material Handling and Storage	4 Baghouses	See Table 2-7	<u>13.00</u>	<u>13.00</u>
			Total	180.53	180.53

Table 3-3. Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr) ^a	
	PM	PM ₁₀	PM	PM ₁₀
Coal Handling Facilities - Drop Operations ^b	0.17	0.059	0.163	0.057
Coal Handling Facilities-Vehicular Traffic ^c	6.91	2.42	6.64	2.33
Raw Material Blending Area - Drop Operations ^b	1.62	0.57	1.56	0.55
Raw Material Blending Area - Vehicular Traffic ^d	<u>14.01</u>	<u>4.91</u>	<u>13.48</u>	<u>4.72</u>
Total	22.71	7.96	21.84	7.65

Notes:

^a Based on average hourly emissions assuming 2,080 hr/yr actual operation.

^b See Table A-1.

^c See Table A-2.

^d See Table A-3.

Table 3-4. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification: 2,190,000 TPY Clinker

Pollutant	PSD Baseline Emissions (TPY)						Future Potential Emissions (TPY)				Net Increase in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Material Handling Fugitive Sources	Total			
Particulate Matter [PM(TSP)]	33.15	112.01	167.87	9.12	43.96	366.1	167.5	180.5	22.7	370.7	4.6	25	No
Particulate Matter (PM ₁₀)	28.18	94.09	167.87	9.12	15.39	314.6	140.7	180.5	8.0	329.2	14.5	15	No
Sulfur Dioxide	14.38	1,399.76	--	18.19	--	1,432.3	806	--	--	806	-626.4	40	No
Nitrogen Dioxide	435.09	1,836.06	--	12.81	--	2,284.0	2,300	--	--	2,300	15.5	40	No
Carbon Monoxide	52.65	1,312.25	--	3.20	--	1,368.1	1,456	--	--	1,456	88.3	100	No
Volatile Organic Compounds	7.03	123.13	--	0.34	--	130.5	153	--	--	153	22.8	40	No
Sulfuric Acid Mist	0.61	256.58	--	0.078	--	257.27	11.8	--	--	11.8	-245.4	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	--	0.0465	0.0071	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	--	0.0149	-0.0087	0.1	No

NEG = Negligible.

4.0 SUMMARY OF PERMIT LIMITS FOR MAIN STACK

The following table presents a summary of the proposed permit limitations for the Main Stack (kiln/cooler/raw mill/coal mill). Short-term emissions are in terms of lb/hr limitations, while the annual limits are in terms of lb/ton clinker on a 12-month rolling average basis.

Air Pollutant Standards and Terms

Titan America LLC
Portland Cement Plant and Associated Equipment

Facility ID No. 0250014

Air Permit No. 0250020-017-AC
(Revision of Permit No. 0250020-016-AC)

Emission Unit ID No. 028 - Kiln/Cooler/Raw Mill System (Dry Process Technology)

EU ID No.	Description	Pollutant ID	Fuels, [2]	Allowable Emissions [3], [5]			Equivalent Emissions TPY [4], [5]	Basis
				Hourly (lb/hr)	Averaging Period	12-Month Rolling Average		
-028	Kiln/Cooler/Raw Mill	PM	coal/pet coke/oil/gas	38.3	3-hr avg. [6]	0.090 lb/ton kiln _{ph} feed *	167.5	Avoid PSD
		PM10	coal/pet coke/oil/gas	32.1	3-hr avg. [6]	0.076 lb/ton kiln _{ph} feed *	140.7	Avoid PSD
		SO2	coal/pet coke/oil/gas	320	24-hr avg. [7]	0.736 lb/ton of clinker	806	Avoid PSD
		NOx	coal/pet coke/oil/gas	720	24-hr avg. [7]	2.1 lb/ton of clinker	2300	Avoid PSD
		CO	coal/pet coke/oil/gas	575	3-hr avg. [6]	1.33 lb/ton clinker	1456	Avoid PSD
		VOC	coal/pet coke/oil/gas	40	24-hr avg. [7]	0.14 lb/ton clinker	153	Avoid PSD
		Dioxin/Furan	coal/pet coke/oil/gas	3.46E-07	3-hr avg. [6]	---	1.51E-06	MACT
		VE	coal/pet coke/oil/gas	---	---	10% opacity	---	MACT

ALLOWABLE OPERATING RATES

	Kiln/Cooler/Raw Mill		
Hours of operation per year	Hours	8,760	
Kiln preheater feed rate (kiln _{ph})*	TPH	425	(1-hour average)
Kiln Heat Input	MMBtu/hr	675	(24-hour average)
Clinker Production [1]	TPH	250	(24-hour average)
Cooler throughput rate	TPH	250	(24-hour average)

NOTES

[1] Based on the maximum preheater feed rate of 425 TPH (dry) and a conversion factor of 0.588, the maximum clinker production rate is 250 TPH.

(425 TPH, kiln_{ph} x 0.588 = 250 TPH, clinker)

[2] Fuel combustion as specified in Specific Condition No. ___.

[3] Compliance Units. This facility shall demonstrate compliance based on these standards.

[4] "Equivalent Emissions" represent annual emissions based on operation at the maximum permitted emissions and production rates. "Equivalent Emissions" are listed for informational purposes, PSD applicability, and recordkeeping/tracking purposes.

[5] The original air construction permit for the new dry process cement plant is Permit No. 0250020-010-AC. Table 1-2 was modified by Permit No. 250020-016-AC.

[6] Based upon the time period for the specified test method.

[7] Based upon CEMS data.

APPENDIX A

FUTURE FUGITIVE DUST EMISSIONS

Table A-1. Estimated Future Fugitive Dust Emissions from Drop Type Operations, Tarmac America, Pennsuco.

SOURCE	Type of Type of Operation ^a	M	U	Emission		Activity Factor	Maximum	PM ₁₀	Maximum
		Moisture Content (%)	Wind Speed ^b (MPH)				Annual PM Emissions (tons/yr)	Size Multiplier ^d	Annual PM ₁₀ Emissions (tons/yr)
<u>COAL HANDLING FACILITIES</u>									
Railcar Unloading for Temporary Storage	Batch Drop	7.2	8.8	0.00111 lbs/ton	87,000	TPY ^c	0.048	0.35	0.017
Temporary Coal Pile to Railcar	Batch Drop	7.2	8.8	0.00111 lbs/ton	87,000	TPY ^c	0.048	0.35	0.017
Railcar Unloading	Batch Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	0.012	0.35	0.004
Conveyor to Conveyor Transfer	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	0.012	0.35	0.004
Conveyor to Conveyor Transfer	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	0.012	0.35	0.004
Conveyor to Stacker Transfer (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	0.012	0.35	0.004
Stacker to Storage Pile (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	0.012	0.35	0.004
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000	TPY ^c	<u>0.012</u>	0.35	<u>0.004</u>
	Subtotal						0.170		0.059
<u>RAW MATERIALS BLENDING AREA</u>									
ADDITIVES:									
Raw Material Unloading	Batch Drop	2.0	8.8	0.00667 lbs/ton	266,700	TPY	0.890	0.35	0.311
Choke Feed Hopper/Conveyor	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700	TPY	0.074	0.35	0.026
Conveyor to Conveyor Transfer	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700	TPY	0.074	0.35	0.026
Conveyor to Stacker Transfer (inside building)	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700	TPY	0.074	0.35	0.026
Stacker to Storage Pile (inside building)	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700	TPY	0.074	0.35	0.026
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700	TPY	0.074	0.35	0.026
LIMESTONE:									
Aggregate Plant Conveyor to Storage Pile (inside building)	Continuous Drop	7.0	1.3	0.00010 lbs/ton	3,716,452	TPY ^f	0.179	0.35	0.063
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	7.0	1.3	0.00010 lbs/ton	3,716,452	TPY ^f	<u>0.179</u>	0.35	<u>0.063</u>
	Subtotal						1.62		0.57
Total							1.79		0.63

^a Batch Drop and Continuous Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). $E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

^b Based on the average wind speed measured at Miami International Airport of 8.8 mph unless the transfer point is enclosed in which case the minimum windspeed for which the equation maintains an "A" Quality Rating, 1.3 mph, was used.

^c Based on future maximum coal throughput.

^d PM₁₀ Size Multiplier is based on particles < 10 micrometers.

^e One-third of total coal throughput could go to temporary storage pile before being placed in storage building.

^f Based on 3,723,000 TPY total dry kiln feed, minus additives (266,700 TPY), and adjusting for moisture content of kiln feed of 7%.

Table A-2. Estimation of Future Emissions For Vehicle Traffic for Temporary Outside Storage of Coal When the Coal Storage Building is Full
Tarmac America, Pennsuco Facility.

General Data	Travel from Railcar to Pile (Unloading of Railcar for Temporary Outdoor Storage)		Travel from Pile to Railcar (Reloading of Railcar for Normal Inside Storage)		Total
	Front End Loader (loaded)	Front End Loader (unloaded)	Front End Loader (loaded)	Front End Loader (unloaded)	
Vehicle Data					
Description	Coal	Coal	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	10	10	
Vehicle weight (W), tons:					
Loaded	55.5	--	55.5	--	
Unloaded	--	47.5	--	47.5	
Vehicle number of wheels (w)	4	4	4	4	
Vehicle miles traveled (VMT)- Annual ^a	716	716	895	895	
General/ Site Characteristics					
Days of precipitation > or = 0.01 inch (p) Annually	120	120	120	120	
Silt content (s), % ^b	12	12	12	12	
Particle size multiplier, PM (k)	1.00	1.00	1.00	1.00	
Particle size multiplier, PM10 (k)	0.35	0.35	0.35	0.35	
Emission Control Data					
Emission control method	--	--	--	--	
Emission control removal efficiency, %	0	0	0	0	
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	10.18	9.13	19.30
Controlled (Final) EF, lb/VMT- Annual	10.18	9.13	10.18	9.13	19.30
Calculated PM10 Emission Factor (EF)					
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	3.56	3.19	6.76
Controlled (Final) EF, lb/VMT- Annual	3.56	3.19	3.56	3.19	6.76
Estimated Emission Rate (ER)					
Particulate Matter (PM) Emission Rate					
lbs/hr ^c	3.50	3.14	4.38	3.93	6.64
TPY	3.64	3.27	4.55	4.08	6.91
Particulate Matter 10 (PM10) Emission Rate					
lbs/hr ^c	1.23	1.10	1.53	1.37	2.33
TPY	1.28	1.14	1.59	1.43	2.42

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

$$UEF(\text{lb/VMT}) = k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{0.5} \times ((365 - p)/365)$$

Controlled (Final) EF (CEF) Equation:

$$CEF(\text{lb/VMT}) = UEF(\text{lb/ton}) \times (100 - \text{Removal efficiency}(\%))$$

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

^a Annual VMT calculated as follows:**Railcar Unloading (Travel Between Railcar Unloading Area and Temporary Storage Pile)**

Annual VMT = 263,000 TPY coal/8 tons (bucket capacity of front-end loader) x 1/3 (amount of coal handled this way) x 300 ft travel (railcar unloading area to pile) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 716 miles/year

Railcar Reloading (Travel Between Temporary Storage Pile and Railcar Loading Area)

Annual VMT = 263,000 TPY coal/8 tons (bucket capacity of front-end loader) x 1/3 (amount of coal handled this way) x 375 ft travel (pile to railcar loading area) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 895 miles/year

^b Tarmac Information.^c Assumes 2,080 hr/yr operation.

Table A-3. Estimation of Future Emissions For Vehicle Traffic for Limestone and Additive Handling
Tarmac America, Pennsoco Facility.

<i>General Data</i>	Travel Between Temporary Storage Pile at Truck Unloading Area and Hopper		Total
	Front End Loader (loaded)	Front End Loader (unloaded)	
Vehicle Data			
Description	Additives	Additives	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual ^a	2,904	2,904	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % ^b	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM10 (k)	0.35	0.35	
Emission Control Data			
Emission control method	Daily Watering	Daily Watering	
Emission control removal efficiency, %	50	50	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	19.30
Controlled (Final) EF, lb/VMT- Annual	5.09	4.56	9.65
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	6.76
Controlled (Final) EF, lb/VMT- Annual	1.78	1.60	3.38
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr ^c	7.10	6.37	13.48
TPY	7.39	6.63	14.01
Particulate Matter 10 (PM10) Emission Rate			
lbs/hr ^c	2.49	2.23	4.72
TPY	2.59	2.32	4.91

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

$$UEF(\text{lb/VMT}) = k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{0.5} \times ((365 - p)/365)$$

Controlled (Final) EF (CEF) Equation:

$$CEF(\text{lb/VMT}) = UEF(\text{lb/ton}) \times (100 - \text{Removal efficiency}(\%))$$

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

^a Annual VMT calculated as follows:

$$\begin{aligned} \text{Annual VMT} &= 266,700 \text{ TPY} / 8 \text{ tons (bucket capacity of front-end loader)} \times 400 \text{ ft travel} \\ &\text{(truck unloading area to pile)} \times 1 \text{ mile} / 5,280 \text{ feet} \times 1.15 \text{ (factor to account for pile maintenance activities)} \\ &= 2,904 \text{ miles/year} \end{aligned}$$

^b Tarmac Information.

^c Assumes 2,080 hr/yr operation.

APPENDIX B

**BASIS OF ORIGINAL BASELINE
EMISSION CALCULATIONS FROM
JUNE 1998 APPLICATION**

Table B-1. Annual Baseline 1996-1997 Emissions From Kilns, Tarmac

Pollutant	Emission Factor	Reference	Activity Factor ^a	Baseline Emissions (tons/yr)
<u>Kiln No. 2</u>				
Particulate Matter (TSP)	8.67 lb/hr	1	7,646.5 hr/yr	33.15
Particulate Matter (PM10)	85 % of PM	2	--	28.18
Sulfur dioxide	3.76 lb/hr	1	7,646.5 hr/yr	14.38
Nitrogen Oxides	113.8 lb/hr	3	7,646.5 hr/yr	435.09
Carbon monoxide	13.77 lb/hr	1	7,646.5 hr/yr	52.65
Volatile Organic Compounds	1.84 lb/hr	1	7,646.5 hr/yr	7.03
Sulfuric acid mist	0.16 lb/hr	4	7,646.5 hr/yr	0.61
Lead	9.20E-05 lb/ton clinker	5	164,619 tons clinker	0.0076
Mercury	5.57E-05 lb/ton clinker	5	164,619 tons clinker	0.0046
<u>Kiln No. 3</u>				
Particulate Matter (TSP)	28.88 lb/hr	6	7,756.0 hr/yr	112.01
Particulate Matter (PM ₁₀)	84 % of PM	2	--	94.09
Sulfur dioxide	360.95 lb/hr	6	7,756.0 hr/yr	1,399.76
Nitrogen Oxides	473.45 lb/hr	6	7,756.0 hr/yr	1,836.06
Carbon monoxide	338.38 lb/hr	7	7,756.0 hr/yr	1,312.25
Volatile Organic Compounds	31.75 lb/hr	7	7,756.0 hr/yr	123.13
Sulfuric acid mist	66.16 lb/hr	8	7,756.0 hr/yr	256.58
Lead	9.20E-05 lb/ton clinker	5	673,096 tons clinker	0.0310
Mercury	5.57E-05 lb/ton clinker	5	673,096 tons clinker	0.0187

^a Based on average of 1996-1997 actual operation.

References:

1. Based on average of 12/11/95 and 4/16/97 compliance tests for Kiln No. 2.
2. From AP-42, for kiln with ESP control, Section 11.6.
3. Based on permit limit for Kiln No. 2, since actual emission have been in excess of this limit.
4. Based on average of 4/16/97 compliance tests for Kiln No. 2.
5. Based on source testing of Kiln No. 3 on January 10, 1992.
6. Based on average of all source tests on Kiln No. 3 during the period January 1996 through December 1997.
7. Based on source test conducted on 11/22/94 on Kiln No.3.
8. Based on source tests conducted on 11/22/94 and 12/12/95 on Kiln No. 3.

Table B-2. Annual 1996-1997 Baseline Emissions From Material Handling Point Sources, Tarmac

Emission Source	Point ID	Baghouse ID	Emission Basis	Emission Factor	Activity Factor ^a	Baseline PM/PM ₁₀ Emissions (TPY)
Coal Handling System	003	G-509, G-521, G-527, G-576 G-578, G-580, G-582	0.01 gr/acf; 50,000 acfm	4.29 lb/hr	7,756.0 hr/yr	16.62
Cooler No. 2	005	K-232	Stack Tests ^b	16.15 lb/hr	7,646.5 hr/yr	61.75
Cooler No. 3	007	K-332	Stack Tests ^b	9.32 lb/hr	7,756.0 hr/yr	36.14
Dust Insufflation System - Kiln 2	--	K-181	0.01 gr/acf; 3,000 acfm	0.26 lb/hr	7,646.5 hr/yr	0.98
Dust Insufflation System - Kiln 3	--	K-383, K-396	0.01 gr/acf; 10,000 acfm	0.86 lb/hr	7,756.0 hr/yr	3.32
Clinker Handling/Stg - Kilns 1 & 2 Silos 1, 2, 4, 5, 11 and 12	008	K-147, K-247 ^c	0.01 gr/acf; 3,000 acfm	0.26 lb/hr	7,646.5 hr/yr	0.98
Clinker Handling/Stg - Kiln 3 Silos 1, 4, 11, 17-23, 26-28	009	K-347, K-447, K-521, K-522, K-633 ^d	0.01 gr/acf; 9,500 acfm	0.81 lb/hr	7,756.0 hr/yr	3.16
Finish Mill No. 1	010	F-130, F-113	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	4,881.0 hr/yr	4.98
Finish Mill No. 2	011	F-230, F-213	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	6,072.5 hr/yr	6.19
Finish Mill No. 3	012	F-313, F-330, F-332	0.01 gr/acf; 41,500 acfm	3.56 lb/hr	4,546.0 hr/yr	8.09
Finish Mill No. 4	013	F-430, F-432, F-603, F-604, F-605	0.01 gr/acf; 67,000 acfm	5.74 lb/hr	3,876.0 hr/yr	11.13
Cement Silos #1-#12	014	F-511, F-512, F-513, F-514, F-515	0.01 gr/acf; 43,000 acfm	3.69 lb/hr	6,072.5 hr/yr	11.19
Cement Distribution-Rail/Truck	015	B-110, B-210, B-372, B-374, B-382	0.01 gr/acf; 15,000 acfm	1.29 lb/hr	2,721.5 hr/yr	1.75
Cement Distribution-Packhouse	016	B-621	0.01 gr/acf; 12,000 acfm	1.03 lb/hr	3,080.5 hr/yr	1.58
					Total	167.87

^a Based on average of 1996-1997 actual operation.

^b Based on average of April 1997 and December 1997 stack tests.

^c Only one baghouse operates at any one time.

^d Baghouses K347 and K447 do not operate at the same time.

Table B-3. Maximum Emissions From Slag Dryer, Tarmac

Parameter	No. 2 Fuel Oil		Natural Gas			
OPERATING DATA^a						
Operating Time	3,120 hr/yr		3,120 hr/yr			
Heat Input Rate	57.48 MMBtu/hr		57.48 MMBtu/hr			
Heat Value	140,000 MMBtu/gal		1000 Btu/scf			
Hourly Fuel Use	410.6 gal/hr		57,480 scf/hr			
Annual Fuel Use	1,280,983 gal/yr		179.34 MMscf/yr			
Max Sulfur Content	0.2 Wt%		0.01 gr/scf			
<hr/>						
Pollutant	Emission Factor ^b	Fuel Oil		Natural Gas		
		Maximum Emissions		Maximum Emissions		
		lb/hr	TPY	Emission Factor ^b	lb/hr	TPY
EMISSION DATA						
PM/PM ₁₀	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12
SO ₂	142*S lb/Mgal ^c	11.66	18.19	0.60 lb/MMscf	0.034	0.054
NO _x	20 lb/Mgal	8.21	12.81	140.00 lb/MMscf	8.05	12.55
CO	5 lb/Mgal	2.05	3.20	35.00 lb/MMscf	2.01	3.14
NM VOC	0.2 lb/Mgal	0.082	0.13	3.83 lb/MMscf	0.22	0.34
Sulfuric Acid Mist	0.1225 lb/Mgal	0.050	0.08	NA	--	--
Lead-Total	8.9E-06 lb/MMBtu	5.12E-04	7.98E-04	NA	--	--
Mercury	3.0E-06 lb/MMBtu	1.72E-04	2.69E-04	NA	--	--
Beryllium	2.5E-06 lb/MMBtu	1.44E-04	2.24E-04	NA	--	--

Note: NA = not applicable.

^aFuel oil use is based on 140,000 Btu/gal for 0.2% S oil. Heat Input Rate is based on 0.48 MMBtu/ton and 150 ton/hr throughput

^bEmission factors are based on AP-42 5th Edition, Tables 1.3-2, 1.3-4, and 1.3-11 for oil use and 1.4-1 and 1.4-3 for gas. NMVOC factor for gas is reduced by 34% to reflect presence of methane.

^c"S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.2%

Table B-4. Summary of Quantifiable Fugitive Emissions, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr) ^a	
	PM	PM ₁₀	PM	PM ₁₀
Coal Handling Facilities-Batch Drop	0.28	0.1	0.32	0.11
Coal Handling Facilities-Vehicular Traffic	23.97	8.39	23.05	8.07
Raw Materials Blending-Batch Drop	3.52	1.23	3.39	1.19
Raw Materials Blending-Vehicular Traffic	14.34	5.02	13.79	4.83
Insufflation Area-Batch Drop	0.22	0.08	0.21	0.07
Insufflation Area-Vehicular Traffic	<u>1.63</u>	<u>0.57</u>	<u>1.57</u>	<u>0.55</u>
Total	43.96	15.39	42.33	14.82

Notes:

^a Based on average hourly emissions assuming 2,080 hr/yr actual operation.

Table B-5. Estimated Baseline Fugitive Dust Emissions from Drop Type Operations, Tarmac

SOURCE	Type of Operation ^a	M	U	Emission Factor	Activity Factor ^b	Maximum	PM ₁₀ Size Multiplier ^c	Maximum	
		Moisture Content (%)	Wind Speed (MPH)			Annual PM Emissions (tons/yr)		Annual PM ₁₀ Emissions (tons/yr)	
<u>COAL HANDLING FACILITIES</u>									
Railcar Unloading	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032	
Temporary Storage Pile to Active Storage Pile	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032	
Active Storage Pile to Loading Hopper	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	<u>0.092</u>	0.35	<u>0.032</u>	
	Subtotal					0.28		0.10	
<u>RAW MATERIALS BLENDING AREA</u>									
Raw Material unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.7610	0.35	0.616	
Raw Materials Pile to Blending Location	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	<u>1.7610</u>	0.35	<u>0.616</u>	
	Subtotal					3.52		1.23	
<u>INSUFFLATION AREA</u>									
Truck Loading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	0.1101	0.35	0.039	
Truck Unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	<u>0.1101</u>	0.35	<u>0.039</u>	
	Subtotal					0.2201		0.08	
Total						4.02		1.41	

^a Batch Drop Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). $E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

^b Based on average two year period, 1996-1997.

^c PM₁₀ Size Multiplier is based on particles < 10 micrometers.

Table B-6. Estimation of Baseline Emissions For Vehicle Traffic in the Coal Handling System, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)			
	4	4	
Vehicle miles traveled (VMT)- Annual ^a			
	2,483	2,483	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % ^b	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM ₁₀ (k)	0.35	0.35	
Emission Control Data			
Emission control method	--	--	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	
Controlled (Final) EF, lb/VMT- Annual	10.18	9.13	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	
Controlled (Final) EF, lb/VMT- Annual	3.56	3.19	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr ^c	12.15	10.90	23.05
TPY	12.64	11.33	23.97
Particulate Matter (PM₁₀) Emission Rate			
lbs/hr ^c	4.25	3.81	8.07
TPY	4.42	3.97	8.39

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

$$UEF(\text{lb/VMT}) = k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{0.5} \times ((365 - p)/365)$$

Controlled (Final) EF (CEF) Equation:

$$CEF(\text{lb/VMT}) = UEF (\text{lb/ton}) \times (100 - \text{Removal efficiency} (\%))$$

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

^a Based on 165,841 TPY (average of 1996-1997 coal throughput) of coal transported 550 ft, empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

^b Tarmac Information.

^c Assumes 2,080 hr/yr operation.

Table B-7. Estimation of Baseline Emissions For Vehicle Traffic in the Raw Material Blending Area, Tarmac

<i>General Data</i>	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Dry Feed	Dry Feed	
Vehicle Speed (S), mph- Average	5	5	
Vehicle weight (W), tons:			
Loaded	50	--	
Unloaded	--	40	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual ^a	3,267	3,267	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % ^b	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM ₁₀ (k)	0.35	0.35	
Emission Control Data			
Emission control method	--	--	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	4.73	4.05	
Controlled (Final) EF,lb/VMT- Annual	4.73	4.05	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	1.66	1.42	
Controlled (Final) EF,lb/VMT- Annual	1.66	1.42	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr ^c	7.43	6.36	13.79
TPY	7.73	6.61	14.34
Particulate Matter (PM ₁₀) Emission Rate			
lbs/hr ^c	2.60	2.22	4.82
TPY	2.70	2.31	5.02

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

$$UEF(\text{lb/VMT}) = k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{0.5} \times ((365 - p)/365)$$

Controlled (Final) EF (CEF) Equation:

$$CEF(\text{lb/VMT}) = UEF (\text{lb/ton}) \times (100 - \text{Removal efficiency} (\%))$$

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

^aBased on 200,000 TPY (1996-1997 average throughput) of Raw Materials transported 750 ft, empty half the time, full the remaining time.

Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

^bTarmac Information.

^cAssumes 2,080 hr/yr operation.

Table B-8. Estimation of Baseline Emissions For Vehicle Traffic in the Insufflation Area, Tarmac

<i>General Data</i>	Truck (loaded)	Truck (unloaded)	Total
Vehicle Data			
Description	Clinker Dust	Clinker Dust	
Vehicle Speed (S), mph- Average	3	3	
Vehicle weight (W), tons:			
Loaded	25.75	--	
Unloaded	--	13.75	
Vehicle number of wheels (w)	10	10	
Vehicle miles traveled (VMT)- Annual ^a	704	704	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % ^b	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM ₁₀ (k)	0.35	0.35	
Emission Control Data			
Emission control method	--	--	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	2.82	1.82	
Controlled (Final) EF, lb/VMT- Annual	2.82	1.82	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	0.99	0.64	
Controlled (Final) EF, lb/VMT- Annual	0.99	0.64	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr ^c	0.95	0.61	1.57
TPY	0.99	0.64	1.63
Particulate Matter (PM ₁₀) Emission Rate			
lbs/hr ^c	0.33	0.22	0.55
TPY	0.35	0.22	0.57

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

$$UEF(\text{lb/VMT}) = k \times 5.9 \times (s/12) \times (S/30) \times (W/3 \wedge 0.7 \times (w/4) \wedge 0.5 \times ((365 - p)/365))$$

Controlled (Final) EF (CEF) Equation:

$$CEF(\text{lb/VMT}) = UEF (\text{lb/ton}) \times (100 - \text{Removal efficiency} (\%))$$

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

^a Based on 12,500 (1996-1997 average throughput) TPY of clinker dust transported 3,100 ft, empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

^b Tarmac Information.

^c Assumes 2,080 hr/yr operation.