STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. Ed Allsopp, V.P., Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, FL 33182

DEP File No. 0250014-016-AC, PSD-FL-324A
Production Increase, Revision of Emission Limits
Miami Cement Plant
Miami-Dade County

_____/

Enclosed is Final Permit Number 0250014-016-AC (PSD-FL-324A). This permit authorizes an increase in raw material feed, fuel use, and clinker production limits at the CSR Rinker Materials Corporation Miami Cement Plant located at 1200 NW 137th Avenue, Miami-Dade County. This permit also revises the air pollutant emission limits without triggering the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration. This permit is issued pursuant to Chapter 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

Trina L Vielhauer

Trina 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 mailed by U.S. Mail before the close of business on 12/30/04 to the person(s) listed:

Ed Allsopp, Rinker (*)
Mike Vardeman, Rinker
John Koogler, PhD., P.E., Koogler & Associates

H. Patrick Wong, Miami-Dade DERM
Laxmana Tallam, DEP, SED

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.

Mary L Harmon 12/30/04
(Clerk) (Date)

FINAL DETERMINATION

File Nos. 0250014-016-AC (PSD-FL-324A)

Rinker Miami Cement Plant

On December 14, 2004, the Florida Department of Environmental Protection (Department) distributed an "Intent to Issue Air Construction Permit" for a proposed production increase at the CSR Rinker Materials Corporation located at 1200 Northwest 137th Avenue in Miami-Dade County. The package included one copy of the Department's draft air construction permit, the "Intent to Issue Air Construction Permit," the "Technical Evaluation and Preliminary Determination," and the "Public Notice of Intent to Issue Air Construction Permit."

The applicant published the "Public Notice" in the Miami Daily Review on December 14 and provided proof of publication to the Department on December 21.

On December 21, the Department received written comments regarding the draft construction permit from the applicant as discussed below. The Department did not receive comments from the public or any other agencies.

The following section summarizes the Department's response to the comments received and any resulting revisions.

COMMENTS/CHANGES

Comment from Dr. John Koogler on behalf of Rinker Regarding Induced Draft Fan(s): "The fan that Rinker is having problems with (the fan we discussed with you) is the main baghouse fan; not to be confused with the kiln I.D. fan. There are several references to this fan in the permit documents and I wanted to make sure there is no misunderstanding about which fan, or fan wheel, may have to be replaced. The permit language at the bottom of page 4 of 8 of the draft permit regarding the "I.D. fan" obviously refers to the kiln I.D.fan. This language is understood and is acceptable. I just want to make sure the replacement of baghouse fan is not confused with the potential replacement of the kiln I.D. fan - which may require additional permitting".

Response: The Department accepts Rinker's clarification that the problem induced draft fan is associated with the baghouse and not the preheater/kiln section. The Department will revise the drafted Condition 4.a. to read as follows:

Baghouse Induced Draft ~~I.D.~~ Fan: The permittee is authorized to replace components of the existing baghouse induced draft ~~I.D.~~ fan with functionally equivalent components. Also the fan blades may be "tipped" (extended) to improve performance. Optionally, the entire baghouse induced draft ~~I.D.~~ fan may be replaced with a functionally equivalent nominal 900 rpm induced draft fan.

Comment from Dr. Koogler Regarding Scrivener's Error in Rinker Statement: "The second matter is the correction of a scrivener's error in the Technical Evaluation and Preliminary Determination. On page 15 of 20, in the comment attributed to Mike Aller (7th line), the sentence beginning "Although there is ..." should read "Although there is "no" precise calculation.....". The word "no" was omitted and this omission changes the meaning of the entire CO discussion. I think this is apparent and should have no bearing on the draft permit or any conditions therein".

Response: The Department reviewed the electronic document received from Rinker and has determined that the scrivener's error is not on the part of the Department. The meaning of the statement does change when corrected. For the record the full sentence affected should read:

"Before entering the main stack, this gas stream mixes with the cooler vent gases as well as ambient air from various fresh air dampers. As a result, the CO concentration in the main stack is significantly lower than in the downcomer. Although there is ***no*** *precise calculation relating downcomer CO and main stack CO, alarm points on downcomer CO could be installed to alert the operator that CO emissions are near the limit and that action is needed to correct the situation".*

The correction changes the understanding given through Rinker's communication to the Department of the correlation between the downcomer CO concentration and CO exiting the stack. However, the relationship is still strong enough such that use of the downcomer CO process monitor in conjunction with the alarm and the margin of safety in the set point will provide reasonable assurance, though not certainty, of compliance with the permitted CO limitation. The plant has continuous emissions monitors systems (CEMS) for the gaseous pollutants of greatest concern, namely NO_X, SO_2 and VOC. The Department does not believe an in-stack CEMS for CO is required for this production increase. The process monitor and alarm will add to the level of compliance assurance provided by the required stack testing that will be conducted within 95 percent of permitted capacity.

CONCLUSION

The Department will issue the final permit with the single change to clarify that the baghouse induced draft fan may be repaired, tipped or replaced (with a like kind replacement) without requirement of a separate permit.

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

PERMITTEE

Rinker Materials Corporation
1200 NW 137th Avenue
Miami, Florida 33182

Permit No. 0250014-016-AC
Expires: December 31, 2006
Miami Cement Plant
Production Capacity Increase

PROJECT AND LOCATION

This permit authorizes a production capacity increase and revises emission limits for the existing kiln and associated equipment at the Miami Cement Plant operated by Rinker Materials Corporation. The permit authorizes certain projects to reach and sustain the permitted production rate.

The existing plant is located in Dade County at 1200 Northwest 137th Avenue in Miami, Florida. The UTM coordinates are Zone 17; 558.20 km E; 2851.20 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 permittee is authorized to perform the work and make the changes specified 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. This permit supplements all other air construction and operation permits for the subject emissions unit and does not alter any requirements from such previously issued air permits unless otherwise specified.

APPENDICES

Appendix GC (General Conditions) is attached as part of this permit.

Michael G. Cooke, Director (Effective Date)
Division of Air Resource
Management

FACILITY DESCRIPTION

Rinker Materials Corporation operates the existing Miami Cement Plant located in Dade County, Florida. The facility consists of raw material handling and storage, a raw mill system, kiln system, clinker handling, finish grinding operations, cement handling, loading, and bagging operations, and coal handling and grinding operations. The key component is the kiln that is presently permitted at the following maximum production and process rates: 220 tons per hour of dry preheater feed materials; 137 tons per hour of clinker; and 437 MMBtu per hour of total heat input to the kiln system. The original air construction permit for the kiln is Permit No. 0250014-002-AC. The kiln first produced clinker in 2000 and currently operates under the provisions of Title V Air Operation Permit No. 0250014-009-AV.

PROJECT

The kiln system (Emissions Unit 018) is the key emission unit affected by this air construction permit. The project increases: the maximum process rate from 220 to 267 tons per hour (TPH) of preheater feed materials; the maximum production rate from 137 to 162 TPH of clinker; and total heat input to the pyropcessing system from 437 to 485 million Btu per hour. During an authorized testing program, Rinker was able to achieve approximately 251 TPH of feed and 151 TPH of product with only operational process changes while complying with the proposed emission limits.

The project may include a number of physical changes such as equipment replacements, or upgrades to achieve and sustain the requested process and production rates.

REGULATORY CLASSIFICATION

Title III: The facility is a major source of hazardous air pollutants (HAP) based on the current Title V permit.

Title V: The facility is a major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: The plant is an existing PSD-major facility in accordance with Rule 62-212.400 F.A.C.

NSPS: This facility operates units 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).

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).

RELEVANT DOCUMENTS

- Comments received on 12/21/04 from Dr. John Koogler on behalf of applicant.
- Intent to Issue Package, including Draft Permit and Technical Evaluation distributed 12/14/04.
- Application No. 0250014-016-AC received on 9/13/2004 and all related supporting information and correspondence to make the application complete.
- Air construction Permit No. 0250014-011-AC issued on 01/16/04 authorizing a temporary production capacity testing period. Project Nos. 0250014-012-AC, 0250013-012-AC, 0250014-014-AC, and 0250014-017-AC extended the temporary capacity testing period through 12/31/04.
- Air construction Permit No. 0250014-008-AC (PSD-FL-324) issued on 03/01/02 to conduct a BACT review for VOC and require the installation of a THC continuous emissions monitoring system.
- Air construction Permit No. 0250014-007-AC issued on 03/01/02 to remove the beryllium emissions limit.
- Original air construction Permit No. 0250014-002-AC issued on 09/11/97 for the kiln modernization project.

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 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. 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.]

7. 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.]

8. Title V Permit: This permit authorizes construction 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 shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

The proposed project affects the following existing emissions unit:

ID No.	Emission Unit Description
018	In-Line Kiln, Raw Mill and Clinker Cooler

ADMINISTRATIVE REQUIREMENTS

1. Previous Permit Conditions: This permit authorizes a production increase from the kiln and associated equipment. As indicated herein, the following conditions are in addition to, or replace, those of the previous air construction permits. Unless otherwise specified, the emissions unit remains subject to all applicable conditions from previous air construction permits. [Rule 62-4.070(3), F.A.C.]

CONSTRUCTION ACTIVITIES

2. Fly Ash Injection to Precalciner: The permittee is authorized to install equipment necessary to inject fly ash into the precalciner. Within 60 days of selecting the final vendor for this project, the permittee shall submit the final design specifications. Before initiating construction activities related to fly ash injection into the precalciner, the permittee shall provide the following information: maximum LOI of the fly ash; monitoring equipment for determining the fly ash injection rate; and the method for determining the clinker production rate when injecting fly ash into the precalciner. [Application No. 0250014-016-AC; Rule 62-4.070(3), F.A.C.]

3. CO Process Alarm: The permittee shall add a control room alarm to the existing CO emissions process monitor to alert operators of elevated CO emissions. The alarm shall be set to activate when the process monitor records CO emissions of 1,200 ppmv or more. When an alarm occurs, operators shall take appropriate corrective actions to return CO emissions below the alarm set point. For each incident of an alarm, the operator shall record the following in a written log: date and time of alarm; amount of time above the alarm level; highest concentration above the alarm level; corrective action taken to regain appropriate operating levels. [Rules 62-4.070(3) and 62-212.400(2)(g), F.A.C.]

4. Other Potential Construction Activities: The following projects are authorized to achieve and sustain the full operational level allowed by this permit.

   a. **Baghouse Induced Draft Fan**: The permittee is authorized to replace components of the existing baghouse induced draft fan with functionally equivalent components. Also the fan blades may be "tipped" (extended) to improve performance. Optionally, the entire baghouse induced draft fan may be replaced with a functionally equivalent nominal 900 rpm induced draft fan.

   b. **Calciner Modifications**: The permittee is authorized to modify the calciner to enhance the combustion efficiency (carbon burnout) by providing additional residence time.

   The permittee shall submit a notification of commencement of construction within 30 days of beginning physical construction on either of the above projects.

   {Permitting Note: Other unidentified projects such as replacement of the preheater/kiln induced draft fan with a larger unit; replacement or upgrade of the kiln drive; upgrade of the raw mill or addition of another mill; etc. may require additional permits. The permittee shall consult with the Department regarding the permitting requirements including PSD applicability for such projects.} [Application No. 0250014-016-AC]

SPECIFIC CONDITIONS

5. Production Limits: The preheater dry feed rate shall not exceed 267 tons per hour (TPH, 1-hour average). The preheater dry feed rate is the mass of material (on a dry basis) entering the preheater/kiln as determined by the Pfister weighing/feeding system. The clinker production rate of the kiln shall not exceed 162 tons per hour (TPH, 1-hour average) and 1,300,000 tons during any consecutive 12 months. The clinker production rate shall be determined as a function of the preheater dry feed rate and a conversion factor (multiplier) for the kiln system of 0.607. Continuous operation is allowed (8760 hours per year) provided the annual clinker production limit is not exceeded.
[Applicant Request - Application No. 0250014-016-AC; Rule 62-210.200, F.A.C. (PTE)]

{Permitting Note: The above condition revises/replaces the previous 24-hr productions limits and the 12-month clinker limits specified in Condition B.4 of Permit No. 0250014-002-AC.}

6. Heat Input Limit: Fuels fired in the pyroprocessing system (kiln and precalciner) shall not exceed a total heat input rate of 485 MMBtu per hour and shall consist only of the fuels originally authorized in Permit No. 0250014-002-AC, as amended. The coal usage rate shall not exceed 18.7 tons per hour (TPH, 24-hour average) and the petroleum coke usage rate shall not exceed 16.3 tons per hour (TPH, 24-hour average). [Application No. 0250014-016-AC; Permit No. 0250014-002-AC; Rule 62-4.070(3), F.A.C.]

{Permitting Note: The above condition revises the maximum heat input rate, coal usage rate, and petroleum coke usage rate to the kiln system specified in Condition B.5 of Permit No. 0250014-002-AC.}

7. Fly Ash Injection Limit: Fly ash injection to the precalciner shall not exceed 35 tons per hour (TPH, 24-hour average). [Application No. 0250014-016-AC; Rule 62-4.070(3), F.A.C.]

8. Revised Emissions Limits: Emissions from the kiln system shall not exceed the limits specified in revised Table 2-1, attached. [Application No. 0250014-016-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(BACT), F.A.C.]

{Permitting Note: The permit limits in Table 1-2 were originally specified in Condition B.1 of Permit No. 0250014-002-AC. This table was subsequently revised by Permit Nos. 0250014-007-AC and 0250014-008-AC (PSD-FL-324). The revised Table 1-2 replaces the previously specified limits and revisions. No changes are made to the methods of compliance.}

9. Initial Testing at Increased Production Rate: Within 270 days of the effective date of this permit, the permittee shall conduct tests to demonstrate compliance with each emission standard specified in Table 1-2. A test report shall be submitted to the compliance authority within 45 days of completing the last required pollutant test. [Rules 62-4.070(3) and 62-297.310, F.A.C.]

10. Operating Rate During Initial Testing: Initial testing of emissions shall be conducted with the emissions unit operation at 95 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at 95 to 100 percent of the maximum operation rate allowed by this permit, testing may be conducted at less than 95 percent of the maximum operation rate; in this case, subsequent emissions unit operation is limited to 105 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

11. Operating Rate During Subsequent Testing. After conducting a compliance test at 95 to 100 percent of the maximum operation rate allowed by this permit, the following applies: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

12. Additional Dioxin/Furan Testing: Pursuant to 40 CFR 63.1349 (b)(4)(e), the owner or operator is required to repeat the dioxin/furan performance tests for kilns or in-line kiln/raw mills within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test. Changes in fly ash use practices including, but not limited to, use of increased loss-on-ignition fly ash or injection of fly ash into the calciner shall be considered significant changes within the purview of this requirement. [40 CFR 63, Subpart LLL and Rule 62-4.070(3), F.A.C.]

13. Relaxations of Restrictions on Pollutant Emitting Capacity. 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.]

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

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

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

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

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

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

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

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

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

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

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

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

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

G.13 This permit also constitutes:

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

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

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

G.14 The permittee shall comply with the following:

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

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

(c) Records of monitoring information shall include:

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

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

Revised Table 1-2. Air Pollutant Standards and Terms
Rinker Materials Corporation
Portland Cement Plant and Associated Equipment

Facility ID No. 0250014
Air Permit No. 0250014-016-AC
(Revision of Original Permit)

Emission Unit ID No. 018 - Kiln/Cooler/Raw Mill System (Dry Process Technology)

EU ID No.	Description	Pollutant ID	Fuels, [2]	Allowable Emissions [3], (5) Permit Limits	Allowable Emissions [3], (5) lb/hr	Equivalent Emissions TPY [4], (5)	Basis
-018	Kiln/Cooler/Raw Mill	PM	coal/gas/WTDF/oil	0.152 lb/ton $kiln_{ph}$ feed *	40.6	163	Avoid PSD
		PM_{10}	coal/gas/WTDF/oil	0.121 lb/ton $kiln_{ph}$ feed *	32.3	130	Avoid PSD
		SO_2	coal/gas/WTDF/oil	0.50 lb/ton of clinker	81.0	325	Avoid PSD
		NO_x	coal/gas/WTDF/oil	4.0 lb/ton of clinker	648	2600	Avoid PSD
		CO	coal/gas/WTDF/oil	2.81lb/ton clinker	455	1827	Avoid PSD
		VOC	coal/gas/WTDF/oil	0.12 lb/ton clinker	19.4	78	PSD-BACT
		H_2SO_{4mist}	coal/gas/WTDF/oil	0.020 lb/ton clinker	3.24	13.0	Avoid PSD
		Mercury	coal/gas/WTDF/oil	1.4×10^{-6} lb/ton clinker	0.023	0.091	Avoid PSD
		Lead	coal/gas/WTDF/oil	3.0×10^{-6} lb/ton clinker	0.049	0.195	Avoid PSD
		VE	coal/gas/WTDF/oil	10% opacity	---	---	NSPS

ALLOWABLE OPERATING RATES

		Kiln/Cooler/Raw Mill	
Hours of operation per year	Hours	8760	
Kiln preheater feed rate ($kiln_{ph}$)*	TPH	267	(1-hour average)
Kiln Heat Input	MMBtu/hr	485	(24-hour average)
Clinker Production [1]	TPH	162	(1-hour average)
Cooler throughput rate	TPH	162	(1-hour average)

NOTES

[1] Based on the maximum preheater feed rate of 267 TPH and a conversion factor of 0.607, the maximum clinker production rate is 162 TPH. (267 TPH, $kiln_{ph}$ x 0.607 = 162 TPH, clinker)

[2] Fuel combustion as specified in Specific Condition No. B.5, and the protocols established by DERM. See also Specific Condition B.13.

[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 kiln modernization project is Permit No. 0250014-002-AC. Table 1-2 was modified by Permit No. 250014-007-AC to remove the beryllium emissions limit. It was subsequently modified by Permit No. 250014-008-AC to: revise the SO_2 limit from 0.7 lb/MMBtu to 2.23 lb/ton of clinker (equivalent emissions) ; revise the NOx emissions limit from 1.53 lb/MMBtu to 4.9 lb/ton of clinker (equivalent emissions); and revise the VOC emission limits from 0.1 to 0.12 lb/ton of clinker, 13.7 to 16.4 lb/hour, and 60 to 72 TPY (BACT).

Revised Table 1-2. Air Pollutant Standards and Terms
Rinker Materials Corporation
Portland Cement Plant and Associated Equipment

Facility ID No. 0250014
Air Permit No. 0250014-016-AC
(Revision of Original Permit)

Emission Unit ID No. 018 - Kiln/Cooler/Raw Mill System (Dry Process Technology)

EU ID No.	Description	Pollutant ID	Fuels, [2]	Allowable Emissions [3], (5) Permit Limits	Allowable Emissions [3], (5) lb/hr	Equivalent Emissions TPY [4], (5)	Basis
-018	Kiln/Cooler/Raw Mill	PM	coal/gas/WTDF/oil	~~0.20~~ **0.152** lb/ton $kiln_{ph}$ feed *	~~44~~ **40.6**	~~193~~ **163**	Avoid PSD
		PM_{10}	coal/gas/WTDF/oil	~~0.17~~ **0.121** lb/ton $kiln_{ph}$ feed *	~~37.40~~ **32.3**	~~164~~ **130**	Avoid PSD
		SO_2	coal/gas/WTDF/oil	~~2.23~~ **0.50** lb/ton of clinker	~~306~~ **81.0**	~~1340~~ **325**	Avoid PSD
		NO_x	coal/gas/WTDF/oil	~~4.9~~ **4.0** lb/ton of clinker	~~671~~ **648**	~~2940~~ **2600**	Avoid PSD
		CO	coal/gas/WTDF/oil	~~3.01~~ **2.81**lb/ton clinker	~~412~~ **455**	~~1807~~ **1827**	Avoid PSD
		VOC	coal/gas/WTDF/oil	0.12 lb/ton clinker	~~16.4~~ **19.4**	~~72~~ **78**	PSD-BACT
		H_2SO_{4mist}	coal/gas/WTDF/oil	~~0.014~~ **0.020** lb/ton clinker	~~1.92~~ **3.24**	~~8.4~~ **13.0**	Avoid PSD
		Mercury	coal/gas/WTDF/oil	~~2.4~~ **14.0** x 10^{-5} lb/ton clinker	~~0.0033~~ **0.023**	~~0.014~~ **0.091**	Avoid PSD
		Lead	coal/gas/WTDF/oil	~~7.5~~ **30.0** x 10^{-5} lb/ton clinker	~~0.01~~ **0.049**	~~0.045~~ **0.195**	Avoid PSD
		VE	coal/gas/WTDF/oil	10% opacity	---	---	NSPS

ALLOWABLE OPERATING RATES

		Kiln/Cooler/Raw Mill	
Hours of operation per year	Hours	8760	
Kiln preheater feed rate ($kiln_{ph}$)*	TPH	~~220~~ **267**	**(1-hour average)**
Kiln Heat Input	MMBtu/hr	~~437~~ **485**	**(24-hour average)**
Clinker Production [1]	TPH	~~137~~ **162**	**(1-hour average)**
Cooler throughput rate	TPH	~~137~~ **162**	**(1-hour average)**

Florida Department of
Environmental Protection

Memorandum

TO: Michael Cooke

THRU: Trina Vielhauer

FROM: A. A. Linero

DATE: December 29, 2004

SUBJECT: CSR Rinker Materials Cement Plant – Miami-Dade County
Production Increase and Emission Limit Revisions
DEP File No. 0250014-016-AC (PSD-FL-324A)

The Final Permit for this project is attached for your approval and signature. This permit authorizes:

- Increasing the clinker production rate at Rinker's Miami Cement Plant from 137 tons per hour (TPH) on a daily basis to 162 TPH on an hourly basis and the annual clinker production limit from 1,200,000 tons per year (TPY) to 1,300,000 TPY.
- Lowering the 24-hr NO_X limitation from 4.9 to 4.0 pounds per ton of clinker (lb/ton).
- Lowering annual NO_X emissions from 2,940 to 2,600 TPY.
- Lowering the 24-hr SO_2 limitation from 2.23 to 0.50 lb/ton.
- Lowering annual SO_2 emissions from 1,340 to 325 TPY.
- Revising other emission limitations to avoid significant increases in allowable annual emissions.

In real terms, we found that actual mass emissions of NO_X remained the same (~ 370 lb/hr) at production levels greater than presently permitted while mass per unit of product decreased from 3.0 to 2.6 lb/ton of clinker. Some of the other pollutants followed similar, though less pronounced trends.

The dry process kiln system started up in 2000 when the old wet process kilns were shut down. The rules allow a recalculation of contemporaneous emissions increases and decreases over a period of five years. The result is that the emission decreases from shutting down the old kilns are great enough to allow the dry kiln and its production increase to net out of PSD for all but one pollutant. We are keeping the BACT of 0.12 lb VOC/ton and the CEMS requirement that were set in 2002.

I recommend your approval of the attached permit.

Attachments

TLV/aal

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. Ed Allsopp, V.P., Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Kelly Gilliard C. Date of Delivery 1-4-05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7000 1670 0013 3109 9267

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 1670 0013 3109 9267

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To Mr. Ed Allsopp, V.P., Cement Operations
CSR Rinker Materials Corporation
Street, Apt. No.; or PO Box No. 1200 Northwest 137th Avenue
City, State, ZIP+4 Miami, Florida 33182

PS Form 3800, May 2000 See Reverse for Instructions

Rinker
MATERIALS™

December 21, 2004

Ms. Trina L. Vielhauer
Chief Bureau of Air Regulation
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL. 32399-2400

Re: DEP File No. 0250014-016-AC (PSD-FL-324A)
Miami Cement Plant – Public Notice

Dear Ms. Vielhauer:

Enclosed is the certified notice of intent for the above referenced action published on December 14, 2004.

If there are any questions please contact me at 305-229-2955 between the hours of 8 AM and 5 PM. Thanks for your assistance in this matter.

Sincerely,

Michael D. Vardeman
Cement Division Environmental Manager

Rinker Materials
PO Box 650679 | 1200 N.W. 137 Avenue | Miami, FL 33182 | 305.221.7645 | Fax 305.229.8015
www.rinker.com

MIAMI DAILY BUSINESS REVIEW

Published Daily except Saturday, Sunday and
Legal Holidays
Miami, Miami-Dade County, Florida

STATE OF FLORIDA
COUNTY OF MIAMI-DADE:

Before the undersigned authority personally appeared O.V. FERBEYRE, who on oath says that he or she is the SUPERVISOR, Legal Notices of the Miami Daily Business Review f/k/a Miami Review, a daily (except Saturday, Sunday and Legal Holidays) newspaper, published at Miami in Miami-Dade County, Florida; that the attached copy of advertisement, being a Legal Advertisement of Notice in the matter of

INTENT TO ISSUE AIR CONSTRUCTION PERMIT
CSR RINKER MATERIALS CORP. DEP FILE NOS. 0250014-016-AC

(SEE ATTACHED)

in the XXXX Court,
was published in said newspaper in the issues of

12/14/2004

Affiant further says that the said Miami Daily Business Review is a newspaper published at Miami in said Miami-Dade County, Florida and that the said newspaper has heretofore been continuously published in said Miami-Dade County, Florida, each day (except Saturday, Sunday and Legal Holidays) 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 or she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me this

14 day of DECEMBER , A.D. 2004

(SEAL)

Maria I. Mesa
My Commission DD293855
Expires March 04, 2008

O.V. FERBEYRE personally known to me

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSR RINKER MATERIALS CORPORATION
MIAMI CEMENT PLANT
MIAMI-DADE COUNTY
DEP FILE NOS. 0250014-016-AC (PSD-FL-324A)

The Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to CSR Rinker Materials Corporation (Rinker) to increase production at the Miami Cement Plant. A review under the rules for the Prevention of Significant Deterioration of Air Quality (PSD) and a Best Available Control Technology (BACT) determination were not required. The applicant's name and address are CSR Rinker Materials Corporation, 1200 Northwest 137th Avenue, Miami, Florida 33182.

In 2000 Rinker replaced two wet process cement kilns and associated clinker coolers having an annual capacity of 650,000 tons per year (TPY) of clinker with a single dry process coal and petroleum coke-fired kiln with preheater, calciner, and clinker cooler with an annual capacity of 1,200,000 TPY. Rinker requests an increase in its hourly clinker production limit from 137 tons per hour (TPH) averaged over 24 hours to a peak production rate of 162 TPH. Rinker requests an increase in the annual clinker production to 1,300,000 TPY.

Pollution control equipment consists of a common fabric filter system (baghouse) for particulate emissions from the kiln and cooler; absorption of sulfur compounds and metals into the product; combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a Low NO_X calciner for NO_x; and baghouses for particulate emissions from other process emission units.

Although the capacity of the plant was increased and will further increase, actual and potential emissions of most pollutants will either decrease or will not increase significantly with respect to PSD 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 rather than the wet process. This is because there is no need to make raw material slurry and then evaporate the water. The preheater/calciner 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.

Following are the net emission increases and decreases over a contemporaneous five year period that includes the shutdown of the wet process kilns, startup of the new kiln and the requested production increase of the new kiln.

Pollutant	Increases Dry Process at Proposed Capacity	Decreases Wet Process Actual Emissions	Net Emission Increases (Decreases)	PSD Significant Emission Rate
PM	163	165	(2)	25
PM_{10}	130	140	(10)	15
SO_2	425	1383	(1058)	40
NO_x	2600	2571	29	40
CO	1827	1735	92	100
VOC	78	47	31	40
H_2SO_4	13	13.4	- 0	7
Hg	0.09	Assumed 0	<0.09	0.1
Pb	0.195	Assumed 0	<0.195	0.6

A PSD Review and BACT determination is not required because the net emission increases are less than the respective significant emission rates for all pollutants except for VOC. The Department conducted a BACT determination for VOC in 2002. The limit is 0.12 pounds of VOC per ton of clinker. A new BACT determination is not required. The present VOC BACT limit is low compared with recent BACT determinations for new kilns throughout the country. It is also much lower than the cement industry Maximum Achievable Control Technology (MACT) standard of approximately 0.3 pounds per ton applicable to new kilns at new sites.

Emission tests were authorized by the Department and conducted by Rinker at greater operating rates than currently permitted. One of the key finding is that SO_2 emissions are very low. Another is that NO_X emissions are fairly constant in terms of pounds per hour at production rates between 100 and 150 TPH. NO_X emissions in terms of pounds per ton of clinker are lower at production rates between 133 and 150 TPH than at production rates between 100 and 132 TPH. CO emissions will increase with increased production. NO_X, SO_2, VOC and visible emissions will be monitored by continuous emission monitoring systems (CEMS) at the stack. Set points will be adjusted by Rinker for an existing process CO monitor in the preheater so that a control room electronic alarm will be triggered when short-term CO concentrations at the preheater approach values equivalent to the allowable emission limits at the stack.

Additional changes allowed by the permit include introduction of fly ash directly into the calciner, replacement of an induced draft fan, and replacement of certain other minor equipment to more reliably achieve the requested production rate.

The Department will issue the FINAL Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) 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:

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

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

December 14, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Ed Allsopp
Vice President of Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

Re: DEP File No. 0250014-016-AC (PSD-FL-324A)
Miami Cement Plant

Dear Mr. Allsopp:

Enclosed is one copy of the Draft Air Construction Permit for the proposed production increase at the Miami Cement Plant. 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 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. The Department reserves the right to publish the Public Notice at anytime. If the Department publishes the Public Notice, the applicant is relieved of this responsibility.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, Administrator, South Permitting Section at the letterhead address. If you have any questions please call Mr. Linero at 850/921-9523.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/al

Enclosures

In the Matter of an
Application for Permit by:

CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

DEP File Nos. 0250014-016-AC (PSD-FL-324A)
Production Increase and Revision of Emission Limits
Miami Cement Plant
Miami-Dade County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of DRAFT Permit Modification attached) for the proposed action, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The permittee, CSR Rinker Materials Corporation (Rinker), owns and operates the Miami Cement Plant in Miami-Dade County. Rinker applied for a construction permit on September 13, 2004 (complete November 17) to increase clinker production from their new cement kiln and revise emission limits.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to increase clinker production.

The Department intends to issue this air construction permit based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., 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. The notice shall be published as soon as possible one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of the Public Notice. 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 modification and require, if applicable, another Public Notice.

The Department will issue the permit modification 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.

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, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

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.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Mediation is not available in this proceeding. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner;

(b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/15/04 to the person(s) listed:

Ed Allsopp, VP, Rinker*
Mike Vardeman, Rinker
Gregg Worley, EPA
John Bunyak, NPS
Tom Tittle, DEP SED
H. Patrick Wong, Miami-Dade DERM
John Koogler, PhD., P.E., K&A

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) 12/15/04 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection
CSR Rinker Materials Corporation
Miami Cement Plant
Miami-Dade County

DEP File Nos. 0250014-016-AC (PSD-FL-324A)

The Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to CSR Rinker Materials Corporation (Rinker) to increase production at the Miami Cement Plant. A review under the rules for the Prevention of Significant Deterioration of Air Quality (PSD) and a Best Available Control Technology (BACT) determination were not required. The applicant's name and address are CSR Rinker Materials Corporation, 1200 Northwest 137th Avenue, Miami, Florida 33182.

In 2000 Rinker replaced two wet process cement kilns and associated clinker coolers having an annual capacity of 650,000 tons per year (TPY) of clinker with a single dry process coal and petroleum coke-fired kiln with preheater, calciner, and clinker cooler with an annual capacity of 1,200,000 TPY. Rinker requests an increase in its hourly clinker production limit from 137 tons per hour (TPH) averaged over 24 hours to a peak production rate of 162 TPH. Rinker requests an increase in the annual clinker production to 1,300,000 TPY.

Pollution control equipment consists of a common fabric filter system (baghouse) for particulate emissions from the kiln and cooler; absorption of sulfur compounds and metals into the product; combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a Low NO_X calciner for NO_x; and baghouses for particulate emissions from other process emission units.

Although the capacity of the plant was increased and will further increase, actual and potential emissions of most pollutants will either decrease or will not increase significantly with respect to PSD 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 rather than the wet process. This is because there is no need to make raw material slurry and then evaporate the water. The preheater/calciner 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.

Following are the net emission increases and decreases over a contemporaneous five year period that includes the shutdown of the wet process kilns, startup of the new kiln and the requested production increase of the new kiln.

Pollutant	Increases Dry Process at Proposed Capacity	Decreases Wet Process Actual Emissions	Net Emission Increases (Decreases)	PSD Significant Emission Rate
PM	163	165	(2)	25
PM_{10}	130	140	(10)	15
SO_2	425	1383	(1058)	40
NO_x	2600	2571	29	40
CO	1827	1735	92	100
VOC	78	47	31	40
H_2SO_4	13	13.4	~ 0	7
Hg	0.09	Assumed 0	<0.09	0.1
Pb	0.195	Assumed 0	<0.195	0.6

A PSD Review and BACT determination is not required because the net emission increases are less than the respective significant emission rates for all pollutants except for VOC. The Department conducted a BACT determination for VOC in 2002. The limit is 0.12 pounds of VOC per ton of clinker. A new BACT determination is not required. The present VOC BACT limit is low compared with recent BACT determinations for new kilns throughout the country. It is also much lower than the cement industry Maximum Achievable Control Technology (MACT) standard of approximately 0.3 pounds per ton applicable to new kilns at new sites.

Emission tests were authorized by the Department and conducted by Rinker at greater operating rates than currently permitted. One of the key finding is that SO_2 emissions are very low. Another is that NO_X emissions are fairly constant in terms of pounds per hour at production rates between 100 and 150 TPH. NO_X emissions in terms of pounds per ton of clinker are lower at production rates between 133 and 150 TPH than at production rates between 100 and 132 TPH. CO emissions will increase with increased production. NO_X, SO_2, VOC and visible emissions will be monitored by continuous emission monitoring systems (CEMS) at the stack. Set points will be adjusted by Rinker for an existing process CO monitor in the preheater so that a control room electronic alarm will be triggered when short-term CO concentrations at the preheater approach values equivalent to the allowable emission limits at the stack.

Additional changes allowed by the permit include introduction of fly ash directly into the calciner, replacement of an induced draft fan, and replacement of certain other minor equipment to more reliably achieve the requested production rate.

The Department will issue the FINAL Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) 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:

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

Department of Environmental Protection
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 2nd 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 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 Rinker Cement, Miami-Dade link.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

CSR RINKER MATERIALS CORPORATION
MIAMI, DADE COUNTY, FLORIDA

Portland Cement Manufacturing Facility
Production Increase and Revision of Emission Limits

DEP File Nos. 0250014-016-AC
PSD-FL-324A

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

December 14, 2004

I. APPLICANT NAME AND ADDRESS

CSR Rinker Materials Corporation
1200 NW 137th Avenue
Miami, Florida 33182
Authorized Representative: Ed Allsopp, Vice President of Cement Operations

II. FACILITY INFORMATION

A. FACILITY LOCATION

CSR Rinker Materials Corporation (Rinker) operates a 1.2 million tons per year (TPY) clinker dry-process line at the Miami Cement Plant.

This site is approximately 8.2 kilometers from the Everglades National Park, a Class I Prevention of Significant Deterioration (PSD) Area, and in an ozone (O_3) maintenance area in 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 Rinker Miami Cement Plant directly emits more than 100 TPY of several regulated air pollutants and emits over 10 TPY of at least one hazardous air pollutant (HAP). 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.

This industry is listed in Table 212.400-1, "Major Facilities Categories", Section 62-212.400, F.A.C. Therefore, stack and fugitive emissions of over 100 TPY of carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO_2), nitrogen oxides (NO_X), or particulate matter (PM/PM_{10}) characterize the existing installation as a Major Facility per the definitions in Rule 62-210.200, F.A.C. and subject to applicability review pursuant to the rules for the Prevention of Significant Deterioration of Air Quality (PSD) at per Rule 62-212.400, F.A.C.

Per Table 212.400-2, "Regulated Air Pollutants – Significant Emission Rates", modifications at the facility resulting in emissions increases greater than 40 TPY of NO_X or SO_2, 7 TPY of sulfuric acid mist (SAM), 25/15 TPY of PM/PM_{10}, 3 TPY of fluorides, 1200 pounds per year (lb/yr) of lead or 200 lb/yr of mercury require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

A previously approved Rinker 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 Significant Emission Rates given above. 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. In 2001, the Department conducted a BACT determination for VOC and required a continuous emission monitoring system (CEMS) for that pollutant.

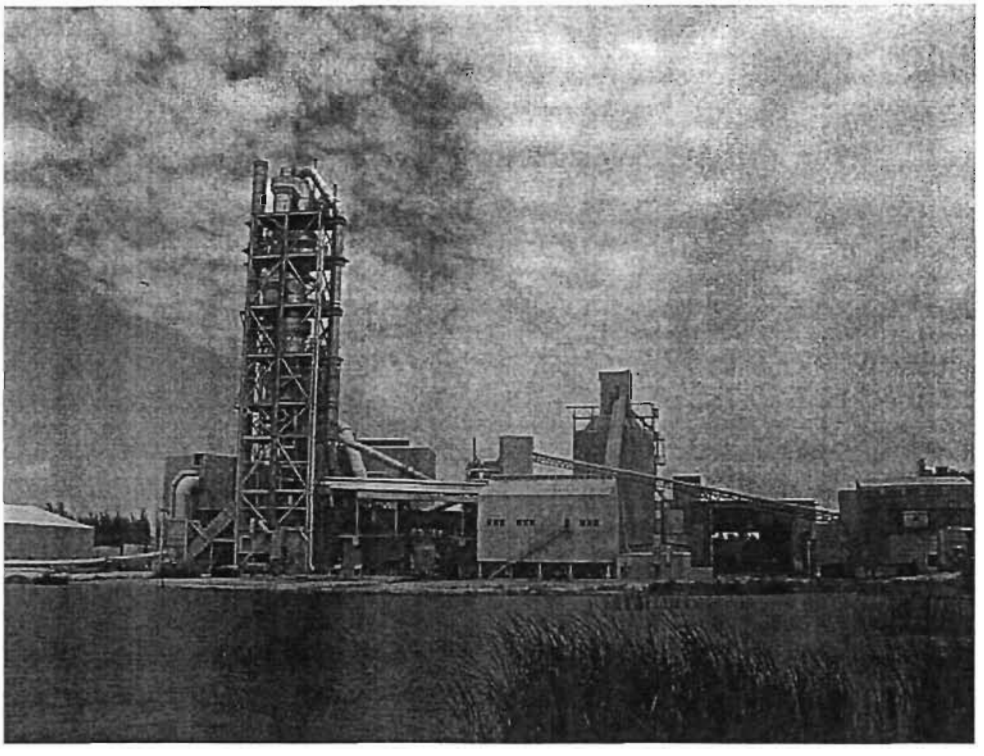
III. MODERNIZATION PROJECT

The Department issued a permit to Rinker on September 11, 1997 to modify the existing wet process plant by incorporating the modern dry process technology including a preheater and calciner along with indirect firing. The dry process preheater/calciner (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 137 tons per hour (TPH) of clinker (averaged over 24 hours) and an annual production rate of 1.2 million TPY of clinker. The major equipment at the plant includes a PH/C kiln, a clinker cooler, raw mill, finish mill, silos, conveyers, and particulate control/dust collection and recycling equipment. The cement product is stored in silos and shipped in bags or in bulk by rail or truck.

A more complete project and process description was provided in the Technical Evaluation and Preliminary Determination issued for the modernization project on June 23, 1997. Rinker completed basic construction of the dry process kiln line in Spring of 2000. Compliance tests were conducted during the second half of the year. The plant operates under Title V Operation Permit 0250014-003-AV issued on November 7, 2000 and revised on October 26, 2004.

Following is a photograph of the constructed dry process plant taken in late June 2001.



CSR Rinker Modernized Dry Process Cement Plant in Miami, Florida

IV. PERMITTED EMISSION AND PRODUCTION RATES

Following are the emission limits and production rates applicable to the dry process line. The values are from the original Air Construction Permit issued for the modernization project as modified by a subsequent PSD permit and BACT determination for VOC.

Parameter	Emission Limits (production basis)	Emission or Production Limits (mass per time basis)	Emissions or Production (Tons per Year)
PM	0.20 lb/ton $kiln_{ph}$ feed	44 lb/hour	193
PM_{10}	0.17 lb/ton $kiln_{ph}$ feed	37.4 lb/hr	164
SO_2	2.23 lb/ton clinker	306 lb/hr	1,340
NO_X	4.9 lb/ton clinker	671 lb/hr	2,940
CO	3.01 lb/ton clinker	412 lb/hr	1,807
VOC	0.12 lb/ton clinker	16.4 lb/hr	72
H_2SO_4	0.014 lb/ton clinker	1.9 lb/hr	8.4
Mercury	2.4×10^{-5} lb/ton clinker	0.0033 lb/hr	0.091
Lead	7.5×10^{-5} lb/ton clinker	0.01 lb/hr	0.045
$Kiln_{ph}$ Feed		220 TPH (24-hr basis)	
Clinker		137 TPH (24-hr basis)	1,200,000
Heat Input		437 mmBtu/hr	

IV. PRODUCTION CAPACITY TESTING REQUESTS

The Department received an application from Rinker on September 13, 2004 requesting production increase. Specifically Rinker requested the following:

- Increase the kiln preheater feed rate from 220 TPH to 267 TPH.
- Increase the clinker production rate from 137 TPH to 162 TPH.
- Increase the fuel heat input rate from 437 million Btu per hour (mmBtu/hr) to 485 mmBtu/hr.
- Revise emission limits to insure that there is not a "net significant emission rate increase" from all projects during a contemporaneous five year period that includes the shutdown of the old kilns, the startup of the new kiln and the requested production increase for the new kiln.
- Possible fly ash feed as a secondary raw material directly into the calciner instead of or in addition to the preheater.
- Possible like-kind replacement of the allegedly defective main induced draft fan.

Following is a tabulation of the emission limits and production rates requested by Rinker. The proposed emission limits are less than the existing limits in terms of lb/ton of feed or clinker as well as in terms of lb/hr for PM, PM_{10}, SO_2, NO_X, and VOC. The proposed emission rates are greater for sulfuric acid mist (H_2SO_4), lead (Pb), and mercury (Hg).

Parameter	Emission Limits (production basis)	Emission or Production Limits (mass per time basis)	Emissions or Production (Tons per Year)
PM	0.152 lb/ton $kiln_{ph}$ feed	40.6 lb/hour (from 44)	163 (from 193)
PM_{10}	0.121 lb/ton $kiln_{ph}$ feed	32.3 lb/hr (from 37.4)	130 (from 164)
SO_2	0.50 lb/ton clinker	81 lb/hr (from 306)	325 (from 1,340)
NO_X	4.0 lb/ton clinker	648 lb/hr (from 671)	2,600 (from 2,940)
CO	2.81 lb/ton clinker	455 lb/hr (from 412)	1,827 (from 1,807)
VOC	0.17 lb/ton clinker	27.5 lb/hr (from 16.4)	110.5 (from 72)
H_2SO_4	0.020 lb/ton clinker	3.24 lb/hr (from 1.92)	13 (from 8.4)
Mercury	14×10^{-5} lb/ton clinker	0.023 lb/hr (from 0.0033)	0.091 (from 0.014)
Lead	30×10^{-5} lb/ton clinker	0.049 lb/hr (from 0.01)	0.195 (from 0.045)
$Kiln_{ph}$ Feed		267 TPH (1-hr) (from 220, 24-hr)	
Clinker		162 TPH (1-hr) (from 137, 24-hr)	1,300,000 (from 1,200,000)
Fuel		485 mmBtu. (from 437)	

V. EMISSIONS RESULTS FROM PRODUCTION CAPACITY TESTING PROGRAM

Prior to submitting the present application, Rinker requested permits to conduct testing for the purpose of determining the production capacity and bottlenecks in the pyroprocessing system and the effect of greater production on emissions. The testing was requested without replacement of the allegedly defective fan or injection of fly ash into the calciner.

The Department issued permits that allowed temporary operation at the kiln preheater feed rate and the clinker production rate that are now permanently requested. The permits required adherence to the previously permitted emission rates (lb/ton and lb/hr) regardless of production rates.

During the capacity testing program, the Department required that Rinker log NO_X, SO_2, and VOC by using the existing continuous emission monitoring systems (CEMS) for those pollutants. The Department also required the continuous recording of preheater feed and calculation of clinker production to relate emissions to production.

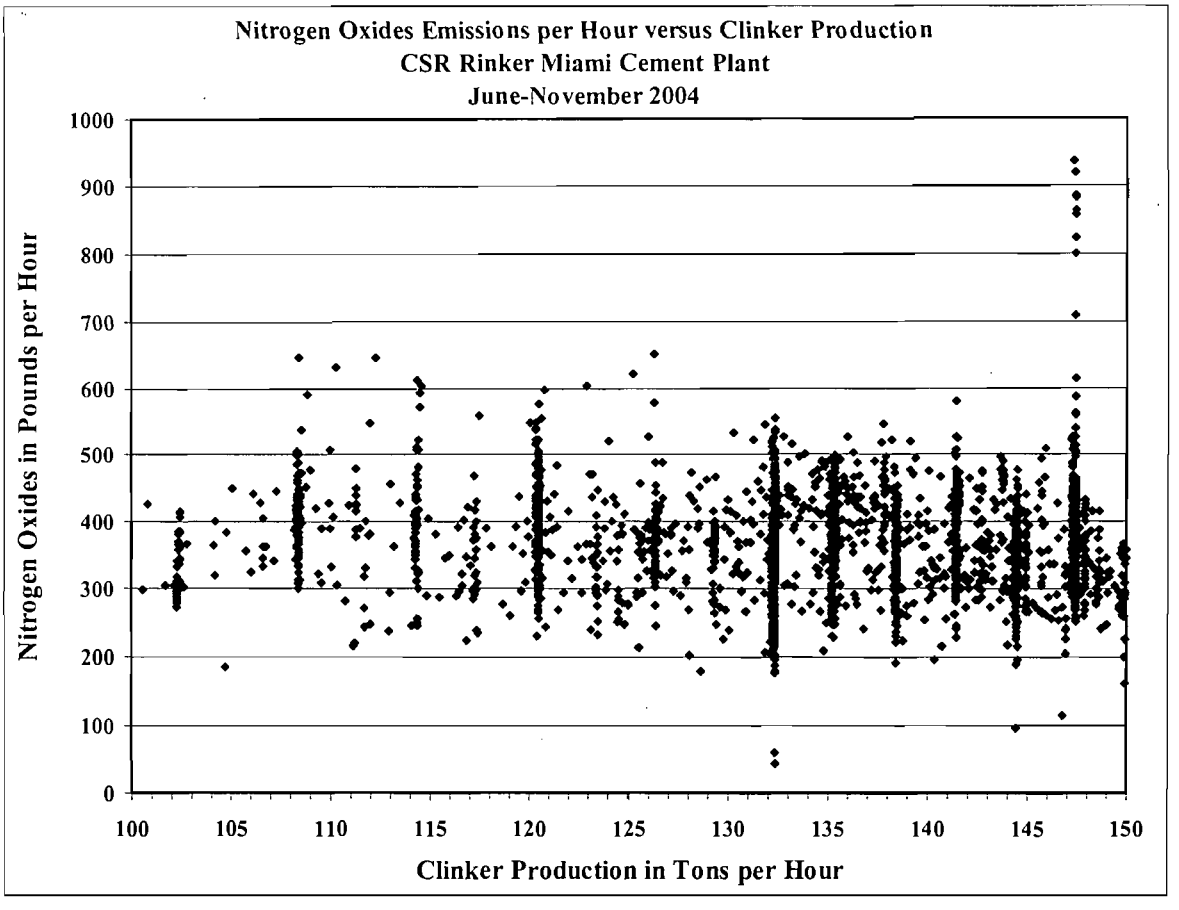
Separate stack testing was required to measure emissions of pollutants for which CEMS are not installed. These include PM, PM_{10}, CO, H_2SO_4, Pb, and Hg. A continuous process CO monitor located in the preheater was also relied upon for determining CO emission trends.

The capacity testing was conducted between June and December 2004. The Department relied upon data as of early November in conducting the present analysis. Stack testing was conducted in August by the firm of Koogler and Associates.

The highest kiln preheater rate achieved during a single hour was 251 tons with a clinker production value of 151 TPH. There were various periods during which the feed was maintained at 246 TPH and clinker production at 147 TPH. Following are discussions relating emissions as measured by CEMS or process monitors to clinker production.

Nitrogen Oxides (NO_X)

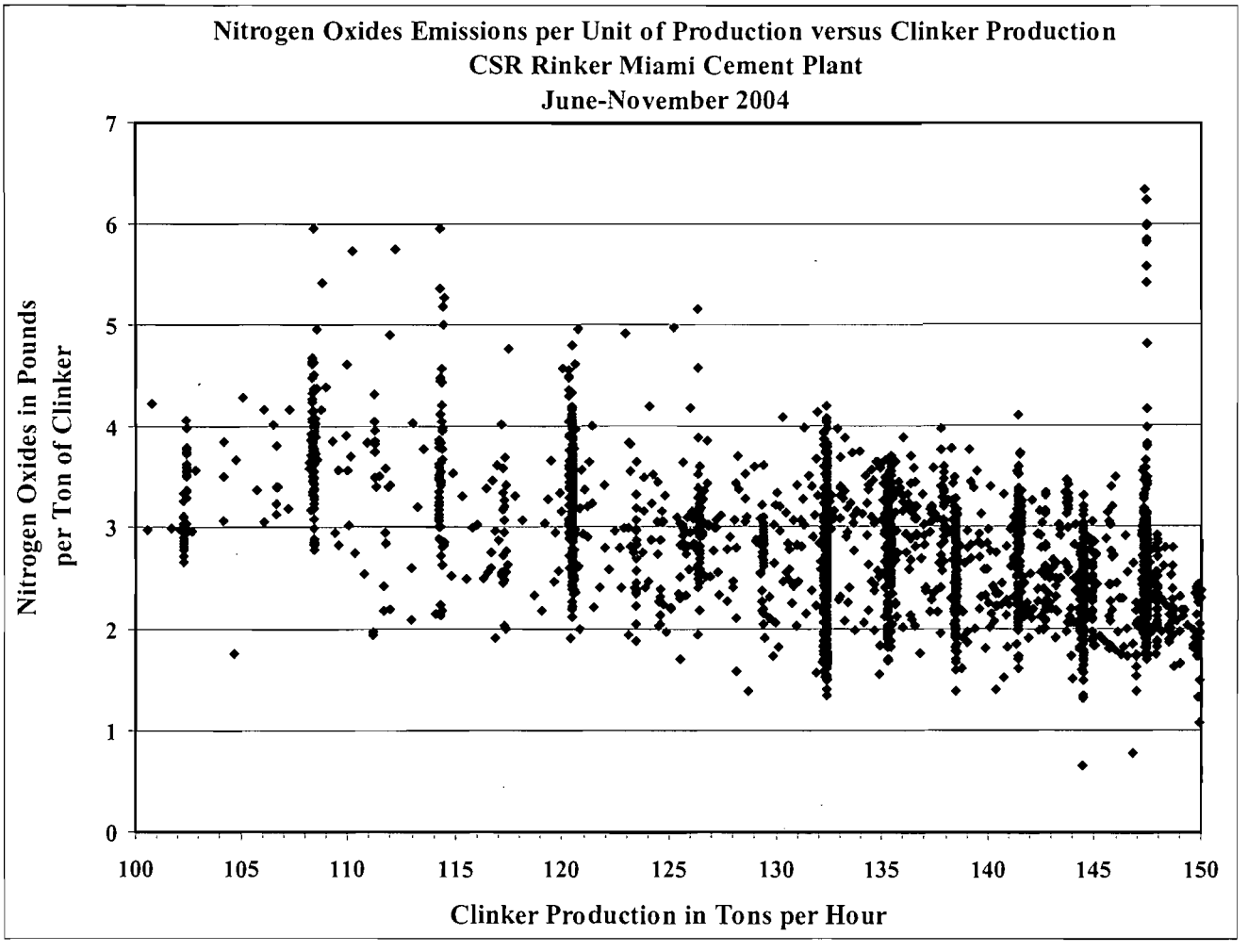
The following graph includes all valid hourly NO_X and clinker production values between June 7 and November 10, 2004.



The mean NO_X value when the kiln produced 132 TPH of clinker or less was 370 lb/hr. The present limit is 671 lb/hr on a **24-hour** average. There were very few **single hour** values that equaled or exceeded the 24-hour limit. It is apparent that the operation always complied with the 24-hour limit.

Interestingly, the mean NO_X value when the kiln produced more than 132 TPH of clinker was also 370 lb/hr. The Department performed a statistical analysis and was able to draw the inference that NO_X values are the same whether clinker production is greater than or less than the presently permitted rate of 132 TPH.

The following graph relates NO_X emissions in terms of lb/ton of clinker to the clinker production rate.

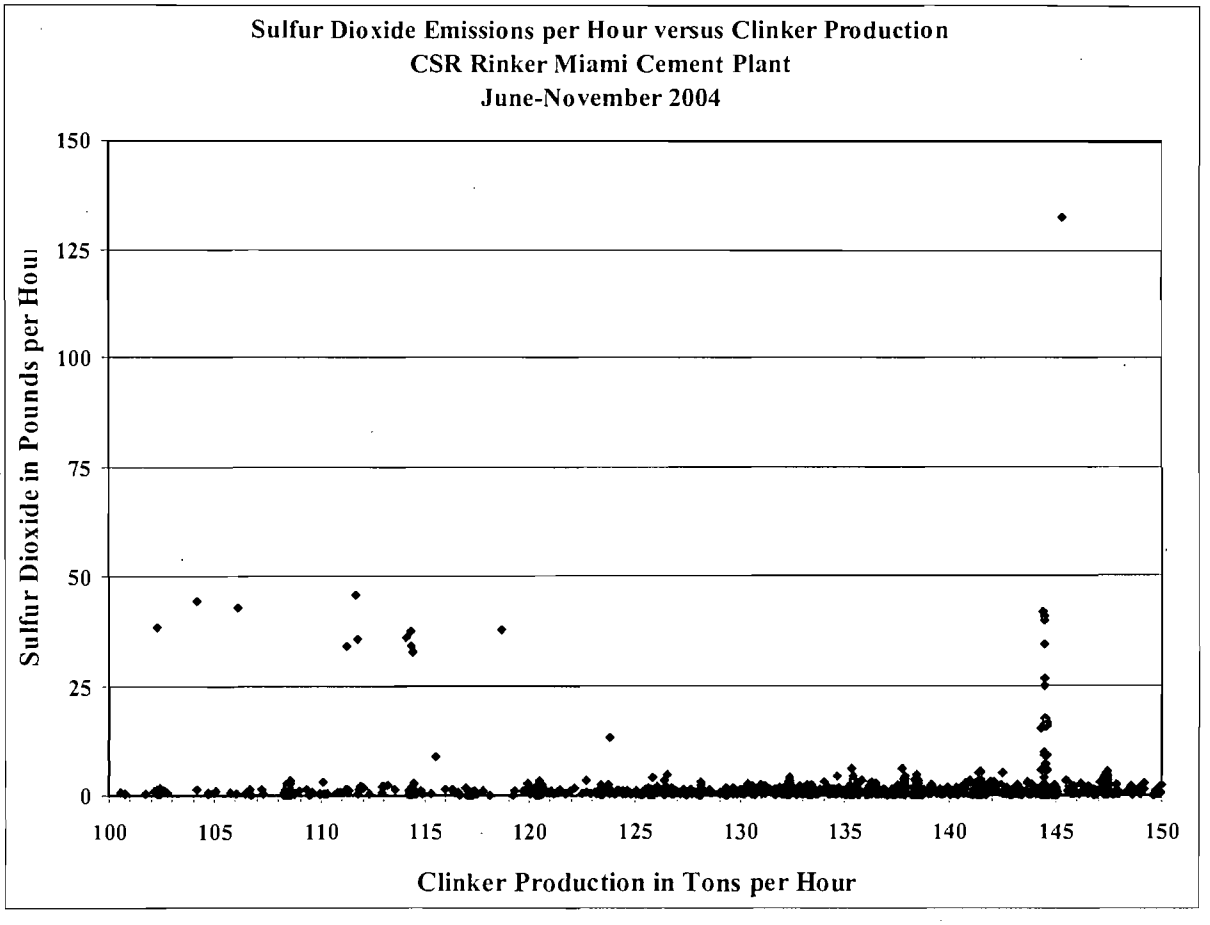


The mean NO_X value when the kiln produced 132 TPH of clinker or less was 3.01 lb/ton of clinker. The present limit is 4.9 lb/ton on a **24-hour** average. Some **single hour** values equaled or exceeded the 24-hour limit. It is apparent that the operation always complied with the 24-hour limit.

Remarkably, the mean NO_X value when the kiln produced more than 132 TPH of clinker was only 2.58 lb/ton of clinker. The Department performed a statistical analysis and was able to reject the null hypothesis that the means are equal with greater than 99 percent confidence. In other words, NO_X emissions in terms of lb/ton of clinker at production rates greater than permitted limit of 132 TPH are less than NO_X emissions at production rates equal to or less than the permitted limit.

Sulfur Dioxide (SO_2)

Following is a chart relating SO_2 emissions in terms of lb/hr to clinker production.



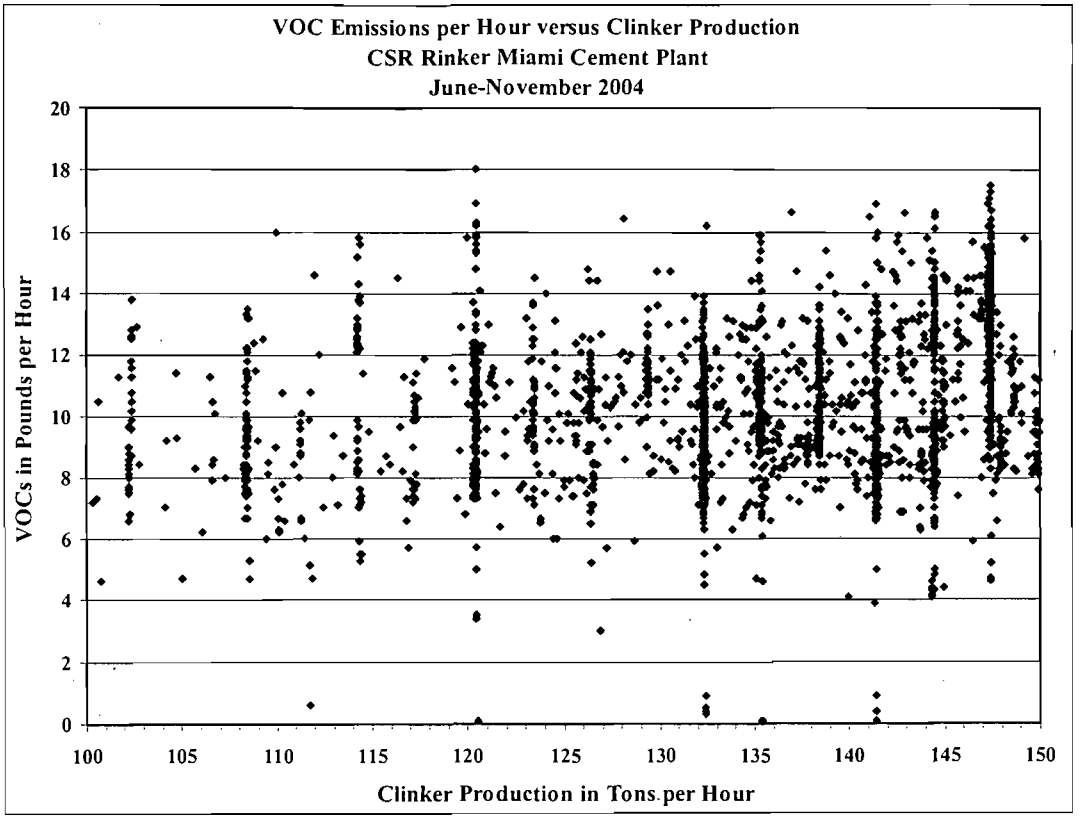
Almost all the recorded SO_2 values were less than 10 lb/hr whether or not clinker production was less than or greater than 132 TPH. It is noteworthy that the present emission limit is 306 lb/hr on a 24-hour basis. There was only a single hourly reading in excess of 50 lb/hr.

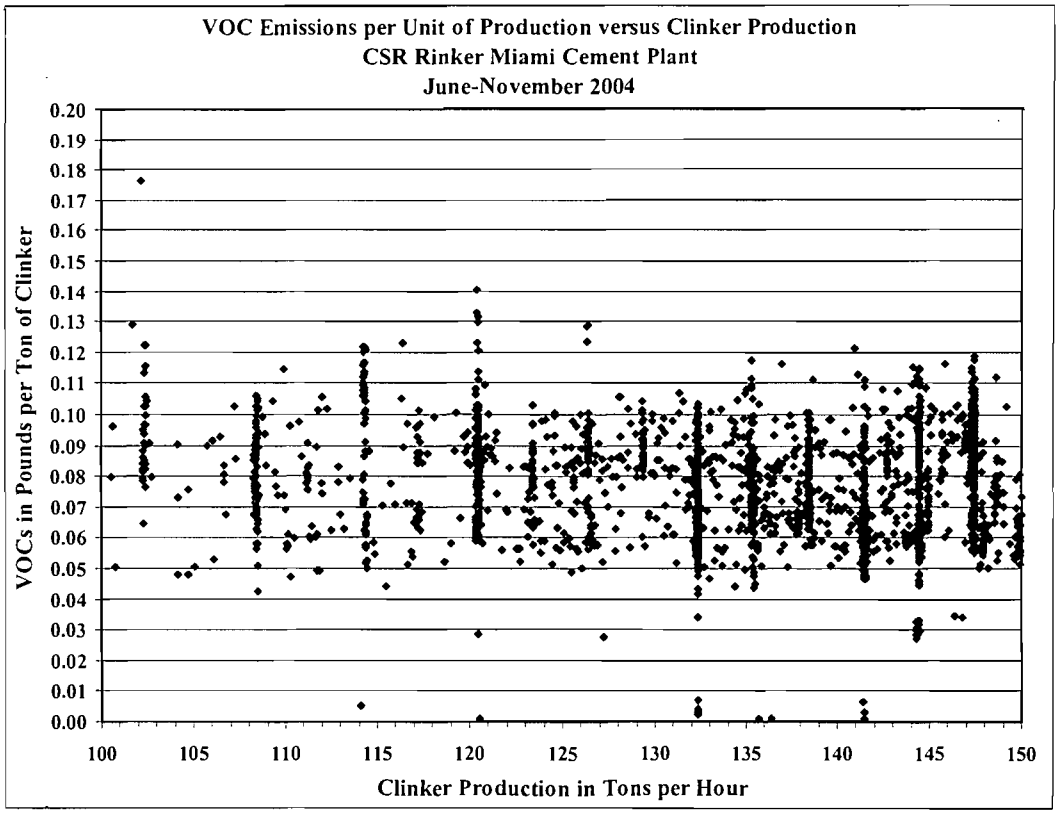
No further analysis of SO_2 emissions is necessary based on the inherently low emissions under both operating scenarios.

Volatile Organic Compounds (VOC)

The graphs on the following page include all valid hourly VOC recorded during the testing program. The mean VOC emission value was 9.7 lb/hr when producing 132 TPH of clinker or less. The mean VOC value was 10.7 lb/hr when producing more than 132 TPH of clinker. The limit is 16.4 on a **30-day** basis. Emissions of VOC were greater at higher production values with greater than 95 percent confidence.

VOC emissions were less on a lb/ton basis (0.076 versus 0.078 lb/ton of clinker) when operating at greater production than at lower production with greater than 95 percent confidence. The limit is 0.12 lb/ton of clinker on a 30-day basis.

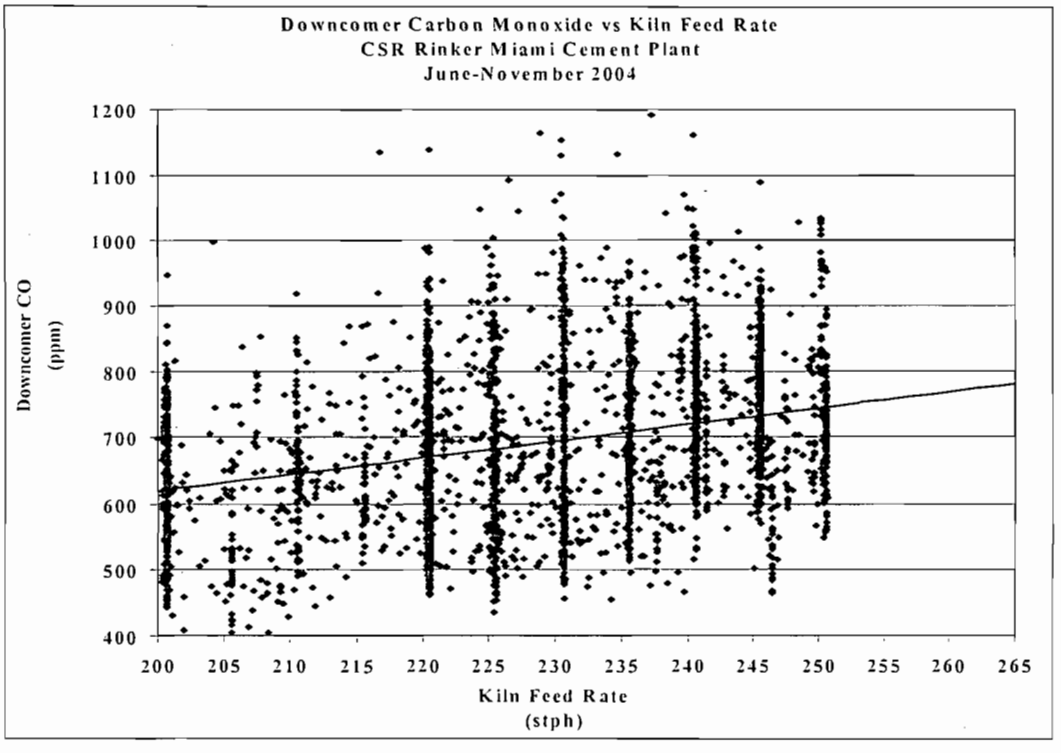

VOC Emissions per Hour versus Clinker Production
CSR Rinker Miami Cement Plant
June-November 2004
VOCs in Pounds per Hour
0
2
4
6
8
10
12
14
16
18
20
100
105
110
115
120
125
130
135
140
145
150
Clinker Production in Tons per Hour


VOC Emissions per Unit of Production versus Clinker Production
CSR Rinker Miami Cement Plant
June-November 2004
VOCs in Pounds per Ton of Clinker
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
0.12
0.13
0.14
0.15
0.16
0.17
0.18
0.19
0.20
100
105
110
115
120
125
130
135
140
145
150
Clinker Production in Tons per Hour

Carbon Monoxide (CO)

Carbon monoxide testing was conducted on August 4, 2004. At the time, the kiln feed was 247 TPH and the clinker production rate was 147 TPH. CO emissions ranged from 241 to 259 lb/hr with an average of 249 lb/hr. This equates to 1.69 lb/ton of clinker. The present emission limits are 412 lb/hr and 3.01 lb/ton of clinker.

CO emissions can vary substantially based on many factors including raw materials, fuels, production rate, etc. The Department requested process CO data from Rinker taken at a point on the process that can reasonably be expected to correlate with CO emissions from the stack.



The data in the above graph relate CO in the down comer of the preheater to kiln feed rather than to clinker production. However, kiln feed and clinker production are directly related. The Department compared CO concentrations in parts per million (uncorrected for oxygen values) to kiln feed. This comparison is similar to comparisons of lb/ton to clinker production.

The trend line in the graph suggests increasing ppm (and thus lb/ton of clinker). The increase in pounds per hour is probably more pronounced.

The Department compared the average CO values measured at the down comer with those measured at the stack on August 4. The uncorrected CO concentrations (at low O_2) at the down comer were approximately 3.6 times the uncorrected concentration (at high O_2) at the stack. The stack emissions equated to 1.69 lb/ton of clinker at a time when the CO instrument in the down comer measured approximately 800 ppm (uncorrected). Thus 1 lb CO/ton of clinker was equivalent to about 475 ppm CO at the down comer (during the stack testing). The present limit (3.01 lb/ton) is roughly equal to 1425 ppm CO in the down comer (at the time of the stack tests.

According to the above graph, CO concentrations measured by the preheater process monitor were always less than 1,200 ppm (uncorrected on an hourly basis). Although CO emissions trended upward with respect to kiln feed and clinker production, it appears that the CO limit was probably never exceeded. This presumes that the relation between the existing process CO measurement and stack CO holds in general.

Other Pollutants (PM, PM_{10}, Dioxin/Furan, Hg, Pb)

During the period August 4 through August 8, 2004 Rinker conducted other tests as required by the testing protocol or the present Title V Operation permit. Following are the results of those tests that were typically conducted while feeding 246 TPH of raw materials to the preheater and producing 147 TPH of clinker.

Pollutant	Permit Limit	Result
Dioxin/Furan (Raw Mill up)	0.4 ng/dscm @7% O_2*	0.122 ng TEQ/dscm @7% O_2
Dioxin/Furan (Raw Mill Down)	0.2 ng/dscm @7% O_2+	0.113 ng TEQ/dscm @7% O_2
Lead (Pb)	7.5×10^{-5} lb/ton clinker	1.8×10^{-5} lb/ton clinker
Mercury (Hg)	2.4×10^{-5} lb/ton clinker	0.7×10^{-5} lb/ton clinker
PM/PM_{10}	0.17 lb/ton ph kiln feed	0.067 lb/ton feed mill down
H_2SO_4	0.014 lb/ton clinker	0.0030 lb/ton clinker

* Standard Baghouse Inlet Temperature < 400 F^0

+ Standard Baghouse Inlet Temperature > 400 F^0

All of the tests indicated compliance with the present permitted limits at production levels greater than presently permitted. It is noted that dioxin/furan emissions during tests conducted in 2002 were less than the more recent high load tests. Following is a comparison of the two sets of dioxin/furan tests.

Year and Mode	Baghouse Inlet Temperature (Degrees F)	Result (Limit) (ng TEQ/dscm @7% O_2)
2004 (Raw Mill Up)	312 – 317	0.122 (0.4)*
2004 (Raw Mill Down)	508 – 515	0.113 (0.2)+
2002 (Raw Mill up)	277 – 286	0.00074 (0.4)
2002 (Raw Mill Down)	500 – 504	0.052 (0.2)

* Standard Baghouse Inlet Temperature < 400 F^0

+ Standard Baghouse Inlet Temperature > 400 F^0

Measured dioxin/furan emissions were greater in 2004 than during testing conducted in 2002. The exact reasons are not known. The temperature at which tests were conducted with the raw mill on (up) was greater in 2004. While significant dioxin formation is not expected at less than 400 °F, formation is nevertheless a temperature-related phenomenon that is also promoted by the high residence time in the baghouse. Nevertheless, the dioxin value with the raw mill up is roughly 1/3 of the allowable rate.

Dioxin/furan emissions were also greater in 2004 than 2002 with the raw mill down. The temperature increase over the previous tests was minimal. There is any number of theoretical explanations. However, the two values may simply be typical within the normal variation of dioxin/furan testing with the raw mill down.

Pursuant to the Federal Maximum Achievable Control Technology (MACT), after dioxin/furan testing Rinker must operate the process such that the three-hour rolling average of control equipment inlet temperature is no greater than the temperature established at performance test.[1] Given the possibility of large variations from one test to the next, it is necessary (and required by the MACT) that Rinker maintain good temperature control in any effort to operate at high capacity.

Emissions Compliance at Higher Production Rates

Based on the Data reviewed by the Department, Rinker has demonstrated that it can consistently comply with the permitted emissions rates as well as the requested emission rates at feed rates (221 to 251 TPH) and production rates (138 to 150 TPH) in excess of those currently authorized (220 and 137 TPH). Compliance was generally demonstrated with a good margin of safety. If and when Rinker achieves and sustains the target production rates, reasonable extrapolation of the emission data trends suggests they can also comply with the requested emission limits at the target production rate.

VI. KILN PRODUCTION CAPACITY

The kiln and key equipment were supplied by F.L. Smidth, one of the largest suppliers of kiln equipment in the world. The project was supervised by Holderbank (aka Holcim), which is one of the largest cement producers in the world.

The project was among the first in the United States after a period of approximately 12 years during which no kilns were built and a number were shut down. It started up in April 2000 – only a few months after the Florida Rock Plant in Alachua that was actually the first project after the lull.

Kiln Manufacturer's Evaluation of Production Capacity

Following is a statement by the manufacturer F.L. Smidth regarding the requested production increase:[2]

"The kiln has already been producing clinker at its authorized production limit of 3288 short tons per day (137 TPH). Although this is well above the rated capacity of 2755 STPD (115 TPH), F.L. Smidth typically provides for additional capacity above and beyond the guarantees provided by the manufacturer.

F.L.Smidth provides reasonable assurance that the kiln system can physically produce substantially more clinker than allowed by the present production limitations. Apart from the inherent "overdesign" of the original configuration, F.L.Smidth provides reasonable assurance that the kiln system is physically capable of being fed at a preheater feed rate of up to 267 short tons per hour without major structural failure of the kiln, cooler and preheater, proper".

The evaluation included comments on the actual loading of the kiln, the capability of the main drive (that turns the kiln), reduced longevity of certain cooler components, higher clinker discharge temperatures, etc. F.L. Smidth included a caveat that states that their preliminary technical assessment "excludes commentary on process stability, burnability, adequacy of the auxiliary equipment, and the pounds per hour emission limits". Of special interest to the Department is the following comment:

"The retention time in the existing calciner will decrease to approximately 2.6 seconds at 3,500 STPD (about 146 TPH of clinker). As a result, the pound per hour CO emissions should be carefully monitored to ensure compliance within the established emissions limits".

In the estimation of the Department, the assessment by F.L. Smidth simply means that the equipment can handle the loads, but they don't vouch for operational ease, maintenance, sustained clinker production, or clinker quality and that CO emissions monitoring is recommended.

Rinker's Evaluation of Production Capacity

Since Rinker, rather than F.L. Smidth, actually conducted the production capacity tests, their production manager, Mike Aller, submitted his analysis and findings, which are reproduced below:[3]

The following observations were made during the production testing of Rinker Materials' Miami Cement plant during which the kiln was operated at feed rates as high as 255 TPH. It will address issues covered in the "Preliminary Technical Assessment" provided by FLS, the main process equipment manufacturer. During this testing, the plant has been able to operate at over 3500 ton of clinker per day and there appears to be no major hurdles that would prevent it being able to sustain these production levels.

Rotary Kiln, Size ø4.15m x 48m:

- Considering the Kiln structure: By adjusting the main drive, a typical feed/speed ratio (~70 tph feed per revolution) has been maintained in the testing to date. Some adjustment to the feed/speed ratio may be required to obtain improved stability, but as FLS points out, the kiln cannot be structurally overloaded.

- Considering the Kiln main drive: Adjustment of the field of a direct current motor to increase the output speed results in reduced output torque. The highest torque requirement is at initial start of the kiln. To date, we have not experienced any difficulties starting the kiln with the field adjusted for a maximum speed of 3.6 rpm. There is further field adjustment available which will allow us to maintain the current feed/speed ratio at higher kiln feed rates.

- Considering the Kiln drive: There is sufficient field adjustment to take the kiln drive to 4.0 rpm. This will allow us to maintain the current feed/speed ratio at higher kiln feed rates.

- Aside: While the specific loading in the kiln is high, we have not experienced any significant kiln instability not related to swings in kiln feed chemistry. During such swings, the instability can be dampened by either decreasing (elevated C3S) or increasing (low C3S) the feed rate. Chemistry control procedures have been modified to minimize swings in C3S.

Clinker Cooler, Size 807CIS – 1014 CFG – 1006 RFT / 1025 RFT:

- Considering the Cooler structure: We have experienced elevated clinker discharge temperatures at higher production rates, but they are still acceptable.

- Considering the Cooler drives: During the testing to date, the cooler hydraulic drive motors have operated at approximately 40% of the full load amp limits, indicating more than adequate power at rates up to 3500 tpd.

Preheater, Size ø5.7 m Stages 1 & 2, ø6.0 m Stages 3, 4, & 5, ILC Calciner ø6.9 m x 16.0 m:

- Considering the Preheater structure: To date we have not experienced any problems with the additional pressure drop across the preheater. While kiln ID fan power draw has increased, the power consumption per ton of clinker has only increased marginally due to the increased pressure drop. The kiln ID fan capacity appears to be adequate for the increased production rates. The kiln ID fan damper typically operated between 75% and 85% open when operating at a kiln feed rate of 245 tph and from 80% to 95% when operating at 250 tph. Higher damper positions have occurred during periods when there was excessive build up in the riser. This build up was caused by pitted refractory in the riser that was replaced during a recent kiln outage.

- Considering the Calciner structure: Stack testing performed during the testing period showed that CO emissions remained well within compliance. Additionally, CO readings on the down comer gas only increased approximately 100 ppm when the kiln feed rate was increased from 220 tph to 250 tph. No significant variations in down comer CO were observed at the increased production rates. Proportionally, CO emissions should remain within our permit limits at feed rates over 250 tph.

Raw Mill – FRM 38/190:

- Considering the Raw Mill: During initial testing, the raw meal fineness target was reduced with no adverse effects on burnability or product quality. The raw mill averaged 256 tph dry raw meal at the current fineness target. This is adequate to support a kiln feed rate of 267 tph. If additional raw meal capacity is required, the fineness target can be reduced further, as it is still above the original design specification.

Coal Mill – FRM 16/18:

- Considering the Coal Mill: The coal mill performed well during the testing, with production rates up to 17 tph of pulverized coal. This was more than adequate to support 3500 tpd clinker. Some adjustment to the fineness target was made during the testing.

General:

During the testing to date, the kiln has operated at 3500 tpd clinker (245 tph kiln feed rate) or above for nearly 650 hours. There has been approximately 190 hours of operation at 3575 tpd (250 tph kiln feed rate). The feed rate was taken as high as 255 tph during the testing to date. During this testing, there were no problems with stack emissions or product quality and there were no mechanical/electrical problems that could be tied directly to the increased production rates.

The raw mill production rates were more than adequate to sustain 3500 tpd clinker. The coal mill adequately sustained the increased production rates.

- There are two future projects that are currently under consideration. One is the implementation of the tire burning/alternate fueling system originally proposed in the construction permit. The second is the injection of elevated loss on ignition flyash directly into the calciner. However, both the main process equipment and the auxiliary support equipment have demonstrated the ability to maintain the requested production rate within the proposed emission limits.

Department personnel visited Rinker on December 7, 2004. Mr. Aller provided an orientation to the control room and the continuous process and emissions data that is monitored by him and the operators. At the request of the Department, Mr. Aller subsequently provided the entire record for process CO data with respect to preheater feed as well as the following statement:

Rinker's Miami Cement plant has a carbon monoxide (CO) limit of 412 lbs per hour and compliance is demonstrated by annual main stack testing. Testing to date has shown that the plant operates well within this limit, but there is no continuous monitoring for CO. There is one process gas analyzer that monitors post-combustion gases for CO, however, it is located in the pre-heater exit, or downcomer duct. Before entering the main stack, this gas stream mixes with the cooler vent gases as well as ambient air from various fresh air dampers. As a result, the CO concentration in the main stack is significantly lower than in the downcomer. Although there is precise calculation relating downcomer CO and main stack CO, alarm points on downcomer CO could be installed to alert the operator that CO emissions are near the limit and that action is needed to correct the situation. Data from previous main stack testing could be used to determine an appropriate alarm set point for the downcomer CO that would provide additional reasonable assurance that the CO permit limit would not be exceeded during normal daily operations.

Dr. Koogler's Summary on Production and Emissions

In response to the Department's request for additional information, Dr. John Koogler (Rinker's environmental consultant) submitted his documentation and opinions regarding production and emissions.[4]

Dr. Koogler described some of the projects that Rinker may conduct in order to achieve the targeted feed rate of 267 TPH and production rate of 167 TPH. Rinker may install a fly ash injection system such that some of the feed (fly ash) entering the preheater will be introduced into the calciner. Rinker may also replace the existing main baghouse fan (or fan wheel) that has experienced resonance problems prior to reaching design capacity with one of equal capacity.

Dr. Koogler submitted the stack tests results for 2003 and 2004. He stated that: "Both the 2003 and 2004 emission measurements demonstrate that the plant routinely operates well within emission limiting standards. The 2004 measurements demonstrate that pollutant emission rates are not a limiting factor in increasing the production rate to 267 tons per hour of preheater feed and 162 tons per hour of clinker".

Dr. Miller's Comments on Submittals

The Department provided the reports from F.L. Smidth, Rinker's Production Manager, and Dr. Koogler to its own consultant, Dr. F. MacGregor Miller. Dr. Miller is an expert on cement raw materials, pyroprocessing, emission formation, and control. The Department requested that he review the documents to help the Department understand the environmental implications of the requested production increase.

On the basis of the three reports, Dr. Miller advised the Department by letter:[5] "the proposed production capacity increase is unlikely to affect emissions, other than possible minor increases in CO. There may be some quality effects arising from the higher production, but this will be an issue for the Rinker quality department, rather than an environmental effect".

Regarding Dr. Koogler's summary, Dr. Miller stated: "the replacement of the ID (induced draft) fan with another unit capable of the design revolution rate of 900 rpm does not seem to constitute a change". He also stated: "the injection of fly ash would probably reduce CO and VOC emissions".

He noted that Dr. Koogler gives actual emission data from the plant with higher production rates than normal but not as high as desired. All pollutants were well below the limits. We (the Department) will need to verify that this is still true at 162 STPH clinker production, as well as the documented rates at 147 STPH".

Department Comments on Production Capacity and Emissions

Rinker demonstrated that it can achieve a short-term kiln preheater feed rate of 251 TPH (possibly 256 TPH) and a clinker production rate of 150 TPH using the raw material, fuel, and operational procedures that were used during the second part of 2004. Rinker is continually making raw materials, process adjustments, and is considering replacement of the induced draft fan components and injection of fly ash directly into the calciner to achieve the target feed and clinker production values of 267 and 162 TPH.

As previously stated, compliance was generally demonstrated with a good margin of safety, suggesting that they can also comply with the requested emission limits at rates as high as those requested.

VII. 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 production limit.

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 are included in the table 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.

The contemporaneous creditable emissions changes are given in the following table. The primary basis of the creditable reductions is the shutdown of the old wet process pyroprocessing lines in 2000. The primary basis of the creditable increases is the startup of the dry process line as modified by the present request.

Pollutant	Increases Dry Process at Proposed Capacity	Decreases Wet Process Actual Emissions	Net Increases (Decreases)	PSD Significant Emission Rate
PM	163	165	(2)	25
PM_{10}	130	140	(10)	15
SO_2	425	1383	(1058)	40
NO_x	2600	2571	29	40
CO	1827	1735	92	100
VOC	111	47	64	40
H_2SO_4	13	13.4	~0	7
Hg	0.09	Assumed 0	<0.09	0.1
Pb	0.195	Assumed 0	<0.195	0.6

The net emission increases are less than the significant emission rates for all pollutants with the exception of VOC. However, the Department conducted a PSD review and made a BACT determination for this pollutant in 2002. The BACT of 0.12 lb/ton of clinker would equate to 78 tons of VOC at the proposed capacity. Therefore, the net VOC increase will be 78 – 47 = 31 TPY and PSD will not be triggered.

For reference, the emissions estimated above are less than those estimated during the original project review conducted in 1997. For example, the present permit allows 1,340 TPY of SO_2 and 2940 TPY of NO_X.

The proposed increase in production and the possible projects to reliably achieve the requested rates. The net emissions increases constitute a modification requiring a permit and that results in net emissions increases less than the significant emission rates. The Department has determined that PSD is not triggered for any pollutant and no BACT determinations are required.

VIII. PROPOSED EMISSION AND PRODUCTION LIMITS

The table on the following page lists the emission limits proposed by the Department for comparison with the previously listed emission limits applicable to the plant. The proposed values are equal to those proposed by Rinker with the exception of VOC. The proposed VOC limit is less than proposed by Rinker in order to preserve the previous PSD review and BACT analysis and to avoid triggering a new PSD review and BACT analysis.

The proposed preheater feed and clinker production limits are based on a 1-hour average rather than a 24-hour average (that would not otherwise limit short term production).

Based on the concerns expressed by F.L. Smidth, the Department's consultant, and the Department's analysis, the Department will require that Rinker activate a CO process alarm. The alarm will rely on the existing continuous process CO monitor and shall be set at the level that corresponds to the emission limit above. The alarm will require Rinker to take the appropriate measures to return CO to a level less than the alarm trigger. By these measures, the Department has reasonable assurance that annual emissions will be less than 1,827 tons per year and will avoid requiring installation of a CO CEMS in the stack.

Parameter	Emission Limits (production basis)	Emission or Production Limits (mass per time basis)	Annual Emissions or Production (Tons per Year)
PM	0.152 lb/ton $kiln_{ph}$ feed	40.6 lb/hour	163
PM_{10}	0.121 lb/ton $kiln_{ph}$ feed	32.3 lb/hr	130
SO_2	0.50 lb/ton clinker (daily)	81 lb/hr (daily average)	325
NO_X	4.0 lb/ton clinker (daily)	648 lb/hr (daily average)	2,600
CO	2.81 lb/ton clinker	412 lb/hr	1,827
VOC	0.12 lb/ton clinker (30-day)	19.4 lb/hr (30-day rolling)	78
H_2SO_4	0.020 lb/ton clinker	3.24 lb/hr	13.0
Mercury	1.4×10^{-4} lb/ton clinker	0.023 lb/hr	0.091
Lead	3.0×10^{-4} lb/ton clinker	0.049 lb/hr	0.195
$Kiln_{ph}$ Feed		267 TPH (1-hr)	
Clinker		162 TPH (1-hr)	1,300,000
Cooler Throughput		162 TPH (1-hr)	
Coal		18.7 TPH (24-hr)	
Petcoke		16.3 TPH (24-hr)	
Heat Input		485 mmBtu/hr	

IX. APPROVED PROJECTS

In order to achieve the target 267 TPH feed rate and 162 TPH of clinker production, the Department recognizes that Rinker may determine that some of the following projects may be necessary:

- Replacement of the induced draft fan with another 900 rpm fan. No permit required.
- Replacement of any fan components or tipping (extending) the blades. No permit required.
- Implementation of fly ash injection in the calciner. Covered by this action.
- Modifications to the calciner to insure complete burnout of CO. Covered by this action.
- Replacement of the induced draft fan with a larger fan. Permit modification required.
- Replacement of kiln drive or any of its components. Permit modification required.
- Upgrading of raw mill or additional raw mill. Permit modification required.

Rinker may determine different projects are needed and shall consult with the Department regarding permitting requirements including PSD applicability.

XI. CONCLUSION

Based on the Data reviewed by the Department, Rinker has demonstrated that it can consistently comply with the permitted emissions rates as well as the requested emission rates at feed rates (221 to 251 TPH) and production rates (138 to 150 TPH) in excess of those currently authorized (220 and 137 TPH). Compliance was generally demonstrated with a good margin of safety.

If and when Rinker achieves and sustains the target production rates, reasonable extrapolation of the emission data trends suggests they can also comply with the requested emission limits at the target production rate.

The large reduction in permitted sulfur dioxide emissions and the reduction in actual emissions compared with those characteristic of the old wet process expands increment in both the nearby Class I and Class II areas.

The permit will provide until December 31, 2006 for the approved projects to reach and maintain the target production rates. However, Rinker must comply with all of the terms of the attached permit upon issuance and with the provisions of the existing Title V permit except those superseded by this permitting action.

References

[1] Regulation. Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. 64 FR 31925, June 14, 1999.

[2] Short Report. Keefe, Brian P., V.P. of Engineering, F.L. Smidth. Preliminary Technical Assessment – Production Increase Evaluation for CSR Rinker Materials Corporation, Miami Florida. October 11 2004.

[3] Short Report. Aller, Mike, Production Manager, Rinker Materials Corporation Miami Cement Plan. November 15, 2004.

[4] Short Report. Koogler, John B., PhD., P.E. Summary of Emission Rates While Operating at Targeted Increased Production Rate. Rinker Materials Corporation, Miami Cement Plant. Prepared by Dr. Koogler and submitted together with his cover letter, References 1 and 2 and other material in support of previously submitted permit application. November 16, 2004.

[5] Letter. Miller, F. MacGregor, PhD to Linero, A., Florida DEP. Proposed Production Increase at Rinker Materials Corporation Miami Cement Plant. November 23, 2004.

DRAFT PERMIT

PERMITTEE

Rinker Materials Corporation
1200 NW 137th Avenue
Miami, Florida 33182

Permit No. 0250014-016-AC
Expires: December 31, 2006
Miami Cement Plant
Production Capacity Increase

PROJECT AND LOCATION

This permit authorizes a production capacity increase and revises emission limits for the existing kiln and associated equipment at the Miami Cement Plant operated by Rinker Materials Corporation. The permit authorizes certain projects to reach and sustain the permitted production rate.

The existing plant is located in Dade County at 1200 Northwest 137th Avenue in Miami, Florida. The UTM coordinates are Zone 17; 558.20 km E; 2851.20 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 permittee is authorized to perform the work and make the changes specified 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. This permit supplements all other air construction and operation permits for the subject emissions unit and does not alter any requirements from such previously issued air permits unless otherwise specified.

APPENDICES

Appendix GC (General Conditions) is attached as part of this permit.

(DRAFT PERMIT)

Michael G. Cooke, Director (Effective Date)
Division of Air Resource

FACILITY DESCRIPTION

Rinker Materials Corporation operates the existing Miami Cement Plant located in Dade County, Florida. The facility consists of raw material handling and storage, a raw mill system, kiln system, clinker handling, finish grinding operations, cement handling, loading, and bagging operations, and coal handling and grinding operations. The key component is the kiln that is presently permitted at the following maximum production and process rates: 220 tons per hour of dry preheater feed materials; 137 tons per hour of clinker; and 437 MMBtu per hour of total heat input to the kiln system. The original air construction permit for the kiln is Permit No. 0250014-002-AC. The kiln first produced clinker in 2000 and currently operates under the provisions of Title V Air Operation Permit No. 0250014-009-AV.

PROJECT

The kiln system (Emissions Unit 018) is the key emission unit affected by this air construction permit. The project increases: the maximum process rate from 220 to 267 tons per hour (TPH) of preheater feed materials; the maximum production rate from 137 to 162 TPH of clinker; and total heat input to the pyropcessing system from 437 to 485 million Btu per hour. During an authorized testing program, Rinker was able to achieve approximately 251 TPH of feed and 151 TPH of product with only operational process changes while complying with the proposed emission limits.

The project may include a number of physical changes such as equipment replacements, or upgrades to achieve and sustain the requested process and production rates.

REGULATORY CLASSIFICATION

Title III: The facility is a major source of hazardous air pollutants (HAP) based on the current Title V permit.

Title V: The facility is a major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: The plant is an existing PSD-major facility in accordance with Rule 62-212.400 F.A.C.

NSPS: This facility operates units 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).

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).

RELEVANT DOCUMENTS

- Application No. 0250014-016-AC received on 9/13/2004 and all related supporting information and correspondence to make the application complete.
- Air construction Permit No. 0250014-011-AC issued on 01/16/04 authorizing a temporary production capacity testing period. Project Nos. 0250014-012-AC, 0250013-012-AC, 0250014-014-AC, and 0250014-017-AC extended the temporary capacity testing period through 12/31/04.
- Air construction Permit No. 0250014-008-AC (PSD-FL-324) issued on 03/01/02 to conduct a BACT review for VOC and require the installation of a THC continuous emissions monitoring system.
- Air construction Permit No. 0250014-007-AC issued on 03/01/02 to remove the beryllium emissions limit.
- Original air construction Permit No. 0250014-002-AC issued on 09/11/97 for the kiln modernization project.

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 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. 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.]

7. 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.]

8. Title V Permit: This permit authorizes construction 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 shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EU 018. Kiln System

The proposed project affects the following existing emissions unit:

ID No.	Emission Unit Description
018	In-Line Kiln, Raw Mill and Clinker Cooler

ADMINISTRATIVE REQUIREMENTS

1. Previous Permit Conditions: This permit authorizes a production increase from the kiln and associated equipment. As indicated herein, the following conditions are in addition to, or replace, those of the previous air construction permits. Unless otherwise specified, the emissions unit remains subject to all applicable conditions from previous air construction permits. [Rule 62-4.070(3), F.A.C.]

CONSTRUCTION ACTIVITIES

2. Fly Ash Injection to Precalciner: The permittee is authorized to install equipment necessary to inject fly ash into the precalciner. Within 60 days of selecting the final vendor for this project, the permittee shall submit the final design specifications. Before initiating construction activities related to fly ash injection into the precalciner, the permittee shall provide the following information: maximum LOI of the fly ash; monitoring equipment for determining the fly ash injection rate; and the method for determining the clinker production rate when injecting fly ash into the precalciner. [Application No. 0250014-016-AC; Rule 62-4.070(3), F.A.C.]

3. CO Process Alarm: The permittee shall add a control room alarm to the existing CO emissions process monitor to alert operators of elevated CO emissions. The alarm shall be set to activate when the process monitor records CO emissions of 1,200 ppmv or more. When an alarm occurs, operators shall take appropriate corrective actions to return CO emissions below the alarm set point. For each incident of an alarm, the operator shall record the following in a written log: date and time of alarm; amount of time above the alarm level; highest concentration above the alarm level; corrective action taken to regain appropriate operating levels. [Rules 62-4.070(3) and 62-212.400(2)(g), F.A.C.]

4. Other Potential Construction Activities: The following projects are authorized to achieve and sustain the full operational level allowed by this permit.

   a. **I.D. Fan**: The permittee is authorized to replace components of the existing induced draft fan with functionally equivalent components. Also the fan blades may be "tipped" (extended) to improve performance. Optionally, entire induced draft fan may be replaced with a functionally equivalent 900 rpm induced draft fan.

   b. **Calciner Modifications**: The permittee is authorized to modify the calciner to enhance the combustion efficiency (carbon burnout) by providing additional residence time.

   The permittee shall submit a notification of commencement of construction within 30 days of beginning physical construction on either of the above projects.

   {Permitting Note: Other unidentified projects such as replacement of the I.D. fan with a larger unit; replacement or upgrade of the kiln drive; upgrade of the raw mill or addition of another mill; etc. may require additional permits. The permittee shall consult with the Department regarding the permitting requirements including PSD applicability for such projects.} [Application No. 0250014-016-AC]

SPECIFIC CONDITIONS

5. Production Limits: The preheater dry feed rate shall not exceed 267 tons per hour (TPH, 1-hour average). The preheater dry feed rate is the mass of material (on a dry basis) entering the preheater/kiln as determined by the Pfister weighing/feeding system. The clinker production rate of the kiln shall not exceed 162 tons per hour (TPH, 1-hour average) and 1,300,000 tons during any consecutive 12 months. The clinker production rate shall be determined as a function of the preheater dry feed rate and a conversion factor (multiplier) for the kiln system of 0.607. Continuous operation is allowed (8760 hours per year) provided the annual clinker production limit is not exceeded.
[Applicant Request - Application No. 0250014-016-AC; Rule 62-210.200, F.A.C. (PTE)]
{Permitting Note: The above condition revises/replaces the previous 24-hr productions limits and the 12-month clinker limits specified in Condition B.4 of Permit No. 0250014-002-AC.}

6. Heat Input Limit: Fuels fired in the pyroprocessing system (kiln and precalciner) shall not exceed a total heat input rate of 485 MMBtu per hour and shall consist only of the fuels originally authorized in Permit No. 0250014-002-AC, as amended. The coal usage rate shall not exceed 18.7 tons per hour (TPH, 24-hour average) and the petroleum coke usage rate shall not exceed 16.3 tons per hour (TPH, 24-hour average). [Application No. 0250014-016-AC; Permit No. 0250014-002-AC; Rule 62-4.070(3), F.A.C.]
{Permitting Note: The above condition revises the maximum heat input rate, coal usage rate, and petroleum coke usage rate to the kiln system specified in Condition B.5 of Permit No. 0250014-002-AC.}

7. Fly Ash Injection Limit: Fly ash injection to the precalciner shall not exceed 35 tons per hour (TPH, 24-hour average). [Application No. 0250014-016-AC; Rule 62-4.070(3), F.A.C.]

8. Revised Emissions Limits: Emissions from the kiln system shall not exceed the limits specified in revised Table 2-1, attached. [Application No. 0250014-016-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(BACT), F.A.C.]
{Permitting Note: The permit limits in Table 1-2 were originally specified in Condition B.1 of Permit No. 0250014-002-AC. This table was subsequently revised by Permit Nos. 0250014-007-AC and 0250014-008-AC (PSD-FL-324). The revised Table 1-2 replaces the previously specified limits and revisions. No changes are made to the methods of compliance.}

9. Initial Testing at Increased Production Rate: Within 270 days of the effective date of this permit, the permittee shall conduct tests to demonstrate compliance with each emission standard specified in Table 1-2. A test report shall be submitted to the compliance authority within 45 days of completing the last required pollutant test. [Rules 62-4.070(3) and 62-297.310, F.A.C.]

10. Operating Rate During Initial Testing: Initial testing of emissions shall be conducted with the emissions unit operation at 95 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at 95 to 100 percent of the maximum operation rate allowed by this permit, testing may be conducted at less than 95 percent of the maximum operation rate; in this case, subsequent emissions unit operation is limited to 105 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

11. Operating Rate During Subsequent Testing. After conducting a compliance test at 95 to 100 percent of the maximum operation rate allowed by this permit, the following applies: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

12. Additional Dioxin/Furan Testing: Pursuant to 40 CFR 63.1349 (b)(4)(e), the owner or operator is required to repeat the dioxin/furan performance tests for kilns or in-line kiln/raw mills within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test. Changes in fly ash use practices including, but not limited to, use of increased loss-on-ignition fly ash or injection of fly ash into the calciner shall be considered significant changes within the purview of this requirement. [40 CFR 63, Subpart LLL and Rule 62-4.070(3), F.A.C.]

13. Relaxations of Restrictions on Pollutant Emitting Capacity. 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.]

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

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

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

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

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

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

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

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

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and;
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

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

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

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

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

G.13 This permit also constitutes:

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

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

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

G.14 The permittee shall comply with the following:

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

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

(c) Records of monitoring information shall include:

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

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

Revised Table 1-2. Air Pollutant Standards and Terms
Rinker Materials Corporation
Portland Cement Plant and Associated Equipment

Facility ID No. 0250014
Air Permit No. 0250014-016-AC
(Revision of Original Permit)

Emission Unit ID No. 018 - Kiln/Cooler/Raw Mill System (Dry Process Technology)

EU ID No.	Description	Pollutant ID	Fuels, [2]	Allowable Emissions [3], (5) Permit Limits	Allowable Emissions [3], (5) lb/hr	Equivalent Emissions TPY [4], (5)	Basis
-018	Kiln/Cooler/Raw Mill	PM	coal/gas/WTDF/oil	~~0.20~~ **0.152** lb/ton $kiln_{ph}$ feed *	~~44~~ **40.6**	~~193~~ **163**	Avoid PSD
		PM_{10}	coal/gas/WTDF/oil	~~0.17~~ **0.121** lb/ton $kiln_{ph}$ feed *	~~37.40~~ **32.3**	~~164~~ **130**	Avoid PSD
		SO_2	coal/gas/WTDF/oil	~~2.23~~ **0.50** lb/ton of clinker	~~306~~ **81.0**	~~1340~~ **325**	Avoid PSD
		NO_x	coal/gas/WTDF/oil	~~4.9~~ **4.0** lb/ton of clinker	~~671~~ **648**	~~2940~~ **2600**	Avoid PSD
		CO	coal/gas/WTDF/oil	~~3.01~~ **2.81**lb/ton clinker	~~412~~ **455**	~~1807~~ **1827**	Avoid PSD
		VOC	coal/gas/WTDF/oil	0.12 lb/ton clinker	~~16.4~~ **19.4**	~~72~~ **78**	PSD-BACT
		H_2SO_{4mist}	coal/gas/WTDF/oil	~~0.014~~ **0.020** lb/ton clinker	~~1.92~~ **3.24**	8.4 **13.0**	Avoid PSD
		Mercury	coal/gas/WTDF/oil	~~2.4~~ **14.0** x 10^{-5} lb/ton clinker	~~0.0033~~ **0.023**	~~0.014~~ **0.091**	Avoid PSD
		Lead	coal/gas/WTDF/oil	~~7.5~~ **30.0** x 10^{-5} lb/ton clinker	~~0.01~~ **0.049**	~~0.045~~ **0.195**	Avoid PSD
		VE	coal/gas/WTDF/oil	10% opacity	---	---	NSPS

ALLOWABLE OPERATING RATES

		Kiln/Cooler/Raw Mill	
Hours of operation per year	Hours	8760	
Kiln preheater feed rate ($kiln_{ph}$)*	TPH	~~220~~ **267**	**(1-hour average)**
Kiln Heat Input	MMBtu/hr	~~437~~ **485**	**(24-hour average)**
Clinker Production [1]	TPH	~~137~~ **162**	**(1-hour average)**
Cooler throughput rate	TPH	~~137~~ **162**	**(1-hour average)**

NOTES

[1] ~~At a maximum design clinker production rate of 137 TPH and preheater feed rate of 220 TPH, utilizing a conversion factor of 0.60: (220 x 0.60 = 137 TPH).~~ **Based on the maximum preheater feed rate of 267 TPH and a conversion factor of 0.607, the maximum clinker production rate is 162 TPH. (267 TPH, $kiln_{ph}$ x 0.607 = 162 TPH, clinker)**

[2] Fuel combustion as specified in Specific Condition No. B.5, and the protocols established by DERM. See also Specific Condition B.13.

[3] Compliance Units. This facility shall demonstrate compliance based on these standards.

[4] ~~"Equivalent Emissions" are annual emissions at 8760 hrs./yr. The "Equivalent Emissions" are also listed for informational purpose and for PSD and recordkeeping tracking purposes.~~ **"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 kiln modernization project is Permit No. 0250014-002-AC. Table 1-2 was modified by Permit No. 250014-007-AC to removed the beryllium emissions limit. It was subsequently modified by Permit No. 250014-008-AC to: revise the SO_2 limit from 0.7 lb/MMBtu to 2.23 lb/ton of clinker; revise the NOx emissions limit from 1.53 lb/MMBtu to 4.9 lb/ton of clinker; and revise the VOC emission limits from 0.1 to 0.12 lb/ton of clinker, 13.7 to 16.4 lb/hour, and 60 to 72 TPY (equivalent emissions).

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. Ed Allsopp
Vice President of Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Kelly Gilliard | C. Date of Delivery 12-17-07

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

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PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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Mr. Ed Allsopp
Vice President of Cement Operations
Street, Apt. No. or PO Box No.
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
City, State, ZIP+4
Miami, Florida 33182

PS Form 3800, May 2000 See Reverse for Instructions

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BUREAU OF AIR REGULATION

November 23, 2004

Mr. Al Linero
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: Proposed Production Increase at Rinker Materials Corporation Miami Cement Plant

Dear Al,

The Department has requested that I offer comments on the reports of Mr. John Koogler of Koogler and Associates, F.L. Smidth and Co. (Mr. Brian Keefe), and Rinker Materials Corporation (Mr. Mike Aller), relative to the mechanical, process and environmental effects projected from a proposed production increase to 267 short tons per hour of kiln feed, corresponding to a clinker production rate of 162 short tons per hour.

In general, I feel that the proposed increase is unlikely to affect emissions, other that possible minor increases in CO. There may be some quality effects arising from the higher production, but this will be an issue for the Rinker quality department, rather than an environmental effect. I do not believe that the proposed increase in production will have any significant safety ramifications, or any effect on the structural and mechanical operation of the kiln system.

Mr. Koogler refers to a specific heat consumption of about 3.00 MMBtu/short ton clinker, which seems reasonable for a production unit of this capacity, normal feed burnability, and normal heat losses from the cooler, kiln shell, and preheater exit gas.

- The replacement of the ID fan with another unit capable of the design revolution rate of 900 rpm does not seem to me to constitute a change; I accept Mr. Koogler's claim that such replacement would merely provide equipment capable of the original design operation.
- The injection of fly ash directly into the calciner would probably reduce CO and VOC emissions. Yet to be determined is whether the raw mix homogeneity would be adequate to produce a quality product; however, this is an issue for the plant to resolve, and does not (apparently) impact FDEP.

The FLS report deals principally with the structural capability of the unit to achieve the desired production. As Mr. Keefe says, "…specifically excludes any commentary on process (e.g.

system stability, burnability, adequacy of the auxiliary equipment, etc.) and the pound per hour emissions limits...". He indicates that the additional production can be obtained "without major structural failure to the kiln, cooler, and preheater, proper." This is a very conservative approach, in my view. He indicates that the kiln drive can be taken up to over 4 rpm, as opposed to the "100% speed" of 3.11 rpm. He does not address whether the kiln can be loaded slightly heavier, increasing the residence time of the charge in the kiln, and thereby potentially reducing the free lime levels at the higher production rate. I believe that this is in fact possible despite the high specific loading of 6.0 mtph/m^3.

- The cooler structure, assuming a higher grate speed, will not be compromised by the higher grate speeds needed to handle the greater clinker quantity. No mention is made of the higher temperature clinker exiting the cooler, and the potentially higher cooler exhaust temperature. It seems likely, however, that these can be managed.
- The ID fan will have a more negative static pressure to handle; Mr. Keefe believes that this will be manageable. He also points out that the material residence time in the calciner will be reduced by the greater production, and this will increase the potential for higher CO emissions. I agree with his statement.

Mr. Koogler goes on to give actual emission data from the plant with higher production rates than normal, but not as high as desired. All pollutants were well below the limits. We will need to verify that this is still true at 162 stph clinker production, as well as the documented rates at 147 stph.

Mr. Aller verifies that the equipment is mechanically capable of dealing with the higher feed rates.

- He indicates for example, that the kiln drive can be taken to 4.0 rpm. He does not indicate the potential quality effects associated with the shorter kiln residence time. This is, of course, primarily a Rinker issue. He does address the potential to modify the feed rate as a function of the C3S content of the clinker. This is the main factor affecting mix burnability.
- He indicates that they have experienced elevated clinker discharge temperatures at higher production rates, but they are still acceptable. Yet to be determined is whether the higher temperatures can be tolerated over long durations.
- He comments on the fan capability by mentioning that the ID fan damper operates up to 95% open at 250 stph feed rate. I believe this fan may ultimately limit production, when material collects in the tower or on the fan blades. Again, this will not be an emission issue.
- He also comments on the capacity of the raw mill at the increased tonnage. He indicates that the raw fineness can be decreased without adverse effects on burnability or product quality. Frankly, I think reductions in raw and fuel fineness are bound to eventually impact product quality. However, again, this is a Rinker parameter, and does not impact emissions unless the fuel is ground so coarse that CO emissions increase. This seems unlikely to me.

I hope this evaluation is of use to the Department. As always, it is a pleasure to work with you and the Department.

Sincerely,

F. MacGregor Miller
For Cement Etc., Inc.
5252 Golf Course Drive
Morrison, CO 80465
Phone: (303) 697-3470
Fax: (303) 697-3471
Email: greg-miller@comcast.net

Section III. Emissions Unit(s) and Conditions.

Subsection A: (Reserved)
{Permitting note: Section III, Subsection A is omitted from this permit revision since it is only valid until June 9, 2002, rendering the entire subsection obsolete.

Section III. Emissions Unit(s) and Conditions.

Subsection B. This section addresses the following emissions units.

E.U. ID No.	Brief Description
-018	In-Line Kiln/Raw Mill & Clinker Cooler

General

B.0. The following Specific Conditions are in effect beginning at 12:01 a.m. of June 10, 2002. [Rule 62-204.800, F.A.C.; and, 40 CFR 63, Subpart LLL]

B.1. Exemption From New Source Performance Standards. Except as provided in paragraphs 40 CFR 63.1356(a)(1) and (a)(2), any affected source subject to the provisions of 40 CFR 63. Subpart LLL is exempted from any otherwise applicable new source performance standard contained in 40 CFR Part 60, Subpart F.
[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1356]

B.2. Attachment "40 CFR 63, Subpart A" is incorporated by reference.

Essential Potential to Emit (PTE) Parameters

B.3. Design Capacities.

Emissions Unit 018	Maximum Capacity
Kiln Preheater Feed Rate (kiln $_{ph}$) (TPH) on a 24-hour basis	~~220~~ 267
Kiln Heat Input (MMBtu/hr) on a 24-hour basis	~~437~~ 485
Clinker Production Rate; 24-hr avg./Annual	~~137~~ 162 TPH/1,300,000 TONS
Cooler Throughput Rate; 24-hr avg./Annual	~~137~~ 162 TPH/1,300,000 TONS
Flyash Injection to Precalciner(TPH) on a 24-hour basis	35

[0250014-002-AC dated September 11, 1997]

B.4. Hours of Operation.

Emissions Unit 018	Maximum Allowable Hours of Operation	Permit
Kiln System	8,760	[0250014-002-AC dated September 11, 1997]

Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.

B.5. Methods of Operation - Fuels.

Fuels fired in the pyroprocessing system (kiln and precalciner) shall not exceed a total heat input rate of ~~437~~ 485 MMBtu/hr and shall consist only of the following:

1. Start-Up Fuels

Bituminous coal, natural gas, petroleum coke, propane, No. 2 fuel oil, residual fuel oil, and on-specification and off-specification used oil.
[0250014-002-AC dated September 11, 1997]

a. Coal and Petroleum Coke

The coal usage rate shall not exceed ~~16.8~~ 18.7 TPH based on a 24-hour average. The petroleum coke usage rate shall not exceed ~~14.6~~ 16.3 TPH on a 24 hour basis.
[0250014-002-AC dated September 11, 1997]

b. Used Oil

i. The constituents and properties of the *on-spec used oil* shall comply with the following allowable concentration levels, as stipulated and defined in 40 CFR 279.11, which is adopted by reference in Rule 62-710.210, F.A.C.

Constituent/Property	Allowable Concentration
Cadmium	2 ppm maximum
Arsenic	5 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	4000 ppm maximum
Flash Point	100 ° F minimum
Polychlorinated Byphenyls (PCBs)	Not Allowed (EQCB Board Order 99-55, Miami-Dade County)

[0250014-002-AC dated September 11, 1997]

ii. (*On-specification/Off-specification used oil* burned at this facility shall not be a hazardous waste as defined by Rule 62-730.030, F.A.C., or 40 CFR Part 261 (July 1, 1996 version). 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. The on-spec used oil shall be burned in compliance with Section 403.769(3), F.S.

[0250014-002-AC dated September 11, 1997]

iii. *On-specification/Off-specification used oil* samples from Specific Condition No. A.4(b) shall be analyzed by EPA Recommended Analytical Procedures for Used Oil for

the following constituent/property, associated unit, and using the test methods indicated:

Constituent/Property	Unit	Test Method
Cadmium	ppm	EPA SW-846(6010)
Arsenic	ppm	EPA SW-846(6010)
Chromium	ppm	EPA SW-846(6010)
Lead	ppm	EPA SW-846(6010)
Total Halogens	ppm	EPA SW-846(9252)
Sulfur	percent	ASTM D129 or ASTM D1552
Flash Point	degree F	EPA SW-846(1010)
Heat of Combustion	Btu/gal	ASTM D240
Polychlorinated Byphenyls (PCBs)	ppm	EPA SW-846 (0010) and EPA 680

NOTE: Other test methods may be used only after receiving written prior approval from the Department.
[0250014-002-AC dated September 11, 1997, Revision Effective Month day, year]

iv. The maximum annual consumption rate of used oil shall not exceed 31,886,000 gallons.
[0250014-002-AC dated September 11, 1997, Revision Effective Month day, year]

2. Supplemental Fuels/Non Start-Up Fuels

a. The following permitted non-hazardous solid waste may be used as supplemental fuel: tires, tire-derived fuels, oil filters, booms and rags from spill clean up, generated on site, unused paper by-products, and clean non-chlorinated plastic by-products. This non-hazardous solid waste material shall not be used as a start-up fuel.
[Miami-Dade County Environmental Quality Control Board, Board Order 99-55 dated December 9, 1999 & 0250014-002-AC dated September 11, 1997]

b. The permitted non-hazardous solid waste may be fed continuously at the kiln inlet at the base of the precalciner at a rate not to exceed ~~132~~ 48.5 MMBtu/hr (10% of total kiln and precalciner fuel input) on a 24-hour basis.
[Miami-Dade County Environmental Quality Control Board, Board Order 99-55 dated December 9, 1999; Revision Effective Month day, yearMonth day, year]

c. Before initiating tire firing the gases exiting the kiln shall reach a minimum temperature of 1,400 degrees F for one hour and the oxygen level in the kiln, as measured at the cement plant induced draft fan, shall reach at least 3 percent (1-hour average). Upon reaching steady state conditions, and within 6 hours, gases exiting the kiln shall be maintained at an outlet temperature of at least 1,750 degrees F.
[0250014-002-AC dated September 11, 1997]

Emission Limitations and Standards

B.6. In-line Kiln /Raw Mill /Clinker Cooler Allowable Emissions [1]:

Pollutant ID	Fuel(s) [2]	Allowable Emissions [3] Permit limits	lb/hr	Equivalent Emissions [4] TPY	Basis
PM	coal/gas/WTDF/oil	~~0.20~~ 0.152lb/ton $kiln_{ph}$ feed *	~~44~~ 40.6	~~193~~ 163	RMC[5] -Data
PM10	coal/gas/WTDF/oil	~~0.17~~ 0.121lb/ton $kiln_{ph}$ feed *	~~37.40~~ 32.30	~~164~~ 130	RMC - Data
SO_2	coal/gas/WTDF/oil	~~2.23~~ 0.50lb/ton of clinker	~~306~~ 81.0	~~1340~~ 325	RMC - Data
NO_x	coal/gas/WTDF/oil	~~4.9~~ 4.00lb/ton of clinker	~~671~~ 648	~~2940~~ 2600	RMC - Data
CO	coal/gas/WTDF/oil	~~3.01~~ 2.81lb/ton clinker	~~412~~ 455	~~1807~~ 1827	RMC - Data
VOC	coal/gas/WTDF/oil	~~0.12~~ 0.17lb/ton clinker	~~16.4~~ 27.5	~~72~~ 110.5	BACT
H_2SO_{4mist}	coal/gas/WTDF/oil	~~0.014~~ 0.020lb/ton clinker	~~1.92~~ 3.24	~~8.4~~ 13.0	<7tpy increase
Mercury	coal/gas/WTDF/oil	~~2.4~~ 14.0x10^{-5} lb/ton clinker	~~3.30 E-03~~ 0.023	~~0.014~~ 0.091	<200 lb/yr
Lead	coal/gas/WTDF/oil	~~7.5~~ 30.0x10^{-5} lb/ton clinker	~~0.01~~ 0.049	~~0.045~~ 0.195	<1200 lb/yr
VE	coal/gas/WTDF/oil	10% opacity			NSPS
Dioxins/Furans	coal/gas/WTDF/oil	0.20 ng/dscm or 0.40 ng/dscm (see specific condition B 8)			40 CFR 63, Subpart LLL

* Kiln preheater feed rate (Kiln)ph

NOTES

[1] At a maximum design clinker production rate of ~~137~~ 162 TPH and preheater feed rate of ~~220~~ 267 TPH, utilizing a conversion factor of 0.607: (267x0.607=162).

[2] Fuel combustion as specified in Specific Condition No. B.5, and the protocols established by DERM. See also Specific Condition B.21.

[3] Compliance Units. This facility shall demonstrate compliance based on these standards.

[4] "Equivalent Emissions" are based on ~~annual emissions at 8760 hrs/yr~~ Clinker Production of 1,300,000 TPY. The "Equivalent Emissions" are also listed for informational purpose and for PSD and recordkeeping tracking purposes.

[5] RMC-Rinker Materials Corporation Data

~~[6] AP-42 - Emission Factors~~

[0250014-002-AC dated September 11, 1997; Permit No. 0250014-008-AC/PSD-FL-324; and Revision Effective Month day, year]

B.7. Maximum Visible Emissions .

Emissions Unit 018	Maximum Visible Emissions Limits
In line Kiln / Raw Mill/ Clinker Cooler	10%

[0250014-002-AC dated September 11, 1997]

B.8. Dioxins/Furans. No owner or operator of an existing in-line kiln/raw mill shall cause to be discharged into the atmosphere from these affected emissions units, any gases which contain dioxins/furans in excess of 0.20 ng/dscm (8.7×10^{-11} gr/dscf) (TEQ) corrected to seven percent oxygen; or 0.40 ng/dscm (1.7×10^{-10} gr/dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate control device is 204° C (400° F) or less.
[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1343(a) and (b)(3)(i)and (ii)]

B.9. Dioxin/Furans Operating Limits for Kilns and In-line Kiln/Raw Mills.
(a) The owner or operator of a kiln subject to a D/F emission limitation under 40 CFR 63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) does not exceed the applicable temperature limit specified in paragraph 40 CFR 40.1344(b). The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under 40 CFR 63.1343 must operate the in-line kiln/raw mill, such that,

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph 40 CFR 63.1344(b) 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 40 CFR 63.1344(b) and established during the performance test when the raw mill was not operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits above is determined in accordance with the following: the run average temperature must be calculated for each run, and the average of the run average temperature must be determined and included in the performance test report and will determine the applicable temperature limit.
[40 CFR 63.1344(a)(1) & 2 and (b)]

Excess Emissions
{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS, NESHAP, or Acid Rain program provision.}

B.10. 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.]

B.11. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

B.12. Excess Visible Emissions. For the purpose of reports under 40 CFR 60.65, periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity exceeds 10% opacity. See Specific Conditions B.7 and B.15.
[Rule 62-204.800, F.A.C.; and, 40 CFR 60.63(d)]

Test Methods and Procedures

B.13. Compliance with the allowable emission limiting standards listed in B.6. shall be determined by using the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 61 Appendix B adopted by reference in Chapter 62-204, F.A.C.

These emission units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements

Description	Pollutant Name or parameter	Fuel(s) [1]	EPA/Reference Method/CMS *	Time Frequency	Compliance Test Duration	CMS * Compliance
Kiln/Cooler/Raw Mill	PM/PM10	Oil/Coal /Gas/WTDF	5 or 201/201A	Initial/annual [8]	3 one-hr run	
Kiln/Cooler/Raw Mill	VE	Oil/Coal/Gas/WTDF	9/COMS	Initial/annual/ COMS	3 one-hr run	No [4]
Kiln/Cooler/Raw Mill	SO_2	Oil/Coal/Gas/WTDF	CEMS	daily average	Continuous	Yes [6]
Kiln/Cooler/Raw Mill	NOx	Oil/Coal/Gas/WTDF	CEMS	daily average	Continuous	Yes [3]
Kiln/Cooler/Raw Mill	CO	Oil/Coal/Gas/WTDF	10 [4]	Initial/annual	3 one-hr run	
Kiln/Cooler/Raw Mill	VOC	Oil/Coal/Gas/WTDF	25A [2]	Initial/annual	3 one-hr run	No [2]
Kiln/Cooler/Raw Mill	H2SO4 mist	Oil/Coal/Gas/WTDF	8	Initial	3 one-hr run	
Kiln/Cooler/Raw Mill	Hg, Pb,	Oil/Coal/Gas/WTDF	29	Initial	3 one-hr run	
Fugitive Sources	VE		9	Protocol [7]		
Minor Sources	VE		9	Initial/annual	3 one-hr run	
Kiln/Cooler/Raw Mill	Dioxins/Furans	Oil/Coal/Gas/WTDF	23	Initial/every 30 months	3 one-hr run	

Notes:

[1] Annual testing of emissions shall be conducted during the worst case scenario that this facility would normally operate under and according to specific condition B.17. Test frequency after initial compliance shall be determined by DERM. Fuels to be burned are specified in Specific Condition B.5.

[2] To comply with the conditions of this permit, VOC emission shall be tested initially, quarterly until the total hydrocarbon (THC) monitor is installed and certified, and annually thereafter At Rinker's option, Method 25A can be corrected for methane through a concurrently conducted Method 18 determination or through another method approved by DERM. If a concurrent demonstration of methone is not performed, then the results of the Method 25A determination shall be used to demonstrate compliance with the VOC emission limit. In other words, Rinker has the option of using Method 25A alone if they stipulate that all of the THC is VOC.

[3] NOx - The continuous emission monitoring system (CEMS) data shall be used to demonstrate compliance with the kiln/cooler/raw mill emissions limits. The CEMS calibration and maintenance shall meet the applicable requirements of 40 CFR 60, Appendix B and Appendix F.

[4] Pursuant to 40 CFR 60, Subpart F, the kiln/cooler/raw mill exhaust system shall be equipped with continuous opacity monitoring system (COMS) to record the opacity at the stack to indicate proper maintenance and operation. Monitoring of the opacity of emissions shall be demonstrated by COMS pursuant to 40 CFR 60.63. Notification and recordkeeping shall be in accordance with 40 CFR 60.7 and 40 CFR 60.65.

[5] Continuous process monitors for CO and/or O_2 to optimize combustion conditions for pollution control shall be part of the process.

[6] SO_2 - The continuous emission monitoring system (CEMS) data shall be used for the Kiln/cooler/raw mill compliance requirement. The CEMS calibration and maintenance shall meet the applicable requirements of 40 CFR 60, Appendix B and Appendix F.

[7] Protocol as approved by the Permitting Authority (DERM)

[8] Rinker has the option of using Method 5 if they stipulate that all of the PM is PM10.

* CMS [=] compliance demonstrated by a continuous monitoring system: CEMS or COMS.

The permittee shall provide DERM with a *protocol* that will outline the different fuel scenarios (% of total heat input) that this unit will be burning. Rinker 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 Specific Condition B.5. Fuel Combustion. 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.

[0250014-002-AC dated September 11, 1997; Permit No. 0250014-008-AC/PSD-FL-324; and Revision Effective Month day, year]

B.13. PM, PM10 , CO, and Visible Emissions. The permittee shall annually (prior to December 31 of each year) conduct performance tests on all emissions units and their corresponding pollutant emissions listed below:

Kiln: PM, PM10, CO, and visible emissions;
Cooler : PM and visible emissions;
[Rule 62-297.310(7), F.A.C.]

B.14. Initial and Subsequent Performance Testing

(a) The owner or operator of an affected emissions unit subject to 40 CFR 63, Subpart LLL, shall demonstrate initial compliance with the emission limits of 40 CFR 63.1343 and 40 CFR 63.1345 (See Specific Condition B.6.) using the test methods and procedures in paragraph 40 CFR 63.1349(b) and 40 CFR 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs 40 CFR 63.1349(a)(1) through (a)(10), as described below, as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

(1) A brief description of the process and the air pollution control system;
(2) Sampling location description(s);
(3) A description of sampling and analytical procedures and any modifications to standard procedures;
(4) Test results;
(5) Quality assurance procedures and results;
(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(7) Raw data sheets for field sampling and field and laboratory analyses;
(8) Documentation of calculations;
(9) All data recorded and used to establish parameters for compliance monitoring; and
(10) Any other information required by the test method.

(b) Performance tests to demonstrate initial compliance with 40 CFR 63, Subpart LLL, shall be conducted as specified as follows: [40 CFR 63.1349(b)(1) through (b)(3)].

(1) 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)(iii) 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). The opacity exhibited during the period of the Method 5 of Appendix A, 40 CFR Part 60 performance tests required by paragraph (b)(1)(i) shall be determined as required in paragraph (b)(1)(v).

(i) EPA Method 5 of Appendix A, 40 CFR Part 60, shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected emission unit is operating at the highest load or capacity level reasonably expected to occur (See Specific Condition B.17.). Each run shall be conducted for at least one 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 particulate matter 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 40 CFR 63, Subpart LLL. 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 in-line kiln/raw mill feed rate, except for fuels, for each run.

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

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

Where: E = emission rate of particulate matter, kg/Mg (lb/ton) of kiln feed.
c_s = concentration of PM, kg/dscm (g/dscf), as determined by Method 5.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr), as determined by Method 5.
P = total kiln feed (dry basis), Mg/hr (ton/hr), as confirmed by material balance over the production system.

(iv) Except as provided in paragraph 40 CFR 63.1349(b)(1)(vi) the opacity exhibited during the period of the Method 5 performance tests required by paragraph 40 CFR 63.1349(b)(1)(i) 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 40 CFR 63.1343(b)(2) or 40 CFR 63.1345(a)(2). See Specific Conditions B.7. and B.13.

(2) The owner or operator of an affected emissions unit subject to limitations on D/F emissions shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of Appendix A, 40 CFR Part 60. 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 (See Specific Condition B.17).

(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 highest load or capacity level reasonably expected to occur (See Specific Condition B.17.). The duration of each run shall be at least three hours and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with B.9(b) [40 CFR 63.1344 (a) & (b)].

Except as provided in paragraph 40 CFR 63.1349(e), performance tests required under paragraphs 40 CFR 63.1349(b)(1) shall be repeated annually. See Specific Conditions B.13.

D/F performance tests required under paragraph 40 CFR 63.1349 Table 1 Summary of Performance Test Requirements shall be repeated every 30 months.

(e) The owner or operator is required to repeat the performance tests for kilns or in-line kiln/raw mills as specified in paragraphs 40 CFR 63.1349(b)(1) and (b)(3) within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test.
[Rules 62-204.800 and 62-297.310(7)(a)4., F.A.C.; and, 40 CFR 63.1349(a); (b)(1)(i), (ii), (iii) & (v); (b)(2); (b)(3)(i), (ii), (iii) & (iv); (c); (d); and, (e)]

B.15. Visible Emissions. Visible emissions performance testing shall be demonstrated using EPA Method 9 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C. See Specific Conditions B. 7,and B.21.
[Rules 62-204.800, 62-297.310(7) & 62-297.401, F.A.C.]

B.16. 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 the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

B.17. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions 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.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

B.18. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

B.19. 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:

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) 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.]

B.20. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.
[Rule 62-297.310(6), F.A.C.]

B.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

cc: J. Cascio
J. Heron
M. Nuttall

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NOV 17 2004
BUREAU OF AIR REGULATION

PLANT OPERATIONAL OBSERVATIONS

Production Increase Evaluation

RINKER MATERIALS CORPORATION
MIAMI, FLORIDA

Mike Aller
Production Manager

November 15, 2004

The following observations were made during the production testing of Rinker Materials' Miami Cement plant during which the kiln was operated at feed rates as high as 255 TPH. It will address issues covered in the "Preliminary Technical Assessment" provided by FLS, the main process equipment manufacturer. During this testing, the plant has been able to operate at over 3500 ton of clinker per day and there appears to be no major hurdles that would prevent it being able to sustain these production levels.

Rotary Kiln, Size ø4.15m x 48m:

- Considering the Kiln structure: By adjusting the main drive, a typical feed/speed ratio (~70 tph feed per revolution) has been maintained in the testing to date. Some adjustment to the feed/speed ratio may be required to obtain improved stability, but as FLS points out, the kiln cannot be structurally overloaded.

- Considering the Kiln main drive: Adjustment of the field of a direct current motor to increase the output speed results in reduced output torque. The highest torque requirement is at initial start of the kiln. To date, we have not experienced any difficulties starting the kiln with the field adjusted for a maximum speed of 3.6 rpm. There is further field adjustment available which will allow us to maintain the current feed/speed ratio at higher kiln feed rates.

- Considering the Kiln drive: There is sufficient field adjustment to take the kiln drive to 4.0 rpm. This will allow us to maintain the current feed/speed ratio at higher kiln feed rates.

- Aside: While the specific loading in the kiln is high, we have not experienced any significant kiln instability not related to swings in kiln feed chemistry. During such swings, the instability can be dampened by either decreasing (elevated C3S) or increasing (low C3S) the feed rate. Chemistry control procedures have been modified to minimize swings in C3S.

Clinker Cooler, Size 807CIS – 1014 CFG – 1006 RFT / 1025 RFT:

- Considering the Cooler structure: We have experienced elevated clinker discharge temperatures at higher production rates, but they are still acceptable.

- Considering the Cooler drives: During the testing to date, the cooler hydraulic drive motors have operated at approximately 40% of the full load amp limits, indicating more than adequate power at rates up to 3500 tpd.

Preheater, Size ø5.7 m Stages 1 & 2, ø6.0 m Stages 3, 4, & 5, ILC Calciner ø6.9 m x 16.0 m:

- Considering the Preheater structure: To date we have not experienced any problems with the additional pressure drop across the preheater. While kiln ID fan power draw has increased, the power consumption per ton of clinker has only increased marginally due to the increased pressure drop. The kiln ID fan capacity appears to be adequate for the increased production rates. The kiln ID fan damper typically operated between 75% and 85% open when operating at a kiln feed rate of 245 tph and from 80% to 95% when operating at 250 tph. Higher damper positions have occurred during periods when there was excessive build up in the riser. This build up was caused by pitted refractory in the riser that was replaced during a recent kiln outage.

- Considering the Calciner structure: Stack testing performed during the testing period showed that CO emissions remained well within compliance. Additionally, CO readings on the downcomer gas only increased approximately 100 ppm when the kiln feed rate was increased from 220 tph to 250 tph. No significant variations in downcomer CO were observed at the increased production rates. Proportionally, CO emissions should remain within our permit limits at feed rates over 250 tph.

Raw Mill – FRM 38/190:

- Considering the Raw Mill: During initial testing, the raw meal fineness target was reduced with no adverse effects on burnability or product quality. The raw mill averaged 256 tph dry raw meal at the current fineness target. This is adequate to support a kiln feed rate of 267 tph. If additional raw meal capacity is required, the fineness target can be reduced further, as it is still above the original design specification.

Coal Mill – FRM 16/18:

- Considering the Coal Mill: The coal mill performed well during the testing, with production rates up to 17 tph of pulverized coal. This was more than adequate to support 3500 tpd clinker. Some adjustment to the fineness target was made during the testing.

General:

During the testing to date, the kiln has operated at 3500 tpd clinker (245 tph kiln feed rate) or above for nearly 650 hours. There has been approximately 190 hours of operation at 3575 tpd (250 tph kiln feed rate). The feed rate was taken as high as 255 tph during the testing to date. During this testing, there were no problems with stack emissions or product quality and there were no mechanical/electrical problems that could be tied directly to the increased production rates. The raw mill production rates were more than adequate to sustain 3500 tpd clinker. The coal mill adequately sustained the increased production rates.

There are two future projects that are currently under consideration. One is the implementation of the tire burning/alternate fueling system originally proposed in the construction permit. The second is the injection of elevated loss on ignition flyash directly into the calciner. However, both the main process equipment and the auxiliary support equipment have demonstrated the ability to maintain the requested production rate within the proposed emission limits.

KOOGLER & ASSOCIATES
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263-03-10
November 16, 2004

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NOV 17 2004
BUREAU OF AIR REGULATION

Mr. Al Linero
FDEP
Twin Towers Office Bldg
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: ***Rinker Materials Corporation***
Miami Cement Plant, Miami, Florida
Production Rate Increase

Dear Al:

The attached materials are submitted in support of the permit application previously submitted to you requesting that the production rate of the Rinker Miami Cement Plant be increased to a preheater feed rate of 267 tons per hour and a corresponding clinker production rate of 162 tons per hour. Along with this request was a request to increase the heat input rate of the plant from 437 mmBTU per hour to 485 mmBTU per hour using presently permitted fuels.

The materials transmitted herewith, in accordance with your requests, include documentation that the plant is physically capable of operating at a preheater feed rate of 267 tons per hour and a clinker production rate of 162 tons per hour, emission data showing that the plant can operate well within permitted emission limiting standards while operating at

90-100 percent of the requested preheater feed rate of 267 tons per hour, and long-term (June-November 2004) production rate data and corresponding emission rate data to demonstrate long-term operating characteristics of the plant.

As previously discussed with you and addressed in the permit application, Rinker is requesting the increased production rate and increased fuel firing rate but will not undertake physical plant modifications to achieve the higher rate. Production rate tests conducted under Department approval have demonstrated that the requested production rate can be achieved with the existing plant.

The one change that will be made, as we've discussed with you, is the replacement of the fan wheel on the main baghouse fan or the fan itself; the fan exhausting the kiln, raw mill, and clinker cooler. This fan was designed and installed to operate at 900 rpm. It was found during the production rate tests, however, that the fan has a resonance problem that begins at a fan speed of approximately 850 rpm. It is anticipated that a replacement fan or fan wheel will be necessary to achieve the designed fan speed of 900 rpm. This will allow the plant to operate at the higher requested production rate in a more reliable manner. As we've discussed, Rinker is of the opinion that the replacement of the fan or fan wheel is not a modification; it is the replacement of a defective piece of equipment with a like-kind piece of equipment without a defect.

Another project that Rinker may elect to undertake as part of the production rate increase is the injection of high carbon (40-50 percent carbon) flyash directly into the

precalciner. Flyash is presently one of the raw materials used in the preparation of the preheater feed. It is presently ground with the other raw materials and introduced at the top of the preheater. By introducing the flyash directly into the precalciner, two benefits are realized. First the material feed rate through the preheater is reduced. This allows Rinker to operate at the requested higher clinker production rate while maintaining a substantial margin of safety in the feed rate of raw material through the preheater. It should be noted that the injection of flyash into the precalciner is not a prerequisite of achieving the requested production rate increase. Secondly, the injection of fly ash directly into the precalciner allows the use of high carbon flyash, a commodity that is becoming much more prevalent as power plants strive to reduce their emissions, without the potential of increased CO and/or VOC emissions. By introducing the high carbon flyash directly into the precalciner, Rinker can take advantage of the heating value of the flyash and also minimize the potential CO and/or VOC emissions that might occur if the high carbon flyash was introduced into the preheater.

The other permit modification requested along with the production rate increase, as previously addressed in the permit application, is the increased heat input rate to the kiln. Rinker is not requesting approval to use any fuels other than presently permitted fuels to achieve this increased heat input rate.

The attached supplemental material that you have requested to support the permit application includes:

- Documentation from F.L. Smidth, the plant designer and Mike Aller, the

Rinker Production Manager commenting on the capability of the plant to operate at the requested production rate,

- A summary of emission measurements conducted in August 2004 demonstrating compliance with all permitted emission limiting standards while the plant was operating within 90-100 percent of the requested production rate, and
- Long-term production rate data and emission rate data (from continuous monitors) demonstrating the long-term operating and emission characteristics of the plant while operating at approved production rates above the presently permitted rate.

I appreciate your attention to this matter. If additionally information is required or if there are questions regarding the information provided herein, please do not hesitate to contact me.

Sincerely,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK/lt

Attachment 1

F.L.Smidth Inc.
2040 Avenue C • Bethlehem, PA 18017-2188 • USA
Tel +1 610 264 6011 • Fax +1 610 264 6701
www.flsmidth.com

PRELIMINARY TECHNICAL ASSESSMENT
Production Increase Evaluation

CSR RINKER MATERIALS CORPORATION
MIAMI, FLORIDA

October 11, 2004

F.L.Smidth Inc.
2040 Avenue C • Bethlehem, PA 18017-2188 • USA
Tel +1 610 264 6011 • Fax +1 610 264 6701
www.flsmidth.com

FLSmidth

BACKGROUND

The kiln system supplied by F.L.Smidth in 1997, under contract # 97-20179, was rated for a clinker production of 2,755 STPD. Rinker Materials is currently evaluating the feasibility for a permanent clinker production rate increase to 3,500 STPD or more by conducting a continuous production capacity test program at the Miami Cement Plant through October 31, 2004.

Currently the plant is operating under Title V Operation Permit which limits the preheater feed rate to 220 tons per hour and the clinker production rate to 137 tons per hour on a 24-hour basis (3,288 STPD). Rinker is in the process of conducting short-term production capacity tests at production rates higher than 3,288 STPD in an attempt to determine the actual production limitations of the kiln system.

The following preliminary technical assessment is taken with respect to the physical size of the original equipment supply only. It specifically excludes any commentary on process (e.g. system stability, burnability, adequacy of the auxiliary equipment, etc.) and the pound per hour emissions limits. It is important that the emissions at the higher capacity be continuously monitored and recorded during the production capacity test program.

KILN PRODUCTION CAPACITY

The kiln has already been producing clinker at its authorized production limit of 3,288 short tons per day. Although this is well above the rated capacity of 2,755 STPD, F.L.Smidth typically provides for additional capacity above and beyond the guarantees provided by the manufacturer.

F.L.Smidth provides reasonable assurance that the kiln system can physically produce substantially more clinker than allowed by the present production limitations. Apart from the inherent "over design" of the original configuration, F.L.Smidth provides reasonable assurance that the kiln system is physically capable of being fed at a preheater feed rate of up to 267 short tons per hour without major structural failure to the kiln, cooler and preheater, proper.

F.L.Smidth Inc.
2040 Avenue C • Bethlehem, PA 18017-2188 • USA
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www.flsmidth.com

Rotary Kiln, Size ø4.15m x 48m:

- Considering the kiln structure: Provided that the kiln will be operated at a higher speed than originally designed, by maintaining a constant feed/speed ratio, the actual load of material in the kiln will not change. In fact, the kiln was designed using a material load corresponding to 10% fill and the back end of the kiln has an opening corresponding to 8%, so the kiln cannot be overloaded with material. This means the stresses in the shell, riding rings, supports, etc. will not exceed those originally calculated due to this capacity increase.

- Considering the main drive: The main drive has a 400 HP motor, which was sized based on the original capacity of 2,750 STPD. The actual calculated motor size required for 3,500 STPD clinker would be 368 HP (184 HP brake) so there was an extra cushion of 8.5% on the motor size. For 3,500 STPD, F.L.Smidth's calculated motor size is 467 HP (234 HP brake). When the motor is taken over speed to increase the kiln speed, the power output remains constant while the available torque reduces proportionately as the speed increases. This means the extra margin in the motor size compared to the brake power required will be lessened with the increased capacity. Rinker will necessarily have somewhat less safety margin on the motor power, an expected draw of 234 HP compared to 400 HP motor power. In other words, the power draw will be ~59% of the available motor power compared to the standard 50% ratio used for new designs. This is not too much of a concern since this is a two-support kiln, so misalignment cannot cause extra power draw, which is one of the main reasons for having margin on the motor power. Since the torque of the motor will not exceed the original maximum design figure and the drive components are designed for that amount, the components of the drive will not be more heavily loaded than original design. There is no concern here.

- Considering the kiln drive: The 100% speed of the kiln is 3.11 rpm. Rinker reports they have already taken their kiln to a speed of 3.7 rpm or so and can take it up over 4 rpm.

- Aside: As mentioned above, this review of the physical equipment specifically excludes any commentary on process stability of the system. It is noted, however, that the kiln has an internal volume of 530 m^3 inside brick, which gives a specific loading of 6.0 mtpd/m^3, which, from a process stability standpoint, would make it one of the heaviest loaded kilns in the world.

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FLSmidth

Clinker Cooler, Size 807CIS – 1014 CFG – 1006 RFT / 1025 RFT:

- Considering the cooler structure: Provided that the cooler drives will be operated at a higher speed (strokes per minute) than originally designed, by increasing the drive speeds in proportion to the capacity increase, the actual load of material in the cooler will not change. That is, apart from the higher heat load, the stresses in the cooler will not exceed those originally calculated due to this capacity increase as long as the cooler's bed height is maintained. However, due to the increased strokes per minute, there will necessarily be reduced longevity of the wear components. The inlet width loading remains reasonable at 1079 MTPD/m, and therefore the grate speed would still run at acceptable levels. The higher heat load into the cooler will necessarily result in higher clinker discharge temperatures resulting from the diminished retention time of the material in the cooler.

- Considering the cooler drives: An investigation of the current hydraulic drive to support the increased speed should be made to determine mechanical modifications which may be required to the power unit. Increased motor sizes may be indicated.

Preheater, Size ø5.7 m Stages 1 & 2, ø6.0 m Stages 3, 4, & 5, ILC Calciner ø6.9 m x 16.0 m:

- Considering the preheater structure: The existing cyclones could support 3,500 STPD, but this will come at the cost of higher velocities and pressure drop. The expected operating pressure at the inlet to the I.D. fan will be well over -800 mmwg (-31.5 inwg) at the higher production.

- Considering the calciner structure: The retention time in the existing calciner will decrease to approximately 2.6 seconds at 3,500 STPD. As a result, the pound per hour CO emissions should be carefully monitored to ensure continued compliance within the established emissions limits.

Brian P. Keefe

Brian P. Keefe
Vice President of Engineering

Attachment 2

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Summary of Emission Rates While Operating at Targeted Increased Production Rate
Rinker Materials Corporation
Miami Cement Plant

In August 2004, emission measurements were conducted at the Rinker Miami Cement Plant to demonstrate compliance with permitted emission limiting standards while operating within 90-100 percent of the targeted increased production rate of 267 tons per hour preheater feed and 162 tons per hour of clinker. The emission measurements also satisfied the compliance demonstration requirement for the plant for fiscal year 2003-2004.

The emission measurements were conducted during the period August 4-8, 2004 while the plant was operating at a nominal preheater feed rate of 245 tons per hour and a nominal clinker production rate of 147 tons per hour. The results of the measurements have previously been submitted to Miami-Dade County DERM and to FDEP. The results of the measurements are summarized herein in Table 1.

The emission measurements were conducted while the plant was operating at approximately 92 percent of the requested increased production rate of 267 tons per hour of preheater feed. The measured emission rates of regulated pollutants show that the plant operated at emission rates (expressed as pounds per ton of preheater feed or clinker) ranging from approximately 21-56 percent of the permitted emission rates for particulate matter, NOx, CO, sulfuric acid mist, mercury and lead; at less than two percent of the permitted SO_2 emission rate; and at 75 percent of the permitted VOC emission rate. Dioxin/furan measurements were also conducted with the raw mill running and with the raw mill offline. These measurements demonstrated that the plant operated in compliance with the permitted emission limits for these pollutants. The mass emission rates (pounds per hour) of all pollutants were also well below the permitted mass emission rates.

Also summarized in Table 1 are emission rates of several pollutants measured during compliance testing in September 2003 while the plant operated at a preheater feed rate of approximately 210 tons per hour and a clinker production rate of approximately 128 tons per

hour. These rates are within 90-100 percent of the currently permitted preheater feed rate and clinker production rate. It is interesting to note that there was no substantial change in emissions (expressed as pounds per ton of feed or clinker) between the two test periods; one with the plant operating at a preheater feed rate of 210 tons per hour and the other with the plant operating at a preheater feed rate of 245 tons per hour.

Both the 2003 and 2004 emission measurements demonstrate that the plant routinely operates well within emission limiting standards. The 2004 measurements demonstrate that pollutant emission rates are not a limiting factor in increasing the production rate to 267 tons per hour of preheater feed and 162 tons per hour of clinker.

A separate attachment summarizes long-term emission rate data and production rate data for the Rinker Miami Cement Plant. These data generally cover periods when the plant was operating at approved production rates above the currently permitted rates.

Test Date: August 2004

Nominal Rate:

Preheater Feed - 245 tph
Clinker Production - 147 tph

Pollutant	(lb/hr)		(lb/ton)		2003 Measured (lb/ton)
	Measured	Limit	Measured	Limit	
PM10 (1)	9.2/15.1	37.4	0.04/0.07	0.17 (2)	0.04 (2)
SO_2	4.3	306	0.03	2.23 (3)	0.16 (3)
NOx	346	671	2.35	4.9 (3)	2.29 (3)
CO	249	412	1.69	3.01 (3)	1.84 (3)
VOC	13.4	16.4	0.09	0.12 (3)	0.09 (3)
SAM	0.44	1.92	0.003	0.014 (3)	
Hg	0.0010	0.0033	0.7 E-05	2.4 E-05 (3)	
Pb	0.0026	0.0100	1.8 E-05	7.5 E-05 (3)	
D/F			0.122/0.113 (4)	0.4/0.2 (4)	

(1) Total PM reported as PM10 with Raw Mill Up/Raw Mill Down
(2) lb/ton feed
(3) lb/ton clinker
(4) ng/dscm @ 7% O_2

11/16/04

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Attachment 3

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

24-HOUR NOx AVERAGES
JUNE 7 – NOV 10, 2004

26-Jun-04	Average Nox	N/A	lb/ton clinker
6-Jul-04	Average Nox	N/A	lb/ton clinker
7-Jul-04	Average Nox	N/A	lb/ton clinker
8-Jul-04	Average Nox	N/A	lb/ton clinker
19-Aug-04	Average Nox	N/A	lb/ton clinker
12-Sep-04	Average Nox	N/A	lb/ton clinker
15-Oct-04	Average Nox	N/A	lb/ton clinker
16-Oct-04	Average Nox	N/A	lb/ton clinker
17-Oct-04	Average Nox	N/A	lb/ton clinker
18-Oct-04	Average Nox	N/A	lb/ton clinker
19-Oct-04	Average Nox	N/A	lb/ton clinker
20-Oct-04	Average Nox	N/A	lb/ton clinker
1-Nov-04	Average Nox	N/A	lb/ton clinker
14-Jul-04	Average Nox	5.89	lb/ton clinker
21-Oct-04	Average Nox	4.35	lb/ton clinker
13-Sep-04	Average Nox	4.04	lb/ton clinker
22-Oct-04	Average Nox	3.89	lb/ton clinker
20-Sep-04	Average Nox	3.79	lb/ton clinker
9-Jul-04	Average Nox	3.66	lb/ton clinker
11-Oct-04	Average Nox	3.66	lb/ton clinker
10-Jul-04	Average Nox	3.59	lb/ton clinker
13-Jul-04	Average Nox	3.59	lb/ton clinker
4-Nov-04	Average Nox	3.58	lb/ton clinker
12-Jul-04	Average Nox	3.56	lb/ton clinker
24-Oct-04	Average Nox	3.54	lb/ton clinker
4-Sep-04	Average Nox	3.52	lb/ton clinker
10-Oct-04	Average Nox	3.51	lb/ton clinker
11-Jul-04	Average Nox	3.51	lb/ton clinker
27-Jun-04	Average Nox	3.49	lb/ton clinker
21-Sep-04	Average Nox	3.48	lb/ton clinker
23-Oct-04	Average Nox	3.47	lb/ton clinker
20-Aug-04	Average Nox	3.45	lb/ton clinker
5-Nov-04	Average Nox	3.40	lb/ton clinker
22-Sep-04	Average Nox	3.34	lb/ton clinker
7-Jun-04	Average Nox	3.32	lb/ton clinker
3-Nov-04	Average Nox	3.30	lb/ton clinker
10-Sep-04	Average Nox	3.30	lb/ton clinker
14-Sep-04	Average Nox	3.29	lb/ton clinker
6-Nov-04	Average Nox	3.28	lb/ton clinker
12-Jun-04	Average Nox	3.27	lb/ton clinker
5-Jul-04	Average Nox	3.25	lb/ton clinker
31-Oct-04	Average Nox	3.25	lb/ton clinker
28-Oct-04	Average Nox	3.23	lb/ton clinker
9-Jun-04	Average Nox	3.22	lb/ton clinker
30-Jun-04	Average Nox	3.19	lb/ton clinker
14-Jun-04	Average Nox	3.16	lb/ton clinker

25-Oct-04	Average Nox	3.16	lb/ton clinker
18-Jun-04	Average Nox	3.13	lb/ton clinker
29-Oct-04	Average Nox	3.10	lb/ton clinker
16-Jun-04	Average Nox	3.09	lb/ton clinker
8-Nov-04	Average Nox	3.08	lb/ton clinker
11-Jun-04	Average Nox	3.07	lb/ton clinker
17-Jun-04	Average Nox	3.05	lb/ton clinker
8-Jun-04	Average Nox	3.05	lb/ton clinker
15-Jun-04	Average Nox	3.04	lb/ton clinker
20-Jun-04	Average Nox	3.04	lb/ton clinker
13-Jun-04	Average Nox	3.04	lb/ton clinker
29-Aug-04	Average Nox	3.03	lb/ton clinker
3-Oct-04	Average Nox	3.02	lb/ton clinker
27-Oct-04	Average Nox	3.02	lb/ton clinker
21-Jul-04	Average Nox	3.02	lb/ton clinker
17-Jul-04	Average Nox	2.95	lb/ton clinker
5-Oct-04	Average Nox	2.95	lb/ton clinker
5-Sep-04	Average Nox	2.95	lb/ton clinker
10-Jun-04	Average Nox	2.93	lb/ton clinker
9-Sep-04	Average Nox	2.92	lb/ton clinker
20-Jul-04	Average Nox	2.91	lb/ton clinker
19-Jun-04	Average Nox	2.90	lb/ton clinker
26-Oct-04	Average Nox	2.90	lb/ton clinker
29-Jun-04	Average Nox	2.87	lb/ton clinker
17-Sep-04	Average Nox	2.86	lb/ton clinker
18-Jul-04	Average Nox	2.85	lb/ton clinker
10-Nov-04	Average Nox	2.82	lb/ton clinker
7-Nov-04	Average Nox	2.80	lb/ton clinker
15-Sep-04	Average Nox	2.79	lb/ton clinker
9-Oct-04	Average Nox	2.79	lb/ton clinker
28-Sep-04	Average Nox	2.78	lb/ton clinker
12-Oct-04	Average Nox	2.78	lb/ton clinker
30-Aug-04	Average Nox	2.78	lb/ton clinker
2-Oct-04	Average Nox	2.76	lb/ton clinker
16-Jul-04	Average Nox	2.75	lb/ton clinker
22-Jul-04	Average Nox	2.73	lb/ton clinker
1-Jul-04	Average Nox	2.73	lb/ton clinker
2-Nov-04	Average Nox	2.71	lb/ton clinker
30-Jul-04	Average Nox	2.70	lb/ton clinker
23-Sep-04	Average Nox	2.69	lb/ton clinker
30-Oct-04	Average Nox	2.67	lb/ton clinker
28-Jun-04	Average Nox	2.65	lb/ton clinker
15-Jul-04	Average Nox	2.64	lb/ton clinker
1-Aug-04	Average Nox	2.63	lb/ton clinker
31-Aug-04	Average Nox	2.62	lb/ton clinker
15-Aug-04	Average Nox	2.61	lb/ton clinker
19-Jul-04	Average Nox	2.61	lb/ton clinker
19-Sep-04	Average Nox	2.59	lb/ton clinker
1-Sep-04	Average Nox	2.59	lb/ton clinker
4-Oct-04	Average Nox	2.57	lb/ton clinker

27-Sep-04	Average Nox	2.57	lb/ton clinker
2-Sep-04	Average Nox	2.56	lb/ton clinker
18-Sep-04	Average Nox	2.55	lb/ton clinker
9-Nov-04	Average Nox	2.54	lb/ton clinker
23-Jun-04	Average Nox	2.53	lb/ton clinker
26-Jul-04	Average Nox	2.52	lb/ton clinker
1-Oct-04	Average Nox	2.52	lb/ton clinker
21-Aug-04	Average Nox	2.51	lb/ton clinker
24-Sep-04	Average Nox	2.51	lb/ton clinker
25-Sep-04	Average Nox	2.50	lb/ton clinker
26-Sep-04	Average Nox	2.50	lb/ton clinker
25-Jun-04	Average Nox	2.49	lb/ton clinker
7-Sep-04	Average Nox	2.49	lb/ton clinker
6-Sep-04	Average Nox	2.48	lb/ton clinker
29-Sep-04	Average Nox	2.48	lb/ton clinker
30-Sep-04	Average Nox	2.44	lb/ton clinker
8-Oct-04	Average Nox	2.44	lb/ton clinker
23-Jul-04	Average Nox	2.44	lb/ton clinker
10-Aug-04	Average Nox	2.44	lb/ton clinker
7-Oct-04	Average Nox	2.43	lb/ton clinker
24-Aug-04	Average Nox	2.42	lb/ton clinker
4-Jul-04	Average Nox	2.41	lb/ton clinker
2-Jul-04	Average Nox	2.40	lb/ton clinker
8-Sep-04	Average Nox	2.38	lb/ton clinker
13-Oct-04	Average Nox	2.37	lb/ton clinker
18-Aug-04	Average Nox	2.35	lb/ton clinker
29-Jul-04	Average Nox	2.35	lb/ton clinker
27-Aug-04	Average Nox	2.34	lb/ton clinker
14-Oct-04	Average Nox	2.34	lb/ton clinker
11-Aug-04	Average Nox	2.31	lb/ton clinker
22-Aug-04	Average Nox	2.30	lb/ton clinker
16-Aug-04	Average Nox	2.28	lb/ton clinker
21-Jun-04	Average Nox	2.27	lb/ton clinker
6-Aug-04	Average Nox	2.26	lb/ton clinker
22-Jun-04	Average Nox	2.25	lb/ton clinker
16-Sep-04	Average Nox	2.24	lb/ton clinker
7-Aug-04	Average Nox	2.24	lb/ton clinker
27-Jul-04	Average Nox	2.22	lb/ton clinker
31-Jul-04	Average Nox	2.20	lb/ton clinker
9-Aug-04	Average Nox	2.18	lb/ton clinker
24-Jun-04	Average Nox	2.17	lb/ton clinker
24-Jul-04	Average Nox	2.16	lb/ton clinker
13-Aug-04	Average Nox	2.15	lb/ton clinker
28-Jul-04	Average Nox	2.15	lb/ton clinker
6-Oct-04	Average Nox	2.14	lb/ton clinker
14-Aug-04	Average Nox	2.13	lb/ton clinker
3-Jul-04	Average Nox	2.10	lb/ton clinker
11-Sep-04	Average Nox	2.10	lb/ton clinker
12-Aug-04	Average Nox	2.08	lb/ton clinker
3-Aug-04	Average Nox	2.08	lb/ton clinker

2-Aug-04	Average Nox	2.07	lb/ton clinker
25-Aug-04	Average Nox	2.05	lb/ton clinker
23-Aug-04	Average Nox	1.99	lb/ton clinker
17-Aug-04	Average Nox	1.98	lb/ton clinker
4-Aug-04	Average Nox	1.97	lb/ton clinker
25-Jul-04	Average Nox	1.93	lb/ton clinker
3-Sep-04	Average Nox	1.93	lb/ton clinker
8-Aug-04	Average Nox	1.92	lb/ton clinker
5-Aug-04	Average Nox	1.91	lb/ton clinker
26-Aug-04	Average Nox	1.89	lb/ton clinker
28-Aug-04	Average Nox	1.80	lb/ton clinker
	AVG =	**2.77**	**lb/ton clinker**

24-HOUR SO2 AVERAGES
JUNE 7 – NOV 10, 2004

26-Jun-04ave SO2	N/A	lbs/ton Clinker
1-Nov-04ave SO2	N/A	lbs/ton Clinker
25-Jun-04ave SO2	0.1784	lbs/ton Clinker
3-Jul-04ave SO2	0.0718	lbs/ton Clinker
24-Jun-04ave SO2	0.0600	lbs/ton Clinker
5-Jul-04ave SO2	0.0546	lbs/ton Clinker
4-Jul-04ave SO2	0.0509	lbs/ton Clinker
1-Jul-04ave SO2	0.0424	lbs/ton Clinker
8-Aug-04ave SO2	0.0380	lbs/ton Clinker
2-Jul-04ave SO2	0.0146	lbs/ton Clinker
30-Sep-04ave SO2	0.0138	lbs/ton Clinker
14-Jun-04ave SO2	0.0137	lbs/ton Clinker
11-Jul-04ave SO2	0.0128	lbs/ton Clinker
10-Jul-04ave SO2	0.0120	lbs/ton Clinker
14-Jul-04ave SO2	0.0118	lbs/ton Clinker
12-Jul-04ave SO2	0.0117	lbs/ton Clinker
20-Jul-04ave SO2	0.0117	lbs/ton Clinker
6-Aug-04ave SO2	0.0117	lbs/ton Clinker
27-Jun-04ave SO2	0.0115	lbs/ton Clinker
19-Jul-04ave SO2	0.0114	lbs/ton Clinker
29-Jun-04ave SO2	0.0113	lbs/ton Clinker
20-Aug-04ave SO2	0.0112	lbs/ton Clinker
30-Jun-04ave SO2	0.0111	lbs/ton Clinker
21-Jul-04ave SO2	0.0108	lbs/ton Clinker
28-Jun-04ave SO2	0.0103	lbs/ton Clinker
5-Aug-04ave SO2	0.0100	lbs/ton Clinker
10-Nov-04ave SO2	0.0097	lbs/ton Clinker
2-Aug-04ave SO2	0.0096	lbs/ton Clinker
1-Oct-04ave SO2	0.0095	lbs/ton Clinker
16-Jul-04ave SO2	0.0094	lbs/ton Clinker
9-Jun-04ave SO2	0.0094	lbs/ton Clinker
21-Aug-04ave SO2	0.0091	lbs/ton Clinker
23-Sep-04ave SO2	0.0091	lbs/ton Clinker
26-Oct-04ave SO2	0.0085	lbs/ton Clinker
21-Sep-04ave SO2	0.0084	lbs/ton Clinker
25-Sep-04ave SO2	0.0081	lbs/ton Clinker
5-Nov-04ave SO2	0.0080	lbs/ton Clinker
22-Aug-04ave SO2	0.0080	lbs/ton Clinker
7-Jun-04ave SO2	0.0080	lbs/ton Clinker
22-Sep-04ave SO2	0.0079	lbs/ton Clinker
24-Sep-04ave SO2	0.0079	lbs/ton Clinker
17-Jul-04ave SO2	0.0079	lbs/ton Clinker
23-Jul-04ave SO2	0.0078	lbs/ton Clinker
15-Jun-04ave SO2	0.0077	lbs/ton Clinker

13-Oct-04 ave SO2	0.0077	lbs/ton Clinker
18-Jul-04 ave SO2	0.0076	lbs/ton Clinker
27-Jul-04 ave SO2	0.0073	lbs/ton Clinker
18-Sep-04 ave SO2	0.0072	lbs/ton Clinker
4-Sep-04 ave SO2	0.0071	lbs/ton Clinker
24-Jul-04 ave SO2	0.0070	lbs/ton Clinker
9-Nov-04 ave SO2	0.0069	lbs/ton Clinker
17-Sep-04 ave SO2	0.0068	lbs/ton Clinker
5-Sep-04 ave SO2	0.0068	lbs/ton Clinker
10-Sep-04 ave SO2	0.0066	lbs/ton Clinker
25-Jul-04 ave SO2	0.0064	lbs/ton Clinker
8-Jun-04 ave SO2	0.0063	lbs/ton Clinker
15-Jul-04 ave SO2	0.0063	lbs/ton Clinker
7-Nov-04 ave SO2	0.0063	lbs/ton Clinker
7-Oct-04 ave SO2	0.0063	lbs/ton Clinker
13-Jun-04 ave SO2	0.0062	lbs/ton Clinker
3-Aug-04 ave SO2	0.0059	lbs/ton Clinker
22-Jul-04 ave SO2	0.0058	lbs/ton Clinker
4-Nov-04 ave SO2	0.0058	lbs/ton Clinker
26-Jul-04 ave SO2	0.0057	lbs/ton Clinker
24-Oct-04 ave SO2	0.0056	lbs/ton Clinker
13-Jul-04 ave SO2	0.0056	lbs/ton Clinker
14-Oct-04 ave SO2	0.0055	lbs/ton Clinker
4-Aug-04 ave SO2	0.0055	lbs/ton Clinker
6-Nov-04 ave SO2	0.0054	lbs/ton Clinker
29-Sep-04 ave SO2	0.0054	lbs/ton Clinker
27-Aug-04 ave SO2	0.0054	lbs/ton Clinker
12-Jun-04 ave SO2	0.0054	lbs/ton Clinker
26-Aug-04 ave SO2	0.0053	lbs/ton Clinker
2-Oct-04 ave SO2	0.0053	lbs/ton Clinker
10-Jun-04 ave SO2	0.0052	lbs/ton Clinker
20-Sep-04 ave SO2	0.0052	lbs/ton Clinker
26-Sep-04 ave SO2	0.0052	lbs/ton Clinker
28-Jul-04 ave SO2	0.0051	lbs/ton Clinker
27-Oct-04 ave SO2	0.0050	lbs/ton Clinker
23-Aug-04 ave SO2	0.0050	lbs/ton Clinker
31-Jul-04 ave SO2	0.0049	lbs/ton Clinker
1-Sep-04 ave SO2	0.0049	lbs/ton Clinker
9-Sep-04 ave SO2	0.0047	lbs/ton Clinker
1-Aug-04 ave SO2	0.0047	lbs/ton Clinker
9-Jul-04 ave SO2	0.0044	lbs/ton Clinker
11-Sep-04 ave SO2	0.0044	lbs/ton Clinker
7-Aug-04 ave SO2	0.0044	lbs/ton Clinker
19-Sep-04 ave SO2	0.0044	lbs/ton Clinker
25-Oct-04 ave SO2	0.0043	lbs/ton Clinker
29-Jul-04 ave SO2	0.0042	lbs/ton Clinker
25-Aug-04 ave SO2	0.0041	lbs/ton Clinker
30-Jul-04 ave SO2	0.0041	lbs/ton Clinker
11-Jun-04 ave SO2	0.0041	lbs/ton Clinker
22-Oct-04 ave SO2	0.0039	lbs/ton Clinker

22-Jun-04ave SO2	0.0037	lbs/ton Clinker
8-Oct-04ave SO2	0.0037	lbs/ton Clinker
4-Oct-04ave SO2	0.0036	lbs/ton Clinker
23-Oct-04ave SO2	0.0035	lbs/ton Clinker
21-Oct-04ave SO2	0.0033	lbs/ton Clinker
6-Oct-04ave SO2	0.0032	lbs/ton Clinker
2-Sep-04ave SO2	0.0031	lbs/ton Clinker
21-Jun-04ave SO2	0.0031	lbs/ton Clinker
20-Jun-04ave SO2	0.0030	lbs/ton Clinker
29-Oct-04ave SO2	0.0029	lbs/ton Clinker
31-Aug-04ave SO2	0.0028	lbs/ton Clinker
30-Oct-04ave SO2	0.0028	lbs/ton Clinker
8-Nov-04ave SO2	0.0027	lbs/ton Clinker
16-Jun-04ave SO2	0.0026	lbs/ton Clinker
18-Jun-04ave SO2	0.0024	lbs/ton Clinker
7-Sep-04ave SO2	0.0022	lbs/ton Clinker
19-Jun-04ave SO2	0.0021	lbs/ton Clinker
3-Oct-04ave SO2	0.0021	lbs/ton Clinker
27-Sep-04ave SO2	0.0021	lbs/ton Clinker
17-Jun-04ave SO2	0.0020	lbs/ton Clinker
28-Aug-04ave SO2	0.0020	lbs/ton Clinker
6-Sep-04ave SO2	0.0018	lbs/ton Clinker
31-Oct-04ave SO2	0.0018	lbs/ton Clinker
11-Aug-04ave SO2	0.0017	lbs/ton Clinker
5-Oct-04ave SO2	0.0017	lbs/ton Clinker
16-Sep-04ave SO2	0.0016	lbs/ton Clinker
28-Oct-04ave SO2	0.0016	lbs/ton Clinker
24-Aug-04ave SO2	0.0015	lbs/ton Clinker
9-Aug-04ave SO2	0.0015	lbs/ton Clinker
10-Aug-04ave SO2	0.0015	lbs/ton Clinker
15-Aug-04ave SO2	0.0014	lbs/ton Clinker
8-Sep-04ave SO2	0.0012	lbs/ton Clinker
15-Sep-04ave SO2	0.0011	lbs/ton Clinker
29-Aug-04ave SO2	0.0011	lbs/ton Clinker
16-Aug-04ave SO2	0.0010	lbs/ton Clinker
17-Aug-04ave SO2	0.0009	lbs/ton Clinker
9-Oct-04ave SO2	0.0009	lbs/ton Clinker
12-Aug-04ave SO2	0.0009	lbs/ton Clinker
14-Aug-04ave SO2	0.0008	lbs/ton Clinker
28-Sep-04ave SO2	0.0008	lbs/ton Clinker
12-Oct-04ave SO2	0.0007	lbs/ton Clinker
14-Sep-04ave SO2	0.0007	lbs/ton Clinker
2-Nov-04ave SO2	0.0007	lbs/ton Clinker
13-Aug-04ave SO2	0.0006	lbs/ton Clinker
10-Oct-04ave SO2	0.0005	lbs/ton Clinker
18-Aug-04ave SO2	0.0005	lbs/ton Clinker
3-Nov-04ave SO2	0.0004	lbs/ton Clinker
30-Aug-04ave SO2	0.0003	lbs/ton Clinker
3-Sep-04ave SO2	0.0003	lbs/ton Clinker
11-Oct-04ave SO2	0.0001	lbs/ton Clinker

13-Sep-04	ave SO2	0.0000	lbs/ton Clinker
23-Jun-04	ave SO2	0.0000	lbs/ton Clinker
6-Jul-04	ave SO2	0.0000	lbs/ton Clinker
7-Jul-04	ave SO2	0.0000	lbs/ton Clinker
8-Jul-04	ave SO2	0.0000	lbs/ton Clinker
19-Aug-04	ave SO2	0.0000	lbs/ton Clinker
12-Sep-04	ave SO2	0.0000	lbs/ton Clinker
15-Oct-04	ave SO2	0.0000	lbs/ton Clinker
16-Oct-04	ave SO2	0.0000	lbs/ton Clinker
17-Oct-04	ave SO2	0.0000	lbs/ton Clinker
18-Oct-04	ave SO2	0.0000	lbs/ton Clinker
19-Oct-04	ave SO2	0.0000	lbs/ton Clinker
20-Oct-04	ave SO2	0.0000	lbs/ton Clinker
	AVG =	**0.0079**	**lbs/ton Clinker**

24 – HOUR VOC AVERAGES
JUNE 7 – NOV 10, 2004

26-Jun-04	ave. VOC	N/A	lb/ton clinker
6-Jul-04	ave. VOC	N/A	lb/ton clinker
7-Jul-04	ave. VOC	N/A	lb/ton clinker
8-Jul-04	ave. VOC	N/A	lb/ton clinker
19-Aug-04	ave. VOC	N/A	lb/ton clinker
15-Oct-04	ave. VOC	N/A	lb/ton clinker
16-Oct-04	ave. VOC	N/A	lb/ton clinker
17-Oct-04	ave. VOC	N/A	lb/ton clinker
18-Oct-04	ave. VOC	N/A	lb/ton clinker
19-Oct-04	ave. VOC	N/A	lb/ton clinker
20-Oct-04	ave. VOC	N/A	lb/ton clinker
1-Nov-04	ave. VOC	N/A	lb/ton clinker
21-Oct-04	ave. VOC	0.111	lb/ton clinker
22-Oct-04	ave. VOC	0.109	lb/ton clinker
10-Oct-04	ave. VOC	0.108	lb/ton clinker
23-Oct-04	ave. VOC	0.106	lb/ton clinker
31-Oct-04	ave. VOC	0.105	lb/ton clinker
14-Oct-04	ave. VOC	0.105	lb/ton clinker
25-Oct-04	ave. VOC	0.103	lb/ton clinker
16-Jul-04	ave. VOC	0.102	lb/ton clinker
24-Oct-04	ave. VOC	0.102	lb/ton clinker
17-Jul-04	ave. VOC	0.102	lb/ton clinker
13-Oct-04	ave. VOC	0.100	lb/ton clinker
26-Oct-04	ave. VOC	0.099	lb/ton clinker
4-Nov-04	ave. VOC	0.097	lb/ton clinker
18-Jul-04	ave. VOC	0.096	lb/ton clinker
12-Oct-04	ave. VOC	0.096	lb/ton clinker
19-Jul-04	ave. VOC	0.095	lb/ton clinker
7-Sep-04	ave. VOC	0.095	lb/ton clinker
22-Jul-04	ave. VOC	0.095	lb/ton clinker
9-Sep-04	ave. VOC	0.094	lb/ton clinker
21-Jul-04	ave. VOC	0.094	lb/ton clinker
11-Oct-04	ave. VOC	0.093	lb/ton clinker
19-Sep-04	ave. VOC	0.092	lb/ton clinker
20-Jul-04	ave. VOC	0.092	lb/ton clinker
6-Sep-04	ave. VOC	0.092	lb/ton clinker
3-Nov-04	ave. VOC	0.092	lb/ton clinker
10-Nov-04	ave. VOC	0.091	lb/ton clinker
7-Oct-04	ave. VOC	0.091	lb/ton clinker
30-Oct-04	ave. VOC	0.090	lb/ton clinker
23-Jul-04	ave. VOC	0.090	lb/ton clinker
6-Oct-04	ave. VOC	0.089	lb/ton clinker

18-Sep-04	ave. VOC	0.089	lb/ton clinker
10-Sep-04	ave. VOC	0.089	lb/ton clinker
5-Oct-04	ave. VOC	0.089	lb/ton clinker
22-Sep-04	ave. VOC	0.089	lb/ton clinker
20-Sep-04	ave. VOC	0.088	lb/ton clinker
17-Sep-04	ave. VOC	0.088	lb/ton clinker
7-Aug-04	ave. VOC	0.088	lb/ton clinker
29-Oct-04	ave. VOC	0.088	lb/ton clinker
9-Oct-04	ave. VOC	0.088	lb/ton clinker
8-Oct-04	ave. VOC	0.088	lb/ton clinker
3-Oct-04	ave. VOC	0.087	lb/ton clinker
24-Sep-04	ave. VOC	0.087	lb/ton clinker
8-Sep-04	ave. VOC	0.086	lb/ton clinker
2-Oct-04	ave. VOC	0.086	lb/ton clinker
4-Oct-04	ave. VOC	0.086	lb/ton clinker
2-Nov-04	ave. VOC	0.085	lb/ton clinker
23-Sep-04	ave. VOC	0.085	lb/ton clinker
15-Jul-04	ave. VOC	0.085	lb/ton clinker
27-Oct-04	ave. VOC	0.085	lb/ton clinker
28-Oct-04	ave. VOC	0.084	lb/ton clinker
24-Jul-04	ave. VOC	0.084	lb/ton clinker
12-Jul-04	ave. VOC	0.084	lb/ton clinker
12-Sep-04	ave. VOC	0.083	lb/ton clinker
9-Jul-04	ave. VOC	0.083	lb/ton clinker
30-Jul-04	ave. VOC	0.082	lb/ton clinker
21-Sep-04	ave. VOC	0.082	lb/ton clinker
5-Nov-04	ave. VOC	0.082	lb/ton clinker
6-Aug-04	ave. VOC	0.082	lb/ton clinker
8-Aug-04	ave. VOC	0.082	lb/ton clinker
25-Sep-04	ave. VOC	0.081	lb/ton clinker
23-Jun-04	ave. VOC	0.080	lb/ton clinker
13-Sep-04	ave. VOC	0.080	lb/ton clinker
27-Sep-04	ave. VOC	0.080	lb/ton clinker
9-Nov-04	ave. VOC	0.079	lb/ton clinker
1-Oct-04	ave. VOC	0.079	lb/ton clinker
6-Nov-04	ave. VOC	0.079	lb/ton clinker
16-Sep-04	ave. VOC	0.079	lb/ton clinker
27-Jul-04	ave. VOC	0.079	lb/ton clinker
5-Aug-04	ave. VOC	0.078	lb/ton clinker
31-Jul-04	ave. VOC	0.076	lb/ton clinker
10-Jun-04	ave. VOC	0.076	lb/ton clinker
11-Jul-04	ave. VOC	0.075	lb/ton clinker
28-Sep-04	ave. VOC	0.075	lb/ton clinker
15-Sep-04	ave. VOC	0.075	lb/ton clinker
4-Aug-04	ave. VOC	0.075	lb/ton clinker
7-Nov-04	ave. VOC	0.075	lb/ton clinker
8-Jun-04	ave. VOC	0.074	lb/ton clinker
9-Aug-04	ave. VOC	0.073	lb/ton clinker
14-Sep-04	ave. VOC	0.073	lb/ton clinker
13-Jul-04	ave. VOC	0.073	lb/ton clinker

10-Jul-04	ave. VOC	0.073	lb/ton clinker
11-Sep-04	ave. VOC	0.072	lb/ton clinker
9-Jun-04	ave. VOC	0.071	lb/ton clinker
14-Jul-04	ave. VOC	0.071	lb/ton clinker
1-Aug-04	ave. VOC	0.071	lb/ton clinker
4-Sep-04	ave. VOC	0.071	lb/ton clinker
29-Sep-04	ave. VOC	0.071	lb/ton clinker
8-Nov-04	ave. VOC	0.071	lb/ton clinker
12-Jun-04	ave. VOC	0.070	lb/ton clinker
26-Sep-04	ave. VOC	0.070	lb/ton clinker
2-Aug-04	ave. VOC	0.069	lb/ton clinker
3-Sep-04	ave. VOC	0.069	lb/ton clinker
20-Aug-04	ave. VOC	0.069	lb/ton clinker
30-Sep-04	ave. VOC	0.068	lb/ton clinker
24-Jun-04	ave. VOC	0.068	lb/ton clinker
3-Aug-04	ave. VOC	0.067	lb/ton clinker
21-Aug-04	ave. VOC	0.067	lb/ton clinker
2-Sep-04	ave. VOC	0.067	lb/ton clinker
5-Sep-04	ave. VOC	0.067	lb/ton clinker
7-Jun-04	ave. VOC	0.066	lb/ton clinker
14-Jun-04	ave. VOC	0.066	lb/ton clinker
10-Aug-04	ave. VOC	0.066	lb/ton clinker
15-Jun-04	ave. VOC	0.066	lb/ton clinker
13-Jun-04	ave. VOC	0.064	lb/ton clinker
1-Sep-04	ave. VOC	0.064	lb/ton clinker
24-Aug-04	ave. VOC	0.064	lb/ton clinker
29-Jun-04	ave. VOC	0.064	lb/ton clinker
26-Aug-04	ave. VOC	0.063	lb/ton clinker
22-Aug-04	ave. VOC	0.063	lb/ton clinker
16-Jun-04	ave. VOC	0.062	lb/ton clinker
18-Aug-04	ave. VOC	0.062	lb/ton clinker
1-Jul-04	ave. VOC	0.061	lb/ton clinker
27-Aug-04	ave. VOC	0.061	lb/ton clinker
29-Aug-04	ave. VOC	0.061	lb/ton clinker
23-Aug-04	ave. VOC	0.061	lb/ton clinker
25-Jul-04	ave. VOC	0.061	lb/ton clinker
16-Aug-04	ave. VOC	0.060	lb/ton clinker
25-Aug-04	ave. VOC	0.060	lb/ton clinker
12-Aug-04	ave. VOC	0.060	lb/ton clinker
25-Jun-04	ave. VOC	0.060	lb/ton clinker
21-Jun-04	ave. VOC	0.059	lb/ton clinker
17-Jun-04	ave. VOC	0.059	lb/ton clinker
31-Aug-04	ave. VOC	0.059	lb/ton clinker
28-Jul-04	ave. VOC	0.059	lb/ton clinker
15-Aug-04	ave. VOC	0.059	lb/ton clinker
4-Jul-04	ave. VOC	0.059	lb/ton clinker
22-Jun-04	ave. VOC	0.058	lb/ton clinker
2-Jul-04	ave. VOC	0.058	lb/ton clinker
28-Jun-04	ave. VOC	0.058	lb/ton clinker
11-Aug-04	ave. VOC	0.058	lb/ton clinker

17-Aug-04	ave. VOC	0.058	lb/ton clinker
28-Aug-04	ave. VOC	0.057	lb/ton clinker
20-Jun-04	ave. VOC	0.057	lb/ton clinker
30-Aug-04	ave. VOC	0.056	lb/ton clinker
30-Jun-04	ave. VOC	0.055	lb/ton clinker
13-Aug-04	ave. VOC	0.054	lb/ton clinker
5-Jul-04	ave. VOC	0.054	lb/ton clinker
14-Aug-04	ave. VOC	0.054	lb/ton clinker
3-Jul-04	ave. VOC	0.053	lb/ton clinker
19-Jun-04	ave. VOC	0.053	lb/ton clinker
18-Jun-04	ave. VOC	0.052	lb/ton clinker
27-Jun-04	ave. VOC	0.052	lb/ton clinker
11-Jun-04	ave. VOC	0.052	lb/ton clinker
29-Jul-04	ave. VOC	0.047	lb/ton clinker
26-Jul-04	ave. VOC	0.030	lb/ton clinker
	AVG =	**0.076**	**lb/ton clinker**

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ANNUAL CO AND VOC COMPLIANCE TEST AND ANNUAL RELATIVE ACCURACY TEST AUDITS (RATA) FOR CONTINUOUS NO_x, SO_2, METHANE/NON-METHANE VOC, FLOW AND OPACITY MONITORS

Kiln/Raw Mill/Clinker Cooler Stack

RINKER MATERIALS CORPORATION
Miami, Florida

Permit No. 0250014-009-AV

Test Dates: August 4-5 and September 16, 2004
Report Date: September 16, 2004
Amended: October 8, 2004

263-04-05

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

ANNUAL CO AND VOC COMPLIANCE TEST
AND
ANNUAL RELATIVE ACCURACY TEST AUDITS (RATA) FOR CONTINUOUS NO_X, SO_2, METHANE/NON-METHANE VOC, FLOW AND OPACITY MONITORS

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Koogler & Associates Environmental Services
4014 N.W. 13th Street
Gainesville, Florida 32609
(352) 377-5822

263-04-05

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

ANNUAL CO AND VOC COMPLIANCE TEST
AND
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Miami, Florida

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Report Date: September 16, 2004
Amended: October 8, 2004

Responsible Official Certification:

I certify that, based upon information and belief formed after reasonable inquiry, the statements and information in the attached documents are true, accurate and complete.

Ed Allsopp, Vice President, Cement Operations

Signature

Date:

263-04-05

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.

John B. Koogler, Ph.D., P.E.

State of Florida
Registration No. 12925

09/16/04

Date

TABLE OF CONTENTS

1.0 INTRODUCTION

Rinker Materials Corporation (Rinker) owns and operates a preheater/precalciner Portland cement plant at 1200 NW 137th Avenue, Miami, Dade County, Florida. During the period August 4-5, 2004, Koogler & Associates, Inc. of Gainesville, Florida performed Relative Accuracy Test Audits (RATA) on the Continuous Emission Monitoring Systems (CEMS) located on the kiln/raw mill/clinker cooler stack for nitrogen oxides (NOx), sulfur dioxide (SO_2) and methane/non-methane hydrocarbons (CH_4/NMHC). An annual RATA was also performed on the Continuous Flow Rate Monitoring System (CFRMS). On September 16, 2004, the annual RATA was conducted on the Continuous Opacity Monitor. The RATAs were conducted in accordance with the requirements of 40 CFR 60, Appendix F in conjunction with 40 CFR 60, Appendix B, Performance Specification 6 (for Flow Rate), Performance Specification 2 (for NO_X and SO_2), and Performance Specification 8A (for CH_4/NMHC). Additionally, annual compliance tests were conducted for carbon monoxide (CO) with EPA Method 10 and CH_4/VOC with EPA Method 25A.

Prior to the test date, the Metropolitan Dade County Environmental Resources Management in Miami, Florida, was notified of the scheduled air emission performance tests.

The results of the certifications are reported in the following Sections.

2.0 LOCATION OF CEMS

The locations of the CEMS, COMS, and CFRMS are shown in Figure 1. The monitors are located 203.5 feet (18.4 diameters) above the point where the stack gas enters the stack and 101.7 feet (9.3 diameters) below the top of the stack. The path length of the COMS is adjusted to the 132.4 inch diameter of the stack. The installation of the monitors satisfies the requirements of Performance Specifications 1, 2, 6, and 8A, 40 CFR 60, Appendix B.

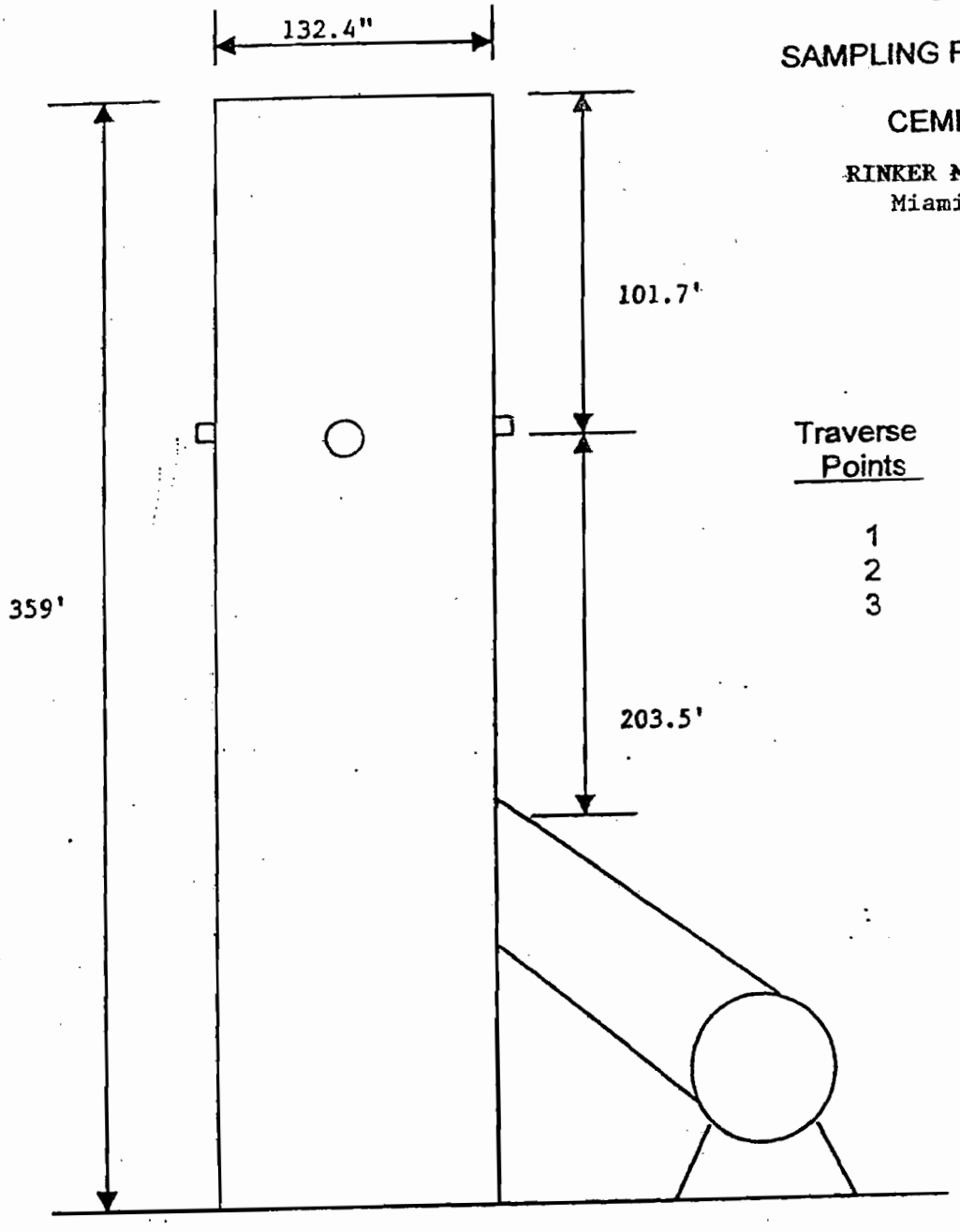
The sample ports for the CO and CH_4/VOC tests are also located at the same level in the stack as the continuous monitoring systems.

FIGURE 1

SAMPLING POINT LOCATIONS

CEMENT PLANT

RINKER MATERIALS CORP
Miami, Florida



Traverse Points	Distance from Inside Stack Wall
1	6.01
2	19.9
3	40.4

3.0 RATA SUMMARIES

3.1 Nitrogen Oxides CEMS

During the period August 4-5, 2004, Koogler & Associates, Inc. of Gainesville, Florida performed Relative Accuracy Test Audit (RATA) on the continuous emission monitoring system (CEMS) for NOx installed on the kiln/raw mill/clinker cooler stack. These tests were conducted in accordance with CEMS certification procedures published in 40 CFR 60, Appendix B, Performance Specification 2 and Appendix F. This monitor successfully met the EPA performance specifications, as summarized below:

Parameter	Limit	Observed
Relative Accuracy	20% of RM	19.9% of RM

The NOx CEMS is a Hartmann & Braun, Model Uras 14, serial number 24511-0-224110202002 multi-component (SO_2 and NO_x) gas analyzer. The NOx CEMS measures the NOx concentration on a dry gas basis. The span of the instrument is 2000 ppm NOx (v/v); which is approximately four times the equivalent NOx standard.

The relative accuracy test procedure published in Section 7.0 of Performance Specification 2 requires at least nine sets of NOx concentration measurements; one series of measurements made with the CEMS and one

series of measurements made with the NOx reference method. For this RATA, nine sets of measurements were made. The NOx reference method used for these measurements was EPA Method 7E as described in 40 CFR 60, Appendix A.

As required by Performance Specification 2, each NOx concentration measurement with the CEMS and reference method was made over at least a 21-minute period. The reference method sampling consisted of a three-point traverse across the stack with sampling conducted at each traverse point for seven minutes.

The RATA data were analyzed as prescribed in Section 7.0 of Performance Specification 2. The data are summarized in Table 1. The error associated with the relative accuracy of NOx CEMS was 19.9 percent of the reference method mean. The relative accuracy error limit specified by Performance Specification 2 is 20 percent of the mean of the reference method measurements (equivalent to about 40 ppm NOx) or 10 percent of the standard (about 50 ppm NOx) ; whichever is greater.

3.2 Sulfur Dioxide CEMS

During the period August 4-5, 2004, Koogler & Associates, Inc. of Gainesville, Florida conducted the RATA on the CEMS for SO_2 installed on the kiln/raw mill/clinker cooler stack. These tests were conducted in

accordance with CEMS certification procedures published in 40 CFR 60, Appendix B, Performance Specification 2 and Appendix F. This monitor successfully met the EPA performance specifications, as summarized below:

Parameter	Limit	Observed
Relative Accuracy	20% of RM or 10% of std.	1.5% of std.

The SO_2 CEMS Hartmann & Braun, Model Uras 14, serial number 24511-0-224110202002 multi-component (SO_2 and NO_x) gas analyzer. The SO_2 CEMS measures the SO_2 concentration on a dry gas basis. The span of the instrument is 500 ppm SO_2 (v/v); which is approximately three times the equivalent SO_2 standard.

The relative accuracy test procedure published in Section 7.0 of Performance Specification 2 requires at least nine sets of SO_2 concentration measurements; one series of measurements made with the CEMS and one series of measurements made with the SO_2 reference method. During this RA test, 10 sets of measurements were made. The SO_2 reference method used for these measurements was EPA Method 6C as described in 40 CFR 60, Appendix A.

The Performance Specifications require the RA error to be within 20 percent of the Reference Method test average or within 10 percent of the standard.

Because of the very low levels of SO_2 in the stack gas (<15 ppm, v/v), the 10 percent of standard criterium was used to evaluate the relative accuracy of the SO_2 CEMS.

At an allowable SO_2 emission rate of 360 pounds per hour and a typical stack gas flow rate of 200,000 dscfm, the equivalent SO_2 concentration standard is about 131 ppm, v/v. The Relative Accuracy error is within 1.5 percent of the equivalent SO_2 concentration standard compared with the 10 percent limit specified by the performance specification. These data are summarized in Table 2.

3.3 Non-Methane Hydrocarbon (NMHC) CEMS

The NMHC CEMS was installed on the kiln/raw mill stack in accordance with revised Air Construction Permit No. 0250014-008-AC. The purpose of the CEMS is to provide the Department reasonable assurance that the kiln/raw mill operates in compliance with the permitted VOC emission limiting standard. Compliance with the VOC standard is to be demonstrated annually using EPA Method 25A as the referenced test method. These tests are reported herein.

The NMHC CEMS is J.U.M. Methane/Non-methane FID Analyzer, Model HFID 109A. The CEMS measure the THC concentration in the stack gas on a wet gas basis using flame ionization detection (FID) technology. System

software combines the measured NMHC concentration with the continuously monitored stack gas flow rate to calculate the mass emission rate of NMHC based on a propane standard. The VOC emission limiting standard for the kiln/raw mill stack, for which the NMHC CEMS is to provide compliance reassurance, is 13.7 pounds per hour. Based on a typical stack gas flow rate, this VOC mass emission limit is equivalent to a VOC stack gas concentration of 15-20 ppm, as propane. The span of the NMHC CEMS is 100 ppm NMHC (v/v, wet basis as propane).

During the period August 4-5, 2004, Koogler & Associates, Inc. of Gainesville, Florida conducted the RATA on the THC CEMS. The RATA were conducted in accordance with 40 CFR 60, Appendix B, Performance Specification 8A and succesfully met the performance criteria.

Parameter	Limit	Observed
Relative Accuracy NMHC	20% of RM or 10% of std.	14.0% of std.

The Relative Accuracy test required by Performance Specification 8A requires at least nine sets of NMHC concentration measurements; one series of measurements made with the CEMS and one series of measurements made with the Reference Method. The Reference Method used for these measurements was EPA Method 25A as described in 40 CFR 60, Appendix A.

As required by Performance Specification 8A, each NMHC concentration measurement with the CEMS and Reference Method was made over a 21-minute period. The Reference Method sampling consisted of a three-point traverse across the stack with sampling conducted at each traverse point for seven minutes.

The relative accuracy test data were analyzed as prescribed in Performance Specification 8A. The error associated with the relative accuracy of the NMHC CEMS was 14.0 percent of the standard. The relative accuracy error limit specified by Performance Specification 8A is 20 percent of the mean of the Reference Method measurements or 10 percent of the standard (about 0.91 ppm as propane); whichever is greater. The RATA data are summarized in Table 3.

3.4 Flow Rate Monitor (CFRMS)

During the period August 4-5, 2004, Koogler & Associates, Inc. of Gainesville, Florida conducted a Relative Accuracy Test Audit (RATA) on the Continuous Stack Gas Flow Rate Monitoring Systems (CFRMS) installed on the kiln/raw mill/clinker cooker stack. These tests were conducted in accordance with CFRMS RATA procedures published in 40 CFR 60, Appendix B, Performance Specification 6 and 40 CFR 75, Appendix A. The flow rate data from the plant CFRMS is provided in the Appendix.

Parameter	Limit	Observed	CFRMS Biased Low
Flow	10% of RM	5.52%	No

The CFRMS is a Monitor Labs Ultra Flow, Model 100, serial number 1001038 gas velocity measuring system. The system measures the actual stack gas velocity of wet gas per unit of time basis. The signal from this monitoring system is incorporated with the cross sectional area of the stack, the stack gas moisture (from wet and dry stack gas O_2 measurements) and the stack gas temperature in the Mass Flow Computer to provide a volumetric flow rate of dry stack gas at standard (68°F and 29.92 in. Hg) conditions.

The Mass Flow Computer of the CFRMS also has the capability of accepting adjustment factors to correct observed CFRMS volumetric flow rates to flow rates measured with a reference method (EPA Method 2, 40 CFR 60, Appendix A). Once these factors are entered, the Mass Flow Computer will calculate an adjusted (corrected) flow rate.

The instrument span is equivalent to a stack gas velocity of 150 actual feet per second, wet. This velocity is equivalent to a stack gas flow rate of 800,000 actual cubic feet per minute, wet, which is approximately 280 percent of the maximum flow rate of observed during the certification period.

The flow rate of 375,000 actual cubic feet per minute wet or 250,000 standard cubic feet per minute, dry was used as the instrument span as it is less than 125 percent of the maximum flow rate observed (see Section 2.1.4, 40 CFR 75, Appendix A).

The relative accuracy of the CFRMS is a comparison of the CFRMS response to stack gas flow measurements made in accordance with a reference method (EPA Method 2, 40 CFR 60, Appendix A). For the RATA, nine sets of flow rate measurements are required at a single representative flow rate. The relative accuracy of the CFRMS cannot exceed 10.0 percent (see Section 3.3.4, 40 CFR 75, Appendix A). Data from the Flow RA test are summarized in Table 4.

The certification of the CERMS includes the certifications of the CFRMS and the NOx and SO_2 CEMS. Signals from these certified systems are input to the plant CERMS computer, and mass emission rates (pounds per hour) of NOx and SO_2 are calculated. As the NO_X and SO_2 CERMS are dependent upon signals from the NO_X and SO_2 CEMS and the CFRMS, the certification of both the NO_X and SO_2 CEMS and the CFRMS represent a certification of the two CERMS.

3.5 Opacity

On September 16, 2004, Koogler & Associates, Inc. conducted a Relative Accuracy Audit on the Continuous Opacity Monitoring System (COMS) installed on the kiln/raw mill/clinker cooler stack. These tests were conducted in accordance with COMS certification procedures published in 40 CFR 60, Appendix B, Performance Specification 1. This monitor successfully met the EPA Performance Specifications, as summarized below:

Parameter	Limit	Observed
Calibration Error:		
Low	3% Opacity	0.32%
Mid	3% Opacity	0.66%
High	3% Opacity	2.54%

The COMS is a United Sciences, Inc. (USI) Model 500C, serial number 7971657 compliance transmissometer. The span of the instrument is 100 percent opacity.

In accordance with Section 7.1.4, 40 CFR 60, Appendix B, Performance Specification 1, three calibrated filters were inserted in the transmissometer path. Each filter was inserted a total of five times and the instrument

response was recorded for each insertion; a total of 15 responses. The attenuation represented by the filter was 9.7, 24.2, and 63.5 percent opacity. The data are summarized in Table 5a. The calibration errors ranged from 0.32 to 2.54 percent opacity. The maximum acceptable calibration error is 3.0 percent.

Response time was determined in accordance with Section 7.1.5. Table 5b summarizes these data.

4.0 COMPLIANCE TESTING

On August 5, 2004, Koogler & Associates, Inc. conducted the annual compliance tests for carbon monoxide and methane and non-methane hydrocarbons. These tests were conducted on the stack exhausting the kiln, raw mill, and clinker cooler. During the test period, the feed rate to the preheater averaged 245.5 tons per hour and the clinker production rate averaged 147.4 tons per hour. The kiln was fired primarily with coal during the test period with a small amount of fuel oil also being fired. The heat input rate to the kiln averaged approximately 355 mmBTU per hour.

During the test period, the stack gas flow rate averaged 247,438 dry standard cubic feet per minute at a temperature of 286°F and a moisture content of 12.7 percent.

The emission data for carbon monoxide and hydrocarbons are summarized in Table 6.

4.1 Carbon Monoxide

The carbon monoxide emission measurements were conducted in accordance with EPA Method 10 (40 CFR 60, Appendix A). Three complete test runs were conducted during the test period with carbon monoxide emissions ranging from 241-259 pounds per hour. The average carbon monoxide emission rate was 249 pounds per hour or 1.69 pounds per ton of

clinker. The permit limits the carbon monoxide emission rate to 412 pounds per hour or 3.01 pounds per ton of clinker.

4.2 Methane and Non-Methane Hydrocarbons

Emission measurements were conducted for both methane and non-methane hydrocarbons in accordance with EPA Method 25A (40 CFR 60, Appendix A). Three complete test runs were conducted with an average methane emission rate of 1.7 pounds per hour and an average non-methane hydrocarbon emission rate of 13.4 pounds per hour. The non-methane hydrocarbon (VOC) emission rate is equivalent to 0.091 pounds per ton of clinker. The permitted VOC emission rate from the plant is 16.4 pounds per hour or 0.12 pounds per ton of clinker.

4.3 Sulfur Dioxide and Nitrogen Oxides

Emission measurements were also conducted for sulfur dioxide (EPA Method 6C) and nitrogen oxides (EPA Method 7E), even though compliance with these compounds is demonstrated with Continuous Emission Monitoring Systems. The measured sulfur dioxide emission rate during the test period averaged 4.3 pounds per hour or 0.03 pounds per ton of clinker. The nitrogen oxide emission rate averaged 346 pounds per hour or 2.35 pounds per ton of clinker. The permitted emission rate of sulfur dioxide is 306 pounds per hour or 2.23 pounds per ton of clinker. The permitted emission rate of nitrogen oxides is 671 pounds per hour or 4.90 pounds per ton of clinker.

5.0 CONCLUSION

Based upon the data reported herein, it can be concluded that the Continuous Monitoring Systems on the kiln/raw mill/cooler stack of the Rinker Miami Cement Plant met the Relative Accuracy Test Audit criteria set forth in 40 CFR 60, Appendix B. It can further be concluded that the emission rates of carbon monoxide, hydrocarbons, SO_2, and NOx were well within permitted limits.

The Appendix of this report contains all calculations, field and laboratory data sheets, equipment calibration data, and plant operating data.

Table 1

RELATIVE ACCURACY TEST RESULTS

Plant: Rinker Materials, Miami, Florida
Source/Unit: Kiln/Rawmill/Clinker Cooler
Test Date: 8/4/04 and 8/05/04
Test Type: NOx CEM RATA
Units: ppm
Accuracy: 20.0 Less than %
Method 40 CFR 60, Appendix B, P.S. 2

Run	Rinker Materials, Miami, Florida ppm	K&A Reference Method ppm	di ppm	CC	RA %	Relative Accuracy Less than % 20.0
3	219.68	176.89	42.79			
4	193.37	168.55	24.82			
5	191.61	162.01	29.61			
6	201.34	167.23	34.11			
7	272.78	225.93	46.85			
8	281.36	257.35	24.01			
9	263.39	226.15	37.24			
10	275.99	232.90	43.09			
11	300.83	264.69	36.14	6.23	19.92	YES
12						
13						
14						
15						
16						
17						
18						

Run	Mean di	SUM di	Sd	Mean RM	di^2 (ppm)	Sigma di^2 (ppm)
1						
2						
3						
4						
5						
6						
7						
8						
9	35.4	318.7	8.1	209.1	1.31E+03	1.18E+04
10						
11						
12						
13						

Table 2

RELATIVE ACCURACY TEST RESULTS

Plant: Rinker Materials, Miami, Florida
Source/Unit: Kiln/Rawmill/Clinker Cooler
Test Date: 8/4/04 and 8/5/04
Test Type: SO2 CEM RATA
Units: ppm

Applicable Standard (ppm): 131.0
Accuracy (ppm): 13.1

Less than 10 % of Standard
(306 lb/hr *24hr ave)
(Standard approx. 131 ppm)

Method 40 CFR 60, Appendix B, P.S. 2

Run	Rinker Materials, Miami, Florida ppm	K&A Reference Method ppm	di ppm	CC	RA ppm	Relative Accuracy Less than 10 % of Standard 13.1 ppm
1	0.00	4.01				
2	1.71	2.37	-0.66			
3	7.07	2.01	5.07			
4	5.30	0.00	5.30			
5	0.24	0.00	0.24			
6	0.00	0.00	0.00			
7	0.00	3.67	-3.67			
8	0.00	2.26	-2.26			
9	0.00	1.84	-1.84	2.36	2.01	YES
10						
11						
12						
13						
14						
15						
16						

Run	Mean di	SUM di	Sd	Mean RM	di^2 (ppm)	Sigma di^2 (ppm)
1						
2						
3						
4						
5						
6						
7						
8						
9	0.27	2.17	3.08	1.80	3.39E+00	7.62E+01
10						
11						
12						
13						

Table 3

RELATIVE ACCURACY TEST RESULTS

Plant: Rinker Materials, Miami, Florida
Source/Unit: Kiln/Rawmill/Clinker Cooler
Test Date: 8/4/04 and 8/05/04
Test Type: THC CEM RATA (Non-Methane)
Units: ppm
Accuracy: 20.0 Less than %
Method 40 CFR 60, Appendix B, P.S. 2

Run	Rinker Materials, Miami, Florida ppm	K&A Reference Method ppm	di ppm	CC	RA %	Relative Accuracy Less than % 20.0
3	5.74	6.88	-1.14			
4	6.17	6.67	-0.50			
5	5.63	6.30	-0.67			
6	5.93	7.21	-1.28			
7	6.28	7.43	-1.16			
8	6.12	5.45	0.67			
9	6.49	6.29	0.20			
10	7.44	6.56	0.88			
11	7.55	6.70	0.86	0.69	14.04	YES
12						
13						
14						
15						
16						
17						
18						

Run	Mean di	SUM di	Sd	Mean RM	di^2 (ppm)	Sigma di^2 (ppm)
1						
2						
3						
4						
5						
6						
7						
8						
9	(0.2)	(2.1)	0.9	6.6	7.33E-01	6.96E+00
10						
11						
12						
13						

Table 4

RELATIVE ACCURACY TEST RESULTS

Plant: Rinker Materials, Miami, Florida
Source/Unit: Kiln/Rawmill/Clinker Cooler
Test Date: 8/04/04, 8/05/04, 8/6/04
Test Type: FLOW RATA MONITOR
Units: scfm
Accuracy: 20.0 Relative Accuracy Less than %
Method 40 CFR 60; Appendix B, P.S. 6

Run	Rinker Materials, Miami, Florida scfm	K&A Reference Method scfm	di scfm	CC	RA %	Relative Accuracy Less than % 20.0
1	305,006	298,428	6,578			
2	284,225	292,469	-8,244			
3	245,928	258,153	-12,226			
4	211,550	217,495	-5,945			
5	207,874	214,964	-7,090			
6	220,368	221,313	-945			
7	245,691	257,493	-11,802			
8	248,516	272,245	-23,730			
9	250,253	255,688	-5,435	6,388.50	5.52	YES
10						
11						
12						
13						
14						
15						
16						

Run	Mean di	SUM di	Sd	Mean RM	di^2 (ppm)	Sigma di^2 (ppm)
1						
2						
3						
4						
5						
6						
7						
8						
9	(7,648.8)	(68,839.0)	8,311	254,250	2.95E+07	1.08E+09
10						
11						
12						
13						
14						

Table 5a
Kiln/Raw-mill/Clinker Cooler COM RATA
Rinker materials

Miami, Florida

Testing Party: Glen Haven		Analyzer manufacturer:	United Sciences
Affiliation: Koogler & Associates / Rinker,Miami		Model/Serial No.	500C /07971657
September 16, 2004		Location:	Kiln/Rawmill/Clinker cooler Stack
Monitor Pathlenghth, L1	132.4	Emission Outlet Pathlength, L2	132.4
Monitoring System Output Pathlength Corrected? (yes/no)	no	OPLR	0.5

Calibrated Neutral Density Filter Values

Actual Optical Density (From Filter)		Path Adjusted Optical Density		
			Parallel	***w/OPLR***
Low Range	9.70%	Low	18.46%	0.097
Med Range	24.20%	Med	42.54%	0.242
High Range	63.50%	High	86.68%	0.635

Filter Audit

Run Number	Calibrated Filter value	Instrument Reading	Arithmetic Difference (Opacity),Decimal		
			Low	Med	High
1-low	9.7	9.9	-0.002		
2-med	24.2	24.8		-0.006	
3-high	63.5	65.9			-0.024
4-low	9.7	9.7	0		
5-med	24.2	24.8		-0.006	
6-high	63.5	65.9			-0.024
7-low	9.7	9.9	-0.002		
8-med	24.2	24.6		-0.004	
9-high	63.5	65.9			-0.024
10low	9.7	9.9	-0.002		
11-med	24.2	24.6		-0.004	
12-high	63.5	65.9			-0.024
13-low	9.7	10	-0.003		
14-med	24.2	24.8		-0.006	
15-high	63.5	65.5			-0.02
			-0.009	**-0.026**	**-0.116**
	Arithmetic Mean (Equation 1-2):		**-0.18%**	**-0.52%**	**-2.32%**
	Confidence Coefficient (Equation 1-4):		**0.14%**	**0.14%**	**0.22%**
	Calibration Error		**0.32%**	**0.66%**	**2.54%**

Table 5b
Kiln/Raw-mill/Clinker Cooler COM RATA
Rinker materials

Miami, Florida

Response Time Test

95 % value high Range filter	60.325
5% of value Low Range Filter	3.175

High In Upscale		Low Out Downscale	
20.00	Sec.	12.00	Sec.
21.00	Sec.	12.00	Sec.
18.00	Sec.	13.00	Sec.
18.00	Sec.	15.00	Sec.
18.00	Sec.	12.00	Sec.

Arithmetic Means High **19** Low **12.8** Combined **15.9**

6 Minute Average Test (Drop **Each** filter for 13 Minutes)

	Low Filter		Mid Filter		High Filter
Start Time	14:15	Start Time	14:29	Start Time	14:45
End Time	14:28	End Time	14:44	End Time	15:00

Table 6

CO, SO2, NOx, CH4, and NMHC Emissions Test

Summary of Operating Conditions CSR Rinker Materials Miami, Florida Cement Kiln / Raw Mill August 5, 2004						
Run No.	Preheater Feed Rate (Ton/Hr)	Clinker Production (Ton/Hr)	Stack Gas Conditions			
			Flow (dscfm)	Flow (scfm,wet)	Temp. (F)	Moisture (%)
1	245.5	147.4	262708	298532	291	12.0
2	245.5	147.4	256008	292247	301	12.4
3	245.5	147.4	223597	259093	267	13.7
Ave.>	245.5	147.4	247438	283290	286	12.7

Summary of Emissions for CO, SO2, NOx, CH4, and NMHC CSR Rinker Materials Miami, Florida Cement Kiln / Raw Mill August 5, 2004										
Run No.	Carbon Monoxide		Sulfur Dioxide		Nitrogen Oxides		Methane(1)(3)		NMHC(2)(3)	
	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)
1	216	247	2.79	7.3	186	349	2.42	1.8	6.66	13.7
2	232	259	0.00	0.0	166	304	2.30	1.7	7.27	14.6
3	247	241	2.54	5.7	239	384	2.37	1.5	6.62	11.8
Ave.>	232	249	1.78	4.3	197	346	2.36	1.7	6.85	13.4

(1) As Methane
(1) As Propane
(2) Wet Basis

Appendix

CEMS RATAs

Reference Method Calculations for NO_x, SO_2, and NMHC
Flow Rate

Field Data Sheets

NO_x, SO_2, and NMHC
Opacity

Plant Continuous Monitor Data

NO_x, SO_2 and NMHC
Flow Rate
Opacity

Emission Rate Measurements for
CO, Hydrocarbons, NO_x, and SO_2

Plant Process Data

Equipment Calibrations

Sampling Equipment
Calibration Gas Certifications

Project Participants

CEMS RATAs

Reference Method Calculations for NO_x, SO_2, and NMHC

Calibration Gas Requirements Determination Table

Plant: Rinker Materials, miami, Florida
Source: Kiln/Rawmill/Clinker Cooler stack

Pollutant Gas	Test Method EPA	Performance Specification Appendix B	Source Emission Limit(Std.) (lb/hr)	Source Flow Rate (dscfm)	Source Moisture (%)	Source Flow Rate (scfmw)	Source Emission (Std.) (ppm)
SO2	6C	2	306	234000	11.2	263514	**131.1**
NOx	7E	2	671	234000	11.2	263514	**400.0**
CO	10	4	412	234000	11.2	263514	**403.5**
VOC	25A	8	16.4	234000	11.2	263514	**9.1**

Pollutant	Reference Method Maximum Insrument Span (0- XX ppm)			Required Calibration Gases	Calculated Calibration Gases Required * All require Zero Air Gas					
					MID (Range)		MID (Range)		SPAN (Range)	
Gas	30%min.	(1.5 X)	(2.0 X)or(2.5 X)		low	high	low	high	low	high
SO2	437	**197**	262	(40-60%) +(80-100%)	**79**	**118**	NA	NA	**157**	197
NOx	1333	**600**	800	(40-60%) +(80-100%)	**240**	**360**	NA	NA	**480**	600
CO	NA	**605**	NA	(30%) +(60%) +(100%)	NA	**182**	NA	**363**	NA	605
VOC	NA	14	**23**	(25-30%) +(45-55%) +(80-90%)	**6**	**7**	**10**	**12**	**18**	20

EPA Protocol Gas Analyzer Calibration Data
CO Concentration Instrument Range Setting (0 - 650 ppm)
August 4, 2004

Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	Drift (% of Range)	Accuracy Diff. from Actual (% of Range)
Zero	0.0	R1-Pre	8/4/2004 10:32	0.00		0.00
Zero	0.0	R1-Post	8/4/2004 15:47	0.08	0.01	0.01
CO	89.9	R1-Pre	8/4/2004 11:39	87		-0.45
CO	302	R1-Pre	8/4/2004 10:41	308		0.90
CO	302	R1-Pre	8/4/2004 16:01	305	-0.39	0.51
CO	499	R1-Pre	8/4/2004 11:05	511		1.86
Zero	0.0	R2-Pre	8/4/2004 15:47	0.08		0.01
Zero	0.0	R2-Post	17:23	-0.30	-0.06	-0.05
CO	302	R2-Pre	8/4/2004 16:01	305		0.51
CO	302	R2-Post	17:29	298	-1.20	-0.69
Zero	0.0	R3-Pre	17:23	-0.30		-0.05
Zero	0.0	R3-Post	8/4/2004 18:57	0.00	0.05	0.00
CO	302	R3-Pre	17:29	298		-0.69
CO	302	R3-Post	8/4/2004 19:02	306	1.37	0.68
Zero	0.0	R1-Pre	8/4/2004 10:32	0.00		0.00
Zero	0.0	R3-Post	8/4/2004 18:57	0.00	0.00	0.00
CO	89.9	R1-Pre	8/4/2004 11:39	87		-0.45
CO	89.9	R3-Post	8/4/2004 19:44	92	0.75	0.30
CO	302	R1-Pre	8/4/2004 10:41	308		0.90
CO	302	R3-Post	8/4/2004 19:02	306	-0.22	0.68
CO	499	R1-Pre	8/4/2004 11:05	511		1.86
CO	499	R3-Post	8/4/2004 19:07	509	-0.36	1.50

Range Setting (0-650ppmv CO)

Cal. Gas ppm	% of Range
89.9	13.83
302	46.46
499	76.77

EPA Protocol Gas Analyzer Calibration Data
SO2 Concentration Instrument Range Setting (0 - 100 ppm)

Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	Drift (% of Range)	Accuracy Diff. from Actual (% of Range)
Zero	0.00	R1-Pre	8/4/2004 10:33	0.29		0.29
Zero	0.00	R1-Post	8/4/2004 15:47	0.58	0.29	0.58
SO2	25.47	R1-Pre	8/4/2004 11:14	26.69		1.22
SO2	25.47	R1-Post	8/4/2004 16:08	25.58	-1.11	0.11
SO2	49.90	R1-Pre	8/4/2004 11:19	51.49		1.59
SO2	0.00	R2-Pre	8/4/2004 15:47	0.58		0.58
SO2	0.00	R2-Post	17:23	0.00	-0.58	0.00
SO2	25.47	R2-Pre	8/4/2004 16:08	25.58		0.11
SO2	25.47	R2-Post	NA	NA	NA	NA
SO2	0.00	R3-Pre	17:23	0.00		0.00
SO2	0.00	R3-Post	8/4/2004 18:57	0.03	0.03	0.03
SO2	25.47	R3-Pre	NA	NA		NA
SO2	25.47	R3-Post	8/4/2004 19:33	25.66	NA	0.19
Zero	0.00	R1-Pre	8/4/2004 10:33	0.29		0.29
Zero	0.00	R3-Post	8/4/2004 18:57	0.03	-0.27	0.03
SO2	25.47	R1-Pre	8/4/2004 11:14	26.69		1.22
SO2	25.47	R3-Post	8/4/2004 19:33	25.66	-1.04	0.19
SO2	49.90	R1-Pre	8/4/2004 11:19	51.49		1.59
SO2	49.90	R3-Post	8/4/2004 19:28	50.71	-0.78	0.81

Range Setting (0-100ppmv SO2)

Cal. Gas ppm	% of Range
25.47	25.47
49.90	49.90

EPA Protocol Gas Analyzer Calibration Data
NOx Concentration Instrument Range Setting (0 - 550 ppm)

Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	Drift (% of Range)	Accuracy Diff. from Actual (% of Range)
Zero	0.0	R1-Pre	8/4/2004 10:33	0.00		0.00
Zero	0.0	R1-Post	8/4/2004 15:47	0.00	0.00	0.00
NOX	307	R1-Pre	8/4/2004 10:42	295		-2.16
NOX	307	R1-Post	8/4/2004 16:01	298	0.51	-1.66
NOX	508	R1-Pre	8/4/2004 10:49	491		-3.03
Zero	0.0	R2-Pre	8/4/2004 15:47	0.00		0.00
Zero	0.0	R2-Post	17:23	1.82	0.33	0.33
NOX	307	R2-Pre	8/4/2004 16:01	298		-1.66
NOX	307	R2-Post	17:38	297	-0.19	-1.85
Zero	0.0	R3-Pre	17:23	1.82		0.33
Zero	0.0	R3-Post	8/4/2004 18:57	0.28	-0.28	0.05
NOX	307	R3-Pre	17:38	297		-1.85
NOX	307	R3-Post	8/4/2004 19:15	299	0.43	-1.42
Zero	0.0	R1-Pre	8/4/2004 10:33	0.00		0.00
Zero	0.0	R3-Post	8/4/2004 18:57	0.28	0.05	0.05
NOX	307	R1-Pre	8/4/2004 10:42	295		-2.16
NOX	307	R3-Post	8/4/2004 19:15	299	0.75	-1.42
NOX	508	R1-Pre	8/4/2004 10:49	491		-3.03
NOX	508	R3-Post	8/4/2004 19:22	496	0.91	-2.12

Range Setting (0-550ppmv NOX)

Cal. Gas ppm	% of Range
300	59.90
495	99.00

EPA Protocol Gas Analyzer Calibration Data
NOx Concentration Instrument Range Setting (0 - 550 ppm)

Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	Drift (% of Range)	Accuracy Diff. from Actual (% of Range)
Zero	0.0	R1-Pre	8/5/2004 13:20	0.07		0.01
Zero	0.0	R1-Post	8/5/2004 16:02	0.00	-0.01	0.00
NOX	307	R1-Pre	8/5/2004 13:40	306		-0.11
NOX	307	R1-Post	8/5/2004 16:11	305	-0.23	-0.34
NOX	508	R1-Pre	8/5/2004 13:34	508		0.05
NOX	508	R1-Pre	8/5/2004 16:16	506	-0.34	-0.29

Range Setting (0-550ppmv NOX)

Cal. Gas ppm	% of Range
300	59.90
495	99.00

EPA Protocol Gas Analyzer Calibration Data
NMHC Concentration Instrument Range Setting (0 - 75 ppm)

Calibration Gas	Conc. (ppmv)	Run No.	Time	Response through Train System Loop (ppmv)	Drift (% of Range)	Accuracy Diff. from Actual (% of Range)
Zero	0.00	R1-Pre	8/4/2004 10:33	0.00		0.00
Zero	0.00	R1-Post	8/4/2004 15:47	0.00	0.00	0.00
VOC	7.0	R1-Pre	8/4/2004 10:57	5.3		-2.18
VOC	7.0	R1-Post	8/4/2004 15:53	5.3	0.03	-2.15
VOC	24.7	R1-Pre	8/4/2004 11:05	22.9		-2.43
VOC	49.1	R1-Pre	8/4/2004 11:29	49.6		0.71
Zero	0.00	R2-Pre	8/4/2004 15:47	0.00		0.00
Zero	0.00	R2-Post	17:23	0.00	0.00	0.00
VOC	7.0	R2-Pre	8/4/2004 15:53	5.3		-2.15
VOC	7.0	R2-Post	17:29	6.5	1.62	-0.53
Zero	0.00	R3-Pre	17:23	0.00		0.00
Zero	0.00	R3-Post	8/4/2004 18:57	0.00	0.00	0.00
VOC	7.0	R3-Pre	17:29	6.5		-0.53
VOC	7.0	R3-Post	8/4/2004 19:02	5.3	-1.63	-2.16
Zero	0.00	R1-Pre	8/4/2004 10:33	0.00		0.00
Zero	0.00	R3-Post	8/4/2004 18:57	0.00	0.00	0.00
VOC	7.0	R1-Pre	8/4/2004 10:57	5.3		-2.18
VOC	7.0	R3-Post	8/4/2004 19:02	5.3	0.01	-2.16
VOC	24.7	R1-Pre	8/4/2004 11:05	22.9		-2.43
VOC	24.7	R3-Post	8/4/2004 19:07	22.9	0.00	-2.43
VOC	49.1	R1-Pre	8/4/2004 11:29	49.6		0.71
VOC	49.1	R3-Post	8/4/2004 19:44	47.0	-3.53	-2.83

Range Setting (0- 75 ppmv NMHC)

Cal. Gas ppm	% of Range
7.0	9.27
24.7	32.93
49.1	65.47

RINKER, MIAMI
KILN / RAWMILL / COOLER

TimeStamp	CO	SO2	NO	NOX	CH4	NMHC	O2%
8/4/2004 10:28	0.0	0.4	0.0	0.0	1.5	0.0	21.1
8/4/2004 10:29	0.0	0.4	0.0	0.0	1.5	0.0	20.7
8/4/2004 10:30	0.0	0.3	0.0	0.0	1.5	0.0	20.6
8/4/2004 10:31	0.0	0.3	0.0	0.0	0.0	0.0	21.1
8/4/2004 10:32	0.0	0.3	0.0	0.0	0.0	0.0	21.1
8/4/2004 10:33	0.0	0.3	0.0	0.0	0.0	0.0	21.1
8/4/2004 10:34	0.0	19.3	0.0	0.0	0.0	0.0	20.9
8/4/2004 10:35	0.2	99.7	0.0	67.3	0.0	0.0	10.3
8/4/2004 10:36	0.0	99.8	0.0	264.0	0.0	0.0	1.7
8/4/2004 10:37	0.0	99.8	0.0	292.3	0.0	0.0	0.2
8/4/2004 10:38	0.0	99.8	0.0	294.8	0.0	0.0	0.0
8/4/2004 10:39	0.0	99.8	0.0	295.2	0.0	0.0	0.0
8/4/2004 10:40	0.0	99.8	0.0	295.0	0.0	0.0	0.0
8/4/2004 10:41	0.0	99.8	0.0	295.0	0.0	0.0	0.0
8/4/2004 10:42	0.0	99.8	0.0	295.2	0.0	0.0	0.0
8/4/2004 10:43	0.0	99.7	0.0	295.0	0.0	0.0	1.6
8/4/2004 10:44	0.2	99.7	0.0	197.7	0.0	0.0	6.3
8/4/2004 10:45	0.0	99.7	0.0	433.7	0.0	0.0	0.9
8/4/2004 10:46	0.0	99.8	0.0	486.9	0.0	0.0	0.0
8/4/2004 10:47	0.0	99.8	0.0	491.2	0.0	0.0	0.0
8/4/2004 10:48	0.0	99.8	0.0	491.3	0.0	0.0	0.0
8/4/2004 10:49	0.0	99.8	0.0	491.3	0.0	0.0	0.0
8/4/2004 10:50	0.0	99.7	0.0	490.5	0.4	0.0	2.7
8/4/2004 10:51	0.0	71.6	0.0	175.3	1.0	0.0	16.4
8/4/2004 10:52	0.0	30.5	0.0	9.3	1.0	0.0	20.0
8/4/2004 10:53	23.4	20.9	0.0	1.4	0.9	0.0	19.9
8/4/2004 10:54	245.4	13.7	0.0	10.2	0.0	1.9	7.4
8/4/2004 10:55	304.8	9.4	0.0	2.2	0.0	5.3	0.9
8/4/2004 10:56	307.8	7.5	0.0	0.4	0.0	5.3	0.0
8/4/2004 10:57	307.8	6.2	0.0	0.0	0.0	5.3	0.0
8/4/2004 10:58	167.5	5.1	0.0	0.0	0.4	5.3	5.6
8/4/2004 10:59	30.3	4.3	0.0	0.0	0.8	3.1	17.6
8/4/2004 11:00	371.6	3.4	0.0	0.1	0.5	0.3	8.9
8/4/2004 11:01	502.8	3.6	0.0	0.0	0.0	18.1	1.1
8/4/2004 11:02	510.5	3.4	0.0	0.0	0.0	22.9	0.0
8/4/2004 11:03	510.4	3.5	0.0	0.0	0.0	22.9	0.0
8/4/2004 11:04	511.0	3.4	0.0	0.0	0.0	22.9	0.0
8/4/2004 11:05	511.2	3.3	0.0	0.0	0.0	22.9	0.0
8/4/2004 11:06	510.7	3.2	0.0	0.0	0.0	22.9	0.0
8/4/2004 11:07	316.7	5.3	0.0	0.0	0.0	22.9	1.4
8/4/2004 11:08	30.8	15.9	0.0	0.0	0.0	19.9	3.5
8/4/2004 11:09	1.9	21.6	0.0	0.0	0.0	0.0	0.2
8/4/2004 11:10	0.2	24.5	0.0	0.0	0.0	0.0	0.0
8/4/2004 11:11	0.2	25.7	0.0	0.0	0.0	0.0	0.0
8/4/2004 11:12	0.2	26.4	0.0	0.0	0.0	0.0	0.0
8/4/2004 11:13	0.0	26.9	0.0	0.0	0.0	0.0	0.0
8/4/2004 11:14	0.2	26.5	0.0	0.0	0.0	0.0	0.0
8/4/2004 11:15	0.2	32.3	0.0	0.8	0.0	0.0	4.0
8/4/2004 11:16	0.2	46.8	0.0	34.6	0.0	0.0	0.7
8/4/2004 11:17	0.2	50.1	0.0	46.3	0.0	0.0	0.0
8/4/2004 11:18	0.2	51.2	0.0	46.9	0.0	0.0	0.0
8/4/2004 11:19	0.2	51.8	0.0	46.9	0.0	0.0	0.0
8/4/2004 11:20	0.2	52.0	0.0	46.9	0.0	0.0	0.0
8/4/2004 11:21	0.0	43.4	0.0	46.7	0.0	0.0	0.0
8/4/2004 11:22	1.2	17.9	0.0	27.4	0.7	0.0	1.5
8/4/2004 11:23	0.8	9.6	0.0	16.7	28.8	0.0	12.6
8/4/2004 11:24	0.0	6.7	0.0	33.2	48.8	7.2	18.7
8/4/2004 11:25	0.0	6.3	0.0	2.5	49.3	8.4	19.7
8/4/2004 11:26	0.0	5.3	0.0	0.1	49.6	8.4	19.9
8/4/2004 11:27	0.0	4.6	0.0	0.0	49.6	8.4	20.1
8/4/2004 11:28	0.0	4.1	0.0	0.0	49.6	8.4	20.1
8/4/2004 11:29	0.0	3.8	0.0	0.0	49.6	8.4	20.2
8/4/2004 11:30	0.0	3.5	0.0	0.0	49.6	8.4	20.2
8/4/2004 11:31	0.0	3.2	0.0	0.0	49.6	8.4	20.2
8/4/2004 11:32	0.0	2.7	0.0	0.0	10.2	7.5	20.3
8/4/2004 11:33	38.5	2.2	0.0	0.0	2.5	0.4	20.2
8/4/2004 11:34	79.2	1.8	0.0	0.0	1.0	37.3	20.4
8/4/2004 11:35	84.6	1.9	0.0	0.0	0.0	45.0	20.4
8/4/2004 11:36	86.6	2.6	0.0	0.0	0.0	46.4	20.4
8/4/2004 11:37	87.6	2.7	0.0	0.0	0.0	46.5	20.4
8/4/2004 11:38	87.1	2.7	0.0	0.0	0.0	46.5	20.4
8/4/2004 11:39	86.8	2.5	0.0	0.0	0.0	46.5	20.5
8/4/2004 11:40	86.5	2.5	0.0	0.0	0.1	46.5	15.2
8/4/2004 11:41	26.7	1.9	0.0	0.0	1.0	35.2	11.6
8/4/2004 11:42	1.0	1.7	0.0	0.0	1.0	10.3	19.4
8/4/2004 11:43	1.2	6.9	0.0	0.0	1.0	0.0	20.3

<<Zero air

CO	SO2	NOx	CH4	NMHC
0.00	0.29	0.00	0.00	0.00

<< 307 NOx

	NOx	
	295.1	<average

<< 508 NOx

	NOx	
	491.3	<average

<< 302 CO / 6.95 Propane

	CO	Propane	
	307.8	5.3	<average

<< 499 CO/24.7 Propane

	CO	Propane	
	511.1	22.9	<average

<< 25.47 SO2

	SO2	
	26.7	<average

<< 49.9 SO2 / 50.5 nox

	SO2	NOx	
	51.5	46.9	<average

<< 49.54 CH4 / 10.29 Propane

	CH4	NMHC	
	49.6	8.4	<average

<< 89.9 CO / 49.1 Propane

	CO	NMHC	
	87.0	46.5	<average

RINKER, MIAMI
KILN / RAWMILL / COOLER

TimeStamp	CO	SO2	NOX	CH4	NMHC	O2%	
8/4/2004 12:10	206.1	5.0	198.1	2.0	5.3	13.0	<<start run 1 Comp/Run RATA
8/4/2004 12:11	195.8	4.9	194.3	2.2	5.3	11.9	
8/4/2004 12:12	197.5	5.1	199.5	2.4	5.4	10.5	
8/4/2004 12:13	217.7	5.0	196.4	2.1	5.3	12.2	
8/4/2004 12:14	209.6	5.1	189.0	2.5	5.3	13.0	
8/4/2004 12:15	189.1	5.0	191.6	2.5	5.3	13.1	
8/4/2004 12:16	197.5	4.8	193.6	2.0	5.3	13.2	
8/4/2004 12:17	198.0	4.7	189.5	2.0	5.3	13.1	
8/4/2004 12:18	198.3	4.6	190.6	2.5	5.3	13.1	
8/4/2004 12:19	181.3	4.6	189.7	2.5	5.2	13.2	
8/4/2004 12:20	205.1	4.4	191.3	2.2	5.3	13.2	
8/4/2004 12:21	205.9	4.4	181.9	2.3	5.3	13.2	
8/4/2004 12:22	190.1	4.4	185.6	2.3	5.3	13.2	
8/4/2004 12:23	181.3	4.4	192.9	2.0	5.3	13.2	
8/4/2004 12:24	189.6	4.3	195.3	2.0	5.3	13.2	
8/4/2004 12:25	188.9	4.2	190.7	2.0	5.3	13.2	
8/4/2004 12:26	184.4	4.0	186.3	2.0	5.3	13.2	
8/4/2004 12:27	180.3	4.0	193.9	2.0	5.3	13.2	
8/4/2004 12:28	203.0	4.0	196.6	2.1	5.3	12.6	
8/4/2004 12:29	222.4	3.9	187.1	2.0	5.3	13.0	
8/4/2004 12:30	232.5	3.8	181.8	2.4	5.3	13.1	
8/4/2004 12:31	230.5	3.9	177.9	2.5	5.3	13.1	<end Rata Run 1
8/4/2004 12:32	207.7	3.8	180.8	2.5	5.3	13.1	
8/4/2004 12:33	201.2	3.6	180.4	2.5	5.3	13.1	
8/4/2004 12:34	202.9	3.7	179.6	2.5	5.3	13.1	
8/4/2004 12:35	192.6	3.7	181.7	2.4	5.3	13.1	
8/4/2004 12:36	195.0	3.7	188.8	2.0	5.3	13.1	
8/4/2004 12:37	200.8	3.6	188.9	2.0	5.3	13.1	
8/4/2004 12:38	198.8	3.6	181.4	2.0	5.3	12.8	
8/4/2004 12:39	192.9	3.6	181.1	2.5	5.3	13.0	
8/4/2004 12:40	208.4	3.6	190.0	2.0	5.3	13.1	
8/4/2004 12:41	207.2	3.7	178.9	2.0	5.3	13.1	
8/4/2004 12:42	188.6	3.7	176.5	2.1	5.4	12.2	
8/4/2004 12:43	191.8	3.8	187.4	2.0	5.3	12.9	<<Raw Mill Down
8/4/2004 14:00	239.7	2.2	173.2	2.5	5.3	20.2	<<start Cal check
8/4/2004 14:01	207.2	2.2	177.1	2.5	5.3	20.2	
8/4/2004 14:02	195.0	2.2	183.2	2.5	5.3	20.1	
8/4/2004 14:03	215.8	2.1	191.4	2.5	5.2	20.2	
8/4/2004 14:04	155.1	2.4	162.3	0.7	4.5	19.8	
8/4/2004 14:05	93.9	2.4	22.4	0.0	45.6	5.5	
8/4/2004 14:06	92.2	2.2	3.8	0.0	46.5	0.4	
8/4/2004 14:07	91.5	2.0	1.8	0.0	46.5	0.0	
8/4/2004 14:08	91.0	1.9	0.8	0.0	46.5	0.0	
8/4/2004 14:09	101.9	1.7	0.6	0.6	46.5	0.7	
8/4/2004 14:10	185.9	15.6	62.0	2.2	25.8	8.5	
8/4/2004 14:11	40.4	98.9	266.9	0.0	3.1	2.2	
8/4/2004 14:12	3.7	99.8	477.7	0.0	0.0	0.0	
8/4/2004 14:13	1.7	99.8	487.8	0.0	0.0	0.0	
8/4/2004 14:14	0.5	99.8	490.6	0.0	0.0	0.0	
8/4/2004 14:15	2.2	99.8	491.6	0.0	0.0	0.0	
8/4/2004 14:16	127.8	99.4	447.2	1.7	0.0	6.8	
8/4/2004 14:17	56.9	67.0	184.3	1.1	4.3	3.3	
8/4/2004 14:18	3.5	41.9	19.8	0.0	0.6	0.1	
8/4/2004 14:19	1.5	32.5	4.0	0.0	0.0	0.0	
8/4/2004 14:20	0.5	28.2	1.8	0.0	0.0	0.0	
8/4/2004 14:21	0.2	26.3	0.8	0.0	0.0	0.0	
8/4/2004 14:22	1.5	25.2	0.6	0.3	0.0	0.0	
8/4/2004 14:23	134.9	18.0	23.5	2.6	1.9	6.6	<<Back on Stack
8/4/2004 14:24	243.2	10.9	164.7	2.5	4.8	11.8	
8/4/2004 14:25	244.4	7.6	174.2	2.5	5.3	12.4	
8/4/2004 14:26	262.6	5.9	178.2	2.5	5.3	12.6	
8/4/2004 14:27	254.2	5.0	163.4	2.5	5.3	12.6	
8/4/2004 14:28	218.7	4.4	174.0	2.5	5.3	12.7	
8/4/2004 14:29	206.2	4.0	183.1	2.5	5.3	12.7	
8/4/2004 14:30	213.5	3.7	190.3	2.5	4.6	12.7	<Restart Run 1 Compliance/Start Rata Run 2
8/4/2004 14:31	221.7	3.4	181.5	2.5	5.1	12.7	
8/4/2004 14:32	222.4	3.3	185.3	2.5	4.8	12.7	
8/4/2004 14:33	226.2	3.2	185.8	2.5	4.9	12.7	
8/4/2004 14:34	233.0	3.1	184.3	2.5	5.3	12.7	
8/4/2004 14:35	217.2	3.0	182.9	2.5	5.3	12.7	
8/4/2004 14:36	219.3	3.0	183.2	2.5	5.3	12.8	
8/4/2004 14:37	214.8	2.9	189.9	2.5	5.3	12.8	

RATA Run 1 AVERAGE

SO2	Nox	CH4	NMHC	THC
4.5	190.6	2.2	5.3	6.0
		0.7		

8/4/2004 14:38	199.2	2.9	192.2	2.5	5.3	12.8	
8/4/2004 14:39	203.9	2.8	197.1	2.5	5.3	12.9	
8/4/2004 14:40	222.5	2.8	186.5	2.5	4.5	12.8	
8/4/2004 14:41	226.1	2.7	180.6	2.5	5.2	12.8	
8/4/2004 14:42	233.5	2.7	176.1	2.5	5.3	12.8	
8/4/2004 14:43	219.7	2.7	180.1	2.5	5.3	12.8	
8/4/2004 14:44	207.6	2.8	181.9	2.5	5.3	12.9	
8/4/2004 14:45	233.0	2.6	183.3	2.5	4.9	12.9	
8/4/2004 14:46	267.3	2.6	165.4	2.5	4.8	12.8	
8/4/2004 14:47	250.6	2.6	163.4	2.5	5.3	12.8	
8/4/2004 14:48	239.0	2.6	166.5	2.5	5.3	12.8	
8/4/2004 14:49	220.9	2.6	170.3	2.5	5.3	12.9	
8/4/2004 14:50	229.8	2.6	173.2	2.5	5.3	12.9	
8/4/2004 14:51	239.4	2.6	169.6	2.5	4.5	12.9	
8/4/2004 14:52	243.1	2.6	165.3	2.5	5.2	12.8	<End RATA Run 2
8/4/2004 14:53	221.9	2.6	171.9	2.5	5.3	12.8	<Start RATA Run 3
8/4/2004 14:54	234.5	2.5	172.6	2.5	5.3	12.9	
8/4/2004 14:55	244.4	2.4	165.9	2.5	5.3	12.8	
8/4/2004 14:56	223.0	2.6	165.0	2.5	5.3	12.8	
8/4/2004 14:57	238.2	2.5	172.1	2.6	5.3	12.8	
8/4/2004 14:58	249.3	2.5	163.9	3.1	5.3	12.8	
8/4/2004 14:59	202.5	2.5	167.6	2.5	5.1	12.9	
8/4/2004 15:00	227.8	2.5	180.3	2.5	4.5	12.9	
8/4/2004 15:01	279.4	2.4	165.8	2.5	4.6	12.8	
8/4/2004 15:02	265.1	2.4	153.3	2.5	5.3	12.8	
8/4/2004 15:03	226.6	2.5	165.4	2.5	5.3	12.9	
8/4/2004 15:04	227.9	2.4	169.3	2.5	4.6	12.9	
8/4/2004 15:05	217.2	2.5	171.1	2.5	4.5	12.9	
8/4/2004 15:06	220.4	2.5	175.1	2.5	4.5	12.9	
8/4/2004 15:07	218.2	2.5	174.9	2.5	4.5	12.9	
8/4/2004 15:08	217.3	2.5	174.7	2.5	4.5	12.9	
8/4/2004 15:09	220.9	2.4	176.2	2.5	4.5	12.9	
8/4/2004 15:10	206.2	2.5	177.4	2.5	4.5	12.9	
8/4/2004 15:11	208.2	2.4	186.5	2.5	4.5	12.9	
8/4/2004 15:12	223.4	2.4	181.7	2.5	4.5	12.9	
8/4/2004 15:13	235.2	2.3	170.4	2.5	4.5	12.9	
8/4/2004 15:14	245.1	2.2	157.3	2.5	4.5	12.9	<End RATA Run 3
8/4/2004 15:15	263.6	2.2	160.4	2.5	5.3	12.9	
8/4/2004 15:16	253.3	2.2	155.0	2.5	5.3	12.8	
8/4/2004 15:17	256.9	2.2	159.7	2.5	5.3	12.8	
8/4/2004 15:18	290.8	2.2	153.6	2.7	5.3	12.8	
8/4/2004 15:19	259.4	2.3	153.2	3.0	5.3	12.4	
8/4/2004 15:20	233.8	2.4	165.4	2.5	5.3	12.9	<<End Run 1 Compliance
8/4/2004 15:21	249.1	2.8	167.6	2.5	5.3	12.8	
8/4/2004 15:22	106.8	68.4	175.5	0.0	3.7	10.8	
8/4/2004 15:23	4.2	99.7	212.8	0.0	0.0	11.4	
8/4/2004 15:24	1.5	99.7	203.2	0.0	0.0	11.4	
8/4/2004 15:25	0.3	99.7	203.4	0.0	0.0	11.4	
8/4/2004 15:26	0.0	99.7	203.4	0.0	0.0	11.4	
8/4/2004 15:27	0.0	99.7	203.4	0.0	0.0	11.4	
8/4/2004 15:28	0.0	99.7	203.6	0.0	0.0	11.3	
8/4/2004 15:29	0.0	99.7	204.1	0.0	0.0	11.5	
8/4/2004 15:30	0.0	73.7	162.6	0.0	0.0	17.4	
8/4/2004 15:31	0.0	30.6	14.9	0.0	0.0	19.9	
8/4/2004 15:32	0.2	17.1	4.0	0.0	0.0	20.1	
8/4/2004 15:33	0.0	11.6	3.8	0.0	0.0	20.1	
8/4/2004 15:34	0.2	8.8	4.0	0.0	0.0	20.1	
8/4/2004 15:35	0.0	7.0	4.2	0.0	0.0	20.1	
8/4/2004 15:36	0.0	5.6	3.2	0.0	0.0	20.2	
8/4/2004 15:37	0.0	4.5	2.4	0.0	0.0	20.2	
8/4/2004 15:38	0.0	3.5	1.7	0.0	0.0	20.2	
8/4/2004 15:39	0.2	2.8	1.1	0.0	0.0	20.3	
8/4/2004 15:40	0.0	2.3	1.0	0.0	0.0	20.3	
8/4/2004 15:41	0.2	1.9	0.4	0.0	0.0	20.3	
8/4/2004 15:42	0.2	1.4	0.1	0.0	0.0	20.3	
8/4/2004 15:43	0.2	1.1	0.0	0.0	0.0	20.3	
8/4/2004 15:44	0.2	1.0	0.0	0.0	0.0	20.3	
8/4/2004 15:45	0.2	0.8	0.0	0.0	0.0	20.3	
8/4/2004 15:46	0.2	0.7	0.0	0.0	0.0	20.3	<<Zero air
8/4/2004 15:47	0.0	0.5	0.0	0.0	0.0	20.3	
8/4/2004 15:48	27.6	1.1	0.0	0.0	0.0	18.9	
8/4/2004 15:49	257.2	1.6	22.5	0.0	0.1	4.6	
8/4/2004 15:50	301.6	1.4	3.8	0.0	5.3	0.3	
8/4/2004 15:51	303.5	1.2	0.7	0.0	5.3	0.0	
8/4/2004 15:52	305.5	1.1	0.1	0.0	5.3	0.0	
8/4/2004 15:53	305.1	1.0	0.0	0.0	5.3	0.0	
8/4/2004 15:54	305.0	1.0	0.0	0.0	5.3	0.0	
8/4/2004 15:55	271.8	21.0	0.0	0.0	5.3	1.1	

RATA Run 2 AVERAGE

SO2	Nox	CH4	NMHC	THC
2.8	179.3	2.5	5.1	5.1

RATA Run 3 AVERAGE

SO2	NOx	CH4	NMHC	THC
2.5	170.8	2.6	4.8	4.8

CO	SO2	N0x	CH4	NMHC
0.08	0.58	0.00	0.00	0.00

<< 302 CO / 6.95 Propane

	CO	Propane	
	305.3	5.3	<average

8/4/2004 15:56	39.2	99.5	136.9	0.0	2.9	0.6
8/4/2004 15:57	3.0	99.8	288.1	0.0	0.0	0.0
8/4/2004 15:58	1.0	99.8	295.3	0.0	0.0	0.0
8/4/2004 15:59	0.2	99.8	297.0	0.0	0.0	0.0
8/4/2004 16:00	0.0	99.8	298.0	0.0	0.0	0.0
8/4/2004 16:01	22.4	99.8	297.8	0.0	0.0	0.9
8/4/2004 16:02	14.5	77.2	165.0	0.0	0.0	0.3
8/4/2004 16:03	1.3	44.6	10.0	0.0	0.0	0.0
8/4/2004 16:04	0.2	33.9	2.8	0.0	0.0	0.0
8/4/2004 16:05	0.0	29.6	1.0	0.0	0.0	0.0
8/4/2004 16:06	0.0	27.4	0.3	0.0	0.0	0.0
8/4/2004 16:07	0.0	26.1	0.0	0.0	0.0	0.0
8/4/2004 16:08	4.4	25.0	0.0	0.2	0.0	0.2
8/4/2004 16:09	139.1	16.2	41.5	2.6	1.7	8.6

<< 307 NOx		
	NOx	
	297.9	<average

<< 25.47 SO2		
	SO2	
	25.6	<average

RUN 1	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CO	218.9	0.0	302.0	306.6	215.6
SO2	3.3	0.4	25.5	26.1	2.8
NOx	179.2	0.0	307.0	296.5	185.5
CH4	2.4	0.0	49.5	49.6	2.4
NMHC	5.1	0.0	6.95	5.3	6.7

CH4	THC	O2 %
0.8	7.5	12.9

RATA Run 1-3	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
SO2	4.5	0.4	25.5	26.1	4.0
SO2	2.8	0.4	25.5	26.1	2.4
SO2	2.5	0.4	25.5	26.1	2.0

RATA Run 1-3	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
Nox	190.6	0.0	307.0	296.5	197.4
NOx	179.3	0.0	307.0	296.5	185.6
NOx	170.8	0.0	307.0	296.5	176.9

RATA Run 1-3	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CH4	2.2	0.0	49.5	49.6	2.2
CH4	2.5	0.0	49.5	49.6	2.5
CH4	2.6	0.0	49.5	49.6	2.6

RATA Run 1-3	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
NMHC	5.3	0.0	7.0	5.3	6.9
NMHC	5.1	0.0	7.0	5.3	6.7
NMHC	4.8	0.0	7.0	5.3	6.3

RINKER, MIAMI
KILN / RAWMILL / COOLER
DATE 8-4-04

TimeStamp	CO	SO2	NOX	CH4	NMHC	O2%	
16:10	186.9	0.2	26.4				
16:11	192.9	0.2	171.4				
16:12	201.5	0.2	180.9				
16:13	231.0	0.2	182.3				
16:14	252.3	0.3	180.1				
16:15	230.5	0.2	167.9				<<Start Run 2 compliance/ Rata run 4
16:16	219.6	0.2	174.1	3.2	5.7		
16:17	215.4	0.2	176.0	3.1	5.7		
16:18	224.5	0.2	179.2	3.2	6.0		
16:19	226.3	0.2	173.5	3.4	6.2		
16:20	240.2	0.2	166.5	3.6	6.3		
16:21	237.6	0.2	157.5	3.4	6.1		
16:22	228.5	0.2	158.5	3.3	6.3		
16:23	217.7	0.2	162.0	3.4	6.2		
16:24	213.8	0.2	161.4	3.4	6.1		
16:25	222.4	0.2	162.4	3.4	6.1		
16:26	221.4	0.2	162.5	3.5	6.1		
16:27	233.2	0.2	162.0	3.5	6.2		
16:28	243.0	0.2	161.5	3.3	6.1		
16:29	234.4	0.2	158.8	3.3	6.0		
16:30	226.8	0.2	161.1	3.4	6.2		
16:31	216.9	0.2	162.7	3.5	6.2		
16:32	242.4	0.2	162.6	3.5	6.2		
16:33	254.5	0.3	162.7	3.5	6.2		
16:34	277.8	0.3	155.5	3.4	6.1		
16:35	267.3	0.3	158.1	3.4	6.1		
16:36	245.3	0.2	154.3	3.5	6.1		<<End Rate Run 4
16:37	249.1	0.2	162.7	3.5	6.3		<<Start Rata Run 5
16:38	242.3	0.2	161.2	3.6	6.2		
16:39	223.0	0.2	153.7	3.5	6.2		
16:40	263.4	0.3	154.7	3.5	6.2		
16:41	270.5	0.3	152.5	3.5	6.3		
16:42	259.6	0.3	151.4	3.4	6.1		
16:43	233.8	0.2	145.8	3.5	6.1		
16:44	234.7	0.2	150.3	3.6	6.4		
16:45	262.4	0.3	158.3	3.6	6.4		
16:46	268.7	0.3	158.5	3.5	6.1		
16:47	234.1	0.2	152.8	3.4	6.2		
16:48	222.9	0.2	157.2	3.7	6.3		
16:49	244.2	0.2	165.3	3.9	6.6		
16:50	251.8	0.3	163.7	3.5	6.4		
16:51	240.4	0.2	159.9	3.4	6.2		
16:52	259.1	0.3	162.4	3.5	6.3		
16:53	263.3	0.3	160.6	3.5	6.6		
16:54	258.5	0.3	159.6	3.6	6.5		
16:55	244.1	0.2	156.4	3.6	6.5		
16:56	233.3	0.2	154.5	3.8	6.6		
16:57	238.1	0.2	157.6	3.6	6.5		
16:58	241.0	0.2	162.7	3.6	6.5		<<End Rate Run 5
16:59	223.0	0.2	159.8	3.4	6.2		<<Start Rata Run 6
17:00	209.3	0.2	165.4	3.5	6.4		
17:01	212.8	0.2	164.3	3.4	6.1		
17:02	233.1	0.2	163.8	3.4	6.2		
17:03	221.1	0.2	164.4	3.4	6.4		
17:04	204.1	0.2	166.7	3.5	6.3		
17:05	206.5	0.2	167.8	3.5	6.3		
17:06	226.2	0.2	173.3	3.3	6.2		
17:07	209.2	0.2	170.1	3.5	6.3		
17:08	190.1	0.2	170.0	3.4	6.2		
17:09	139.6	0.1	171.2	3.4	6.2		
17:10	241.1	0.2	92.0	3.3	6.0		
17:11	213.0	0.2	153.0	3.7	6.3		
17:12	207.9	0.2	162.0	3.3	6.0		
17:13	215.7	0.2	168.4	3.3	6.0		
17:14	215.3	0.2	167.4	3.4	5.9		
17:15	196.3	0.2	161.9	3.4	6.1		
17:16	221.4	0.2	170.5	3.3	6.0		<<End Run 2 Compliance
17:17	242.6	0.2	173.0	3.6	6.2		
17:18	239.9	0.2	166.0	3.7	6.3		<<End Rate Run 6
17:19	156.8	0.2	160.1	3.4	6.1		
17:20	6.4	0.0	161.6	0.0	0.1		
17:21	-0.3	0.0	54.8	0.0	0.0		

RATA Run 4 AVERAGE

SO2	Nox	CH4	NMHC	THC
0.2	163.7	3.4	6.2	7.3
		1.1		

RATA Run 5 AVERAGE

SO2	Nox	CH4	NMHC	THC
0.2	157.4	3.5	6.4	7.5
		1.2		

RATA Run 6 AVERAGE

SO2	Nox	CH4	NMHC	THC
0.2	162.4	2.4	4.7	5.5
		0.8		

17:22	-0.3	0.0	2.7	0.0	0.0	<<Zero air
17:23	-0.3	0.0	1.0	0.0	0.0	
17:24	5.8	0.0	0.5	1.7	2.4	
17:25	194.3	0.2	0.3	0.1	7.4	
17:26	295.8	0.3	39.4	0.0	0.4	
17:27	297.7	0.3	16.9	0.0	0.0	
17:28	297.6	0.3	0.7	0.0	6.5	
17:29	297.4	0.3	0.2	0.0	6.6	
17:30	297.7	0.3	0.1	0.0	6.5	
17:31	297.6	0.3	0.0	0.0	0.0	
17:32	211.9	0.2	0.0	0.0	0.0	
17:33	11.4	0.0	12.4	0.0	0.0	
17:34	0.0	0.0	226.5	0.0	0.0	
17:35	-0.3	0.0	294.5	0.0	0.0	
17:36	-0.3	0.0	296.7	0.0	0.0	
17:37	-0.3	0.0	296.9	0.1	0.0	
17:38	4.5	0.0	296.8	0.0	0.0	
17:39	48.7	0.0	296.5	0.0	0.0	
17:40	2.4	0.0	250.2	0.0	0.0	
17:41	0.3	0.0	27.2	0.0	0.0	
17:42	-0.2	0.0	3.3	3.5	5.9	
17:43	-0.4	0.0	0.9	3.7	6.4	

<<Zero air				
CO	SO2	N0x	CH4	NMHC
-0.30	0.00	1.82	0.00	0.00

<< 302 CO / 6.95 Propane			
	CO	Propane	
	297.5	6.5	<average

<< 307 N0x		
	N0x	
	296.9	<average

RUN 2	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CO	231.7	-0.1	302.0	301.4	232.2
SO2	0.2	0.3	25.5	25.6	-0.1
N0x	160.9	0.9	307.0	297.4	165.7
CH4	3.5	1.2	49.5	49.6	2.3
NMHC	6.2	0.0	6.95	5.9	7.3

CH4	THC	O2 %
0.8	8.0	11.5

RATA Run 4-6	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
SO2	0.2	0.3	25.5	25.6	-0.1
SO2	0.2	0.3	25.5	25.6	0.0
SO2	0.2	0.3	25.5	25.6	-0.1

RATA Run 4-6	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
Nox	163.7	0.9	307.0	297.4	168.6
N0x	157.4	0.9	307.0	297.4	162.0
N0x	162.4	0.9	307.0	297.4	167.2

RATA Run 4-6	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CH4	3.4	1.2	49.5	49.6	2.3
CH4	3.5	1.2	49.5	49.6	2.4
CH4	2.4	1.2	49.5	49.6	1.2

RATA Run 4-6	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
NMHC	6.2	0.0	7.0	5.9	7.2
NMHC	6.4	0.0	7.0	5.9	7.4
NMHC	4.7	0.0	7.0	5.9	5.5

RINKER, MIAMI
KILN / RAWMILL / COOLER

TimeStamp	CO	SO2	NOX	CH4	NMHC	O2%	
8/4/2004 16:10	-	-	-	-	-	-	
8/4/2004 17:46	236.3	9.0	160.9	3.0	4.9	12.5	
8/4/2004 17:47	222.9	6.9	170.0	2.5	5.3	12.6	<<Start Compliance Run 3/ RATA Run 7
8/4/2004 17:48	232.3	5.8	168.5	2.5	5.3	12.7	
8/4/2004 17:49	229.9	5.0	169.6	2.5	5.3	12.7	
8/4/2004 17:50	224.9	4.4	168.5	3.0	5.3	12.7	
8/4/2004 17:51	207.6	4.0	169.6	2.6	5.3	12.8	
8/4/2004 17:52	223.4	3.7	172.2	2.5	5.3	12.8	
8/4/2004 17:53	219.0	3.6	175.1	2.5	5.3	12.7	
8/4/2004 17:54	227.9	3.6	188.6	2.5	5.3	12.1	
8/4/2004 17:55	252.5	3.5	212.0	2.5	5.9	11.4	
8/4/2004 17:56	251.8	3.3	217.7	2.5	6.0	11.1	
8/4/2004 17:57	236.2	3.3	227.2	2.5	6.0	11.1	
8/4/2004 17:58	234.8	3.2	238.4	2.5	5.6	11.1	
8/4/2004 17:59	232.8	3.1	243.0	2.5	5.2	11.1	
8/4/2004 18:00	231.1	2.9	244.3	2.5	5.2	11.1	
8/4/2004 18:01	223.0	2.9	249.4	2.0	5.2	11.1	
8/4/2004 18:02	227.1	2.8	256.2	2.0	5.2	11.2	
8/4/2004 18:03	226.1	2.7	260.1	2.0	5.2	11.1	
8/4/2004 18:04	225.4	2.6	266.1	2.0	5.3	11.1	
8/4/2004 18:05	231.0	2.4	269.9	2.1	5.4	11.1	
8/4/2004 18:06	226.2	2.3	272.2	2.1	5.4	11.1	
8/4/2004 18:07	215.3	2.2	275.6	2.1	5.4	11.1	
8/4/2004 18:08	228.6	2.2	276.0	2.1	5.4	11.1	<<End Rate Run 7
8/4/2004 18:09	236.0	2.1	274.6	2.1	5.4	11.0	<<Start Rata Run 8
8/4/2004 18:10	238.0	2.1	265.1	2.1	5.4	10.9	
8/4/2004 18:11	242.1	2.0	266.2	2.6	5.4	10.8	
8/4/2004 18:12	242.1	2.0	256.9	2.6	5.6	10.8	
8/4/2004 18:13	241.0	2.2	252.1	2.6	5.9	10.7	
8/4/2004 18:14	230.5	3.0	251.2	2.3	4.9	10.5	
8/4/2004 18:15	226.1	3.1	249.1	2.3	4.9	10.5	
8/4/2004 18:16	240.0	3.0	248.6	2.0	4.9	10.6	
8/4/2004 18:17	258.9	3.0	249.4	2.0	4.9	10.5	
8/4/2004 18:18	255.5	3.0	243.0	2.3	5.5	10.4	
8/4/2004 18:19	230.6	2.2	245.9	2.4	5.9	10.5	
8/4/2004 18:20	226.4	1.8	250.9	2.4	5.8	10.6	
8/4/2004 18:21	239.7	1.8	245.9	2.4	5.8	10.6	
8/4/2004 18:22	264.3	2.2	242.6	2.4	5.9	10.5	
8/4/2004 18:23	263.3	2.2	241.6	2.4	5.8	10.5	
8/4/2004 18:24	243.2	2.1	241.3	2.5	6.0	10.5	
8/4/2004 18:25	229.4	2.1	238.6	2.5	6.0	10.6	
8/4/2004 18:26	237.0	2.1	241.8	2.5	6.0	10.7	
8/4/2004 18:27	245.9	2.1	241.5	2.5	6.0	10.7	
8/4/2004 18:28	231.3	2.2	239.5	2.5	6.0	10.7	
8/4/2004 18:29	234.0	2.1	244.1	2.5	6.0	10.0	
8/4/2004 18:30	262.7	2.1	244.0	2.5	5.5	10.7	<<End Rate Run 8
8/4/2004 18:31	252.1	2.1	233.4	2.5	5.8	10.7	<<Start Rata Run 9
8/4/2004 18:32	247.8	2.1	240.2	2.4	5.6	10.8	
8/4/2004 18:33	253.0	2.1	241.3	2.1	5.6	10.8	
8/4/2004 18:34	268.8	2.0	237.9	2.5	5.7	10.8	
8/4/2004 18:35	266.4	2.0	232.4	2.5	5.5	10.7	
8/4/2004 18:36	279.1	2.0	234.5	2.5	6.0	10.7	
8/4/2004 18:37	267.1	2.0	228.0	2.5	6.0	10.7	
8/4/2004 18:38	265.6	2.0	223.3	2.5	6.0	10.7	
8/4/2004 18:39	270.3	1.9	219.2	2.5	6.0	10.7	
8/4/2004 18:40	287.5	2.0	213.8	2.5	6.0	10.7	
8/4/2004 18:41	293.4	1.9	213.2	2.5	6.0	10.6	
8/4/2004 18:42	276.2	1.9	212.7	2.5	6.0	10.6	
8/4/2004 18:43	271.5	1.9	218.9	2.5	6.0	10.6	
8/4/2004 18:44	288.8	1.9	222.8	2.6	6.0	10.5	
8/4/2004 18:45	268.6	1.9	222.7	3.0	6.0	10.4	
8/4/2004 18:46	260.6	1.9	225.9	2.5	6.0	10.4	
8/4/2004 18:47	256.2	1.9	229.7	2.5	6.0	10.4	<<End Run 3 Compliance
8/4/2004 18:48	282.9	2.0	233.6	2.5	6.0	10.4	
8/4/2004 18:49	331.5	1.9	231.5	2.9	6.1	10.3	
8/4/2004 18:50	294.7	2.1	218.4	2.7	6.8	10.3	
8/4/2004 18:51	143.7	1.1	228.7	1.0	6.0	13.9	
8/4/2004 18:52	5.9	0.3	49.7	0.0	0.7	19.5	<<End Rate Run 9
8/4/2004 18:53	0.7	0.1	4.9	0.0	0.0	20.1	
8/4/2004 18:54	0.0	0.1	1.4	0.0	0.0	20.2	
8/4/2004 18:55	0.0	0.0	0.8	0.0	0.0	20.2	

RATA Run 7 AVERAGE

SO2	Nox	CH4	NMHC	THC
3.7	219.6	2.4	5.4	6.2
		0.8		

RATA Run 8 AVERAGE

SO2	Nox	CH4	NMHC	THC
2.3	250.0	2.4	5.6	6.4
		0.8		

RATA Run 9 AVERAGE

SO2	Nox	CH4	NMHC	THC
1.9	219.8	2.4	5.7	6.5
		0.8		

8/4/2004 18:56	0.0	0.0	0.3	0.0	0.0	20.2
8/4/2004 18:57	0.0	0.0	0.3	0.0	0.0	20.2
8/4/2004 18:58	0.0	0.0	0.3	0.0	0.0	20.2
8/4/2004 18:59	93.9	0.6	5.0	0.0	0.0	15.0
8/4/2004 19:00	291.8	0.7	55.4	0.0	0.8	1.9
8/4/2004 19:01	306.0	0.6	3.2	0.0	5.3	0.0
8/4/2004 19:02	306.8	0.6	0.4	0.0	5.3	0.0
8/4/2004 19:03	298.6	0.9	0.6	1.5	5.3	1.6
8/4/2004 19:04	448.8	1.0	69.8	1.3	5.3	1.1
8/4/2004 19:05	506.3	0.6	8.1	0.0	18.6	0.0
8/4/2004 19:06	508.2	0.6	1.0	0.0	22.9	0.0
8/4/2004 19:07	509.3	0.5	0.1	0.0	22.9	0.0
8/4/2004 19:08	509.0	0.5	0.0	0.0	22.9	0.0
8/4/2004 19:09	434.8	4.9	1.5	0.0	22.9	1.9
8/4/2004 19:10	80.1	91.7	157.3	0.0	16.3	1.3
8/4/2004 19:11	2.9	99.8	291.1	0.0	0.0	0.0
8/4/2004 19:12	0.3	99.8	297.8	0.0	0.0	0.0
8/4/2004 19:13	0.2	99.8	298.8	0.0	0.0	0.0
8/4/2004 19:14	0.2	99.8	299.2	0.0	0.0	0.0
8/4/2004 19:15	0.2	99.8	299.2	0.0	0.0	0.0
8/4/2004 19:16	72.8	99.5	296.6	1.4	0.0	2.7
8/4/2004 19:17	94.2	99.7	264.4	1.9	3.9	3.7
8/4/2004 19:18	3.9	99.7	457.5	0.0	1.9	0.1
8/4/2004 19:19	0.7	99.7	491.4	0.0	0.0	0.0
8/4/2004 19:20	0.2	99.8	494.8	0.0	0.0	0.0
8/4/2004 19:21	0.0	99.8	495.9	0.0	0.0	0.0
8/4/2004 19:22	0.0	99.8	496.7	0.0	0.0	0.0
8/4/2004 19:23	0.0	99.8	472.7	0.9	0.0	3.1
8/4/2004 19:24	0.0	89.3	113.6	0.2	0.0	0.2
8/4/2004 19:25	0.0	65.4	51.9	0.0	0.0	0.0
8/4/2004 19:26	0.2	56.4	49.0	0.0	0.0	0.0
8/4/2004 19:27	0.2	51.8	48.7	0.0	0.0	0.0
8/4/2004 19:28	0.2	49.6	48.7	0.0	0.0	0.0
8/4/2004 19:29	0.2	48.4	48.5	0.0	0.0	0.0
8/4/2004 19:30	0.2	35.6	45.5	0.0	0.0	4.2
8/4/2004 19:31	0.2	28.5	8.2	0.0	0.0	0.5
8/4/2004 19:32	0.0	26.2	0.7	0.0	0.0	0.0
8/4/2004 19:33	0.2	25.1	0.1	0.0	0.0	0.0
8/4/2004 19:34	0.2	24.6	0.0	0.0	0.0	0.0
8/4/2004 19:35	0.2	17.7	0.0	1.0	0.0	9.9
8/4/2004 19:36	0.2	10.2	0.1	42.1	0.8	7.7
8/4/2004 19:37	0.2	6.8	0.1	51.0	8.4	0.3
8/4/2004 19:38	0.2	5.0	0.0	51.2	8.4	0.0
8/4/2004 19:39	0.2	3.7	0.0	50.9	8.4	0.0
8/4/2004 19:40	0.2	2.9	0.0	8.4	50.9	0.3
8/4/2004 19:41	49.5	2.3	0.0	8.4	33.2	2.5
8/4/2004 19:42	90.5	2.0	0.1	32.4	0.0	0.0
8/4/2004 19:43	91.7	1.9	0.0	47.0	0.0	0.0
8/4/2004 19:44	92.0	1.7	0.1	47.0	0.0	0.0
8/4/2004 19:45	91.7	1.5	0.1	46.6	0.0	0.0
8/4/2004 19:46	91.8	1.3	0.0	46.8	0.0	0.0
8/4/2004 19:47	42.9	0.5	0.0	40.9	0.9	2.1
8/4/2004 19:48	0.3	0.1	0.0	5.9	1.1	0.1
8/4/2004 19:49	0.3	0.1	0.1	3.1	0.7	0.0
8/4/2004 19:50	0.3	0.0	0.1	14.1	0.6	0.1

<<Zero air

CO	SO2	N0x	CH4	NMHC
0.00	0.03	0.28	0.00	0.00

<< 302 CO / 6.95 Propane

	CO	Propane	
	306.4	5.3	<average

<< 499 CO/24.7 Propane

	CO	Propane	
	508.8	22.9	<average

<< 307 N0x

	N0x	
	299.2	<average

<< 508 N0x

	N0x	
	496.3	<average

<< 49.9 SO2 / 50.5 nox

SO2	N0x	
50.7	48.7	<average

<< 25.47 SO2

	SO2	
	25.7	<average

<< 49.54 CH4 / 10.29 Propane

CH4	NMHC	
51.0	8.4	<average

<< 89.9 CO / 49.1 Propane

CO	NMHC	
91.8	47.0	<average

RUN 3	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CO	247.3	-0.1	302.0	301.9	247.4
SO2	2.6	0.0	25.5	25.7	2.5
N0x	232.7	1.0	307.0	298.0	239.5
CH4	2.4	0.0	49.5	50.3	2.4
NMHC	5.7	0.0	6.95	5.9	6.6

CH4	THC	O2 %
0.8	7.4	11.0

RATA Run 7-9	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
SO2	3.7	0.0	25.5	25.7	3.7
SO2	2.3	0.0	25.5	25.7	2.3
SO2	1.9	0.0	25.5	25.7	1.8

RATA Run 7-9	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
Nox	219.6	1.0	307.0	298.0	225.9
N0x	250.0	1.0	307.0	298.0	257.4
N0x	219.8	1.0	307.0	298.0	226.1

RATA Run 7-9	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
CH4	2.4	0.0	49.5	50.3	2.4
CH4	2.4	0.0	49.5	50.3	2.3
CH4	2.4	0.0	49.5	50.3	2.3

RATA Run 7-9	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
NMHC	5.4	0.0	7.0	5.9	6.3
NMHC	5.6	0.0	7.0	5.9	6.6
NMHC	5.7	0.0	7.0	5.9	6.7

RINKER, MIAMI
KILN / RAWMILL / COOLER

TimeStamp	NOX	O2%			
8/5/2004 13:15	0.0	20.6			
8/5/2004 13:16	0.0	20.6			
8/5/2004 13:17	0.0	20.6			
8/5/2004 13:18	0.0	20.6			
8/5/2004 13:19	0.0	20.6	<<Zero air		
8/5/2004 13:20	0.1	20.6	N0x		O2 %
8/5/2004 13:21	0.0	20.6	0.07		20.63
8/5/2004 13:22	0.0	20.6			
8/5/2004 13:23	0.0	20.6			
8/5/2004 13:24	41.2	14.3			
8/5/2004 13:25	359.8	3.4			
8/5/2004 13:26	484.5	0.7			
8/5/2004 13:27	492.1	0.2			
8/5/2004 13:28	494.0	0.0			
8/5/2004 13:29	494.6	0.0			
8/5/2004 13:30	495.2	0.0			
8/5/2004 13:31	496.9	0.0			
8/5/2004 13:32	508.4	0.0			
8/5/2004 13:33	508.4	0.0	<< 508 N0x		
8/5/2004 13:34	508.1	0.3		N0x	
8/5/2004 13:35	377.7	1.0		508.3	<average
8/5/2004 13:36	310.2	0.1			
8/5/2004 13:37	306.6	0.0			
8/5/2004 13:38	306.6	0.0			
8/5/2004 13:39	306.6	0.0	<< 307 N0x		
8/5/2004 13:40	306.2	0.6		N0x	
8/5/2004 13:41	176.5	11.3		306.4	<average
8/5/2004 13:42	12.9	18.6			
8/5/2004 13:43	1.3	19.9			
8/5/2004 13:44	0.4	20.1			
8/5/2004 13:45	0.0	20.2			
8/5/2004 13:46	0.0	20.2	<<Zero air		
8/5/2004 13:47	0.0	20.2	N0x		O2 %
8/5/2004 13:48	16.4	19.2	0.00		20.23
8/5/2004 13:49	209.6	17.7			
8/5/2004 13:50	249.0	17.6			
8/5/2004 13:51	250.8	17.6			
8/5/2004 13:52	240.6	17.7			
8/5/2004 13:53	231.2	18.0			
8/5/2004 13:54	228.1	18.2			
8/5/2004 13:55	227.0	18.4			
8/5/2004 13:56	224.0	18.1			
8/5/2004 13:57	220.6	18.3			
8/5/2004 13:58	223.0	18.4			
8/5/2004 13:59	223.4	18.0			
8/5/2004 14:00	222.4	17.9			
8/5/2004 14:01	228.0	18.1			
8/5/2004 14:02	225.6	18.1			
8/5/2004 14:03	218.9	18.3			
8/5/2004 14:04	218.5	19.1			
8/5/2004 14:05	222.0	19.5			
8/5/2004 14:06	223.4	19.5			
8/5/2004 14:07	218.1	19.5			
8/5/2004 14:08	224.1	19.3			
8/5/2004 14:09	225.6	19.3			
8/5/2004 14:10	218.0	19.3			
8/5/2004 14:11	212.7	19.5			
8/5/2004 14:12	220.5	19.5			
8/5/2004 14:13	229.1	19.7			
8/5/2004 14:14	172.8	20.1			
8/5/2004 14:15	152.9	20.2			
8/5/2004 14:16	158.9	20.1			
8/5/2004 14:17	209.3	19.9			
8/5/2004 14:18	201.0	19.9			
8/5/2004 14:19	187.5	19.9			
8/5/2004 14:20	205.6	19.8			
8/5/2004 14:21	199.2	20.1			
8/5/2004 14:22	134.2	20.2			
8/5/2004 14:23	129.6	20.3			
8/5/2004 14:24	143.1	20.3			
8/5/2004 14:25	134.8	20.3			
8/5/2004 14:26	108.2	20.3			
8/5/2004 14:27	129.6	20.2			

8/5/2004 14:28	143.1	20.1	
8/5/2004 14:29	153.0	20.2	
8/5/2004 14:30	144.8	20.3	
8/5/2004 14:31	145.2	20.3	
8/5/2004 14:32	146.2	20.3	
8/5/2004 14:33	136.5	20.3	
8/5/2004 14:34	127.7	20.3	
8/5/2004 14:35	141.5	20.3	
8/5/2004 14:36	119.3	16.3	
8/5/2004 14:37	202.6	11.3	
8/5/2004 14:38	223.4	10.7	
8/5/2004 14:39	220.1	10.5	
8/5/2004 14:40	214.2	10.5	<<Start Rata Run 10
8/5/2004 14:41	210.2	10.4	
8/5/2004 14:42	204.6	10.4	
8/5/2004 14:43	196.4	10.4	
8/5/2004 14:44	192.4	10.3	
8/5/2004 14:45	207.8	10.4	
8/5/2004 14:46	212.4	10.4	
8/5/2004 14:47	224.8	10.4	
8/5/2004 14:48	238.0	10.4	
8/5/2004 14:49	244.0	10.4	
8/5/2004 14:50	240.2	10.4	
8/5/2004 14:51	240.4	10.5	
8/5/2004 14:52	245.4	10.5	
8/5/2004 14:53	251.6	10.5	
8/5/2004 14:54	249.8	10.5	
8/5/2004 14:55	251.8	10.6	
8/5/2004 14:56	240.0	10.6	
8/5/2004 14:57	234.2	10.5	
8/5/2004 14:58	237.7	10.5	
8/5/2004 14:59	246.9	10.5	
8/5/2004 15:00	249.1	10.6	
8/5/2004 15:01	254.4	10.6	<<End Rata Run 10
8/5/2004 15:02	259.0	10.6	<<Start Rata Run 11
8/5/2004 15:03	263.6	10.6	
8/5/2004 15:04	260.7	10.7	
8/5/2004 15:05	257.8	10.6	
8/5/2004 15:06	261.4	10.6	
8/5/2004 15:07	261.1	10.7	
8/5/2004 15:08	262.3	10.7	
8/5/2004 15:09	273.5	10.7	
8/5/2004 15:10	267.6	10.7	
8/5/2004 15:11	270.0	10.7	
8/5/2004 15:12	263.6	10.8	
8/5/2004 15:13	262.6	10.8	
8/5/2004 15:14	266.2	10.7	
8/5/2004 15:15	262.9	10.7	
8/5/2004 15:16	263.6	10.7	
8/5/2004 15:17	265.0	10.8	
8/5/2004 15:18	264.3	10.8	
8/5/2004 15:19	260.3	10.8	
8/5/2004 15:20	260.4	10.9	
8/5/2004 15:21	264.4	10.9	
8/5/2004 15:22	266.9	10.8	
8/5/2004 15:23	262.2	10.8	<<End Rata Run 11
8/5/2004 15:24	262.1	10.9	<<Start Rata Run 12
8/5/2004 15:25	269.9	10.9	
8/5/2004 15:26	276.1	10.8	
8/5/2004 15:27	270.7	10.9	
8/5/2004 15:28	271.8	10.9	
8/5/2004 15:29	287.0	10.9	
8/5/2004 15:30	278.9	11.0	
8/5/2004 15:31	268.7	11.0	
8/5/2004 15:32	276.7	11.0	
8/5/2004 15:33	280.7	10.9	
8/5/2004 15:34	285.0	10.9	
8/5/2004 15:35	273.6	10.9	
8/5/2004 15:36	271.2	10.8	
8/5/2004 15:37	273.6	10.9	
8/5/2004 15:38	272.4	10.9	
8/5/2004 15:39	271.1	11.0	
8/5/2004 15:40	271.7	11.1	
8/5/2004 15:41	271.5	11.2	
8/5/2004 15:42	266.4	11.1	
8/5/2004 15:43	272.5	11.0	
8/5/2004 15:44	275.1	10.0	<<End Rata Run 12
8/5/2004 15:45	271.8	11.1	

8/5/2004 15:46	270.4	11.0			
8/5/2004 15:47	261.8	11.2			
8/5/2004 15:48	266.0	11.1			
8/5/2004 15:49	272.9	11.0			
8/5/2004 15:50	273.6	11.0			
8/5/2004 15:51	265.4	11.1			
8/5/2004 15:52	266.7	11.2			
8/5/2004 15:53	262.8	14.1			
8/5/2004 15:54	64.4	19.2			
8/5/2004 15:55	3.1	20.0			
8/5/2004 15:56	1.0	20.1			
8/5/2004 15:57	0.3	20.1			
8/5/2004 15:58	0.1	20.1			
8/5/2004 15:59	0.1	20.2			
8/5/2004 16:00	0.0	20.2			
8/5/2004 16:01	0.0	20.2	<<Zero air		
8/5/2004 16:02	0.0	20.2	N0x		O2 %
8/5/2004 16:03	0.0	19.4	0.00		20.17
8/5/2004 16:04	84.7	6.1			
8/5/2004 16:05	293.8	0.6			
8/5/2004 16:06	303.2	0.0			
8/5/2004 16:07	303.9	0.0			
8/5/2004 16:08	304.5	0.0			
8/5/2004 16:09	304.9	0.0			
8/5/2004 16:10	305.1	0.0	<< 307 N0x		
8/5/2004 16:11	305.2	0.0		N0x	
8/5/2004 16:12	306.2	0.1		305.1	<average
8/5/2004 16:13	432.6	0.0			
8/5/2004 16:14	504.8	0.0			
8/5/2004 16:15	506.7	0.0	<< 508 N0x		
8/5/2004 16:16	506.1	0.5		N0x	
8/5/2004 16:17	413.0	8.0		506.4	<average

RATA Run 10-12	ANALYZER RESPONSE TO STACK GAS ppmv	ZERO BIAS ppmv	ACTUAL CAL.GAS VALUE ppmv	ANALYZER RESPONSE TO CAL. GAS ppmv	CORRECTED STACK GAS CONC. ppmv
Nox	231.2	0.0	308.0	305.7	232.9
N0x	263.6	0.0	307.0	305.7	264.7
N0x	273.7	0.0	308.0	305.7	275.7

Flow Rate

Koogler & Associates
Reference Data Summary

Sample Date	Test	Run No.	RATA Run No.	Test Time	Flow (dscfm)	Moisture (%)	Flow (scfm)
08/04/04	PM Mill UP	1	1	1210-1245/1427-1500	262915	11.9	298428
08/04/04	PM Mill UP	2	2	1615-1722	255618	12.6	292469
08/04/04	PM Mill UP	3	3	1723-1730/1750-1858	222270	13.9	258153
08/05/04	PM Mill Down	1	4	0814-0920	195528	10.1	217495
08/05/04	PM Mill Down	2	5	9:55-1059	193468	10.0	214964
08/05/04	PM Mill Down	3	6	1440-1530/1607-1635	198739	10.2	221313
08/06/04	Acid Mist	1	7	1023-1130	218354	15.2	257493
08/06/04	Acid Mist	2	8	1205-1311	228686	16.0	272245
08/06/04	Acid Mist	3	9	1346-1454	215801	15.6	255688

Field Data Sheets

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

NO_x, SO_2, and NMHC

Rinker, Miami
8/4/04

1 - CO
2 - SO_2
3 - ~~S~~ NO
4 - NO_x
5 - Methane
6 - NMHC(prop)
8 - O_2

Annual Compliance / Temp. Permit Compliance

Range
CO - (0 - 650)
NO_x - (0 - 550)
SO_2 - (0 - 100)
VOC NMHC (0 - 75
CH (0 - 50)

0850 Start Calibrations / Leak Check
1013 > Program Data Logger
1029 Zero Air ON
1034 Low NOx (307 ppm) ON
1041 307 NOx = 295.0351 ppm
1043 508 (499 SO_2) NOx ON
1048 508 NOx = 491 ppm
1053 302 (low) CO / 6.95 prop ON
1057 499 CO / 24.7 prop ON
1104 499 CO = 511 ppm / 24.7 prop = 22 ppm
1107 25.47 (low) SO_2 ON
1113 25.47 SO_2 = 24.91 ppm
1114 49.9 SO_2 / 50.5 NOx ON
1119 49.9 SO_2 = 51.79 ppm
1122 10.29 (low) prop / 49.54 CH_4 ON
1128 10.29 prop = 8.36 ppm / 49.54 CH_4 = 49.62 ppm
1132 49.1 prop / 89.9 CO ON
1138 49.1 prop = 46.5 ppm 89.9 CO = 87.13 ppm
1140 > Test Gas for Tom Stokes
1200 > ON Stack
1210 > Start RI RATA/COMP
1243 > RAW MILL WENT DOWN
1402 > 49.1 prop / 89.9 CO ON
1410 508 NO_x ON
1415 NOx = 492

,413 = 509
,755 = 499 C
,494 = 49.9 SO
,164 = 48.8 NMH
,988 = 50.43 CH

* CO Logger = 308 Inst = 301
# 1059 - Reopened cylinder / gas dropped off

Richer Miami 8/4/04 184

1416 25.47 SO_2 on

1423 25.47 SO_2 = 25.7 ppm

1425 ON Stack

1430 Restart Run 1

1520 > End Run 1 & Run 3 Rata

1521 > Zero Air on

15:48 > 302 CO / 6.95 prop on

1552 302 CO = 304.46 ppm 6.95 prop = 5.34 ppm

1554 307 NOx ~~SO_2~~ ON

1559 307 NOx = 296.98 ppm

1600 25.47 SO_2 on

1607 25.47 SO_2 = ~~25.~~ 25.65 ppm

1610 ON-Stack

1615 Start Run 2 / Run 4 Rata

1718 > Zero Air on

1724 > 302 CO / 6.95 prop on

1727 > 302 CO = 303.4 ppm ~~6.95 prop =~~

1730 > 6.95 prop = 5.31 ppm

1732 > 307 NOx on

1735 > 307 NOx = 298 ppm

1738 > 25.47 SO_2 on

1743 > 25.47 SO_2 = 28 ppm Cal gases off

1745 > ON Stack

1747 > Start R3 / Run 6 Rata

1850 > End R3 / RR9

1850 > Ø air ON

CO_2 % = 10%

R2 CO_2 % = 13.2 %

* 55C Time/Data
10:32 = 18:06
10-3-15 = 8-4-04

10:36 ≤ 16:10

Rinker, Miami 8/4/04

1859 302 CO / 6.95 prop OW

1901 302 CO = 300 ppm 6.95 prop = 6.58 ppm (O_2 = 14%

1903 499 CO / 24.7 prop OW O_2 = 12%

1906 499 CO = 496 ppm 24.7 prop = 23.7 ppm

1909 307 NO_x / 305 SO_2 OW

1914 307 NO_x = 299 ppm

1917 508 NO_x / 499 SO_2 OW

1920 508 NO_x = 495 ppm

1922 49.9 SO_2 / 50.5 NO_x OW

1926 49.9 SO_2 = 53.9 ppm 50.5 NO_x = 48.4

1929 25.47 SO_2 OW

1932 25.47 SO_2 = 26.7

1935 49.54 CH_4 / 10.29 prop. OW

1937 49.54 CH_4 = 51.1 10.29 prop = 8.4

1941 89.9 CO / 49.1 prop OW

1943 89.9 CO = 91 ppm 49.1 prop = 47 ppm

Rinker Materials, Miami

Annual Compliance / RATA 8/5/04 Clouties

13:20 Prep NO_x Test CEM — NO_x span 0-550 ppm

13:25 NO_x 508 ON — Gases 508 span Gas

13:30 ~~Set~~ Span NO_x 507 / Log = 509 — 307 mid Gas

1333 NO_x 307 ON

1339 Ø air ON

1346 Cal gases ~~off~~ / probe in stack

1440 Start Rata Run 10 (NO_x)

1550 End Run 12 Rata (NO_x)

1552 Ø air ON

1603 308 NO_x ON

16:16 Cal gases off

Opacity

Plant: RINKER - MIAMI		Location: Miami, FL	
K&A Testing Party: Neil A. LOFGREN		Analyzer manufacturer: SICK ~~Maihak~~, Inc. UNITED SCIENCES	
Plant Testing Party: TOM STOKES		Model/Serial No. ~~GM62-A7~~ 500C/0797 1657	
Date: 9/16/04		Source Location Main Stack	
Monitor Pathlenghth, L1	11'-3.5"	Instrument Span D1, (0 - ??)	0 – 100 %
Emission Outlet Pathlength, L2	11'-3.5"		
Monitoring System Output Pathlength Corrected? (yes/no)		OPLR=L2/(2xL1)	OPLR

Calibrated Neutral Density Filter Values

Actual Optical Density (From Filter) (0 - X%)	Actual			Path Adjusted (PA) Optical Density Parallel		w/OPLR
Low Range (D1= 40%=11%) (D1=50to100=20%)	9.7	%	Low	=(1-(1-Actual %)^2)		=(1-(1-Parallel)$^{(OPLR)}$)
Mid Range (D1=40%=20%)(D1=50to60=37%) (D1=70to80=50%)(D1=80to100=60%)	24.2	%	Med	=(1-(1-Actual %)^2)		=(1-(1-Parallel)$^{(OPLR)}$)
High Range (D1=40%=37%)(D1=50to60%=50%) (D1=70%=60%)(D1=80=75%)(D1=90%=80%) (D1=100%=87.5%)	63.5	%	High	=(1-(1-Actual %)^2)		=(1-(1-Parallel)$^{(OPLR)}$)

Field Filter Audit Data

Run Number	Instrument Reading	Calculated w/OPLR Density %	Percent Difference (Reading-actual)x100		Percent Difference Max 3.0% ((Reading-PA)/PA)x100	
1-low	9.9					
2-med	24.8					
3-high	65.9					
4-low	9.9					
5-med	24.8					
6-high	65.9					
7-low	9.9					
8-med	24.6					
9-high	65.9					
10low	9.9					
11-med	24.6					
12-high	65.9					
13-low	10.0					
14-med	24.8					
15-high	65.5					

Response Time Test

95 % value high Range filter	=High range x.95	
5% of value Low Range Filter	=Low range x.5	

High In Time to Upscale		Low Out Time to Downscale	
~~20~~ 21	Sec.	12	Sec.
21	Sec.	12	Sec.
18	Sec.	13	Sec.
18	Sec.	15	Sec.
18	Sec.	12	Sec.
Arithmetic Mean High			Arithmetic Mean Low

6 Minute Average Test (Drop Each filter for 13 Minutes)

	Low Filter		Mid Filter		High Filter	
Start Time	14:15	Start Time	14:29	Start Time	14:45	
End Time	14:28	End Time	14:44	End Time	15:00	

Plant Continuous Monitor Data

NO_x, SO_2 and NMHC

Rinker Materials, Miami, Florida
Annual Compliance Tests
CEMS RATA , Plant Process data

REPORT DATE :**8/4/2004**

TIME hh:mm	SO2 RAW (PPM)	NOx RAW (PPM)	METH HC RAW (PPM)	N-METH RAW (PPM)	
12:10	0.00	252.3	2.7	5.7	
12:11	0.00	249.6	2.9	5.9	
12:12	0.00	255.1	2.9	5.8	
12:13	0.00	248.7	2.8	5.7	
12:14	0.00	251.8	2.8	5.8	
12:15	0.00	245.9	2.8	5.7	
12:16	0.00	256.8	2.8	5.7	
12:17	0.00	239.7	2.6	5.2	
12:18	0.00	245.4	2.8	5.7	
12:19	0.00	247.4	2.9	5.6	
12:20	0.00	256.4	2.8	5.5	
12:21	0.00	251.9	2.6	5.4	
12:22	0.00	247.0	2.8	5.8	
12:23	0.00	245.3	2.8	5.7	
12:24	0.00	260.7	2.8	5.6	
12:25	0.00	251.1	2.7	5.6	
12:26	0.00	243.7	2.7	6.0	
12:27	0.00	235.2	2.8	6.1	
12:28	0.00	242.3	2.8	6.0	
12:29	0.00	241.4	2.9	6.0	
12:30	0.00	238.6	2.9	5.8	
12:31	0.00	238.1	2.8	5.9	<End RATA Run 1
12:32	0.00	246.2	2.9	5.9	
12:33	0.00	249.2	2.8	6.0	
12:34	0.00	246.7	2.8	6.0	
12:35	0.00	236.4	2.9	6.1	
12:36	0.00	248.5	3.0	6.0	
12:37	0.00	245.8	2.8	5.8	
12:38	0.00	232.4	2.9	5.9	
12:39	0.00	244.1	2.9	5.9	
12:40	0.00	251.0	2.9	5.9	
14:25	1.70	212.5	3.0	6.4	
14:26	1.70	233.8	3.0	6.3	
14:27	1.70	237.2	3.0	6.2	
14:28	1.70	248.3	2.9	6.1	
14:29	1.70	232.8	3.0	6.1	
14:30	1.70	242.8	2.9	6.3	<Start RATA Run 2
14:31	1.60	242.4	2.9	6.4	
14:32	1.70	237.5	2.9	6.5	

RATA Run 1 AVERAGE

SO2	Nox	CH4	NMHC
0.00	247.5	2.8	5.7

14:33	1.70	238.4	2.7	6.1
14:34	1.80	238.5	2.8	6.6
14:35	1.60	248.1	2.9	6.3
14:36	1.70	247.2	2.9	6.2
14:37	1.70	253.2	2.9	6.1
14:38	1.70	238.7	2.9	6.1
14:39	1.70	233.8	2.9	6.3
14:40	1.70	229.2	2.9	6.2
14:41	1.70	236.2	2.9	6.3
14:42	1.70	236.9	2.9	6.1
14:43	1.80	236.9	2.8	6.0
14:44	1.70	213.4	2.9	6.1
14:45	1.80	219.5	3.1	6.4
14:46	1.70	220.2	3.0	5.9
14:47	1.70	224.3	3.0	5.9
14:48	1.70	226.2	2.9	5.9
14:49	1.70	221.8	3.0	5.9
14:50	1.70	218.4	2.8	6.5
14:51	1.70	229.2	3.0	6.2
14:52	1.80	224.4	3.0	5.8
14:53	1.70	218.4	2.9	5.9
14:54	7.30	214.5	0.3	5.8
14:55	8.40	228.9	0.3	5.9
14:56	7.10	210.9	0.3	5.7
14:57	6.90	236.4	0.3	5.6
14:58	7.00	234.1	0.3	5.9
14:59	7.20	212.9	0.3	5.7
15:00	7.00	206.8	0.3	5.7
15:01	6.90	222.7	0.3	5.7
15:02	7.00	221.2	0.3	5.6
15:03	6.90	218.0	0.4	5.3
15:04	7.60	228.0	0.3	5.8
15:05	8.10	216.4	0.3	5.5
15:06	8.10	228.3	0.3	5.5
15:07	7.60	220.5	0.3	5.4
15:08	7.40	230.2	0.3	5.4
15:09	7.20	235.4	0.3	5.5
15:10	7.20	227.8	0.3	5.5
15:11	7.20	212.8	0.3	5.5
15:12	7.40	200.6	0.3	5.8
15:13	7.20	208.2	0.3	5.5
15:14	7.20	200.0	0.3	5.6
15:15	6.90	205.3	0.3	5.8
15:16	6.90	199.3	0.3	6.0
15:17	6.80	201.1	0.3	5.8
15:18	6.80	214.1	0.3	6.0
15:19	6.60	214.4	0.3	5.8
15:20	6.40	207.5	0.3	5.6
15:21	2.10	212.1	2.6	5.4
15:22	1.80	206.0	2.6	5.5
15:23	1.60	206.8	2.6	5.4
15:24	1.70	205.7	2.8	5.6

<End RATA Run 2
<Start RATA Run 3

RATA Run 2 AVERAGE

SO2	Nox	CH4	NMHC
1.71	232.5	2.9	6.2

<End RATA Run 3

RATA Run 3 AVERAGE

SO2	Nox	CH4	NMHC
7.07	219.7	0.4	5.6

15:25	1.70	204.3	2.8	5.7	
15:26	1.60	203.9	2.9	5.8	
15:27	1.60	213.1	2.9	5.8	
15:28	1.60	220.1	3.0	5.7	
15:29	1.60	210.4	3.1	5.7	
15:30	1.60	213.7	2.6	5.6	
15:31	1.70	220.9	3.0	5.7	
15:32	1.60	213.8	3.0	5.7	
15:33	1.60	223.4	3.0	5.6	
15:34	1.60	225.9	3.0	5.6	
15:35	1.70	228.1	3.0	5.6	
15:36	1.60	230.0	3.0	5.7	
15:37	1.70	233.8	2.8	5.4	
15:38	1.60	237.1	2.8	5.4	
15:39	1.60	227.2	2.9	5.4	
15:40	1.70	226.1	2.7	5.5	
15:41	1.70	218.1	3.0	5.8	
15:42	1.60	211.1	3.1	5.8	
15:43	1.50	214.0	3.0	5.5	
15:44	1.60	213.6	2.9	5.5	
15:45	1.50	213.8	2.9	5.4	
15:46	1.60	212.4	2.8	5.5	
15:47	1.50	208.4	2.8	5.6	
15:48	1.60	203.4	3.0	5.8	
15:49	1.60	206.6	3.1	5.6	
15:50	1.50	211.0	2.9	5.5	
15:51	1.60	213.2	2.9	5.6	
15:52	1.50	210.9	3.0	5.6	
15:53	1.60	213.4	3.0	5.4	
15:54	1.50	209.9	2.9	5.5	
15:55	1.60	212.7	2.8	5.4	
15:56	1.70	69.0	2.9	5.8	
15:57	1.60	69.1	2.9	5.3	
15:58	1.60	69.0	2.8	5.6	
15:59	1.60	216.8	2.9	5.6	
16:00	1.30	213.0	3.0	5.6	
16:01	1.70	221.3	2.9	5.4	
16:02	1.60	219.4	2.9	5.6	
16:03	1.60	225.7	2.9	5.5	
16:04	1.50	223.3	2.8	5.5	
16:05	1.60	225.2	2.9	5.6	
16:06	1.60	225.4	2.8	5.5	
16:07	1.60	228.4	2.8	5.3	
16:08	1.60	232.8	2.8	5.4	
16:09	1.50	228.1	2.5	5.2	
16:10	75.90	229.8	2.3	6.3	
16:11	76.00	548.4	2.9	5.9	
16:12	76.00	548.7	2.8	6.1	
16:13	169.90	548.6	2.6	6.0	
16:14	28.80	216.2	2.4	5.8	
16:15	15.60	208.6	2.4	5.8	<Start RATA Run 4
16:16	11.50	198.2	2.5	5.8	

16:17	9.30	190.7	2.6	5.9
16:18	8.50	190.7	2.7	6.3
16:19	7.10	191.3	2.8	5.8
16:20	6.20	195.6	2.8	5.8
16:21	5.60	191.9	2.8	5.7
16:22	5.10	194.5	2.8	5.8
16:23	4.80	194.4	2.9	5.9
16:24	4.40	194.6	2.9	5.8
16:25	4.00	193.1	3.0	5.8
16:26	3.80	191.0	3.0	5.8
16:27	3.60	193.6	3.0	5.9
16:28	3.40	196.3	3.0	5.9
16:29	3.30	195.5	3.0	5.8
16:30	3.20	192.3	3.0	5.9
16:31	3.10	188.6	3.1	6.0
16:32	3.00	190.1	2.9	6.1
16:33	2.90	190.1	3.1	6.3
16:34	2.80	197.2	3.2	6.1
16:35	2.70	191.0	3.1	6.1
16:36	2.70	184.8	3.1	6.1
16:37	2.60	186.2	3.0	5.9
16:38	2.50	183.1	3.1	6.0
16:39	0.20	181.3	3.1	6.2
16:40	0.00	178.4	3.1	6.4
16:41	0.00	185.2	3.1	6.1
16:42	0.00	194.8	3.0	6.2
16:43	0.00	191.4	3.2	6.3
16:44	0.00	187.5	3.2	6.5
16:45	0.00	193.7	3.2	6.3
16:46	0.00	199.3	3.0	6.2
16:47	0.00	196.1	3.1	6.3
16:48	0.00	195.1	3.1	6.3
16:49	0.00	197.0	3.1	6.3
16:50	0.00	193.3	3.2	6.5
16:51	0.00	194.8	3.2	6.6
16:52	0.00	188.3	3.2	6.3
16:53	0.00	189.1	3.2	6.4
16:54	0.00	192.7	3.2	6.3
16:55	0.00	197.4	3.1	6.2
16:56	0.00	194.3	3.2	6.3
16:57	0.00	199.3	3.1	6.3
16:58	0.00	197.2	3.0	6.2
16:59	0.00	196.7	3.0	6.2
17:00	0.00	198.6	3.1	6.2
17:01	0.00	201.5	3.1	6.2
17:02	0.00	201.8	3.1	6.2
17:03	0.00	207.2	3.0	6.2
17:04	0.00	201.5	3.1	6.2
17:05	0.00	205.2	3.1	6.1
17:06	0.00	206.6	3.0	6.1
17:07	0.00	206.9	3.1	6.2
17:08	0.00	199.2	3.1	6.3

<End RATA Run 4
<Start RATA Run 5

RATA Run 4 AVERAGE

SO2	Nox	CH4	NMHC
5.30	193.4	2.9	5.9

<End RATA Run 5
<Start RATA Run 6

RATA Run 5 AVERAGE

SO2	Nox	CH4	NMHC
0.24	191.6	3.1	6.3

17:09	0.00	197.6	3.2	6.0
17:10	0.00	202.2	3.0	5.9
17:11	0.00	199.5	3.1	6.0
17:12	0.00	194.3	3.1	5.9
17:13				
17:14				
17:15				
17:16				
17:17				
17:18				
17:19				

<End RATA Run 6

RATA Run 6 AVERAGE

SO2	Nox	CH4	NMHC
0.00	201.34	3.08	6.12

Rinker Materials, Miami, Florida
Annual Compliance Tests
CEMS RATA , Plant Process data

REPORT DATE :**8/4/2004**

TIME hh:mm	SO2 RAW (PPM)	NOx RAW (PPM)	METH HC RAW (PPM)	N-METH RAW (PPM)	
17:45	0.00	201.9	2.9	6.2	
17:46	0.00	204.6	2.9	6.0	
17:47	0.00	201.7	2.9	6.0	<<Start RATA Run 7
17:48	0.00	204.4	3.0	6.3	
17:49	0.00	206.1	3.0	6.1	
17:50	0.00	209.0	2.9	6.1	
17:51	0.00	227.3	3.0	6.2	
17:52	0.00	253.1	3.0	6.7	
17:53	0.00	255.7	3.0	6.9	
17:54	0.00	266.3	3.0	7.0	
17:55	0.00	277.7	3.0	6.9	
17:56	0.00	281.3	2.9	6.9	
17:57	0.00	280.6	2.9	6.7	
17:58	0.00	287.4	2.9	6.8	
17:59	0.00	293.5	2.8	6.5	
18:00	0.00	297.3	2.8	6.5	
18:01	0.00	303.5	2.7	6.5	
18:02	0.00	306.7	2.8	6.4	
18:03	0.00	310.4	2.2	5.6	
18:04	0.00	312.2	2.8	6.3	
18:05	0.00	312.1	2.8	6.4	
18:06	0.00	311.1	2.7	6.5	
18:07	0.00	300.5	2.7	6.7	
18:08	0.00	303.2	2.7	6.8	<<End RATA Run 7
18:09	0.00	290.7	2.3	7.9	<<Start RATA Run 8
18:10	0.00	289.2	2.6	7.3	
18:11	0.00	289.4	2.6	7.9	
18:12	0.00	286.3	2.7	7.2	
18:13	0.00	287.7	2.7	7.0	
18:14	0.00	287.2	2.7	7.0	
18:15	0.00	280.8	2.6	7.9	
18:16	0.00	282.2	2.7	7.7	
18:17	0.00	284.5	2.7	7.9	
18:18	0.00	279.4	2.7	7.9	
18:19	0.00	281.1	2.8	7.2	
18:20	0.00	279.9	2.9	7.3	
18:21	0.00	278.6	2.9	7.2	
18:22	0.00	274.7	3.0	7.2	
18:23	0.00	278.6	2.9	7.0	

RATA Run 7 AVERAGE

SO2	Nox	CH4	NMHC
0.00	272.8	2.8	6.5

18:24	0.00	277.7	2.7	7.7	
18:25	0.00	276.0	2.9	7.6	
18:26	0.00	281.7	2.8	7.4	
18:27	0.00	279.5	2.7	8.3	
18:28	0.00	268.6	2.9	7.1	
18:29	0.00	279.5	3.0	7.0	
18:30	0.00	276.6	2.8	6.9	<<End RATA Run 8
18:31	0.00	274.7	2.8	6.9	<<Start RATA Run 9
18:32	0.00	269.2	2.8	7.2	
18:33	0.00	271.8	2.7	8.2	
18:34	0.00	264.8	2.9	7.0	
18:35	0.00	260.1	2.9	7.0	
18:36	0.00	255.5	2.8	7.5	
18:37	0.00	251.1	2.9	7.6	
18:38	0.00	252.9	3.0	7.7	
18:39	0.00	251.0	3.1	7.3	
18:40	0.00	258.0	2.9	7.3	
18:41	0.00	261.3	2.9	8.1	
18:42	0.00	261.3	3.0	7.7	
18:43	0.00	263.4	3.1	7.4	
18:44	0.00	267.0	3.0	7.5	
18:45	0.00	270.8	2.9	7.8	
18:46	0.00	268.7	2.8	7.7	
18:47	0.00	258.0	2.9	7.8	
18:48	0.00	272.8	3.1	7.8	
18:49	0.00	270.0	2.9	7.8	
18:50	0.00	258.1	2.8	7.9	
18:51	0.00	261.3	3.0	7.5	
18:52	0.00	272.7	2.9	7.5	<<End RATA Run 9
18:53	0.00	267.1	2.9	7.3	
18:54	0.00	274.1	2.6	7.0	
18:55	0.00	270.0	2.8	7.5	
18:56	0.00	272.4	2.9	7.4	
18:57	0.00	273.4	2.9	7.2	
18:58	0.00	261.6	2.6	6.5	
18:59	0.00	270.1	2.9	7.2	

RATA Run 8 AVERAGE

SO2	Nox	CH4	NMHC
0.00	281.4	2.8	7.4

RATA Run 9 AVERAGE

SO2	Nox	CH4	NMHC
0.00	263.4	2.9	7.6

ONE MINUTE REPORT

COMPANY NAME :	Rinker Materials Corporation
COMPANY LOCATION :	1200 NW 137th Ave. Miami,FL 33182
SOURCE :	KILN
CEMS ID NO :	1234
DATE CREATED :	08-05-2004 @ 16:49
TIME PERIOD :	START:07:00 END:16:45
REPORT DATE :	8/5/2004

TIME hh:mm	INVALI QTY	NOx RAW (PPM)	
14:40	0	235.4	Start RATA Run 10
14:41	0	234.7	
14:42	0	250.5	
14:43	0	252.1	
14:44	0	266.2	
14:45	0	276.5	
14:46	0	281.3	
14:47	0	274.7	
14:48	0	279.1	
14:49	0	281.4	
14:50	0	290.3	
14:51	0	287.5	
14:52	0	285.2	
14:53	0	271.5	
14:54	0	272.0	
14:55	0	278.2	
14:56	0	285.0	
14:57	0	286.2	
14:58	0	292.7	
14:59	0	294.9	
15:00	0	300.1	
15:01	0	296.3	<<End RATA Run 10 Average
15:02	0	293.0	<<Start RATA Run 11
15:03	0	298.8	
15:04	0	295.5	
15:05	0	299.0	
15:06	0	312.1	
15:07	0	302.8	
15:08	0	305.5	
15:09	0	297.9	
15:10	0	298.2	
15:11	0	304.3	
15:12	0	298.3	
15:13	0	303.1	
15:14	0	301.0	
15:15	0	298.0	
15:16	0	297.3	
15:17	0	294.7	
15:18	0	301.8	

NOx Average	
276.0	

15:19	0	303.2	
15:20	0	296.1	
15:21	0	299.4	
15:22	0	307.5	
15:23	0	310.8	<<End RATA Run 11
15:24	0	302.5	<<Start RATA Run 12
15:25	0	310.0	
15:26	0	326.0	
15:27	0	308.7	
15:28	0	304.9	
15:29	0	314.4	
15:30	0	317.7	
15:31	0	319.3	
15:32	0	304.9	
15:33	0	306.2	
15:34	0	309.7	
15:35	0	304.4	
15:36	0	303.4	
15:37	0	303.8	
15:38	0	301.1	
15:39	0	299.6	
15:40	0	307.3	
15:41	0	304.7	
15:42	0	304.9	
15:43	0	302.1	
15:44	0	294.5	
15:45	0	303.1	<<End RATA Run 12
15:46	0	309.6	
15:47	0	305.4	
15:48	0	299.3	
15:49	0	300.3	
15:50	0	302.7	

NOx Average	
300.8	

NOx Average	
307.0	

Flow Rate

ONE MINUTE REPORT
COMPANY NAME :Rinker Materials Corporation
COMPANY LOCATION : 1200 NW 137th Ave. Miami, FL 33182
SOURCE : KILN
CEMS ID NO :1234
DATE CREATED :09-20-2004 @ 13:16
TIME PERIOD :START:12:00 END:19:00
REPORT DATE :8/4/2004

RATA Run	SCFM
1	305006
2	284225
3	245928

TIME hh:mm	WET FLOW RAW KSCFM		Run stopped/Resume		
12:10	288.7	Start Rata Run1			
12:11	289.2		14:27	284.5	
12:12	289.9		14:28	283.8	
12:13	290.1		14:29	281.5	
12:14	291.3		14:30	281.9	
12:15	291.5		14:31	282.2	
12:16	291.6		14:32	283.7	
12:17	291.5		14:33	284.8	
12:18	290.8		14:34	285.1	
12:19	290.1		14:35	285.0	
12:20	288.8		14:36	285.1	
12:21	288.5		14:37	283.9	
12:22	288.3		14:38	280.7	
12:23	289.2		14:39	281.3	
12:24	289.7		14:40	281.7	
12:25	289.5		14:41	283.6	
12:26	290.6		14:42	284.3	
12:27	291.0		14:43	287.5	
12:28	290.2		14:44	287.2	
12:29	291.3		14:45	287.4	
12:30	292.2		14:46	287.6	
12:31	291.8		14:47	288.1	
12:32	291.0		14:48	288.5	
12:33	290.3		14:49	289.7	
12:34	289.0		14:50	289.9	
12:35	289.1		14:51	290.0	
12:36	289.2		14:52	289.7	
12:37	288.1		14:53	339.3	
12:38	290.1		14:54	458.5	
12:39	290.2		14:55	457.0	
12:40	290.2		14:56	457.7	
12:41	293.5		14:57	458.3	
12:42	291.5		14:58	456.8	
12:43	276.6		14:59	456.4	
12:44	272.6		15:00	455.6	End RATA Run 1
12:45	264.9				

16:15	286.1	Start RATA Run 2	17:03	282.2	
16:16	285.4		17:04	282.7	
16:17	285.1		17:05	282.2	
16:18	286.0		17:06	281.8	
16:19	286.3		17:07	281.8	
16:20	287.0		17:08	282.4	
16:21	287.3		17:09	282.6	
16:22	287.3		17:10	283.1	
16:23	287.5		17:11	283.3	
16:24	286.3		17:12	284.9	
16:25	286.2		17:13	284.8	
16:26	287.2		17:14	284.9	
16:27	288.0		17:15	284.3	
16:28	288.6		17:16	284.0	
16:29	290.5		17:17	281.5	
16:30	290.6		17:18	281.5	
16:31	289.9		17:19	280.8	
16:32	288.4		17:20	278.5	
16:33	287.9		17:21	278.3	
16:34	285.1		17:22	278.8	<<End RATA Run 2
16:35	284.8				
16:36	284.8				
16:37	286.3				
16:38	286.5				
16:39	287.5				
16:40	286.6				
16:41	286.1				
16:42	285.3				
16:43	285.0				
16:44	283.4				
16:45	283.6				
16:46	283.7				
16:47	283.6				
16:48	283.6				
16:49	283.4				
16:50	281.7				
16:51	281.1				
16:52	280.0				
16:53	280.8				
16:54	280.5				
16:55	279.6				
16:56	279.9				
16:57	279.9				
16:58	279.3				
16:59	281.2				
17:00	281.6				
17:01	281.2				
17:02	280.9				

17:23	279.9	<<Start RATA Run 3	18:30	243.3	
17:24	280.5		18:31	243.7	
17:25	281.5		18:32	243.2	
17:26	281.8		18:33	242.9	
17:27	281.9		18:34	242.3	
17:28	281.1		18:35	242.5	
17:29	280.9		18:36	241.9	
17:30	280.4		18:37	240.0	
Run stopped/Resume			18:38	238.9	
17:50	288.0		18:39	238.9	
17:51	286.1		18:40	239.1	
17:52	279.4		18:41	239.2	
17:53	268.5		18:42	238.7	
17:54	261.7		18:43	238.1	
17:55	249.1		18:44	237.7	
17:56	244.8		18:45	234.3	
17:57	242.7		18:46	233.9	
17:58	244.1		18:47	233.5	
17:59	244.1		18:48	232.5	
18:00	244.0		18:49	232.6	
18:01	244.1		18:50	232.8	
18:02	244.8		18:51	233.4	
18:03	245.4		18:52	234.6	
18:04	246.1		18:53	235.1	
18:05	246.3		18:54	238.4	
18:06	244.5		18:55	241.0	
18:07	242.9		18:56	243.5	
18:08	242.9		18:57	245.6	
18:09	242.0		18:58	245.9	End RATA Run 3
18:10	242.2				
18:11	241.4				
18:12	239.6				
18:13	238.8				
18:14	237.3				
18:15	237.4				
18:16	237.5				
18:17	238.0				
18:18	239.0				
18:19	239.6				
18:20	239.3				
18:21	239.4				
18:22	239.3				
18:23	236.8				
18:24	237.4				
18:25	238.0				
18:26	239.5				
18:27	240.2				
18:28	242.0				
18:29	242.9				

ONE MINUTE REPORT
COMPANY NAME Rinker Materials Corporation
COMPANY LOCATION : 1200 NW 137th Ave. Miami, FL 33182
SOURCE : KILN
CEMS ID NO :1234
DATE CREATED: 09-20-2004 @ 13:18
TIME PERIOD: START:08:00 END:17:00
REPORT DATE:: 08-05-2004

RATA Run	SCFM
4	211550
5	207874
6	220368

TIME hh:mm	WET FLOW RAW KSCFM		TIME hh:mm	WET FLOW RAW KSCFM	
8:14	212.1	<<Start RATA Run 4	8:48	210.7	
8:15	211.3		8:49	210.1	
8:16	213.1		8:50	210.1	
8:17	214.1		8:51	210.8	
8:18	210.6		8:52	210.5	
8:19	211.1		8:53	210.3	
8:20	213.3		8:54	211.4	
8:21	211.5		8:55	211.2	
8:22	212.0		8:56	211.0	
8:23	214.2		8:57	212.8	
8:24	213.1		8:58	212.8	
8:25	212.8		8:59	212.6	
8:26	213.3		9:00	212.6	
8:27	212.9		9:01	212.4	
8:28	212.4		9:02	210.6	
8:29	211.0		9:03	210.3	
8:30	211.3		9:04	209.6	
8:31	212.2		9:05	207.9	
8:32	211.0		9:06	205.9	
8:33	211.1		9:07	205.2	
8:34	211.4		9:08	205.2	
8:35	211.2		9:09	205.0	
8:36	211.6		9:10	205.5	
8:37	213.1		9:11	205.7	
8:38	213.1		9:12	207.1	
8:39	212.0		9:13	207.3	
8:40	211.2		9:14	208.1	
8:41	207.9		9:15	209.9	
8:42	208.3		9:16	210.2	
8:43	208.5		9:17	210.9	
8:44	209.1		9:18	209.0	
8:45	209.4		9:19	209.2	
8:46	210.6		9:20	209.6	<<End RATA Run 4
8:47	210.9				

9:55	208.3	<<Start RATA Run 5	10:45	208.2	
9:56	207.2		10:46	209.2	
9:57	207.0		10:47	208.3	
9:58	207.1		10:48	208.7	
9:59	207.9		10:49	211.8	
10:00	208.5		10:50	212.6	
10:01	208.6		10:51	212.8	
10:02	208.2		10:52	212.3	
10:03	209.4		10:53	210.9	
10:04	209.9		10:54	209.9	
10:05	210.0		10:55	209.6	
10:06	208.4		10:56	210.2	
10:07	207.3		10:57	212.6	
10:08	207.0		10:58	214.4	
10:09	206.3		10:59	215.6	<<End RATA Run 5
10:10	206.0				
10:11	205.0				
10:12	204.7				
10:13	206.1				
10:14	206.3				
10:15	207.2				
10:16	209.9				
10:17	210.4				
10:18	210.3				
10:19	209.7				
10:20	208.9				
10:21	208.4				
10:22	207.0				
10:23	206.5				
10:24	204.6				
10:25	206.1				
10:26	207.0				
10:27	207.6				
10:28	210.8				
10:29	212.1				
10:30	212.3				
10:31	213.2				
10:32	212.3				
10:33	211.0				
10:34	207.9				
10:35	208.1				
10:36	204.3				
10:37	203.2				
10:38	203.3				
10:39	203.8				
10:40	204.6				
10:41	207.6				
10:42	208.7				
10:43	209.5				
10:44	208.2				

14:40	212.4	<<Start RATA Run 6	15:30	218.6	
14:41	213.0		Run stopped/Resume		
14:42	213.9		16:07	223.0	
14:43	214.3		16:08	220.8	
14:44	215.1		16:09	220.6	
14:45	216.0		16:10	220.3	
14:46	216.5		16:11	220.1	
14:47	215.6		16:12	221.0	
14:48	215.2		16:13	223.9	
14:49	214.4		16:14	223.5	
14:50	214.6		16:15	222.5	
14:51	215.1		16:16	223.6	
14:52	215.5		16:17	224.4	
14:53	214.7		16:18	227.5	
14:54	215.2		16:19	227.5	
14:55	215.5		16:20	227.8	
14:56	213.9		16:21	225.5	
14:57	215.2		16:22	224.7	
14:58	216.1		16:23	224.7	
14:59	216.8		16:24	225.7	
15:00	216.8		16:25	226.5	
15:01	217.0		16:26	227.2	
15:02	217.7		16:27	227.1	
15:03	217.8		16:28	226.5	
15:04	218.3		16:29	226.9	
15:05	219.2		16:30	227.1	
15:06	222.3		16:31	228.5	
15:07	222.0		16:32	228.5	
15:08	221.7		16:33	227.8	
15:09	220.7		16:34	227.4	
15:10	220.2		16:35	227.2	End RATA Run 6
15:11	219.0				
15:12	217.9				
15:13	217.5				
15:14	217.3				
15:15	217.1				
15:16	216.4				
15:17	218.3				
15:18	218.7				
15:19	219.6				
15:20	221.6				
15:21	221.8				
15:22	219.4				
15:23	220.0				
15:24	220.6				
15:25	219.4				
15:26	220.3				
15:27	222.8				
15:28	221.0				
15:29	219.9				

ONE MINL Page : 1
COMPANY NAME :Rinker Materials Corporation
COMPANY LOCATION : 1200 NW 137th Ave. Miami, FL33182
SOURCE :KILN
CEMS ID NO :1234
DATE CREATED :09-20-2004 @ 13:20
TIME PERIOD :START:10:00 END:15:00
REPORT DATE :8/6/2004

RATA Run	SCFM
7	245691
8	248516
9	250253

TIME hh:mm	WET FLOW RAW KSCFM		TIME hh:mm	WET FLOW RAW KSCFM	
10:23	246.8	<<Start RATA Run 7	10:57	247.4	
10:24	247.0		10:58	246.7	
10:25	246.7		10:59	245.4	
10:26	245.2		11:00	245.5	
10:27	246.2		11:01	245.5	
10:28	247.0		11:02	246.0	
10:29	245.8		11:03	246.2	
10:30	245.4		11:04	246.6	
10:31	244.1		11:05	246.6	
10:32	243.1		11:06	246.2	
10:33	243.2		11:07	246.3	
10:34	242.7		11:08	246.0	
10:35	243.4		11:09	245.1	
10:36	240.8		11:10	245.2	
10:37	241.2		11:11	245.0	
10:38	241.4		11:12	244.5	
10:39	241.9		11:13	244.3	
10:40	243.8		11:14	246.5	
10:41	244.0		11:15	246.9	
10:42	244.4		11:16	247.9	
10:43	244.7		11:17	247.4	
10:44	244.9		11:18	248.1	
10:45	247.4		11:19	249.7	
10:46	247.7		11:20	250.6	
10:47	247.7		11:21	251.3	
10:48	248.4		11:22	252.1	
10:49	248.5		11:23	251.9	
10:50	248.2		11:24	251.3	
10:51	248.6		11:25	249.9	
10:52	248.9		11:26	251.0	
10:53	249.3		11:27	251.9	
10:54	248.9		11:28	251.4	
10:55	248.4		11:29	251.8	
10:56	247.8		11:30	252.3	<<End RATA Run 7

12:05	246.6	<<Start RATA Run 8	12:50	249.9	
12:06	246.7		12:51	249.7	
12:07	246.2		12:52	250.9	
12:08	244.4		12:53	251.4	
12:09	244.0		12:54	252.7	
12:10	242.9		12:55	251.7	
12:11	242.7		12:56	250.9	
12:12	242.6		12:57	250.1	
12:13	242.2		12:58	249.2	
12:14	243.1		12:59	248.8	
12:15	243.7		13:00	248.1	
12:16	244.0		13:01	249.1	
12:17	243.8		13:02	249.6	
12:18	243.5		13:03	248.8	
12:19	243.0		13:04	249.1	
12:20	243.2		13:05	249.9	
12:21	244.0		13:06	250.9	
12:22	246.3		13:07	249.8	
12:23	247.3		13:08	249.7	
12:24	249.3		13:09	249.6	
12:25	250.4		13:10	249.4	
12:26	250.6		13:11	248.8	<<End RATA Run 8
12:27	250.5				
12:28	250.8				
12:29	251.4				
12:30	250.8				
12:31	250.4				
12:32	249.7				
12:33	250.5				
12:34	251.0				
12:35	252.1				
12:36	252.2				
12:37	252.5				
12:38	250.7				
12:39	250.2				
12:40	250.2				
12:41	253.6				
12:42	253.8				
12:43	254.6				
12:44	254.9				
12:45	254.8				
12:46	253.8				
12:47	252.3				
12:48	251.7				
12:49	250.2				

13:46	250.0	<<Start RATA Run 9	14:37	248.2	
13:47	249.5		14:38	247.4	
13:48	249.2		14:39	246.7	
13:49	248.8		14:40	245.8	
13:50	247.5		14:41	245.5	
13:51	247.0		14:42	242.7	
13:52	246.6		14:43	243.8	
13:53	246.4		14:44	244.8	
13:54	247.8		14:45	246.6	
13:55	248.1		14:46	247.3	
13:56	248.0		14:47	249.1	
13:57	249.5		14:48	247.3	
13:58	249.8		14:49	247.2	
13:59	249.7		14:50	247.2	
14:00	251.1		14:51	246.6	
14:01	251.6		14:52	246.8	
14:02	252.0		14:53	249.1	
14:03	251.5		14:54	248.2	<<End RATA Run 9
14:04	251.1				
14:05	251.4				
14:06	252.5				
14:07	252.9				
14:08	253.0				
14:09	252.8				
14:10	252.7				
14:11	252.4				
14:12	252.5				
14:13	252.5				
14:14	252.3				
14:15	252.0				
14:16	251.4				
14:17	250.5				
14:18	250.8				
14:19	251.9				
14:20	251.7				
14:21	251.3				
14:22	250.8				
14:23	251.1				
14:24	251.6				
14:25	251.5				
14:26	251.3				
14:27	251.0				
14:28	248.1				
14:29	247.7				
14:30	247.9				
14:31	247.6				
14:32	248.2				
14:33	250.2				
14:34	249.0				
14:35	248.5				
14:36	248.6				

Opacity

ONE MINUTI : 1
COMPANY NAME :Rinker Materials Corporation
COMPANY LOCATION : 1200 NW 137th Ave. Miami, FL 33182
SOURCE :KILN
CEMS ID NO :1234
DATE CREATED :09-16-2004 @ 15:09
TIME PERIOD :START:14:00 END:15:00
REPORT DATE :9/16/2004

TIME hh:mm	OPACITY RAW (%)	TIME hh:mm	OPACITY RAW (%)
14:00	61.8	14:30	25.2
14:01	0.4	14:31	25.1
14:02	0.4	14:32	25.1
14:03	0.4	14:33	25.3
14:04	0.8	14:34	25.2
14:05	0.4	14:35	25.2
14:06	55.6	14:36	25.3
14:07	0.5	14:37	25.3
14:08	62	14:38	25.4
14:09	0.4	14:39	62.1
14:10	10.2	14:40	62.5
14:11	10.2	14:41	62.3
14:12	10.2	14:42	62.2
14:13	10.2	14:43	62.2
14:14	10.2	14:44	62.4
14:15	10.3	14:45	62.3
14:16	10.2	14:46	62.5
14:17	10.3	14:47	62.4
14:18	10.2	14:48	62.5
14:19	10.3	14:49	62.4
14:20	10.3	14:50	62.5
14:21	10.3	14:51	62.5
14:22	10.3	14:52	62.4
14:23	23.6	14:53	62.2
14:24	25.1	14:54	62.3
14:25	25.2	14:55	93.1
14:26	25.1	14:56	98.4
14:27	25.2	14:57	99.7
14:28	25.2	14:58	98
14:29	25.2	14:59	97

Plant Process Data

			AAGLOGS_Kiln													Raw Mill	
	0.6003		461-KL1_ONTIME		431-RW1-FZ1		481-RW1-FZ1	481-BU1-FZ1	451-RW1-FZ1	461-2K1-AZ3	461-2K1-AZ1	461-2K1-AZ2	441-2K1-AZ3	441-2K1-AZ1	441-2K1-AZ2	421-BF1-TZ4	421-BF1-TZ5
			kiln run time	Kiln run Hours	kiln feed flow rate	Clinker Rate	pulv. coal to kiln	oil to kiln	pulv. coal to calciner	kiln O2	kiln CO	kiln NO	pre heater O2	pre heater CO	pre heater NO	MAIN BAGHOUSE INLET TEMPERATURE MIXING	MAIN BAGHOUSE INLET TEMPERATURE MIXING
4-Aug-04	0:00:00	1:00:00	13739.7	1.0	250.6	150.4	6.6	0.0	8.8	1.2	312.1	633.4	5.0	717.4	325.2	255.0	235.8
4-Aug-04	1:00:00	2:00:00	13740.7	1.0	250.4	150.3	6.6	0.0	8.9	1.0	279.6	551.4	3.8	779.2	349.9	263.1	241.2
4-Aug-04	2:00:00	3:00:00	13741.7	1.0	250.4	150.3	6.5	0.0	9.0	0.8	458.8	507.5	3.3	801.1	357.9	303.2	289.2
4-Aug-04	3:00:00	4:00:00	13742.7	1.0	250.4	150.3	6.6	0.0	9.1	1.7	162.8	621.4	3.5	740.6	380.8	248.4	233.7
4-Aug-04	4:00:00	5:00:00	13743.6	1.0	250.4	150.3	6.7	0.2	9.0	1.2	164.7	802.7	3.5	740.5	398.4	254.9	236.3
4-Aug-04	5:00:00	6:00:00	13744.6	1.0	250.4	150.3	6.6	0.0	9.6	1.2	159.0	1877.7	3.0	693.6	543.1	268.4	243.7
4-Aug-04	6:00:00	7:00:00	13745.6	1.0	250.5	150.4	6.4	0.1	9.9	1.8	156.2	2015.8	2.9	684.6	573.4	283.5	252.2
4-Aug-04	7:00:00	8:00:00	13746.6	1.0	248.3	149.0	6.5	0.2	9.9	1.4	158.7	1924.3	2.7	702.6	548.4	290.3	254.7
4-Aug-04	8:00:00	9:00:00	13747.6	1.0	245.6	147.4	6.6	0.1	9.9	0.8	175.6	1858.5	2.7	695.0	525.5	295.6	254.5
4-Aug-04	9:00:00	10:00:00	13748.6	1.0	245.6	147.4	6.5	0.0	9.8	0.3	241.7	1360.2	2.6	738.6	466.2	295.9	253.9
4-Aug-04	10:00:00	11:00:00	13749.6	1.0	245.6	147.4	6.4	0.1	9.7	0.2	308.6	1385.7	2.6	721.0	472.6	298.4	256.1
4-Aug-04	11:00:00	12:00:00	13750.6	1.0	245.6	147.4	6.2	0.2	9.7	0.2	359.7	1542.7	2.3	787.9	473.6	328.9	268.8
4-Aug-04	12:00:00	13:00:00	13751.6	1.0	245.5	147.4	6.1	0.4	9.7	0.8	163.7	1940.2	2.7	718.7	513.7	404.2	328.8
4-Aug-04	13:00:00	14:00:00	13752.6	1.0	245.5	147.4	6.2	0.4	9.7	0.5	210.5	1753.5	2.6	758.6	499.4	382.4	368.5
4-Aug-04	14:00:00	15:00:00	13753.6	1.0	245.6	147.4	6.3	0.4	9.5	0.2	218.2	1670.4	2.3	818.9	476.5	337.1	263.0
4-Aug-04	15:00:00	16:00:00	13754.6	1.0	245.6	147.4	6.3	0.5	9.5	0.0	354.1	1124.3	2.3	831.4	452.5	358.4	273.4
4-Aug-04	16:00:00	17:00:00	13755.6	1.0	245.6	147.4	6.4	0.4	9.5	0.1	309.9	1286.1	2.3	866.9	438.6	367.9	273.1
4-Aug-04	17:00:00	18:00:00	13756.6	1.0	245.6	147.4	6.4	0.5	9.3	0.1	225.3	1424.7	2.4	814.9	457.5	378.3	278.7
4-Aug-04	18:00:00	19:00:00	13757.6	1.0	245.6	147.4	6.4	0.4	9.6	1.6	183.4	1551.6	2.9	706.8	489.1	264.2	239.6
4-Aug-04	19:00:00	20:00:00	13758.6	1.0	245.2	147.2	6.3	0.3	9.5	2.7	163.5	1455.4	2.9	681.6	491.2	263.1	239.7
4-Aug-04	20:00:00	21:00:00	13759.6	1.0	250.6	150.5	6.4	0.2	9.7	2.9	163.2	1355.2	2.7	733.6	480.3	272.9	248.2
4-Aug-04	21:00:00	22:00:00	13760.6	1.0	250.6	150.4	6.5	0.2	9.6	4.6	229.7	1238.6	2.6	773.5	459.4	310.1	287.0
4-Aug-04	22:00:00	23:00:00	13761.6	1.0	250.6	150.4	6.5	0.2	9.6	1.0	403.9	1514.3	2.6	819.5	449.2	351.2	353.9
4-Aug-04	23:00:00	0:00:00	13762.6	1.0	250.6	150.4	6.4	0.0	9.6	1.0	321.5	1542.2	2.7	771.5	456.6	253.9	236.9
5-Aug-04	0:00:00	1:00:00	13763.6	1.0	250.5	150.4	6.4	0.1	9.8	1.1	285.8	1449.1	2.7	778.5	451.8	259.8	240.4
5-Aug-04	1:00:00	2:00:00	13764.6	1.0	250.6	150.4	6.4	0.0	9.8	0.8	352.5	1306.1	2.7	790.4	437.4	262.1	239.0
5-Aug-04	2:00:00	3:00:00	13765.6	1.0	250.5	150.4	6.4	0.0	9.6	0.7	406.8	1260.6	2.8	775.8	434.1	264.7	241.4
5-Aug-04	3:00:00	4:00:00	13766.6	1.0	250.5	150.4	6.4	0.1	9.5	0.8	276.5	1317.7	2.9	753.8	445.5	267.1	245.2
5-Aug-04	4:00:00	5:00:00	13767.6	1.0	250.6	150.4	6.4	0.1	9.4	1.0	270.5	1198.7	2.9	782.4	422.2	342.0	331.9
5-Aug-04	5:00:00	6:00:00	13768.6	1.0	250.6	150.4	6.4	0.1	9.4	0.9	478.4	1025.0	3.0	800.6	413.9	331.2	330.4
5-Aug-04	6:00:00	7:00:00	13769.5	1.0	250.6	150.5	6.3	0.0	9.6	1.3	262.7	1059.3	3.1	756.8	427.9	290.4	280.3
5-Aug-04	7:00:00	8:00:00	13770.5	1.0	248.2	149.0	6.3	0.1	9.5	1.4	371.7	910.2	3.1	764.2	402.8	427.6	432.3
5-Aug-04	8:00:00	9:00:00	13771.5	1.0	245.6	147.4	6.3	0.1	9.2	0.8	458.3	1145.4	3.1	727.9	428.0	510.1	517.0
5-Aug-04	9:00:00	10:00:00	13772.5	1.0	245.6	147.4	6.2	0.1	9.6	0.6	392.0	1385.1	2.8	745.6	442.8	508.5	515.5
5-Aug-04	10:00:00	11:00:00	13773.5	1.0	245.6	147.4	6.2	0.1	9.4	0.5	409.6	1508.9	2.8	753.5	447.1	508.7	515.4
5-Aug-04	11:00:00	12:00:00	13774.5	0.2	165.3	99.2	1.5	0.1	2.3	14.1	161.3	410.7	14.6	421.4	151.9	512.1	516.9
5-Aug-04	12:00:00	13:00:00	13774.8	0.5	124.0	74.4	0.0	13.5	2.9	6.3	1134.3	484.5	9.9	396.1	238.3	437.0	437.5
5-Aug-04	13:00:00	14:00:00	13775.3	1.0	222.8	133.7	2.6	14.4	8.8	1.6	372.7	1659.2	2.8	845.9	469.8	453.9	459.9
5-Aug-04	14:00:00	15:00:00	13776.3	1.0	245.6	147.4	6.3	1.6	9.1	1.2	290.3	1255.3	2.4	865.9	457.9	498.4	505.2

			AAGLOGS_Kiln													Raw Mill	
	0.6003		461-KL1_ONTIME		431-RW1-FZ1		481-RW1-FZ1	481-BU1-FZ1	451-RW1-FZ1	461-2K1-AZ3	461-2K1-AZ1	461-2K1-AZ2	441-2K1-AZ3	441-2K1-AZ1	441-2K1-AZ2	421-BF1-TZ4	421-BF1-TZ5
			kiln run time	Kiln run Hours	kiln feed flow rate	Clinker Rate	pulv. coal to kiln	oil to kiln	pulv. coal to calciner	kiln O2	kiln CO	kiln NO	pre heater O2	pre heater CO	pre heater NO	MAIN BAGHOUSE INLET TEMPERATURE	MAIN BAGHOUSE INLET TEMPERATURE
5-Aug-04	15:00:00	16:00:00	13777.3	1.0	245.6	147.4	6.5	0.3	9.3	3.3	159.3	1420.8	3.0	720.8	528.7	505.5	512.3
5-Aug-04	16:00:00	17:00:00	13778.3	0.7	245.6	147.4	4.4	0.0	6.4	6.9	129.2	1191.5	7.4	708.8	382.3	506.0	513.0
5-Aug-04	17:00:00	18:00:00	13779.0	0.8	174.4	104.7	0.3	17.0	5.7	5.7	300.3	1273.2	8.7	521.7	323.0	473.1	475.7
5-Aug-04	18:00:00	19:00:00	13779.8	1.0	239.3	143.7	6.1	0.4	9.6	3.8	160.7	1911.5	2.8	756.8	455.8	484.6	490.8
5-Aug-04	19:00:00	20:00:00	13780.8	1.0	245.6	147.4	6.2	0.1	9.1	4.4	156.9	1639.7	3.1	751.9	478.0	505.0	510.7
5-Aug-04	20:00:00	21:00:00	13781.8	1.0	237.4	142.5	6.2	0.0	8.8	4.5	157.0	1709.5	3.4	691.6	494.1	385.9	402.2
5-Aug-04	21:00:00	22:00:00	13782.8	1.0	235.6	141.4	6.2	0.0	8.9	5.0	153.4	1782.3	3.9	614.2	499.5	236.9	225.9
5-Aug-04	22:00:00	23:00:00	13783.7	1.0	235.6	141.4	6.2	0.1	8.7	4.3	154.8	1805.2	3.7	613.7	530.7	243.3	230.3
5-Aug-04	23:00:00	0:00:00	13784.7	1.0	235.6	141.4	6.2	0.0	8.7	3.5	158.9	1698.5	3.6	616.5	552.6	247.8	233.8
6-Aug-04	0:00:00	1:00:00	13785.7	1.0	235.6	141.4	6.2	0.0	8.7	3.9	157.3	1567.0	3.6	625.5	518.7	242.1	228.8
6-Aug-04	1:00:00	2:00:00	13786.7	1.0	235.6	141.4	6.3	0.0	8.5	3.2	161.7	1169.1	3.4	670.7	452.2	243.3	229.7
6-Aug-04	2:00:00	3:00:00	13787.7	1.0	235.6	141.4	6.4	0.0	8.5	2.2	175.7	1151.8	3.5	677.7	457.2	249.6	232.7
6-Aug-04	3:00:00	4:00:00	13788.7	1.0	235.6	141.4	6.4	0.0	8.6	2.2	176.6	1208.3	3.5	680.4	459.6	249.2	232.0
6-Aug-04	4:00:00	5:00:00	13789.7	1.0	218.1	130.9	6.2	0.0	7.7	3.2	163.3	1046.7	4.3	641.1	437.9	254.2	235.4
6-Aug-04	5:00:00	6:00:00	13790.7	1.0	205.1	123.1	6.0	0.1	7.7	3.0	168.3	1123.9	4.0	621.7	424.4	281.5	276.0
6-Aug-04	6:00:00	7:00:00	13791.7	0.0	125.2	75.1	0.1	4.4	0.2	3.8	3488.3	216.6	9.7	194.2	89.4	337.2	342.3
6-Aug-04	7:00:00	8:00:00	13791.7	0.0	151.4	90.9	0.0	4.4	0.0	3.1	822.8	439.1	8.1	156.2	271.1	289.5	295.1
6-Aug-04	8:00:00	9:00:00	13791.7	0.9	131.6	79.0	0.0	21.0	5.2	4.1	153.7	1443.4	5.4	547.8	486.8	358.0	372.2
6-Aug-04	9:00:00	10:00:00	13792.7	1.0	234.8	140.9	3.5	10.9	9.3	2.1	469.0	2216.5	2.2	1131.7	492.6	394.2	415.0
6-Aug-04	10:00:00	11:00:00	13793.7	1.0	244.4	146.7	6.5	0.3	8.8	2.3	324.6	1800.7	3.0	756.6	517.3	248.0	237.7
6-Aug-04	11:00:00	12:00:00	13794.7	1.0	244.4	146.7	6.5	0.2	9.2	2.5	213.8	2014.2	3.2	702.2	527.9	241.5	228.2
6-Aug-04	12:00:00	13:00:00	13795.7	1.0	245.5	147.4	6.5	0.2	9.4	1.9	181.1	1837.7	3.0	760.8	504.4	264.0	243.4
6-Aug-04	13:00:00	14:00:00	13796.7	1.0	245.4	147.3	6.5	0.2	9.6	1.8	194.9	1800.6	3.1	739.9	508.3	266.2	245.1
6-Aug-04	14:00:00	15:00:00	13797.7	1.0	245.3	147.3	6.3	0.2	10.0	2.4	181.3	1763.7	3.2	658.7	533.7	270.1	246.4
6-Aug-04	15:00:00	16:00:00	13798.6	1.0	245.4	147.3	6.3	0.3	10.0	2.5	170.1	1877.0	3.4	627.0	557.2	261.3	241.2
6-Aug-04	16:00:00	17:00:00	13799.6	1.0	245.4	147.3	6.3	0.3	9.9	3.1	174.6	1723.5	3.3	662.2	545.6	254.9	236.2
6-Aug-04	17:00:00	18:00:00	13800.6	1.0	245.4	147.3	6.3	0.3	9.8	2.6	171.7	1723.5	3.3	647.9	541.1	254.4	235.8
6-Aug-04	18:00:00	19:00:00	13801.6	1.0	245.5	147.3	6.3	0.3	9.9	2.2	165.8	1725.8	3.1	686.3	525.5	262.1	239.1
6-Aug-04	19:00:00	20:00:00	13802.6	1.0	245.4	147.3	6.3	0.2	9.7	2.2	163.3	1707.8	3.2	702.5	525.7	268.8	244.5
6-Aug-04	20:00:00	21:00:00	13803.6	1.0	245.5	147.3	6.3	0.1	9.9	2.6	162.8	1641.0	3.3	681.1	535.3	264.9	242.2
6-Aug-04	21:00:00	22:00:00	13804.6	1.0	245.6	147.4	6.2	0.0	9.9	1.7	188.2	1856.1	3.1	675.9	535.6	260.5	237.4
6-Aug-04	22:00:00	23:00:00	13805.6	1.0	245.6	147.4	6.2	0.0	9.9	2.1	161.5	1913.0	3.3	644.1	552.2	261.7	238.4
6-Aug-04	23:00:00	0:00:00	13806.6	1.0	245.6	147.4	6.2	0.0	10.0	1.7	162.6	1910.8	3.1	673.5	540.7	258.4	237.1
7-Aug-04	0:00:00	1:00:00	13807.6	1.0	245.6	147.4	6.2	0.0	9.9	2.2	161.2	1839.7	3.0	671.1	520.7	344.4	334.6
7-Aug-04	1:00:00	2:00:00	13808.6	1.0	245.6	147.4	6.2	0.1	9.7	3.2	160.2	1714.9	3.0	704.2	512.6	370.9	375.3
7-Aug-04	2:00:00	3:00:00	13809.6	1.0	245.6	147.4	6.4	0.1	9.4	8.9	110.0	1196.1	3.2	680.2	542.3	259.8	248.6
7-Aug-04	3:00:00	4:00:00	13810.6	1.0	245.6	147.4	6.5	0.0	9.6	20.5	-4.2	-4.2	3.1	710.9	540.8	252.2	234.1
7-Aug-04	4:00:00	5:00:00	13811.6	1.0	245.6	147.4	6.5	0.0	9.4	20.5	-4.0	0.4	3.1	720.1	516.6	246.0	230.4
7-Aug-04	5:00:00	6:00:00	13812.6	1.0	245.6	147.4	6.5	0.0	9.1	20.5	-4.0	-3.9	3.3	721.4	489.7	235.1	224.2
7-Aug-04	6:00:00	7:00:00	13813.6	1.0	245.6	147.4	6.6	0.0	9.1	20.5	-4.0	-4.0	3.3	693.4	464.8	239.2	225.6
7-Aug-04	7:00:00	8:00:00	13814.6	1.0	245.5	147.4	6.6	0.0	9.0	10.4	107.6	884.7	2.9	772.8	480.3	277.4	240.8
7-Aug-04	8:00:00	9:00:00	13815.6	1.0	245.5	147.4	6.6	0.0	9.0	1.3	209.7	1298.9	2.5	988.6	432.8	348.5	263.7
7-Aug-04	9:00:00	10:00:00	13816.6	1.0	245.6	147.4	6.5	0.1	8.9	1.0	255.8	933.1	2.5	1090.2	373.3	360.1	261.9
7-Aug-04	10:00:00	11:00:00	13817.6	1.0	245.6	147.4	6.4	0.1	9.2	1.0	249.8	1298.2	2.5	924.3	424.5	366.8	262.0

			0.6003		461-KL1_ONTIME		431-RW1-FZ1		481-RW1-FZ1	481-BU1-FZ1	451-RW1-FZ1	461-2K1-AZ3	461-2K1-AZ1	461-2K1-AZ2	441-2K1-AZ3	441-2K1-AZ1	441-2K1-AZ2	421-BF1-TZ4	421-BF1-TZ5
					kiln run time	Kiln run Hours	kiln feed flow rate	Clinker Rate	pulv. coal to kiln	oil to kiln	pulv. coal to calciner	kiln O2	kiln CO	kiln NO	pre heater O2	pre heater CO	pre heater NO	MAIN BAGHOUSE INLET TEMPERATURE MIXING	MAIN BAGHOUSE INLET TEMPERATURE MIXING
7-Aug-04	11:00:00	12:00:00			13818.6	1.0	245.6	147.4	6.3	0.1	9.6	2.1	173.2	1550.3	2.6	808.0	458.2	381.3	306.2
7-Aug-04	12:00:00	13:00:00			13819.6	1.0	245.6	147.4	6.3	0.1	9.4	3.1	172.6	1464.6	2.7	825.9	445.2	319.3	248.6
7-Aug-04	13:00:00	14:00:00			13820.6	1.0	245.6	147.4	6.3	0.1	9.0	3.1	196.8	1439.1	3.2	716.4	445.1	305.3	254.5
7-Aug-04	14:00:00	15:00:00			13821.6	1.0	245.6	147.4	6.3	0.1	9.2	12.1	125.4	501.4	3.0	797.1	410.2	350.9	258.4
7-Aug-04	15:00:00	16:00:00			13822.6	1.0	245.6	147.4	6.3	0.1	9.6	2.9	194.4	1335.9	3.3	715.0	452.6	423.9	408.9
7-Aug-04	16:00:00	17:00:00			13823.6	1.0	245.6	147.4	6.3	0.0	9.2	2.1	232.7	1224.2	2.7	867.3	405.3	357.4	288.1
7-Aug-04	17:00:00	18:00:00			13824.5	1.0	237.8	142.8	6.3	0.0	8.9	3.0	242.9	732.5	3.3	776.9	383.3	355.5	267.4
7-Aug-04	18:00:00	19:00:00			13825.5	1.0	205.6	123.4	6.1	0.0	7.9	20.0	0.4	18.4	3.3	621.1	367.4	239.6	225.4
7-Aug-04	19:00:00	20:00:00			13826.5	1.0	205.6	123.4	6.0	0.0	7.6	20.6	-4.6	-4.6	3.3	609.9	377.4	247.4	228.7
7-Aug-04	20:00:00	21:00:00			13827.5	1.0	205.6	123.4	6.1	0.0	7.5	20.7	-4.3	-3.5	3.5	583.5	388.1	247.2	227.6
7-Aug-04	21:00:00	22:00:00			13828.5	1.0	205.6	123.4	6.1	0.0	7.5	6.9	159.4	1328.7	3.7	554.5	432.6	245.3	225.6
7-Aug-04	22:00:00	23:00:00			13829.5	1.0	205.6	123.4	6.0	0.1	7.7	1.1	254.9	1839.6	3.7	545.6	447.1	257.6	234.9
7-Aug-04	23:00:00	0:00:00			13830.5	1.0	205.6	123.4	6.0	0.2	7.7	1.9	288.6	1402.5	4.2	532.4	408.5	256.3	234.0
8-Aug-04	0:00:00	1:00:00			13831.5	1.0	205.6	123.4	6.0	0.3	7.7	2.8	162.7	1369.9	4.1	518.5	417.1	249.9	227.7
8-Aug-04	1:00:00	2:00:00			13832.5	1.0	205.6	123.4	6.0	0.2	7.9	1.6	182.2	1403.0	4.2	532.1	400.2	251.4	228.7
8-Aug-04	2:00:00	3:00:00			13833.5	1.0	205.6	123.4	6.0	0.2	7.8	3.4	160.4	1864.6	4.2	483.3	501.1	262.3	242.0
8-Aug-04	3:00:00	4:00:00			13834.5	1.0	205.6	123.4	5.9	0.2	7.9	3.2	155.5	2508.4	4.1	476.7	557.8	257.4	235.2
8-Aug-04	4:00:00	5:00:00			13835.5	1.0	205.6	123.4	5.9	0.2	8.3	3.0	155.2	2529.0	4.0	486.9	549.6	264.8	243.5
8-Aug-04	5:00:00	6:00:00			13836.5	1.0	208.6	125.2	5.9	0.2	8.5	2.5	156.6	2438.8	3.5	517.2	522.2	267.6	245.5
8-Aug-04	6:00:00	7:00:00			13837.5	1.0	224.9	135.0	6.3	0.2	9.0	2.5	166.8	2341.3	4.1	565.3	490.6	270.0	248.6
8-Aug-04	7:00:00	8:00:00			13838.5	1.0	242.0	145.3	6.5	0.2	9.4	3.2	161.0	2140.6	3.3	680.5	483.6	462.6	464.8
8-Aug-04	8:00:00	9:00:00			13839.5	1.0	245.6	147.4	6.5	0.2	9.5	2.6	166.7	1778.7	3.2	771.9	437.7	511.4	516.0
8-Aug-04	9:00:00	10:00:00			13840.5	1.0	245.6	147.4	6.5	0.2	9.5	2.1	183.6	1359.7	3.3	832.0	387.9	510.3	514.9
8-Aug-04	10:00:00	11:00:00			13841.5	1.0	245.6	147.4	6.6	0.3	9.4	1.9	170.2	1176.6	3.5	791.6	380.5	514.3	518.8
8-Aug-04	11:00:00	12:00:00			13842.5	1.0	237.0	142.3	6.6	0.3	8.9	2.4	158.6	1250.2	5.5	601.1	370.3	434.8	451.7
8-Aug-04	12:00:00	13:00:00			13843.5	1.0	235.6	141.4	6.6	0.3	8.7	2.2	171.1	955.7	6.3	591.1	333.9	293.8	289.9
8-Aug-04	13:00:00	14:00:00			13844.5	1.0	235.6	141.4	6.6	0.3	8.5	1.9	169.7	829.3	6.5	582.0	308.4	244.5	228.6
8-Aug-04	14:00:00	15:00:00			13845.5	1.0	235.6	141.4	6.6	0.2	8.3	1.7	172.2	763.8	6.8	581.6	291.0	242.6	227.1
8-Aug-04	15:00:00	16:00:00			13846.5	1.0	235.6	141.4	6.6	0.2	8.4	2.1	164.6	748.0	6.7	591.4	291.2	250.5	231.1
8-Aug-04	16:00:00	17:00:00			13847.5	1.0	235.6	141.4	6.7	0.3	8.4	1.4	198.6	561.1	6.8	604.0	283.2	262.2	238.0
8-Aug-04	17:00:00	18:00:00			13848.5	1.0	235.6	141.4	6.7	0.3	8.3	1.1	1135.8	469.6	6.8	600.6	273.1	265.6	241.1
8-Aug-04	18:00:00	19:00:00			13849.5	1.0	235.6	141.4	6.7	0.3	7.9	5.4	2697.8	212.6	7.0	581.6	266.2	260.4	236.9
8-Aug-04	19:00:00	20:00:00			13850.5	1.0	235.6	141.4	6.7	0.3	8.1	2.2	163.8	657.5	6.9	571.6	290.3	241.4	226.0
8-Aug-04	20:00:00	21:00:00			13851.4	1.0	226.8	136.1	6.9	0.3	7.7	1.9	185.2	856.0	7.5	520.9	304.7	245.3	227.9
8-Aug-04	21:00:00	22:00:00			13852.4	1.0	225.5	135.4	6.9	0.3	7.8	2.3	172.1	1785.3	7.8	465.9	398.9	256.3	235.7
8-Aug-04	22:00:00	23:00:00			13853.4	1.0	225.5	135.4	6.9	0.2	7.8	1.7	209.8	2136.8	8.0	453.9	427.3	262.4	239.3
8-Aug-04	23:00:00	0:00:00			13854.4	-13854.4	225.5	135.3	6.7	0.1	8.4	1.2	302.4	1983.4	7.6	465.7	400.9	275.9	245.8

GEOCHEMICAL TESTING
Environmental and Energy Analysis

Mike Miller
2005 N Center Ave
Somerset PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

COAL ANALYSIS REPORT

Client: RINKER MATERIALS CORP

Sampled by: Oliver Sohn

Sampling Date: 08/04/2004

Analyzed on: 08/13/2004

Description: Coal Sample 10:00

LAB NO. 04-069547

	As Received	Dry	Dry Ash-Free
Total Moisture...D2961-02..	1.43		
Ash.....D3174-02..	17.30	17.55	
Sulfur.....D4239-02..	1.09	1.11	
BTU/LB.....D5865-03..	12330	12509	15172
Free Swelling Index D720-91	7.5		
Lbs Sulfur/Million Btu	0.88		
Nitrogen.....D5373....	1.34	1.36	1.65
Mercury.....ASTM D3684-01		.173 mg/kg, dry	

Robert L. Stull
Director of Coal Services

MEMBER ACIL

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N Center Ave
Somerset PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

COAL ANALYSIS REPORT

Client: RINKER MATERIALS CORP

Sampled by: Oliver Sohn

Sampling Date: 08/04/2004

Analyzed on: 08/13/2004

Description: Coal Sample 14:00

LAB NO. 04-069548

		As Received	Dry	Dry Ash-Free
Total Moisture	D2961-02	1.33		
Ash	D3174-02	17.21	17.44	
Sulfur	D4239-02	1.11	1.12	
BTU/LB	D5865-03	12414	12581	15239
Free Swelling Index	D720-91	7.5		
Lbs Sulfur/Million Btu		0.89		
Nitrogen	D5373	1.31	1.33	1.61
Mercury	ASTM D3684-01		.181 mg/kg, dry	

Robert L. Stull
Director of Coal Services

MEMBER ACIL

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N Center Ave
Somerset PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

COAL ANALYSIS REPORT

Client: RINKER MATERIALS CORP

Sampled by: Oliver Sohn

Sampling Date: 08/05/2004

Analyzed on: 08/13/2004

Description: Coal Sample 10:00

LAB NO. 04-069549

	As Received	Dry	Dry Ash-Free
Total Moisture...D2961-02..	1.36		
Ash.....D3174-02..	17.69	17.93	
Sulfur.....D4239-02..	1.11	1.13	
BTU/LB.....D5865-03..	12318	12488	15216
Free Swelling Index D720-91	7.5		
Lbs Sulfur/Million Btu	0.90		
Nitrogen.....D5373....	1.29	1.31	1.59
Mercury.....ASTM D3684-01		.206 mg/kg, dry	

Robert L. Stull
Director of Coal Services

MEMBER ACIL

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N Center Ave
Somerset PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

COAL ANALYSIS REPORT

Client: RINKER MATERIALS CORP

Sampled by: Oliver Sohn

Sampling Date: 08/05/2004

Analyzed on: 08/13/2004

Description: Coal Sample 14:00

LAB NO. 04-069550

	As Received	Dry	Dry Ash-Free
Total Moisture...D2961-02..	1.45		
Ash.....D3174-02..	18.99	19.27	
Sulfur.....D4239-02..	1.08	1.10	
BTU/LB.....D5865-03..	11961	12137	15034
Free Swelling Index D720-91	7.0		
Lbs Sulfur/Million Btu	0.90		
Nitrogen.....D5373....	1.26	1.28	1.58
Mercury.....ASTM D3684-01		.257	mg/kg, dry

Robert L. Stull
Director of Coal Services

MEMBER ACIL

Equipment Calibrations

Sampling Equipment

KODGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Calibration Gas Certifications

Airgas

Airgas South
5837 W. Fifth Street
Jacksonville FL 32254
(904) 781-8450 Fax: (904) 693-9128
www.airgas.com

CERTIFICATE OF PURE GAS BATCH ANALYSIS

PURE GAS PRODUCT: Air

Date: January 15, 2004 Reference Number: 55-04013-1

Customer Name: Airgas South
Address:

Purchase Order #:

Grade of Product: Ultra Zero

Cylinder Number (Analyzed Cylinder)	Impurity	Specification	Actual Level
SG221738	Oxygen	20-22	21.1 %
	THC	0.1	ND<0.1 ppm
	Water	2.0	0.1 ppm
	Carbon Dioxide	1.0	ND<0.1 ppm
	Carbon Monoxide	1.0	ND<0.1 ppm

Cylinders in Batch:

SW840435	H2098	SG044338A	SG645166
SG057356A	SG221738	SG38237A	1189410Y
SG9106352A	SG634414	SG9704721A	SG1152A
SW096000	SG18412A	SG52313A	634996
644653	SG057194A	SG20081A	SG58273A
SG6514A	722450Y	SG62240A	SG404938
TWC014313	3004256	300088	SG9704584
104677	SG54817A	TWC523267	SG432418
SG32655A	SG473950	SG839717	SG9704592A
SG58486	SG862093	T009625	SG26170
SG26162A	SG701410		

Delivery Ticket #:

M. Schubach
Approval Signature

Airgas

Airgas Specialty Gases
12722 S. Wentworth Ave.
Chicago, IL. 60628
773-785-3000 Fax: 773-785-19
www.airgas.com

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Certification performed in accordance with "EPA Traceability Protocol (Sept.1997)" using assay procedures listed.

Cylinder No:	SG9149481BAL	Order No:	829679-00
Certification Date:	05/20/2002	Expiration Date:	05/20/2005
Cylinder Pressure:	2000	Part No:	E03NI99E15A0527

*Do not use cylinder below 150 psig.

Component	Certified Concentration	Unit of Measure	Accuracy	Procedure	Analytical Principle
Carbon Monoxide	302*	ppm	1%	G-1	NDIR
Propane	6.95	ppm	1%	G-1	FID
Nitrogen	Balance				
Nox (Reference Value Only)		ppm			

Reference Standard Information

Type	Component	Concentration	Unit	Cylinder Number
Ntrm	Carbon Monoxide	491	ppm	sg9159486bal
Ntrm	Propane	9.8	ppm	sg9160454bal

Analytical Data

Component 1 Carbon Monoxide

1st Analysis Date: 05/13/2002

Zero	0.000	Ref	4.910	Cand	3.010
Cand	3.010	Zero	0.000	Ref	4.910
Ref	4.910	Cand	3.010	Zero	0.000

2nd Analysis Date: 05/20/2002

Zero	0.000	Ref	9.730	Cand	3.020
Cand	3.020	Zero	0.000	Ref	9.740
Ref	9.730	Cand	3.020	Zero	0.000

Airgas

Airgas Specialty Gases
12722 S. Wentworth Ave.
Chicago, IL. 60628
773-785-3000 Fax: 773-785-19
www.airgas.com

Component 2		Propane				
1st Analysis Date:		05/13/2002				
	Zero	0	Ref	9.786	Cand	6.94
	Cand	6.93	Zero	0	Ref	9.777
	Ref	9.785	Cand	6.94	Zero	0
2nd Analysis Date:						
	Zero		Ref		Cand	
	Cand		Zero		Ref	
	Ref		Cand		Zero	

Approved by:

Airgas

Airgas Specialty Gases
5480 Hamilton Blvd.
Theodore, AL 36582

P.O. Box 190969
Mobile, AL 36619
(251) 653-2500 Fax: (251) 653-2530
http://www.airgas.com

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No :	CC153624	Order No.	110600824
Cylinder Pressure:	2000 PSIG	Expiration Date:	6/16/06
Certification Date	6/16/03	Laboratory:	ASG-MOBILE
Part Number:	E03NI99E15A2067		

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
NTRM 0005201	PROPANE	SG9168891	50.5 ppm
NTRM 52474	CARBON MONOXIDE	SG9153982	973.6 ppm

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
SIEMENS FIDAMAT 5E-P, K4-391	FID
SIEMENS ULTRAMAT 5E/J9-661	NDIR

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
PROPANE	24.70 ppm	+/-1%	G1
CARBON MONOXIDE	499.0 ppm	+/-1%	G1
NITROGEN	BALANCE		

Analytical Results:

1st Component: PROPANE

1st Analysis Date: 6/9/03

R	50.50	S	24.70	Z	0.00	Conc	24.70 ppm
S	24.70	Z	0.00	R	50.50	Conc	24.70 ppm
Z	0.00	R	50.50	S	24.70	Conc	24.70 ppm
						AVG:	24.70 ppm

Airgas

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Theodore, AL 36582

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(251) 653-2500 Fax: (251) 653-2530
http://www.airgas.com

2nd Component: CARBON MONOXIDE

1st Analysis Date:		6/9/03						
R	973.6	S	499.2	Z	0.0	Conc	499.2	ppm
S	499.2	Z	0.0	R	973.6	Conc	499.2	ppm
Z	0.0	R	973.6	S	499.2	Conc	499.2	ppm
						AVG:	499.2	ppm
2nd Analysis Date:		6/16/03						
R	973.6	S	498.7	Z	0.0	Conc	498.7	ppm
S	498.7	Z	0.0	R	973.6	Conc	498.7	ppm
Z	0.0	R	973.6	S	498.7	Conc	498.7	ppm
						AVG:	498.7	ppm

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.

Do not use cylinder below 150 psig.

Carol Stewart
Approved for Release

Airgas

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
773.785.3000 Fax: 773.785.1928
www.airgas.com

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Certification performed in accordance with "EPA Traceability Protocol (Sept.1997)" using assay procedures listed.

Cylinder No:	CC17028	Order No:	332684-00
Certification Date:	04/24/2003	Expiration Date:	04/24/2005
Cylinder Pressure:	2000	Part No:	E02NI99E15A0257

*Do not use cylinder below 150 psig.

Component	*Certified Concentration*	*Unit of Measure*	*Accuracy*	*Procedure*	*Analytical Principle*
Sulfur Dioxide	25.47	ppm	1%	G-1	NDIR
Nitrogen	Balance				

Nox _____ ppm
(Reference Value Only)

Reference Standard Information

Type	*Component*	*Concentration*	*Unit*	*Cylinder Number*
NTRM	Sulfur Dioxide	44.8	ppm	SG9168422BAL

Analytical Data

Component 1 Sulfur Dioxide

1st Analysis Date: 04/17/2003

Zero	0.000	Cand	25.500	Ref	44.600
Zero	0.000	Cand	25.200	Ref	44.700
Zero	0.000	Cand	25.600	Ref	44.300

2nd Analysis Date: 04/24/03

Zero	0.000	Cand	25.200	Ref	44.800
Zero	0.000	Cand	25.400	Ref	44.900
Zero	0.000	Cand	25.500	Ref	44.800

Analyzed by: B. Bahr

Airgas
Specialty Gases
5480 Hamilton Blvd.
Theodore, AL 36582
P.O. Box 190969
Mobile, AL 36619
Phone: (334) 653-2500
FAX: (334) 653-2530

2nd Analysis Date:	2/12/01						
R	280.00	S	90.00	Z	0.00	Conc	90.03 ppm
S	90.00	Z	0.00	R	280.00	Conc	90.03 ppm
Z	0.00	R	280.00	S	90.00	Conc	90.03 ppm
						AVG:	90.03 ppm

2nd Component: PROPANE

1st Analysis Date:	2/12/01						
R	96.200	S	49.150	Z	0.000	Conc	49.15 ppm
S	49.150	Z	0.000	R	96.200	Conc	49.15 ppm
Z	0.000	R	96.200	S	49.150	Conc	49.15 ppm
						AVG:	49.15 ppm

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.

Do not use cylinder below 150 psig.

Carol Stewart
Approved for Release

Airgas
Specialty Gases
5480 Hamilton Blvd.
Theodore, AL 36582
P.O. Box 190969
Mobile, AL 36619
Phone: (334) 653-2500
FAX: (334) 653-2530

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No :	CC126340	Order No.	431496
Cylinder Pressure:	2000 PSI	Expiration Date:	2/12/04
Certification Date	2/12/01	Laboratory:	ASG-MOBILE

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
GMIS	CARBON MONOXIDE	CC45624	280.1PPM
NTRM81668	PROPANE	CC47113	96.2PPM

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
Siemens Ultramat 5E J9-662	NDIR
Siemens Fidamat 5E-P K4-391	FID

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
CARBON MONOXIDE	89.93 ppm	+/- 1%	G1
PROPANE	49.15 ppm	+/- 1%	G1
NITROGEN	BALANCE		

Analytical Results:

1st Component: CARBON MONOXIDE

1st Analysis Date: 2/5/01

R	280.00	S	89.80	Z	0.00	Conc	89.83 ppm
S	89.80	Z	0.00	R	280.00	Conc	89.83 ppm
Z	0.00	R	280.00	S	89.80	Conc	89.83 ppm
						AVG:	89.83 ppm

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www.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	CC114639	Reference Number:	47-58373600-002
Cylinder Pressure:	2,013 psig	Expiration Date:	09/15/2005
Certification Date:	09/15/2003	Laboratory:	ASG - Mobile

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Nitric Oxide	50.50 PPM	+/- 1%	CHEMILLUM	G1
Sulfur Dioxide	49.90 PPM	+/- 1%	NDIR	G1
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes: AIRGAS PO 110624020 AIRGAS LOT # 47-030904/5086 NOx 50.50ppm

Do not use cylinder below 150 psig.

Approved for Release

Reference Standard Information

Type	Component	Cyl. Number	Concentration
NTRM	Nitric Oxide	CC26726	96.40 PPM
GMIS	Sulfur Dioxide	ND-15721	103.8 PPM

Analytical Results

1st Component Nitric Oxide

1st Analysis Date:			09/08/2003				
R	96.40	S	50.50	Z	0.0000	Conc	50.50 PPM
S	50.50	Z	0.0000	R	96.40	Conc	50.50 PPM
Z	0.0000	R	96.40	S	50.50	Conc	50.50 PPM
						AVG:	50.50 PPM
2nd Analysis Date:			09/15/2003				
R	96.40	S	50.50	Z	0.0000	Conc	50.50 PPM
S	50.50	Z	0.0000	R	96.40	Conc	50.50 PPM
Z	0.0000	R	96.40	S	50.50	Conc	50.50 PPM
						AVG:	50.50 PPM

2nd Component Sulfur Dioxide

1st Analysis Date:			09/08/2003				
R	104.0	S	50.00	Z	0.0000	Conc	49.90 PPM
S	50.00	Z	0.0000	R	104.0	Conc	49.90 PPM
Z	0.0000	R	104.0	S	50.00	Conc	49.90 PPM
						AVG:	49.90 PPM
2nd Analysis Date:			09/15/2003				
R	104.0	S	50.00	Z	0.0000	Conc	49.90 PPM
S	50.00	Z	0.0000	R	104.0	Conc	49.90 PPM
Z	0.0000	R	104.0	S	50.00	Conc	49.90 PPM
						AVG:	49.90 PPM

Airgas

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Theodore, AL 36582
(251) 653-2500 Fax: (251) 653-2530
www.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	SG9149434	Reference Number:	47-ST1147-000
Cylinder Pressure:	2,013 psig	Expiration Date:	12/30/2005
Certification Date:	12/30/2003	Laboratory:	ASG - Mobile

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Nitric Oxide	307.0 PPM	+/- 1%	CHEMILLUM	G1
Sulfur Dioxide	305.0 PPM	+/- 1%	NDIR	G1
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes: AIRGAS PO 110649420 AIRGAS LOT # 47-031217/7277 NOx 307.0 ppm

Do not use cylinder below 150 psig.

Carol Stewart
Approved for Release

Reference Standard Information

Type	Component	Cyl. Number	Concentration
NTRM 1051003	Sulfur Dioxide	SG9159595	376.2 PPM
GMIS 0	Nitric Oxide	ND-17876	975.0 PPM

Analytical Results

1st Component Nitric Oxide

1st Analysis Date:			12/23/2003				
R	975.0	S	308.0	Z	0.0000	Conc	308.0 PPM
S	308.0	Z	0.0000	R	975.0	Conc	308.0 PPM
Z	0.0000	R	975.0	S	308.0	Conc	308.0 PPM
						AVG:	308.0 PPM
2nd Analysis Date:			12/30/2003				
R	975.0	S	306.0	Z	0.0000	Conc	306.0 PPM
S	306.0	Z	0.0000	R	975.0	Conc	306.0 PPM
Z	0.0000	R	975.0	S	306.0	Conc	306.0 PPM
						AVG:	306.0 PPM

2nd Component Sulfur Dioxide

1st Analysis Date:			12/23/2003				
R	376.0	S	303.5	Z	0.0000	Conc	303.7 PPM
S	303.5	Z	0.0000	R	376.0	Conc	303.7 PPM
Z	0.0000	R	376.0	S	303.5	Conc	303.7 PPM
						AVG:	303.7 PPM
2nd Analysis Date:			12/30/2003				
R	376.0	S	306.0	Z	0.0000	Conc	306.2 PPM
S	306.0	Z	0.0000	R	376.0	Conc	306.2 PPM
Z	0.0000	R	376.0	S	306.0	Conc	306.2 PPM
						AVG:	306.2 PPM

Airgas

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www.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	CC160225	Reference Number:	47-ST1145-000
Cylinder Pressure:	2,013 psig	Expiration Date:	12/30/2005
Certification Date:	12/30/2003	Laboratory:	ASG - Mobile

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Nitric Oxide	508.0 PPM	+/- 1%	CHEMILLUM	G1
Sulfur Dioxide	499.0 PPM	+/- 1%	NDIR	G1
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes: AIRGAS PO 110649420 AIRGAS LOT # 47-031217/7279 NOx 508.0 ppm

Do not use cylinder below 150 psig.

Carol Stewart
Approved for Release

Reference Standard Information

Type	Component	Cyl. Number	Concentration
GMIS 0	Sulfur Dioxide	ND-15687	1,026 PPM
GMIS 0	Nitric Oxide	ND-17876	975.0 PPM

Analytical Results

1st Component Nitric Oxide

1st Analysis Date:			12/23/2003				
R	975.0	S	507.0	Z	0.0000	Conc	507.0 PPM
S	507.0	Z	0.0000	R	975.0	Conc	507.0 PPM
Z	0.0000	R	975.0	S	507.0	Conc	507.0 PPM
						AVG:	507.0 PPM
2nd Analysis Date:			12/30/2003				
R	975.0	S	509.0	Z	0.0000	Conc	509.0 PPM
S	509.0	Z	0.0000	R	975.0	Conc	509.0 PPM
Z	0.0000	R	975.0	S	509.0	Conc	509.0 PPM
						AVG:	509.0 PPM

2nd Component Sulfur Dioxide

1st Analysis Date:			12/23/2003				
R	1,026	S	499.0	Z	0.0000	Conc	499.0 PPM
S	499.0	Z	0.0000	R	1,026	Conc	499.0 PPM
Z	0.0000	R	1,026	S	499.0	Conc	499.0 PPM
						AVG:	499.0 PPM
2nd Analysis Date:			12/30/2003				
R	1,026	S	499.0	Z	0.0000	Conc	499.0 PPM
S	499.0	Z	0.0000	R	1,026	Conc	499.0 PPM
Z	0.0000	R	1,026	S	499.0	Conc	499.0 PPM
						AVG:	499.0 PPM

Project Participants

PROJECT PARTICIPANTS

Koogler & Associates

John B. Koogler, Ph.D., P.E.	Project Advisor
Steven Cloutier	Technical Manager
Glen Haven	Field Test Crew
Rodney Paul	Field Test Crew
Cory J Bell	Field Test Crew
Adam West	Field Test Crew
Eric Thomas	Field Test Crew

Rinker Materials Corporation

Michael Vardeman	Environmental Manager, Cement Division

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

263-03-10
September 10, 2004

Via UPS Overnight

RECEIVED
SEP 13 2004
BUREAU OF AIR REGULATION

Mr. Al Linero
FDEP
Twin Towers Office Bldg
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: ***Rinker Materials Corporation***
Miami Cement Plant, Miami, Florida
Permit No. 0250014-003-AV
Kiln Production Rate Increase

Dear Al:

Enclosed are four copies of a Air Construction Permit Application for a production rate increase at the Rinker Miami Cement Plant.

If you need to contact me regarding this application, please do not hesitate to contact me at 352-377-5822 or jkoogler@kooglerassociates.com.

Sincerely,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK/llt

cc: Scott Benyon
Mike Vardeman
Charles Allen

Department of Environmental Protection

RECEIVED
SEP 13 2004
BUREAU OF AIR REGULATION

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: **Rinker Materials Corporation**	
2. Site Name: **Rinker Miami Cement Plant**	
3. Facility Identification Number: **0250014**	
4. Facility Location: Street Address or Other Locator: **1200 NW 137th Ave.** City: **Miami** County: **Miami-Dade** Zip Code: **33182**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **John B. Koogler PhD, PE**
2. Application Contact Mailing Address... Organization/Firm: **Koogler & Associates, Inc.** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **Florida** Zip Code: **32609**
3. Application Contact Telephone Numbers... Telephone: **(352) 377-5822** ext. Fax: **(352) 377-7158**
4. Application Contact Email Address: **vsgro@kooglerassociates.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	9-13-04
2. Project Number(s):	1250014-016-AC
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

This application requests for a production rate increase for the following emission units:

- **EU 018 : increase kiln feed rate from 220 tph to 267 tph ; increase clinker production rate from 137 tph to 162 tph ;**
- **EU 020 : increase the heat input rate from 437 mmBtu/hr to 485 mmBtu/hr.**

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
017	Raw Materials Handling (Baghouses)	AC1F	$0
018	In-line Kiln/Raw Mill & Clinker Cooler	AC1C	$0
020	Coal Mill System	AC1F	$0
025	Facilty Wide Fugitive Emissions	AC1E	$0

Application Processing Fee

Check one: ☐ Attached - Amount: $ 0 ☒ Not Applicable

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : **Ed Allsopp, VP of Cement Operations**

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Rinker Materials Corporation**
   Street Address: **1200 NW 137th Avenue**
   City: **Miami** State: **Florida** Zip Code: **33182**

3. Owner/Authorized Representative Telephone Numbers...**N/A**
   Telephone: **(561) 820-8344** ext. Fax: **(561) 820-8388**

4. Owner/Authorized Representative Email Address: **eallsopp@rinker.com**

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Signature

9/10/04
Date

Certification with original signature submitted under separate cover.

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: **N/A**

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **N/A**
   Street Address: **N/A**
   City: **N/A** State: **N/A** Zip Code: **N/A**

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official Email Address: **N/A**

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   _____ _____
   Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **John B. Koogler**
   Registration Number: **12925**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Koogler & Associates, Inc.**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **Florida** Zip Code: **32609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 377- 5822** ext. Fax: **(352) 377 - 7158**
4. Professional Engineer Email Address: **jkoogler@kooglerassociates.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 NO. 12925 Date 9/10/04

(seal) STATE OF

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **558.20** North (km) **2851.20**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **25/46/45** Longitude (DD/MM/SS) **80/25/10**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241**
7. Facility Comment : **N/A**			

Facility Contact

1. Facility Contact Name: **Michael D. Vardeman, Cement Division Environmental Manager**
2. Facility Contact Mailing Address... Organization/Firm: **Rinker Materials Corporation** Street Address: **1200 NW 137th Avenue** City: **Miami** State: **FL** Zip Code: **33182**
3. Facility Contact Telephone Numbers: Telephone: **(305) 229-2955** ext. Fax: **(305) 229-8015**
4. Facility Contact Email Address: **mvardeman@rinker.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: **N/A**
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 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. ☐ Small Business Stationary Source	☒ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	
Kiln and Clinker Cooler subject to NSPS, Subpart F and plant is subject to NESHAP, Subpart LLL. Coal Mill is subject to NPS, Subpart Y.	
The facility is presumed to be a major source of HAPs.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM/PM_{10}	**A**	**N**
SO_2	**A**	**N**
NO_x	**A**	**N**
CO	**A**	**N**
VOC	**A**	**N**
DIOX	**B**	**N**
PB	**B**	**N**
SAM (Acid Mist)	**B**	**N**
H114 (Mercury)	**B**	**N**
HAPs (total)	**A***	**N**
*** Presumed Major**		

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

7. Facility-Wide or Multi-Unit Emissions Cap Comment: **N/A**

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)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **unknown**
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)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **unknown**
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)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **unknown**

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification:
   ☒ Attached, Document ID: **001**
3. Rule Applicability Analysis:
   ☐ Attached, Document ID: **N/A**
4. 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)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   ☒ Attached, Document ID: **002** ☐ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☒ 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: **Previously Submitted**
   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

N/A

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.

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 (Baghouses)

3. Emissions Unit Identification Number: **017**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**2000**	**32**	☐ Yes ☒ No

9. Package Unit: **N/A**
Manufacturer: **N/A** Model Number: **N/A**

10. Generator Nameplate Rating: **N/A** MW

11. Emissions Unit Comment:
These activites are regulated for opacity by NSPS Subpart F and by NESHAP Subpart LLL.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Fabric Filters—Low Temperature

2. Control Device or Method Code(s): **018**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **N/A**	
2. Maximum Production Rate: **N/A**	
3. Maximum Heat Input Rate: **N/A** million Btu/hr	
4. Maximum Incineration Rate: **N/A** pounds/hr **N/A** tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **8760** hours/year
6. Operating Capacity/Schedule Comment: **N/A**	

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: **See Emission Point ID; Item 3, below**	2. Emission Point Type Code: **3**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:

K21-BF1: Baghouse for Additive Transfer: 3800 acfm
K21-BF2: Baghouse for Additive Transfer: 4500 acfm
K22-BF1: Baghouse for Soil/Ash Transfer: 4000 acfm
K22-BF2: Baghouse for Clean Soil Bin: 9000 acfm
K51-BF1: Baghouse for Slag/Soil Elevator: 5000 acfm
293-BF1: Baghouse for Soil/Ash Transfer: 4000 acfm
293-BF2: Baghouse for Soil/Ash Transfer: 4000 acfm
391-BF1: Baghouse for Raw Meal Transfer Elevator: 5500 acfm
391-BF2: Baghouse for Raw Meal Silo: 7000 acfm
391-BF3: Baghouse for Additive (Dust) Bin: 2000 acfm
431-BF1: Baghouse for Raw Mill (Kiln Feed) Transfer: 5500 acfm
431-BF2: Baghouse for Raw Mill Transfer (Return): 3000 acfm

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
See 3; above

5. Discharge Type Code: **H**	6. Stack Height: **Variable** feet	7. Exit Diameter: **Variable** feet
8. Exit Temperature: **< 180** °F	9. Actual Volumetric Flow Rate: **See 3; above** acfm	10. Water Vapor: **2-3 %**

11. Maximum Dry Standard Flow Rate: **See 3; above** dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): **See Pg. 7** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)

15. Emission Point Comment: **The annual material throughput rate of some of the material handling equipment associated with Emission Points addressed herein may increase as a result of the kiln production rate increase. However, the PM emission rates of the Emission Points will not increase, as the PM emission rates are a function of the air flow rates, PM discharge concentrations and the hours of operation; none of which will change.**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Cement Manufacturing : Dry Process : Raw Material Transfer**		
2. Source Classification Code (SCC): **3-05-006-12**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **1200**	5. Maximum Annual Rate: **10,512,000**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment: **N/A**		

Segment Description and Rate: Segment N/A of N/A

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:		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment N/A of N/A

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:		

Segment Description and Rate: Segment N/A of N/A

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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**018**	**N/A**	**EL**
PM_{10}	**018**	**N/A**	**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **4.91** lb/hour **21.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.01 grains per actual cubic foot** Reference: **Table 1-1 of Permit No. 0250014-002-AC**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **57,300 acfm x 0.01 gr/acf x 1.0 pound/7000 grains x 60 minutes/hr = 4.91 lb PM /hr @ 8760 hr/yr = 21.5 tons PM/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Material throughput rates may change ; however, the Potential Emissions of PM are a function only of flow, concentrations and hours of operation (8760 hr/yr) and therefore will remain unchanged. Potential Emissions are for all Emission Points collectively in this Emission Unit (EU-017).**	

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: **N/A**
3. Allowable Emissions and Units: **0.01 grains per actual cubic foot**	4. Equivalent Allowable Emissions: **4.91** lb/hour **21.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **4.17** lb/hour **18.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.0085 grains per actual cubic foot** Reference: **Table 1-1 of Permit No. 0250014-002-AC**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **57,300 acfm x 0.0085 gr/acf x 1.0 pound/7000 grains x 60 minutes/hr = 4.17 lb PM /hr @ 8760 hr/yr = 18.3 tons PM/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Material throughput rates may change ; however, the Potential Emissions of PM are a function only of flow, concentrations and hours of operation (8760 hr/yr) and therefore will remain unchanged. Potential Emissions are for all Emission Points collectively in this Emission Unit (EU-017).**	

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: **N/A**
3. Allowable Emissions and Units: **0.0085 grains per actual cubic foot**	4. Equivalent Allowable Emissions: **4.17** lb/hour **18.3** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: [x] Rule--**BACT** [ ] Other
3. Allowable Opacity: **5 %** Normal Conditions: **0 %** Exceptional Conditions: **5 %** Maximum Period of Excess Opacity Allowed: **N/A min/hour**	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Rule 62-297.620(4), F.A.C.** **This opacity limitation is more stringent than NSPS/NESHAP**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [x] Rule--**BACT** [ ] Other
3. Allowable Opacity: **10 %** Normal Conditions: **0 %** Exceptional Conditions: **10 %** Maximum Period of Excess Opacity Allowed: **N/A min/hour**	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 63.1348**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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 N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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 N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: **N/A** ☐ 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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: **2002 & 2003**
   Test Date(s)/Pollutant(s) Tested: **VE tests on all Emission Points in EU-017**
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ 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
   ☐ Attached, Document ID: _____ ☒ Not Applicable

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))
   ☐ Attached, Document ID: _____ ☒ 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.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: **N/A**
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

Additional Requirements Comment

None.

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] of [4] [018: In-line Kiln/Raw Mill & Clinker Cooler]

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.)

   [X] 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)

   [X] 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:
In-Line Kiln/ In-Line Raw Mill and Clinker Cooler

3. Emissions Unit Identification Number: **018**

4. Emissions Unit Status Code: **A**	5. Commence Construction Date: **N/A**	6. Initial Startup Date: **2000**	7. Emissions Unit Major Group SIC Code: **32**	8. Acid Rain Unit? [ ] Yes [X] No

9. Package Unit: **N/A**
   Manufacturer: **N/A** Model Number: **N/A**

10. Generator Nameplate Rating: **N/A** MW

11. Emissions Unit Comment:
This emissions unit is regulated by NSPS Subpart F and NESHAP Subpart LLL.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
Fabric Filter—High Temperature

Note: Single fabric filter collector for Kiln, Raw Mill and Clinker Cooler

2. Control Device or Method Code(s): **016**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **267 tons per hour of dry feed to preheater**	
2. Maximum Production Rate: **162 tons per hour of clinker produced**	
3. Maximum Heat Input Rate: **485** million Btu/hr	
4. Maximum Incineration Rate: **N/A** pounds/hr **N/A** tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **8760** hours/year

6. Operating Capacity/Schedule Comment:

All limits are based on a 30-day averaging period.

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: **Main Stack**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Kiln/Raw Mill/Cooler Stack**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **018**		
5. Discharge Type Code: **V**	6. Stack Height: **359** feet	7. Exit Diameter: **8** feet
8. Exit Temperature: (1) **240°F** (2) **420°F**	9. Actual Volumetric Flow Rate: (1) **298,300** acfm (2) **348,000** acfm	10. Water Vapor: (1) **15%** (2) **20%**
11. Maximum Dry Standard Flow Rate: (1) **191,250** dscfm (2) **168,000** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates... Zone: East (km): **See Pg. 7** North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)

15. Emission Point Comment:
Common baghouse for raw mill, kiln, and clinker cooler.

(1) Raw Mill Operating ; typically 90% of the time
(2) Raw Mill Down ; typically 10% of the time

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 10

1. Segment Description (Process/Fuel Type): **Mineral Products : Cement Manufacturing : Dry Process : Preheater/Precalciner Kilns**		
2. Source Classification Code (SCC): **3-05-006-23**	3. SCC Units: **Tons Produced (Clinker)**	
4. Maximum Hourly Rate: **162 Tons Produced**	5. Maximum Annual Rate: **1,419,120 Tons Produced**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment: **Rate in 30-day average. See Item 10 in Segment 2 of 10.**		

Segment Description and Rate: Segment 2 of 10

1. Segment Description (Process/Fuel Type): **Mineral Products : Cement Manufacturing : Dry Process : Preheater/Precalciner Kilns**		
2. Source Classification Code (SCC): **3-05-006-22**	3. SCC Units: **Tons Produced (Feed)**	
4. Maximum Hourly Rate: **267 Tons Fed**	5. Maximum Annual Rate: **2,338,920 Tons Fed**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment: **Rate in 30-day average. It is requested that only clinker production be limited by permit. Clinker production and Preheater Feed are related, thus there is no reason to limit both.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (Continued)

Segment Description and Rate: Segment 3 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Natural Gas : Cement Kiln**		
2. Source Classification Code (SCC): **3-90-006-02**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.46 MMcf**	5. Maximum Annual Rate: **4,046 MMcf**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **1050 MMBtu/MMcf**
10. Segment Comment: **485 Mmbtu/hr x 1.0 MMcf/1050 MMBtu = 0.46 MMcf/hr @8760 hr/yr= 4,046 MMcf/yr**		

Segment Description and Rate: Segment 4 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Bituminous Coal : Cement Kiln**		
2. Source Classification Code (SCC): **3-90-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **18.7 Tons Burned**	5. Maximum Annual Rate: **163,408 Tons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **26 MMBtu/Ton**
10. Segment Comment: **485 MMBtu/hr x 1.0 tons/ 26 MMBtu = 18.7 tons/hr @ 8760 hr/yr = 163,408 Tons/yr**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (Continued)

Segment Description and Rate: Segment 5 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Coke : Cement Kiln** **Petroleum Coke as In-Process Fuel**		
2. Source Classification Code (SCC) : **3-90-008-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **17.3 Tons Burned**	5. Maximum Annual Rate: **151,735 Tons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **28 MMBtu/ Ton**
10. Segment Comment: **485 MMBtu/hr x 1.0 tons/28 MMBtu = 17.3 tons/hr** **@ 8760 hr/yr = 151,735 tons/yr**		

Segment Description and Rate: Segment 6 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Liquefied Petroleum Gas (LPG) : General** **Use of Propane in Kiln**		
2. Source Classification Code (SCC): **3-90-010-99**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **5.16 Thousand Gallons Burned**	5. Maximum Annual Rate: **45,198 Thousand Gallons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **Negligible**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **94 MMBtu/Thousand Gallons Burned**
10. Segment Comment: **485 MMBtu x 1.0 Thousand Gallons Burned/94 MMBtu = 5.16 TGB/hr** **@8760 hr/yr=45,198 TGB/yr**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (Continued)

Segment Description and Rate: Segment 7 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Distillate Oil : Cement Kiln** **Use of No. 2 Fuel Oil in Kiln**		
2. Source Classification Code (SCC) : **3-90-005-02**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **3.4 Thousand Gallons Burned**	5. Maximum Annual Rate: **30,132 Thousand Gallons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **141 MMBtu/Thousand Gallons Burned**
10. Segment Comment: **485 MMBtu/hr x 1.0 Thousand Gallons Burned/141 MMBtu = 3.4 TGB/hr @ 8760 hr/yr = 30,156 TGB/yr**		

Segment Description and Rate: Segment 8 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Residual Oil : Cement Kiln**		
2. Source Classification Code (SCC): **3-90-004-02**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **3.32 Thousand Gallons Burned**	5. Maximum Annual Rate: **29,100 Thousand Gallons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **146 MMBtu/Thousand Gallons Burned**
10. Segment Comment: **485 MMBtu x 1.0 Thousand Gallons Burned/146 MMBtu = 3.32 TGB/hr @ 8760 hr/ yr = 29,100 Thousand Gallons Burned**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (Continued)

Segment Description and Rate: Segment 9 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In-Process Fuel Use : Liquid Waste : General** **Use of Used Oil in Kiln**		
2. Source Classification Code (SCC) : **3-90-013-99**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **4.02 Thousand Gallons Burned**	5. Maximum Annual Rate: **31,866 Thousand Gallons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **0.4**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **120 MMBtu/Thousand Gallons Burned**
10. Segment Comment: **485 MMBtu/hr x 1.0 Thousand Gallons Burned/120 MMBtu = 4.02 TGB/hr** **Annual Rate limited to 31,866,000 gallons by 0250014-002-AC**		

Segment Description and Rate: Segment 10 of 10

1. Segment Description (Process/Fuel Type): **Industrial Process : In –Process Fuel Use : Solid Waste : Cement Kiln** **Combustion of nonhazardous solid waste. Materials inclued, but are not limited to :** • **Whole Tires and/or Tire-Derived Fuel (TDF)** • **Oil Fliters** • **Booms and Rags from Spill Cleanup** • **Unused Diapers** • **Paper Products** • **Non-Chlorinated Plastic Waste**		
2. Source Classification Code (SCC) : **3-90-012-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **~2.0 Tons Burned; 24-hr average**	5. Maximum Annual Rate: **16,000 Tons Burned**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **~24 MMBtu/Ton**
10. Segment Comment: **Maximum heat input (24-hr average) limited to 43.7 mmBtu/hr (Permit No 0250014-003-AV); or to a firing rate of ~2.0 tph of the above listed wastes.** **@8760 hr/yr = 16,000 tons/yr**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	016	N/A	EL
PM_{10}	016	N/A	EL
SO_2	N/A	N/A	EL
NO_X	N/A	N/A	EL
CO	N/A	N/A	EL
VOC	N/A	N/A	EL
SAM	N/A	N/A	EL
H114—Mercury	N/A	N/A	EL
PB—Lead	N/A	N/A	EL
DIOX	N/A	N/A	EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **38.1** lb/hour **166.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.235 lb PM/ton of clinker** **Reference: Proposed as BACT**	7. Emissions Method Code: **0**

8. Calculation of Emissions:
0.235 lb PM/tons of clinker x 162 tons of clinker /hour = 38.1 lb PM/hr @ 8760 hr/yr = 166.7 tons/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Proposed emission factor is 0.235 lb PM/ton clinker. For Rinker's operation, the conversion factor from tons of dry preheater feed to tons of clinker is 0.607 (162 TPH clinker/267 TPH feed). Hence, the emission factor used for PM is equivalent to: 0.235 lbs PM/ton Clinker x 0.607 ton clinker/ton dry preheater feed = 0.143 lb PM/ton dry preheater feed. This is a reduction from the currently permitted and actual PM emissions of 44.0 lb/hr and 193.0 TPY. Averaging time fore emission limit is to be 3-hr ; the time for a M5 test.

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: **N/A**
3. Allowable Emissions and Units: **0.235 lb PM/ton of clinker**	4. Equivalent Allowable Emissions: **38.1** lb/hour **166.7** tons/year
5. Method of Compliance: **EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **It is requested that the PM emission limit be expressed as 0.235 lb/ton clinker (rather than 0.143 lb/ton feed) for consistency with other emission limits.**	

Allowable Emissions Allowable Emissions N/A of N/A

2. Basis for Allowable Emissions Code:	3. Future Effective Date of Allowable Emissions:
4. Allowable Emissions and Units:	5. Equivalent Allowable Emissions: lb/hour tons/year
6. Method of Compliance:	
7. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions N/A of N/A

8. Basis for Allowable Emissions Code:	9. Future Effective Date of Allowable Emissions:
10. Allowable Emissions and Units:	11. Equivalent Allowable Emissions: lb/hour tons/year
12. Method of Compliance:	
13. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **32.4** lb/hour **141.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.20 lb PM_{10}/ ton of clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.20 lb PM_{10}/ton x 162 tons/hour of clinker = 32.4 lb PM_{10}/hr** **@ 8760 hr/year = 141.9 tons/year**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Proposed emission factor is 0.20 lb PM/ton clinker. For Rinker's operation, the conversion factor from tons of dry preheater feed to tons of clinker is 0.607 (162 TPH clinker/267 TPH feed). Hence, the emission factor used for PM_{10} is equivalent to: 0.20 lbs PM/ton Clinker x 0.607 ton clinker/ton dry preheater feed = 0.121 lb PM_{10}/ton dry preheater feed. This is a reduction from the currently permitted and actual emissions fo 37.4 lb/hr and 164.0 tpy. The averaging time for emission limit is to be 3-hours ; the time for a M5 test.**	

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: **N/A**
3. Allowable Emissions and Units: **0.20 lb PM_{10}/ton of Clinker**	4. Equivalent Allowable Emissions: **32.4** lb/hour **141.9** tons/year
5. Method of Compliance: **EPA Method 5, with all PM assumed to be PM_{10}**	
6. Allowable Emissions Comment (Description of Operating Method): **It is requested that the PM emission limit be expressed as 0.235 lb/ton clinker (rather than 0.143 lb/ton feed) for consistency with other emission limits.**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **N/A**
3. Potential Emissions: **81.0** lb/hour **354.8** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.50 lb SO_2/ton clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.50 lb SO_2/ton clinker x 162 ton clinker/hour=81.0 lb SO_2/hr @8760 hr/yr=354.8 tons SO_2/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **SO_2 emissions have been reduced from currently permitted and actual rates of 306 lb/hr and 1340 tpy. The average time for emission limit is to be 24-hours ; with compliance by CEMS.**	

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: **N/A**
3. Allowable Emissions and Units: **0.50 lb SO_2/ton Clinker**	4. Equivalent Allowable Emissions: **81.0** lb/hour **354.8** tons/year
5. Method of Compliance: **CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **N/A**
3. Potential Emissions: **648.0** lb/hour **2838** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **4.0 lb NO_x/ton Clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **4.0 lb NO_x/ton Clinker x 162 ton clinker/hr = 648.0 lb NO_x/hr** **@8760 hr/yr = 2838.2 ton NO_x/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **NO_x emissions have been reduced from currently permitted and actual emission rates of 671 lb/hr and 2940 tpy. The averaging time for emission limit is to be 30-days, with compliance by CEMS.**	

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: **N/A**
3. Allowable Emissions and Units: **4.0 lb NO_x/ton clinker**	4. Equivalent Allowable Emissions: **648.0** lb/hour **2838.2** tons/year
2. Method of Compliance: **CEMS**	
3. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of NA

4. Basis for Allowable Emissions Code:	5. Future Effective Date of Allowable Emissions:
6. Allowable Emissions and Units:	7. Equivalent Allowable Emissions: lb/hour tons/year
8. Method of Compliance:	
9. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions N/A of N/A

10. Basis for Allowable Emissions Code:	11. Future Effective Date of Allowable Emissions:
12. Allowable Emissions and Units:	13. Equivalent Allowable Emissions: lb/hour tons/year
14. Method of Compliance:	
15. Allowable Emissions Comment (Description of Operating Method):	

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: **N/A**
3. Potential Emissions: **421.2** lb/hour **1844.8** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **2.60 lb CO/ton of clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **2.60 lb CO/ton of clinker x 162 tons/hr = 421.2 lb/hr** **@ 8760 hr/yr = 1844.8 tons CO/ yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **CO emissions have increased 37.8 tpy ; less than the significance level of 100 tpy (See Attachment 002). The currently permitted and actual emissions have increased to 421.2 lb/hr (from 412.0 lb/hr) and 1844.8 tpy (from 1807 tpy). The averaging time for emission limt is to be 3-hours , the time for a M10 test.**	

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: **N/A**
3. Allowable Emissions and Units: **2.60 lb CO/ton of clinker**	4. Equivalent Allowable Emissions: **421.2** lb/hour **1844.8** tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **None**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **N/A**
3. Potential Emissions: **19.4** lb/hour **85.0** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.12 lb VOC/ton of Clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**

8. Calculation of Emissions:
0.12 lbs VOC/ Ton of Clinker x 162 tons of Clinker/hr = 19.4 lbs VOC/ hr @ 8760 hr/yr = 85.0 tons VOC/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment: **VOC emissions have increaesed 13 tpy ; less thant the significance level of 40 tpy (See Attachment 002). The currently permitted and actual emissions have increased to 19.4 lb/hr (from 16.4 lb/hr) and 85.0 tpy (from 72.0 tpy). The averaging time for the emission limit is to be a 30-operating day block average.**

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: **N/A**
3. Allowable Emissions and Units: **0.12 lb VOC/ton Clinker**	4. Equivalent Allowable Emissions: **19.4** lb/hour **85.0** tons/year
2. Method of Compliance: **EPA M25A with measure of non-methane hydrocarbons with a THC CEMS for reasonable assurance.**	
3. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

4. Basis for Allowable Emissions Code:	5. Future Effective Date of Allowable Emissions:
6. Allowable Emissions and Units:	7. Equivalent Allowable Emissions: lb/hour tons/year
8. Method of Compliance:	
9. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions N/A of N/A

10. Basis for Allowable Emissions Code:	11. Future Effective Date of Allowable Emissions:
12. Allowable Emissions and Units:	13. Equivalent Allowable Emissions: lb/hour tons/year
14. Method of Compliance:	
15. Allowable Emissions Comment (Description of Operating Method):	

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: **N/A**
3. Potential Emissions: **3.24** lb/hour **14.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.02 lb SAM/ton Clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.02 lb SAM/ton Clinker x 162 tons of Clinker/hr = 3.24 lb SAM/hr @ 8760 hr/yr = 14.2 tons SAM/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **SAM emissions have increased 5.8 tpy ; less than the significance level of 7.0 tpy (See Attachment 002). The currently permitted and actual emissions have increased to 3.24 lb/hr (from 1.92 lb/hr) and 14.2 tpy (from 18.4 tpy). The averaging time for the emission limit is to be 3-hour ; the time for a M8 test.**	

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: **N/A**
3. Allowable Emissions and Units: **0.02 lb SAM/ton Clinker**	4. Equivalent Allowable Emissions: **3.24** lb/hour **14.2** tons/year
5. Method of Compliance: **EPA Method 8 (initial only)**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **H114--Mercury**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **0.023** lb/hour **0.099** tons/year **(199 lb/yr)**	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **14.0 x 10^{-5} lb Hg/ton Clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **14.0 x 10^{-5} lb Hg/ton Clinker x 162 tons of Clinker/hr = 2.27 x 10^{-2} lb Hg/hr @ 8760 hr/yr = 9.93 x 10^{-2} ton Hg/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **The proposed mercury emission rate is less than the significance level of 200 lb/yr (See Attachment 002).**	

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: **N/A**
3. Allowable Emissions and Units: **14.0 X 10^{-5} lb Hg/yr**	4. Equivalent Allowable Emissions: **2.27 x 10^{-2}** lb/hour **9.93 x 10^{-2}** tons/year
5. Method of Compliance: **EPA Method 29 (initial only)**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **Pb--Lead**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **0.05** lb/hour **0.21** tons/year **(420 lb/yr)**	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **30.0 x 10^{-5} lb Pb/ton Clinker** Reference: **Proposed as BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **30.0 x 10^{-5} lb Pb/ton Clinker x 162 ton Clinker/hr = 0.05 lb Pb/hr** **@8760 hr/yr = 0.21 ton Pb/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **The proposed lead emission rate is less than the significance level of 1200 lb/yr (See Attachment 002).**	

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: **N/A**
3. Allowable Emissions and Units: **30.0 x 10^{-5} lb Pb/ton Clinker**	4. Equivalent Allowable Emissions: **0.05** lb/hour **0.21** tons/year
5. Method of Compliance: **EPA Method 29 (initial only)**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **Not Applicable**
3. Potential Emissions: **N/A** lb/hour **N/A** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: • **0.2 nanograms/dscm @ 7% O_2 if kiln baghouse inlet temperature is less than or equal to 400°F** • **0.4 nanograms/dscm @ 7% O_2 if kiln baghouse inlet temperature is greater than 400°F** Reference: **MACT—40 CFR 63.1343(b)(3)(i)**	7. Emissions Method Code: **0**
8. Calculation of Emissions:	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **NESHAP LLL. The dioxin/furan emission limit is concentration based ; not mass based.**	

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: **N/A**
3. Allowable Emissions and Units: **0.2/0.4 ng/dscm @ 7% O_2**	4. Equivalent Allowable Emissions: **N/A** lb/hour **N/A** tons/year
5. Method of Compliance: **EPA Method 23 repeated every 30 months**	
6. Allowable Emissions Comment (Description of Operating Method): **NESHAP Subpart LLL**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: ☒ Rule--**BACT** ☐ Other
3. Allowable Opacity: **10 %** Normal Conditions: **0 %** Exceptional Conditions: **10 %** Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Method 9**	
5. Visible Emissions Comment: **This opacity limitation is NSPS/NESHAP for clinker cooler** **40 CFR 63.1345(a)(2)**	

Visible Emissions Limitation: Visible Emissions Limitation N/A of N/A

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 5

1. Parameter Code: **VE**	2. Pollutant(s): **Opacity**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **United Sciences** Model Number: **500C Compliance Monitor** Serial Number: **7971657**	
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2002**
7. Continuous Monitor Comment: **NSPS Subpart F & NESHAP Subpart LLL**	

Continuous Monitoring System: Continuous Monitor 2 of 5

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2, NO_x**
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Hartmann & Braun** Model Number: **URAS 14** Serial Number: **24511-0-224110202002**	
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2002**
7. Continuous Monitor Comment: **Combined SO_2-NO_x analyzer**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 5

1. Parameter Code: **EM**	2. Pollutant(s): **THC**
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **J.U.M Methane/Non-Methane** Model Number: **109A**	Serial Number: **Unknown**
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2003**
7. Continuous Monitor Comment: **Monitor used for reasonable assurance with VOC emission limit**	

Continuous Monitoring System: Continuous Monitor 4 of 5

1. Parameter Code: **FLOW**	2. Pollutant(s): **FLOW**
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Monitor Labs Ultra Flow** Model Number: **100**	Serial Number: **1001038**
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2002**
7. Continuous Monitor Comment: **N/A**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 5 of 5

1. Parameter Code: **TEMP**	2. Pollutant(s): **N/A**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Unknown** Model Number: **Unknown**	Serial Number: **Unknown**
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2002**
7. Continuous Monitor Comment: **NESHAP Subpart LLL; to monitor kiln/raw-mill/cooler baghouse inlet temperature**	

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ 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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: **9/2002 and 9/2003**
   Test Date(s)/Pollutant(s) Tested: **PM/PM_{10}, SO_2, NO_x VOC, CO, SAM, Pb, Hg**
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ 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
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [2] of [4] [018: In-line Kiln/Raw Mill & Clinker Cooler]

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))
   ☐ Attached, Document ID: _____ ☒ 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.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: **N/A**
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☒ Not Applicable

Additional Requirements Comment

None.

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.

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.)

   [X] 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).

   [X] 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 Mill System**

3. Emissions Unit Identification Number: **020**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**2000**	**32**	[ ] Yes [X] No

9. Package Unit: **N/A**
   Manufacturer: **N/A** Model Number: **N/A**

10. Generator Nameplate Rating: **N/A** MW

11. Emissions Unit Comment: **These activities are regulated by NSPS Subpart Y.**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Fabric Filters—Low Temperature

- **Baghouse L61-BF1; Coal/Coke Mill**
- **Baghouse L91-BF1; Coal/Coke Bin**

2. Control Device or Method Code(s): **018**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **163,408 tons/yr; coal**	
2. Maximum Production Rate: **N/A**	
3. Maximum Heat Input Rate: **N/A** million Btu/hr	
4. Maximum Incineration Rate: **N/A** pounds/hr **N/A** tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **8760** hours/year
6. Operating Capacity/Schedule Comment: **Coal/Coke throughput rate may increase as a result of the production rate increase. PM/PM_{10} emissions will remain unchanged as they are a function of air flow, concentrations in the discharge air stream (0.01 gr/acf) and operating time (8760 hr/yr). None of these factors will change.**	

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: **(See 3; below)**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **L61-BF1: Baghouse for Coal/Coke Mill: 24,000 acfm** **L91-BF1: Baghouse for Coal/Coke Bin: 2,500 acfm**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates... Zone: East (km): **See pg. 7** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **N/A**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Mineral Products : Coal Cleaning : Material Handling : Crushing**		
2. Source Classification Code (SCC): **3-05-010-10**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **18.7, avg.**	5. Maximum Annual Rate: **163,408**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **26**
10. Segment Comment: **1 ton coal/26 mmBtu x 485 mmBtu/hr = 18.7 ton/hr** **@8760 hr/yr = 163,408 tons/yr** **Rates are 30-day average**		

Segment Description and Rate: Segment N/A of N/A

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:		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment N/A of N/A

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:		

Segment Description and Rate: Segment N/A of N/A

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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**018**	**None**	**EL**
PM_{10}	**018**	**None**	**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **2.27** lb/hour **9.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.01 grains per actual cubic foot** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **26,500 acfm x 0.01 gr/acf x 1.0 pound/7000 grains x 60 min./hr = 2.27 lb/hr @ 8760 hr/yr = 9.9 tons/year**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emissions from EU 020 ; coal mill with two emission points. Emissions will remain unchanged.**	

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: **N/A**
3. Allowable Emissions and Units: **0.01 grains per actual cubic foot**	4. Equivalent Allowable Emissions: **2.27** lb/hour **9.9** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **99+%**
3. Potential Emissions: **1.93** lb/hour **8.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **0.0085 grains per actual cubic foot** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **26,500 acfm x 0.0085 gr/acf x 1.0 pound/grains x 60 min/hr = 1.93 lb/hr @ 8760 hr/yr = 8.5 tons/yr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emissions from EU 020 ; coal mill with two emission points. Emissions will remain unchanged.**	

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: **N/A**
3. Allowable Emissions and Units: **0.0085 grains per actual cubic foot**	4. Equivalent Allowable Emissions: **1.93** lb/hour **8.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: [X] Rule [ ] Other
3. Allowable Opacity: **5 %** Normal Conditions: **0 %** Exceptional Conditions: **5 %** Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Method 9**	
5. Visible Emissions Comment: **This opacity limitation is more stringent than NSPS.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Method 9**	
5. Visible Emissions Comment: **40 CFR 60.252(c)—Coal processing and conveying equipment, coal storage system, coal transfer and loading system.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **TEMP**	2. Pollutant(s): **N/A**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Unknown** Model Number: **Unknown**	Serial Number: **Unknown**
5. Installation Date: **2000**	6. Performance Specification Test Date: **9/2002**
7. Continuous Monitor Comment: **40 CFR 60.253(a)(1)**	

Continuous Monitoring System: Continuous Monitor N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **N/A** of **N/A**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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 **N/A** of **N/A**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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] of [4] [020: Coal Mill 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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date **N/A**

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: **9/2002**
   Test Date(s)/Pollutant(s) Tested: **TEMP**
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ 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
   ☐ Attached, Document ID: _____ ☒ Not Applicable

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))
   ☐ Attached, Document ID: _____ ☒ 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.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: **N/A**
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

Additional Requirements Comment

None.

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] of [4] [025: Facility-Wide Fugitives]
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:
Facility Wide Fugitive Emissions

3. Emissions Unit Identification Number: **025**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	N/A	2000	32	☐ Yes ☒ No

9. Package Unit: **N/A**
Manufacturer: **N/A** Model Number: **N/A**

10. Generator Nameplate Rating: **N/A** MW

11. Emissions Unit Comment:
This emissions unit represents facility-wide fugitve emissions from :

- **RawMaterial Storage Handling**
- **Clinker Storage and Handling**
- **Vehicle Traffic onPaved and Unpaved Roads**
- **Wind Erosion from Stockpiles**
- **Mining and Quarrying Activities : Including Land Clearing, Drilling Blasting**
- **Maintenance Activities : Including Maintenance Painting, Parts Cleaning, Welding**
- **Diesel Engines**
- **Sand and Media Blasting for Maintenance Paintings**
- **Emergency Generators**
- **Railcar Traffic**
- **Fugitive Emissions from Other Emission Units**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
Emissions minimized by management practices.

2. Control Device or Method Code(s): **N/A**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **N/A**
2. Maximum Production Rate: **1,419,120 tpy clinker**
3. Maximum Heat Input Rate: **N/A** million Btu/hr
4. Maximum Incineration Rate: **N/A** pounds/hr **N/A** tons/day
5. Requested Maximum Operating Schedule: hours/day days/week weeks/year **8760** hours/year
6. Operating Capacity/Schedule Comment: **Fugitive PM and PM_{10} emissions are presumed to be proportional to annual clinker production.**

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: **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **F**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **5-20** feet	
13. Emission Point UTM Coordinates... Zone: East (km): **See Pg. 7** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Multiple sources of PM and PM_{10} emissions.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Mineral Products : Fugitive Emissions : Process—See Comments Field**		
2. Source Classification Code (SCC): **3-05-888-01**	3. SCC Units: **Tons Product (Clinker)**	
4. Maximum Hourly Rate: **162**	5. Maximum Annual Rate: **1,419,120**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**

10. Segment Comment:
This segment represents facility-wide fugitive emissions related to the production of cement, from:

- **RawMaterial Storage Handling**
- **Clinker Storage and Handling**
- **Vehicle Traffic onPaved and Unpaved Roads**
- **Wind Erosion from Stockpiles**
- **Mining and Quarrying Activities : Including Land Clearing, Drilling Blasting**
- **Maintenance Activities : Including Maintenance Painting, Parts Cleaning, Welding**
- **Diesel Engines**
- **Sand and Media Blasting for Maintenance Paintings**
- **Emergency Generators**
- **Railcar Traffic**
- **Fugitive Emissions from Other Emission Units**

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Mineral Products : Cement Manufacturing : Dry Process ; Preheater/Precalciner Kilns**		
2. Source Classification Code (SCC): **3-05-006-23**	3. SCC Units: **Tons Processed (Clinker)**	
4. Maximum Hourly Rate: **162**	5. Maximum Annual Rate: **1,419,120**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment: **Fugitive PM and PM_{10} emissions presumed proportional to clinker production.**		

Segment Description and Rate: Segment N/A of N/A

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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**(1)**	**None**	**NS**
PM_{10}	**(1)**	**None**	**NS**
(1) Emissions controlled by management practices			

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: **N/A**
3. Potential Emissions: **8.6** lb/hour **37.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **N/A** Reference: **Permit No 0250014-002-AC**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **PM emissions at 1,200,120 tpy clinker=31.9 tpy** **PM emissions at 1,419,120 tpy clinker** **= 1,419,120/1,200,120 x 31.9=37.7 tpy** **@ 8760 hr/yr=8.6 lb/hr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **N/A**	

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: **N/A**
3. Allowable Emissions and Units: **37.7 tpy**	4. Equivalent Allowable Emissions: **8.6** lb/hour **37.7** tons/year
5. Method of Compliance: **EPA Method 22**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **3.0** lb/hour **13.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **N/A** Reference: **Permit No 0250014-002-AC**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **35% of PM emissions** **=37.7 tpy x 0.35** **=13.2 tpy** **@ 8760 hr/yr=3.0 lb/hr**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **N/A**	

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: **N/A**
3. Allowable Emissions and Units: **13.2 tpy**	4. Equivalent Allowable Emissions: **3.0** lb/hour **13.2** tons/year
5. Method of Compliance: **EPA Method 22**	
6. Allowable Emissions Comment (Description of Operating Method): **N/A**	

Allowable Emissions Allowable Emissions N/A of N/A

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 N/A of N/A

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):	

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: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: **20 %** Normal Conditions: **0 %** Exceptional Conditions: **20 %** Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 22**	
5. Visible Emissions Comment: **VE from multiple fugitive PM and PM_{10} sources.**	

Visible Emissions Limitation: Visible Emissions Limitation N/A of N/A

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **N/A** of **N/A**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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 **N/A** of **N/A**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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 N/A of N/A

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **Unknown**

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)
   ☐ Attached, Document ID: **N/A** ☐ 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)
   ☐ Attached, Document ID: **N/A** ☐ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ 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
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [4] of [4] [025: Facility-Wide Fugitives]

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))
   ☐ Attached, Document ID: _____ ☒ 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.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: N/A
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

Additional Requirements Comment

None.

Attachment 001

Project Description

Rinker Materials Corporation (Rinker) operates a preheater/precalciner Portland cement plant in Miami, Dade County, Florida. The plant is permitted for a clinker production rate of 137 tons per hour and a corresponding preheater feed rate of 220 tons per hour; both on a 24-hour basis. The heat input rate to the plant is limited by permit to 437 mmBTU per hour (3.2 mmBTU per ton of clinker). The permitted fuels for the plant include coal, petroleum coke, natural gas, LP gas, distillate and residual fuel oils, on-specification and off-specification used oil, and various non-hazardous solid wastes. Rinker has gained operational experience with the plant and has recognized that the plant is capable of producing more than 137 tons per hour of clinker, 24-hour average. Rinker applied to the Department for authorization to conduct short-term production rate tests to evaluate the true production rate capacity of the plant. The approval was initially authorized by Permit 0250014-011-AC. This permit granted Rinker a 60-day period to conduct the necessary testing. Rinker has reapplied to the Department for authorization to extend the production rate test period through October 31, 2004. This request is pending.

Based upon the information Rinker has developed to this point in time, the company is proceeding with this permit application to permanently increase the clinker production rate to 162 tons per hour, to increase the preheater feed rate to 267 tons per hour, and to increase the heat input to the plant to 485 mmBTU per hour (3.0 mmBTU per ton of clinker). The fuels requested by Rinker are the same as those presently permitted.

To confirm the feasibility of permitting the existing plant for a clinker production rate of 162 tons per hour and a preheater feed rate of 267 tons per hour, Rinker is providing an independent, third-party opinion confirming that the plant is capable of such rates. This letter is included as Attachment 003.

Rinker does recognize that in order to burn some of the permitted solid waste fuels, a modification to the plant may be required. If such modification is required, Rinker recognizes that a separate Air Construction Permit will be required from the Department. No such fuel firing related modification is included as part of this Air Construction Permit Application.

Rinker has evaluated the feasibility of operating at a higher production rate during the short-term production rate test period that the Department has authorized. During this test period, Rinker has evaluated operating at sustained preheater feed rates of 245 tons per hour and 250 tons per hour. Operating at these rates has included an evaluation of the fineness target for raw meal in order to increase the raw mill production capacity and an evaluation of the feed chemistry necessary to maintain cement quality while operating at higher production rates. Rinker will continue to evaluate the factors that will lead to higher production rates under the extension to the short-term production rate tests that is now pending with the Department and under the permit issued as a result of this application.

Rinker does not foresee increasing the capacity of the raw mill to achieve higher production rates. Thus, an increase in the raw mill production capacity is not a subject of this application. Additionally, Rinker does not anticipate increasing the capacity of the coal mill for grinding either by bituminous coal or petroleum coke to achieve the increased heat input rate necessary to operate at the higher production capacity. Furthermore, Rinker does not anticipate the necessity to make changes to the kiln or calciner burners to fire any of the additional fuels required to achieve the higher heat input rates. Thus, modifications to the coal mill and burner systems are not a subject of this application.

The one matter that Rinker has recognized that may be necessary to achieve and sustain higher production rates is to overcome a problem with the main baghouse fan; the baghouse exhausting the kiln, raw mill, and clinker cooler. This fan was designed and installed to operate at 900 rpm. It was found during the short-term production tests, however, that the fan has a resonance problem that begins at a fan speed of approximately 850 rpm. It is anticipated that a replacement of the fan or fan wheel may be necessary in order to achieve the designed fan speed of 900 rpm. Rinker is of the opinion that the replacement of the fan or fan wheel is not a modification, but is more properly classified as the replacement of a defective piece of equipment with a like-kind piece of equipment without a defect. Rinker is notifying the Department of this possible

action and requests that this potential project be addressed as a non-permittable maintenance project in the permit to be issued.

Another project Rinker may elect to undertake potentially related to the requested production rate increase is the injection of high carbon (in the range 40-50 percent carbon) fly ash directly into the precalciner. Fly ash is used in the raw meal mix as a source of aluminum and perhaps other constituents necessary to produce the targeted raw feed chemistry. There appears to be a trend toward increasing carbon levels in fly ash as power plants work to reduce NOx and mercury emissions. The inclusion of this high carbon fly ash in the raw meal and the introduction of this meal into the preheater could lead to an increase in carbon monoxide (CO) and possibly THC emissions as the temperature of the raw meal increases during its passage down the preheater. To eliminate the potential for increases in CO and THC emissions while utilizing a by-product of the electric power industry, some cement plants have begun introducing the high carbon fly ash directly into the precalciner, thus bypassing the preheater tower.

With the high carbon fly ash injected directly into the precalciner, the carbon will burn as a precalciner fuel while the inorganic fraction of the fly ash will mix with the preheater feed and enter the kiln.

To monitor the total material input rate to the pyroprocessing system in order to develop an appropriate factor for determining clinker production, the preheater

feed (minus the fly ash) will be determined as it now is and a LOI (Loss on Ignition) factor will be determined for the preheater feed (without the fly ash). The fly ash fed to the precalciner will be monitored and recorded and a LOI factor will be established for the fly ash. The total clinker production will be determined as a function of the preheater feed multiplied by the LOI for the preheater feed plus the fly ash feed multiplied by the LOI factor for the fly ash.

The carbon content of the fly ash (the LOI fraction) will be accounted for as fuel to the precalciner and included in the calculation of the total heat input to the pyroprocessing system.

This proposed fly ash injection project may or may not be immediately exercised by Rinker. Authorization of the project is requested, however, within the Air Construction Permit that will be issued based on this permit application. The project is not expected to significantly affect emissions and will not affect or change the emissions proposed for this project and included in the emission netting calculations.

Regarding changes in regulated air pollutants from the plant and air pollutants not previously emitted, the netting calculations presented in Attachment 002 demonstrate that there will be no significant increases, as defined by Table 212.400-2, F.A.C., in pollutants presently regulated. Furthermore, there will be no pollutants emitted from the plant that are not presently emitted.

The netting calculations were begun with the netting summary documented by Permit 0250014-002-AC. Since that time, Rinker was issued Permit 008-AC which resulted in an increase in VOC emissions from the plant and Permit 010-AC which resulted in an increase in PM and PM10 emissions from the plant. The VOC increase required a BACT Determination which is part of Permit 008-AC.

As a part of this Air Construction Permit Application for the production rate increase, Rinker is proposing reductions in the emission rates of PM/PM10, SO_2 and NOx and less than significant increases in the emission rates of CO, VOC, sulfuric acid mist (SAM), mercury and lead.

The netting summary of contemporaneous increases and decreases in pollutant emission rates is presented in Attachment 002. This summary demonstrates that the proposed project will result in a net decrease in the emission rates of PM (170.6 tpy), SO_2 (1093.2 tpy), NOx (90.3 tpy), and SAM (7.6 tpy). There will be net increases in the emission rate of PM10 (0.1 tpy), CO (96.2 tpy), VOC (13.0 tpy), mercury (198.7 lb/yr), and lead (125.7 lb/yr). None of the emission rate increases are significant as defined by Table 212.400-2, F.A.C.

Attachment 002

Air Pollutant Netting Calculations

NETTING CALCULATIONS

- The netting calculations begin with data from Permit 0250014-002-AC, issued 9/11/97, for the Rinker Miami Cement Plant Modernization.

- Increases in emissions since 9/11/97 include:

Pollutant	Permit	Date	Emission Increase (tpy)		
			From	To	Increase
VOC (1)	008-AC	3/1/02	60.0	72.0	12.0(2)
PM (3)	010-AC	11/5/03	0.6	12.6	12.0
PM10 (3)	010-AC	11/5/03	0.5	10.7	10.2

(1) Increase the VOC limit of the kiln/raw-mill from 0.10 lb/ton clinker to 0.12 lb/ton clinker.

(2) A BACT determination was made for this increase. See Permit 0250014-008-AC.

(3) Increase the PM and PM10 emission limit of Finish Mills Nos. 4 and 5.

- Decreases in emissions since 9/11/97 – None.

- Emission changes associates with this proposed production rate increase:

Emission Unit	Pollutant	Emission Increase/Decrease (tpy)		
		From	To	Net Change
017 – Raw Materials Hndl.	PM		(1)	- 0 -
	PM10		(1)	- 0 -
018 – Kiln/RM/Cooler	PM	192.8	166.7	-25.1 (2)
	PM10	163.8	141.9	-21.9 (3)
	SO_2	1340.0	354.8	-985.2 (4)
	NOx	2940.3	2838.2	-102.1 (5)
	CO	1806.2	1844.8	+38.6 (6)
	VOC	72.0	85.0	+13.0 (7)
	SAM	8.4	14.2	+5.8 (8)
	HG	28.0 lb/yr	198.7 lb/yr	+170.7 lb/yr (9)
	PB	90.0 lb/yr	425.7 lb/yr	+335.7 lb/yr (10)
020 – Coal Mill	PM		(1)	- 0 -
	PM10		(1)	- 0 -
025 - Fugitive	PM	31.9	37.7	+5.8 (11)
	PM10	11.2	13.2	+2.0 (12)

(1) No change in emissions. PM and PM10 emissions are functions of flow rate of baghouse fan (CFM), the PM/PM10 discharge concentrations (0.10/0.085 gr/ft^3) and operating time (8760 hr/yr). None of these will change as a result of the proposed production rate increase.

(2) PM emissions reduced from 0.20 lb/ton feed (0.33 lb/ton clinker) and 192.8 tpy to 0.235 lb/ton clinker and 166.7 tpy.

(3) PM10 emissions reduced from 0.17 lb/ton feed (0.28 lb/ton clinker) and 163.8 tpy to 0.20 lb/ton clinker and 141.9 tpy.

(4) SO_2 emissions reduced from 2.23 lb/ton clinker and 1340.0 tpy to 0.50 lb/ton clinker and 354.8 tpy.

(5) NOx emissions reduced from 4.90 lb/ton clinker and 2940.3 tpy to 4.00 lb/ton clinker and 2838.2 tpy.

(6) CO emissions change from 3.01 lb/ton clinker and 1806.2 tpy to 2.60 lb/ton clinker and 1844.8 tpy.

(7) VOC emissions change from 0.12 lb/ton clinker and 72.0 tpy to 0.12 lb/ton clinker and 85.0 tpy.

(8) SAM emissions increase from 0.014 lb/ton clinker and 8.4 tpy to 0.020 lb/ton clinker and 14.2 tpy. Note, that at 14.2 tpy the SAM emissions increase net out to less than 7 tpy; the SAM significance level.

(9) Mercury emissions increase from 2.4E – 05 lb/ton clinker and 28 lb/yr to 14.0E-05 lb/ton clinker and 198.7 lb/yr. Note, the proposed mercury emission limit is less than 200 lb/yr; the mercury significance level.

(10) Lead emissions increase from 7.5E – 05 lb/ton clinker and 90.0 lb/yr to 30.0E – 05 lb/ton clinker and 425.7 lb/yr. Note, the proposed lead emission limit is less than 1200 lb/yr; the lead significance level.

(11) Fugitive PM emissions are presumed proportional to clinker production. At 1,200,120 tpy clinker, fugitive PM emissions are 31.9 tpy (0250014-0020-AC). At the proposed production rate of 1,419,120 tpy clinker, the fugitive PM emissions will be 37.7 tpy.

(12) Fugitive PM10 emissions are presumed proportional to clinker production. At 1,200,120 tpy clinker, fugitive PM10 emissions are 11.2 tpy (35% of the PM emissions) (0250014-0020-AC). At the proposed production rate of 1,419,120 tpy clinker, the fugitive PM10 emissions will be 13.2 tpy.

- Netting Summary (tons/year)

Pollutant	Permit 002-AC	Permit 008-AC	Permit 010-AC	Proposed Changes	Net Change	PSD Sign	PSD Triggered (?)
PM	-163.3	0	12.0	-19.3 (2)	-170.6	25	No
PM10	9.8	0	10.2	-19.9 (2)	0.1	15	No
SO_2	-108.0	0	0	-985.2	-1093.2	40	No
NOx	11.8	0	0	-102.1	-90.3	40	No
CO	57.6	0	0	38.6	96.2	100	No
VOC	32.9	12.0 (1)	0	13.0	13.0 (3)	40	No
SAM	-13.4	0	0	5.8	-7.6	7	No
HG	28.0 lb/yr	0	0	170.7 lb/yr	198.7 lb/yr	200 lb/yr	No
PB	90.0 lb/yr	0	0	335.7 lb/yr	425.7 lb/yr	1200 lb/yr	No
DIOX	NA	0	0	(4)	(4)	NA	No

(1) PSD triggered and BACT analysis conducted

(2) Sum of changes in Kiln/RM/Cooler emissions and Fugitive emissions

(3) Increase since last BACT determination (008-AC)

(4) DIOX emission limit will continue to be the concentration based emission limit established by the NESHAP for Portland Cement Plants.

Attachment 003

Plant Capacity Verification

To be provided under separate cover.

Department of
Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

October 11, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Ed Allsopp
Vice President of Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

Re: DEP File No. 0250014-016-AC
Miami Cement Plant

Dear Mr. Allsopp:

The Department received your request, submitted through Koogler and Associates, to permanently increase the feed rate and clinker production rate at the Miami Cement Plant. The Department has determined that the application is incomplete and requires the submittal of additional information as described below.

The plant is still operating under the temporary permit to conduct testing until October 31, 2004 at feed rates and production rates up to 260 and 162 tons per hour (TPH) respectively on a 24-hour basis. Beyond that date, feed and production will revert to the values authorized in the present Title V Air Operation Permit of 220 and 137 TPH respectively on a 24-hour basis. We have since received a request to extend the test period and are reviewing that request.

We appreciated the opportunity to meet with environmental and plant personnel on October 7 to discuss the status of the request for the permanent increase and the conditions of the temporary capacity test permit. On October 11, we received the reports for the stack tests conducted while 245 TPH were fed to the pyroprocessing system on a short term basis and while approximately 147 TPH of clinker were produced. We are reviewing those reports.

Following are the items required to process the permanent production increase application.

1. Satisfaction of Specific Condition 18 of Permit 0250014-014-AC (Capacity Test Permit) which reads:

   Final Report: Within 90 days of the permit expiration date, the permittee shall submit a technical report summarizing the following: a description of the production capacity test; pollutant emissions when operating at higher rates; ambient conditions during each test; feed rates; and heat input rates. The final report shall also detail any operational problems as well as mechanical, electrical, structural, and process limitations identified during the course of the test.

A tab was included in the application for a "Plant Capacity Verification" to be provided as Attachment 003. Rinker is still conducting testing and may not yet have prepared such a report. This is the kind of information that will allow Rinker and the Department to determine whether or not the engineering features of the existing pyroprocessing system will allow continued operation at the requested rate while still meeting all air pollution emission limits.

[Basis is: Permit 0250014-014-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]

2. Satisfaction of Specific Condition 19 of Capacity Test Permit which reads:

*Future Permit Requests: **Any future applications for permanent production** increases shall include an engineering report describing the full capability of the kiln to sustain the requested production rates while meeting proposed emission rates. The report shall be sealed by professional engineers or other experts as appropriate in structural, mechanical, electrical, process, and environmental disciplines. A single report from the kiln manufacturer would suffice to fulfill this requirement. (Emphasis added)*

This also relates to the blank Attachment 003. Again, since Rinker is still testing, the report may not yet have been prepared. However submittal of this report is a requirement for evaluation of the permanent production increase application. We did receive a statement from Rinker that was prepared by the kiln manufacturer that reads:

"The kiln has already been producing clinker at its authorized limit of 3288 short tons per day (137 TPH average). Although this is well above the rated capacity of 2755 STPD (115 TPH average), F.L. Smidth provides for additional capacity above and beyond the guarantees provided by the manufacturer. F.L. Smidth provides reasonable assurance that the kiln system can physically produce substantially more clinker than allowed by the present production limitations. Apart from the inherent "overdesign" of the original configuration, F.L. Smidth provides reasonable assurance that the kiln system is physically capable of being fed at a preheater feed rate of up to 267 short tons per hour without major structural failure of the kiln, cooler and preheater proper."

This statement does not fulfill the requirements of an engineering report and did not address electrical and process features. It did not, for example, address adequacy of the raw mill with respect to grinding enough raw material to allow continuous feed to the pyroprocessing system of 267 TPH or the capability of the induced draft fan, etc. The Department must evaluate this information to determine if sustained operations at the requested operating rate will allow continuous compliance with air pollution emission limits. In addition, any necessary physical projects required to sustain operations and emission limits could be authorized by the requested construction permit and not unnecessarily trigger another permitting review.

[Basis is: Permit 0250014-014-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]

3. Submission of five year contemporaneous emission calculations.

   This relates to the information submitted in Attachment 002 as "Air Pollution Netting Calculations". The original permit issued in 1997 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. The production increase application relies on a comparison of past permitted emissions to future permitted emissions which will be reduced. However this procedure is not applicable to all of the pollutants. Updated contemporaneous emission calculations are required based on reductions and increases from 2000 to 2004, inclusive.

   [Basis is: 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 Tom Cascio at 850/921-9526.

Sincerely,

A. A. Linero, Program Administrator
South Permitting Section

Cc: John Koogler, P.E.
Mike Vardeman, Rinker
H. Patrick Wong, Miami-Dade-DERM

7000 1670 0013 3109 8680

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CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
City, State, ZIP+4
Miami, Florida 33182

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1. Article Addressed to:

Mr. Ed Allsopp
Vice President of Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* SHARON FERREIRA — C. Date of Delivery 10/14/04

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1. Article Addressed to:

Mr. Ed Allsopp, V.P., Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

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A. Signature
X [signature] ☐ Agent ☐ Addressee

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Sent To Mr. Ed Allsopp, V.P., Cement Operations
CSR Rinker Materials Corporation
Street, Apt. No.; or PO Box No. 1200 Northwest 137th Avenue
City, State, ZIP+4 Miami, Florida 33182

PS Form 3800, May 2000 See Reverse for Instructions

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSR RINKER MATERIALS CORPORATION
MIAMI CEMENT PLANT
MIAMI-DADE COUNTY
DEP FILE NOS. 0250014-016-AC (PSD-FL-324A)

The Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to CSR Rinker Materials Corporation (Rinker) to increase production at the Miami Cement Plant. A review under the rules for the Prevention of Significant Deterioration of Air Quality (PSD) and a Best Available Control Technology (BACT) determination were not required. The applicant's name and address are CSR Rinker Materials Corporation, 1200 Northwest 137th Avenue, Miami, Florida 33182.

In 2000 Rinker replaced two wet process cement kilns and associated clinker coolers having an annual capacity of 650,000 tons per year (TPY) of clinker with a single dry process coal and petroleum coke-fired kiln with preheater, calciner, and clinker cooler with an annual capacity of 1,200,000 TPY. Rinker requests an increase in its hourly clinker production limit from 137 tons per hour (TPH) averaged over 24 hours to a peak production rate of 162 TPH. Rinker requests an increase in the annual clinker production to 1,300,000 TPY.

Pollution control equipment consists of a common fabric filter system (baghouse) for particulate emissions from the kiln and cooler; absorption of sulfur compounds and metals into the product; combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a Low NO_X calciner for NO_x; and baghouses for particulate emissions from other process emission units.

Although the capacity of the plant was increased and will further increase, actual and potential emissions of most pollutants will either decrease or will not increase significantly with respect to PSD 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 rather than the wet process. This is because there is no need to make raw material slurry and then evaporate the water. The preheater/calciner 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.

Following are the net emission increases and decreases over a contemporaneous five year period that includes the shutdown of the wet process kilns, startup of the new kiln and the requested production increase of the new kiln.

Pollutant	Increases Dry Process at Proposed Capacity	Decreases Wet Process Actual Emissions	Net Emission Increases (Decreases)	PSD Significant Emission Rate
PM	163	165	(2)	25
PM_{10}	130	140	(10)	15
SO_2	425	1383	(1058)	40
NO_x	2600	2571	29	40
CO	1827	1735	92	100
VOC	78	47	31	40
H_2SO_4	13	13.4	- 0	7
Hg	0.09	Assumed 0	<0.09	0.1
Pb	0.195	Assumed 0	<0.195	0.6

A PSD Review and BACT determination is not required because the net emission increases are less than the respective significant emission rates for all pollutants except for VOC. The Department conducted a BACT determination for VOC in 2002. The limit is 0.12 pounds of VOC per ton of clinker. A new BACT determination is not required. The present VOC BACT limit is low compared with recent BACT determinations for new kilns throughout the country. It is also much lower than the cement industry Maximum Achievable Control Technology (MACT) standard of approximately 0.3 pounds per ton applicable to new kilns at new sites.

Emission tests were authorized by the Department and conducted by Rinker at greater operating rates than currently permitted. One of the key finding is that SO_2 emissions are very low. Another is that NO_X emissions are fairly constant in terms of pounds per hour at production rates between 100 and 150 TPH. NO_X emissions in terms of pounds per ton of clinker are lower at production rates between 133 and 150 TPH than at production rates between 100 and 132 TPH. CO emissions will increase with increased production. NO_X, SO_2, VOC and visible emissions will be monitored by continuous emission monitoring systems (CEMS) at the stack. Set points will be adjusted by Rinker for an existing process CO monitor in the preheater so that a control room electronic alarm will be triggered when short-term CO concentrations at the preheater approach values equivalent to the allowable emission limits at the stack.

Additional changes allowed by the permit include introduction of fly ash directly into the calciner, replacement of an induced draft fan, and replacement of certain other minor equipment to more reliably achieve the requested production rate.

The Department will issue the FINAL Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) 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:

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

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- 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. Ed Allsopp
Vice President of Cement Operations
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Kelly Gilliard C. Date of Delivery 12-17-07

D. Is delivery address different from item 1? ☐ Yes
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Vice President of Cement Operations
Street, Apt. No. or PO Box No.
CSR Rinker Materials Corporation
1200 Northwest 137th Avenue
City, State, ZIP+4
Miami, Florida 33182

PS Form 3800, May 2000 See Reverse for Instructions