

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 23, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James S. Jenkins III
Vice President of Cement Operations
Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

Re: DRAFT Permit No. 0250014-002-AC
Rinker Materials Corporation Portland Cement Plant Modernization Project


Dear Mr. Jenkins:

Enclosed is one copy of the Draft Air Construction Permit for the Rinker Materials Corporation Cement Plant located at 1200 Northwest 137th Avenue in Miami, Dade County. The Technical Evaluation and Preliminary Determination, the Department's Intent to Issue Air Construction Permit, and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" must be published within 30 (thirty) days of receipt of this letter. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Ms. Teresa Heron or Mr. Linero at 904/488-1344.

Sincerely,


for C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/th/t

Enclosures

In the Matter of an
Application for Permit by:

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

DRAFT Permit No.: 0250014-002-AC
FID No. 0250014
Miami Portland Cement Facility
Dade County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

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

The applicant, Rinker Materials Corporation (RMC), applied on December 4, 1996, to the Department for an air construction permit to convert its cement plant from the wet process to the dry process with preheater and precalciner at its facility located at 1200 NW 137th Avenue in Miami, Dade County.

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

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

Pursuant to Section 403.815, F.S., and Rule 62-103.150, 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 one time only within 30 (thirty) days in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. 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: 904/488-1344; Fax 904/ 922-6979) within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-103.150 (6), F.A.C.

The Department will issue the FINAL Permit, in accordance with the conditions of the enclosed DRAFT Permit 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 DRAFT Permit issuance action for a period of 14 (fourteen) 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, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT 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., or a party requests mediation as an alternative remedy under Section 120.573 F.S. before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing are set forth below, followed by the procedures for requesting mediation.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9730, fax: 904/487-4938. Petitions 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. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition (or a request for mediation, as discussed below) within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the 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 person whose substantial interests are affected by the Department's proposed permitting decision, may elect to pursue mediation by asking all parties to the proceeding to agree to such mediation and by filing with the Department a request for mediation and the written agreement of all such parties to mediate the dispute. The request and agreement must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

A request for mediation must contain the following information: (a) The name, address, and telephone number of the person requesting mediation and that person's representative, if any; (b) A statement of the preliminary agency action; (c) A statement of the relief sought; and (d) Either an explanation of how the requester's substantial interests will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that the requester has already filed, and incorporating it by reference.

The agreement to mediate must include the following: (a) The names, addresses, and telephone numbers of any persons who may attend the mediation; (b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time; (c) The agreed allocation of the costs and fees associated with the mediation; (d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation; (e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen; (f) The name of each party's representative who shall have authority to settle or recommend settlement; and (g) The signatures of all parties or their authorized representatives.

As provided in Section 120.573 F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57 F.S. for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57 F.S. remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.


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. 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 EIA 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.


for C. H. Fancy, P.E., 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, Draft BACT Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 6-24-97 to the person(s) listed:

James S. Jenkins, III, RMC *
Brian Beals, EPA
John Bunyak, NPS
John Koogler, P.E.
Ewart L. Anderson, DERM
Isidore Goldman, SED

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


(Clerk) 6-24-97
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit No. 0250014-002-AC
Rinker Materials Corporation
Dade County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Rinker Materials Corporation (RMC) for a modernization project at its cement manufacturing facility located at 1200 Northwest 137th Avenue in Miami, Dade County. A Best Available Control Technology (BACT) determination and a PSD review were not required pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The applicant's name and address are: Rinker Materials Corporation, 1200 Northwest 137th Avenue in Miami, Dade County, Florida

The proposed project consists of replacement of 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, precalciner, and clinker cooler with an annual capacity of 1,200,000 TPY. Other equipment to be replaced or added includes primary crusher, raw material handling system, raw mill and raw meal handling and storage, clinker handling and storage equipment, finish mill, and a coal and petroleum coke preparation system. Fuels and materials previously approved for use under their existing permits include coal, gas, fuel oil, used oil, tires and solid waste. This draft permit also specifies burning of oil filters, booms and rags from spill cleanup, unused diapers, paper products, non-chlorinated plastic wastes, and sewage sludge from publicly-owned treatment works within the scope of solid waste.

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 other combustion controls for NO_x; and baghouses for particulate emissions from other process emission units.

Although the capacity of the plant will increase, actual and potential emissions of most pollutants will either decrease or will not increase significantly with respect to PSD. 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 a raw material slurry and then evaporate the water. The preheater/precalciner technology offers better combustion control of the process. New and better baghouses will be installed.

Total emissions of PSD criteria pollutants shall not exceed the following limits in tons per year:

<u>Pollutant</u>	<u>Maximum Emissions</u>	<u>Net Emissions Change</u>	<u>PSD Significant Emission Rate</u>
PM	353	-163.3	25
PM ₁₀	285	9.8	15
SO ₂	1340	-108.0	40
NO _x	2970	11.8	40
CO	1807	57.6	100
VOC	60	32.9	40
H ₂ SO ₄	8.4	-13.4	7
Hg	<0.056	<0	0.1
Pb	<0.18	<0	0.6
Be	0.0004	0.0002	0.0004

Based on review of actual emission data from similar plants in Florida, the Department projects that emissions of SO₂ and NO_x will be significantly lower than the maximum values given above. In addition to the required continuous opacity monitor, RMC has agreed to install continuous emission monitors for SO₂ and NO_x as well as process monitors to insure good combustion practices are followed at all times.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit 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 DRAFT Permit issuance action for a period of 30 (thirty) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The Department will issue FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. or a party requests mediation as an alternative remedy under Section 120.573 before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing are set forth below, followed by the procedures for requesting mediation.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions 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. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition (or a request for mediation, as discussed below) within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

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As provided in Section 120.573 F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57 F.S. for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57 F.S. remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

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: 904/488-1344
Fax: 904/922-6979

Dade County Department of
Environmental Resources Mgt.
Suite 900
33 Southwest Second Avenue
Miami, Florida 33130-1540
Telephone: 305/372-6925
Fax: 305/372-6954

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

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, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

RINKER MATERIALS CORPORATION
MIAMI, DADE COUNTY, FLORIDA

Portland Cement Manufacturing Facility
Modernization and Expansion Project

Permit No. 0250014-002-AC

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

June 23, 1997

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

Permit No. 0250014-002-AC
Facility ID No.: 0250014

I. APPLICANT NAME AND ADDRESS

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

II. FACILITY INFORMATION

A. FACILITY LOCATION

Rinker Materials Corporation (RMC) plans to modernize the existing Miami Cement plant by replacing the wet -process cement plant with a 1.2 million TPY clinker dry-process cement production line [137 ton of clinker per hour (TPH)] at its existing Miami cement facility.

This site is approximately 8.2 kilometers to the Everglades National Park, a Class I PSD Area, and in an ozone (O₃) maintenance areas in Dade County. The USGS Hialeah SW quadrangle map, and a map of the Everglades National Park were compared. The northeast corner of the Park, bounded by U.S. 41 to the North and Levee No.31N to the east, is the nearest point to the Rinker facility. The UTM coordinates of this facility are Zone 17, 558.20 East and 2851.20 km North.

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 Materials Corporation facility is classified as a major air pollutant emitting facility. As proposed, the revised project is not subject to New Source Review including provisions for the Prevention of Significant Deterioration of air quality (PSD) because the proposed modernized plant will result in less air pollution than the existing plant. This is primarily due to the lower fuel requirements per unit of product characteristic of the dry processes. Although there will be an increase in cement production capacity as a result of the proposed project, there will be a reduction in the emissions of most air pollutants.

Emissions decreases or less than significant increases with respect to PSD are expected for the following pollutants in tons per year (TPY): -108 TPY of sulfur dioxide (SO₂), +11.8 TPY of nitrogen oxides (NO_x), +9.8 TPY of particulate matter (PM), -163.3 TPY of particulate matter smaller than 10 microns (PM₁₀), +57.6 TPY of carbon monoxide (CO), +32.9 TPY of volatile organic compounds (VOC), and -13.4 TPY of sulfuric acid mist (SO₃). Slight reductions or insignificant increases are also expected in emissions of lead (Pb), mercury (Hg), and beryllium (Be).

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

Permit No. 0250014-002-AC
Facility ID No.: 0250014

III. PROJECT DESCRIPTION

RMC is applying for a permit to modify the existing wet process plant by incorporating the modern dry process technology including a preheater and precalciner along with indirect firing. The dry process preheater/precalciner (PH/PC) kiln is the most fuel efficient cement pyroprocessing technology currently available. Thermal efficiencies will be improved with the PH/PC kiln and the amount of fuel combusted per ton of clinker produced is expected to be reduced

The proposed modernized cement plant will be designed to produce up to 137 TPH of clinker (highest maintained rate over a day). The annual potential production rate will not exceed 1.2 million TPY of clinker. The major equipment will include a PH/PC kiln, a clinker cooler, raw mill, finish mill, silos, conveyers, and particulate control/dust collection and recycling equipment. The cement product will be stored in silos and shipped in bags or in bulk by rail or truck.

The currently permitted Rinker facility consists of a quarry, limestone crushing system, material receiving facilities both by rail and truck, open short-term material storage piles, a storage building for intermediate raw material and clinker storage, a soil dryer, two raw mills, kiln feed slurry system, two kilns, two coolers, five finish mills, four pack houses, thirty cement silos, a rail and truck bulk loadout facility, and, a liquid fuel tank farm.

The proposed plant modernization will include limestone crushing, limestone premixing and storage, raw grinding, blending and kiln feed, pyroprocessing, clinker storage, coal grinding, and additional finish mill and cement transport to existing silos. The existing quarry operation, soil dryer, five finish mills, packhouses, and , cement silos will remain in operation.

Equipment changes resulting from the change in kiln technology and plant modernization consist of the following:

- A new primary crushing facility will be constructed.
- A new raw materials handling system
- A new raw mill system and new raw meal handling and storage equipment will be constructed
- The existing two wet process cement kiln will be replaced with a single dry process kiln with a preheater and a precalciner
- The existing two clinker coolers will be replaced with a new single clinker cooler
- New clinker handling and storage equipment will be constructed
- A new coal/coke preparation system will be constructed. This will allow indirect firing of coal/coke.

The main raw materials will be limestone, clay, ash, iron ore from various sources and gypsum.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

Permit No. 0250014-002-AC
Facility ID No.: 0250014

IV. PROCESS DESCRIPTION

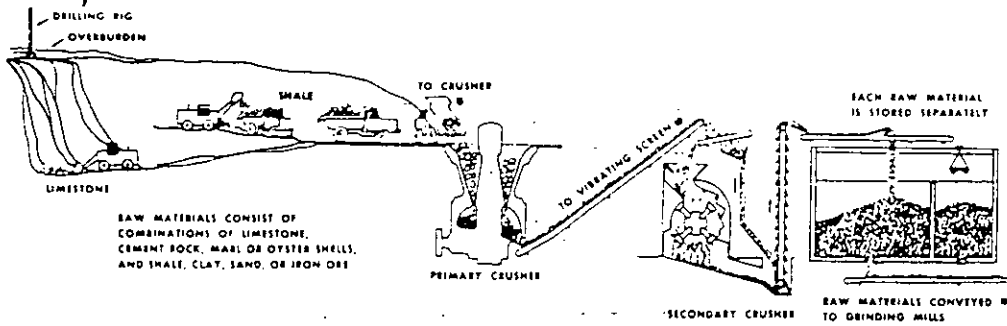
Portland cement is a fine powder, usually gray in color, that consists of a mixture of dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tricalcium aluminoferrite, and miscellaneous minerals to which one or more forms of calcium sulfate have been added. About 95% of the cement production in the United States is portland cement. Masonry cement, also produced at the portland cement plant, represents the balance of the domestic cement production.

There are several variations in cement manufacturing including the wet, dry, dry preheater (PH), and dry preheater/precalciner (PH/PC) processes. These processes are essentially identical relative to the manufacture of cement from raw materials. However, the type of process does affect the equipment design, method of operation, and fuel consumption. Because of its lower fuel requirements, most new portland cement plants use the dry PH/PC. RMC proposes to switch to the dry PH/PC process depicted in simplified form in Figure 1 (from a Portland Cement Association publication).

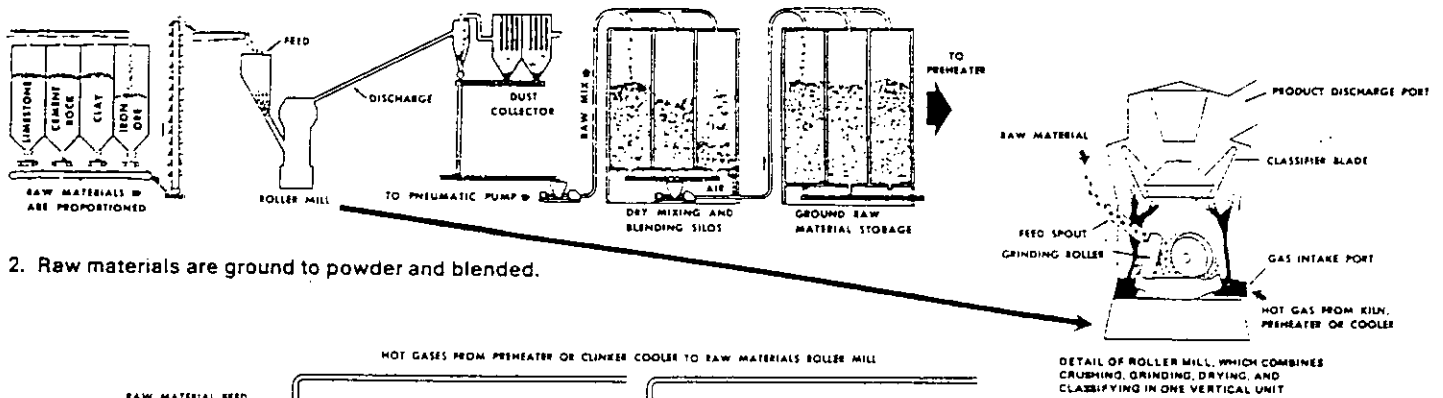
The choice of fuel is based on economics. The most commonly used kiln fuels are coal, natural gas, and oil. Supplementary fuels such as petroleum coke, tires, used oil and various kinds of wastes are burned at many plants. Fuel combustion differs between the various processes. In all of the variations, some or all combustion occurs in the kiln. In the dry PH/PC process, substantial fuel combustion also occurs in PC vessel between the PH and kiln material entry point. This reduces the thermal load on the kiln and allows for a shorter kiln.

The production of portland cement is a four-step process: (1) raw materials acquisition and handling (2) kiln feed preparation for pyroprocessing, (3) pyroprocessing, and (4) finished cement grinding. The chemical reactions and physical processes that constitute the transformation are quite complex. The main portion of the advanced, dry processes is the pyroprocessing system which includes the rotary kiln, suspension preheater, and calcining loop. Several complex chemical reactions necessary to produce portland cement minerals take place in the rotary kiln. Pyroprocessing (dry process with preheater) may be conveniently divided into five stages, depending on location and temperature of the materials in the system.

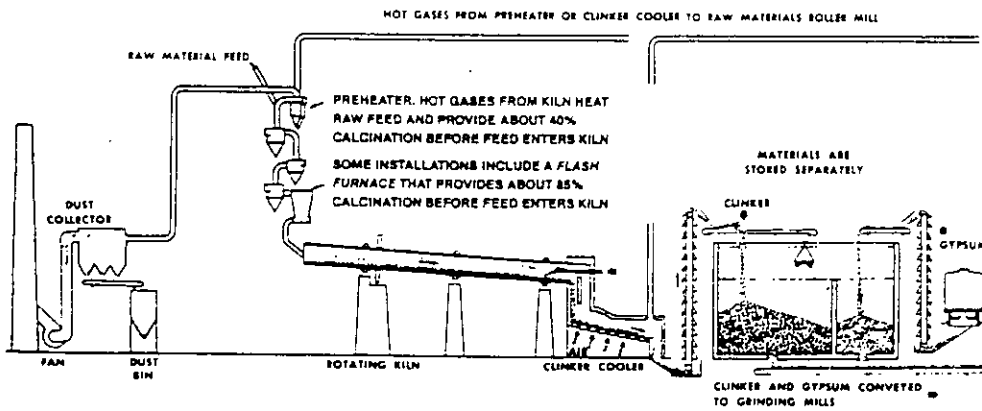
1. Uncombined water evaporates from raw materials as the material temperature increases to 100°C (212°F) in the upper PH or raw materials roller mill.
2. As the material temperature increases from 100°C to approximately 430°C (800°F) in the PH, combined water is liberated from argillaceous compounds.
3. Between 430°C and 900°C (1650°F), calcination begins in the lower PH and is completed in the PC. Carbon dioxide is liberated from the carbonates. A portion of the fuel is burned in the PC vessel to effect the greatest degree of calcination.
4. Following calcination, sintering of the oxides occurs in the burning zone of the rotary kiln at temperatures up to 1510°C (2750°F). Lime, silica, and iron and aluminum compounds react to



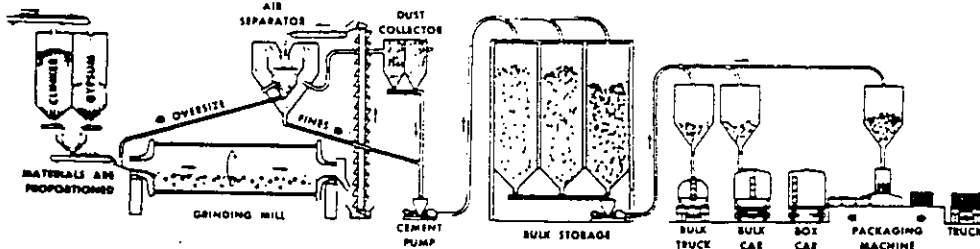
1. Stone is first reduced to 125 mm size, then to 20 mm, and stored.



2. Raw materials are ground to powder and blended.



3. Burning changes raw mix chemically into cement clinker. Note four-stage preheater, flash furnaces, and shorter kiln.



4. Clinker with gypsum is ground into Portland cement and shipped.

Figure 1. New technology in dry-process cement manufacturing

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

Permit No. 0250014-002-AC
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form calcium silicates, aluminates, ferrites and aluminoferrites. Alkali sulfates and chlorides evaporate.

5. Following sintering, clinker nodules are produced as the temperature of the material decreases from 1510°C to 1370°C (2500°F).

The raw materials enter the pyroprocessing system in the uppermost PH. They exit the PC and (together with tires) enter the kiln at the elevated end. The rotation of the kiln causes the solid materials to be slowly transported downward from the front end. Coal (or fuel oil blend or natural gas) is supplied at the lower or discharge end of the kiln. The hot, gaseous combustion products move counter-current to the materials flow, thereby transferring heat to solids in the kiln and preheater.

The product of the rotary kiln is known as clinker which enters a vessel where it is cooled by air. Hot air from the clinker cooler is recovered and returned to the pyroprocessing system as combustion air or to dry or convey materials. The cooled clinker is mixed with a form of calcium sulfate, such as waste gypsum from electric utility scrubbers, and ground in the finish mill to produce portland cement.

Portland cement is shipped from the packhouse or shipping department in bulk or in paper bags by truck or rail.

V. FUEL CONSUMPTION

The main fuels to be burned in the kiln are coal and petroleum coke. Tires will also be burned as supplemental fuel for the heat and iron content. No.2 fuel oil, residual fuel oil, on-spec and off-spec used oil will be used for startup and as supplemental fuels. The applicant proposes to use gas at any time. There are no plans to burn hazardous wastes. Solid waste materials such as booms and rags from spill cleanup, unused diapers, paper products, non-chlorinated plastic waste, and sewage sludge from Publicly Owned Treat Works (POTW). Tires and solid waste will not exceed 40 percent of the heat input value at any time.

Startup of the proposed cement kiln will be accomplished with oil or gas. Oil and gas will be combusted first at low utilization rates. Cold start-up requires approximately 24 hours until the kiln is ready to receive feed. Since oil or gas utilization rates during the entire startup period are less than fuel consumption rates at normal operating conditions and no product or coal is introduced to the kiln, emissions during start up period should be less than emissions under normal operation. No coal or product will be introduced into the kiln until optimum operating conditions are attained. Like the start-up period, coal and product feed begins at reduced rates, ramping up gradually to the final operating conditions.

Tires will not be fed until the kiln is hot enough to support proper combustion and the temperature maintained high enough to destroy dioxins and furans.

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The revision in technology will add one primary emission source, the precalciner (PC). Fuel burned in the PC offsets some of the fuel requirement of the kiln. This new source of combustion is integral in the preparation of the raw material feed and the cement clinker production. The combined gross heat input to the PC and the kiln is 437 MMBtu/hr, to be fired on coal, natural gas, and/or tires or tire-derived fuel (start-up with natural gas, fuel oil, and/or on-spec used oil).

VI. RULE APPLICABILITY

The proposed project is subject to the preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, and 62-204, 62-210, 62-212, 62-296, and 62-297, Florida Administrative Code (F.A.C.).

The present facility is a Major Source of air pollution per Rule 62-210.200., F.A.C., "Definitions." The new cement plant will be a major source for PM, PM₁₀, SO₂, NO_x, and CO. The proposed plant will be located in an area (Dade County) designated attainment for all criteria pollutants (Rule 62-204.360, F.A.C.) and maintenance area for Ozone (O₃). The proposed project is not subject to the Prevention of Significant Deterioration (PSD) regulations (Rule 62-212.400., F.A.C.) because the potential emissions increases of each of these pollutants do not exceed the significant emission rates given in Table 62-212.400-2, F.A.C., "Regulated Air Pollutants Significant Emission Rates."

A PSD net emission increase analyses showed that this facility nets out of review for all pollutants. This is mainly due to the lower fuel input per unit of product resulting from the replacement of the existing wet-process plan for the new dry process plant.

This cement plant is subject to review for the applicable requirements of the federal New Source Performance Standards (NSPS) including:

- 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants.
- 40 CFR 51 Subpart P, "Protection of Visibility."
- 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants
- 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants
- 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
- 40 CFR 60, Subpart Eb-Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994. (Co-fired combustor reporting requirements only)

The proposed cement plant is also subject to the applicable requirements related to used fuels and wastes given in 40 CFR 279 and 40 CFR Part 261 (July 1996 version), which is adopted by reference in Chapter 62-710, F.A.C. and Chapter 62-730, F.A.C. and to the applicable requirements of Chapter 24 of the Code Of Metropolitan Dade County, which limits the allowable SO₂ from combustion of solid and liquid fuels to 1.2 and 1.1 lb/MMBtu, respectively.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

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

- Chapter 62-4 Permits
- Rule 62-204.220 Ambient Air Quality Protection
- Rule 62-204.240 Ambient Air Quality Standards
- Rule 62-204.260 Prevention of Significant Deterioration Increments
- Rule 62-204.360 Designation of Prevention of Significant Deterioration Areas
- Rule 62-204.800 Federal Regulations Adopted by Reference
- Rule 62-210.300 Permits Required
- Rule 62-210.350 Public Notice and Comments
- Rule 62-210.370 Reports
- Rule 62-210.550 Stack Height Policy
- Rule 62-210.650 Circumvention
- Rule 62-210.700 Excess Emissions
- Rule 62-210.900 Forms and Instructions
- Rule 62-212.300 General Preconstruction Review Requirements
- Rule 62-296.320 General Pollutant Emission Limiting Standards
- Rule 62-297.310 General Test Requirements
- Rule 62-297.400 EPA Methods Adopted by Reference
- Rule 62-297.401 EPA Test Procedures
- Rule 62-297.520 EPA Performance Specifications
- Rule 62-297.570 Reasonably Available Control Technology (RACT)

VII. SOURCE EVALUATION

A. CONTROL TECHNOLOGY REVIEW

A.1 PARTICULATE MATTER

As proposed by the applicant, all emissions sources addressed in Table 1.1 Allowable Opacity Limits will be controlled by baghouses. The major emission unit in the cement plant is the kiln. The exhaust gases from the kiln and cooler will be controlled by a common baghouse and emitted to the atmosphere through a dedicated stack. The particulate emission rates from the kiln, cooler and raw mill will be 0.2 pounds per ton of preheater feed. This compares with the combined NSPS limit of 0.4 pounds per ton of preheater feed and represents the lowest permitted limit in the state.

All the baghouses used in the proposed cement plant are designed to operate such that particulate matter concentrations in the exhaust gas stream will not exceed 0.01 grains per dry cubic foot (gr/dscf).

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All dry raw materials, intermediate products and final products within the cement plant will be transferred by enclosed conveyer, air slides, screw conveyors, or enclosed elevators. All of the enclosed transfer systems will be operated under negative pressure with the gases vented through baghouses before being discharged to the atmosphere. Storage silos and the coal receiving and storage system will also be vented through baghouses. Water sprays will be used as necessary to control fugitive particulate matter emission. Quarrying and raw material storage piles will be under moist conditions with relatively low unconfined emissions. Roads will be washed on a daily basis in order to control excessive dust.

According to RMC, the new cement plant will not generate cement kiln dust (CKD) as a waste product. This is consistent with the greater opportunity for recycle afforded by the dry processes CKD was generated by the existing wet process and there is an inventory of material on-site. The present inventory has been reduced in recent years as techniques have been developed to re-introduce the material into the kiln feed and product as well as development of uses of CKD in other masonry products. RMC will eventually be required to comply with Subtitle C regulations to be promulgated by EPA to address CKD.

A covered coal conveyer and baghouse will be used to limit fugitive emissions from the coal handling system.

Manual and automatic control of the combustion process will insure that the combustion process can be optimized for both normal operation and for startup and shutdown conditions. At no time will the baghouse be bypassed during either startup or shutdown periods.

A.2 SULFUR DIOXIDE

The Department's SO₂ emission limit of 0.7 pounds per million BTU (2.23 lb/ton of clinker) will be accomplished by removal of sulfur oxides as alkali salts including sodium and potassium sulfates as well as removal by reactions with lime and limestone in the kiln, PH/PC, raw mill, and kiln baghouse. Removal is enhanced by maintaining proper ratios of sulfur and alkali in the pyroprocessing environment and intimate contact between raw materials and exhaust gases. Ultimately the sulfur oxides are incorporated into the clinker, thus minimizing the amount emitted to the atmosphere and reducing the amount of gypsum which must be added to the clinker to make cement.

The Department expects SO₂ emissions to be substantially less than permitted based on the performance of other dry process kilns in the state. The installation of the SO₂ CEMS will likely confirm this conclusion and insure that SO₂ emission limit will not be exceeded.

A.3 NITROGEN OXIDES

A NO_x emission limit of 1.53 pound per million BTU (4.9 lb/ton of clinker) will be met through proper combustion practices and distribution of the thermal load by indirect firing of fuel in the kiln,

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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burning a portion of the fuel in the PC burner, and tire burning near the entry point of the kiln. The Department expects the emissions of NO_x to be lower than projected by RMC based on emissions from similar kilns in the state. The installation of the NO_x CEMS will likely confirm this conclusion and insure that the NO_x emission limit will not be exceeded

A.4 CARBON MONOXIDE AND VOLATILE ORGANIC COMPOUNDS

CO and VOC emission limits of 3.01 and 0.1 pounds per ton of clinker, respectively, will be accomplished through good combustion controls. RMC will install process monitors to continuously measure either oxygen, carbon monoxide, or carbon dioxide for both safety and optimization of operations. These measures, together with the NO_x and SO₂ CEMS units will allow RMC to incorporate good combustion practices into its Operations and Maintenance (O&M) procedures

A.5 METALS EMISSIONS

Most trace metals in the kiln systems behave in a manner similar to the main elements, i.e. Ca, Si, Al, Fe and Mg. As such, most of the trace metals are incorporated into the lattice structure of the product clinker. Studies show that where all CKD is recycled, more than 99 percent of heavy metals ultimately leave the kiln system via the product clinker. In the case of volatile metals such as mercury and thallium, the capture is lower. However the amounts in the raw materials are minimal and emissions through the exhaust stack are not significant.

Although baghouses are approximately equivalent to electrostatic precipitators in terms of dust collection efficiency, baghouses generally perform better in the removal of some of the non-PSD air pollutants.

B. EMISSION LIMITATIONS

The proposed emissions for this dry process cement plant are summarized in Table A and B. Table 1-1 and Table 1-2 (attached) list permitted emissions for each emission unit. The proposed facility will emit PM/PM₁₀, SO₂, NO_x, CO, VOC, SO₃, Be, Hg, and Pb at less than the PSD significant levels. The detailed analysis below shows that there will be no significant net emissions increases for any PSD pollutants with respect to Table 62-212.400-2, F.A.C.

The proposed modernized plant will produce lesser quantities of air pollutants per ton of clinker than the existing plant. Although there will be an increase in cement production capacity as a result of the proposed project, there will be a reduction in the overall emissions of air pollutants.

C. EMISSIONS SUMMARY

The net emissions increase for all PSD pollutants as a result of this modification are calculated below:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

Permit No. 0250014-002-AC
Facility ID No.: 0250014

CONTEMPORANEOUS CREDITABLE CHANGES (TPY) ⁽¹⁾

POLLUTANTS	MODIFICATION (Plant modernization)	+ INCREASES (Contemporaneous period)	DECREASES (Shutdown of existing emissions units)	= TOTAL (Decrease or Increase)	PSD Significant Level ton/yr
PM	353	23.5	539.8	-163.3	25
PM ₁₀	285	8.3	283.5	9.8	15
SO ₂	1340	36.8	1884.8	-108.0	40
NO _x	2940	60.4	2988.6	11.8	40
CO	1807	15.4	1764.8	57.6	100
VOC	60	20.5	47.6	32.9	40
SO ₃	8.4	0	21.8	-13.4	7

(1) Sum of Contemporaneous Creditable Changes (TPY) detailed in Rinker Materials Corporation's letter dated April 16, 1997.

BACT/LAER/RACT CLEARINGHOUSE DATABASE COMPARISON

Although this project is not subject to BACT, the following table is a comparison with portland cement facilities listed in the BACT/LAER/RACT Clearinghouse database:

POLLUTANT	lb/ton clinker	lb/ton kiln _{ph} feed	lb/MM BTU
PM (kiln)	0.32	0.20	0.10
PM ₁₀ (kiln)	0.27	0.17	0.085
SO ₂ (kiln)	2.23	1.39	0.7
NO _x (kiln)	4.9	3.05	1.53
CO (kiln)	3.01	1.87	0.94
VOC (kiln)	0.1	0.06	0.031
SO ₃ (kiln)	0.014	8.7 E-03	4.39 E-03
Be (kiln)	6.6 x 10 ⁻⁷	4.10 E-07	2.07 E-07
Hg (kiln)	2.4 x 10 ⁻⁵	1.5 E-05	7.55 E-06
Pb (kiln)	7.5 x 10 ⁻⁵	4.55 E-05	2.28 E-05
PM (Cooler)	0.16	0.10	0.05
PM ₁₀ (Cooler)	0.13	0.09	0.04

Based on the following RMC process rates:

Preheater feed rate (kiln_{ph} feed): 220 TPH

Clinker production : 137 TPH

Heat Input : 437 MMBtu/hr

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker Materials Corporation
Portland Cement Manufacturing Facility

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VIII. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by Rinker Materials Corporation, the Department has made a preliminary determination that the proposed project will result in a reduction in emissions of most air pollutants and insignificant increases in others. The Department has reasonable assurance that the project will comply with all applicable state and federal air pollution regulations provided the Department's allowable emissions limits are not exceeded and certain conditions are met. The general and specific conditions are listed in the attached draft conditions of approval.

Table A
Rinker Materials Corporation
Summary of Proposed Emissions

Pollutant	Potential Increase in Facility Emissions (tons per year)	PSD Significant Emission Rates (tons per year)	Subject to PSD Review
PM	353	25	Decrease
PM ₁₀	285	15	Net out
SO ₂	1340	40	Decrease
NO _x	2940	40	Net out
CO	1807	100	Net out
VOC	60	40	Net out
H ₂ SO ₄ mist	8.4	7	Decrease
Be	0.000396	0.0004	No
Hg	0.014	0.1	No
Pb	0.045	0.6	No
Fluoride	0.54	3	No

Note:

- * PM₁₀ emissions are assumed to be 85 percent of PM.
- PM/PM10 emissions include point sources and fugitives.

Table B
Emission Units Summary of Proposed Emissions
Rinker Materials Corporation

Description	PM lb/hr	PM TPY	PM10 lb/hr	PM10 TPY
Emission Unit: Raw Material Processed				
Material Processing (Fugitive)		negligible		negligible
Crusher (Fugitive)		negligible		negligible
Paved and Unpaved Roads (Fugitive)		31.91		11.49
Emission Unit: Raw Mill System				
Raw Materials Handling				
Soil Bin	0.86	3.75	0.73	3.19
Transfer	0.60	2.63	0.51	2.23
Add Bin	1.71	7.51	1.46	6.38
Raw Meal Silo	1.10	4.81	0.93	4.08
Raw Meal Silo	1.37	6.01	1.17	5.11
Meal Transfer	1.37	6.01	1.17	5.11
Waste Soil	0.39	1.69	0.33	1.44
Waste Soil/Coal Transfer	0.60	2.63	0.51	2.23
Rail Transfer--Rail Cars	0.49	2.14	0.42	1.82
PM Transfer--Coal	0.49	2.14	0.42	1.82
PM Transfer--Gypsum	0.49	2.14	0.42	1.82
PM Feed Mill Transfer	0.49	2.14	0.42	1.82
PM Feed Mill Transfer	0.49	2.14	0.42	1.82
Coal Transfer	0.49	2.14	0.42	1.82
Coke/Coal Transfer	0.86	3.75	0.73	3.19
Soil Transfer	1.71	7.51	1.46	6.38
Emission Unit: Kiln System				
Raw Mill/Kiln/PH/PC/Cooler	44.00	192.72	37.40	163.81
Emission Unit: Finish Mill: Clinker and Cement Handling				
Clinker Storage Silo	0.39	1.73	0.34	1.47
Clinker Pan Conveyor	0.39	1.73	0.34	1.47
Clinker Retrofit Silo	0.39	1.73	0.34	1.47
Clinker Discharge Transfer	0.49	2.14	0.42	1.82
Clinker Discharge Transfer	0.49	2.14	0.42	1.82
Feed Bin	0.39	1.73	0.34	1.47
Additional Transfer	0.49	2.14	0.42	1.82
Gypsum Bin Transfer	0.49	2.14	0.42	1.82
Flyash Bin	0.60	2.63	0.51	2.23
Clinker Mill (Pulse Type)	2.31	10.14	1.97	8.62
Separator (Pulse Type)	6.17	27.03	5.25	22.98
Mill Return Conveyor	0.49	2.14	0.42	1.82
Silo Feed Conveyor	0.49	2.14	0.42	1.82
Emission Unit: Coal Mill System				
Coal Mill	1.80	7.88	1.53	6.70
Coal Handling and Storage				
Fuel Bin	0.49	2.14	0.42	1.82
TOTAL	73.38	351.21	62.48	284.71

DRAFT

PERMITTEE:

Rinker Materials Corporation
Miami Cement Plant
1200 Northwest 137th Avenue
Miami, Fl 33182

FID No.	0250014
SIC No.	3241
Permit No.	0250014-002-AC
Expires:	May 30, 1999

Authorized Representative:

James S. Jenkins, III
Vice-President of Cement Operations

LOCATED AT:

Rinker Materials Corporation
Project: Portland Cement Manufacturing Facility
Standard Industrial Classification Code (SIC): 3241
Dade County, Florida

UTM: Zone 17; 558.20 km E ; 2851.20 km N
Address: 1200 NW 137 th Avenue, Miami, Dade County, Florida 33182

STATEMENT OF BASIS:

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

Attached appendices and Tables made a part of this permit:

Table 1-1	Allowable Opacity Limits
Table 1-2	Air Pollutants Standards and Terms
Table 2-1	Compliance Requirements
Appendix GC	Construction Permit General Conditions
Appendix CSC	Emission Unit(s) Common Specific Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

DRAFT

AIR CONSTRUCTION PERMIT 0250014-002-AC

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

This existing facility consists of a quarry, two wet-process cement kilns and clinker coolers, associated equipment, a soil treatment facility and a concrete batch plant. This permit is for the replacement of the existing kilns and coolers having a total capacity of 650,000 tons per year with a single dry-process kiln with preheater, precalciner and clinker cooler, capable of producing approximately 1,200,000 TPY [approximately 3300 tons per day (TPD)]. Substantial improvements and upgrades in fuel and materials handling will also be made.

EMISSION UNITS

This permit addresses the following emission units:

EMISSIONS UNIT No.	SYSTEM	EMISSIONS UNITS DESCRIPTION
ARMS No.	Raw Materials Processed	Material Handling (Fugitive) Handling and Storage (Fugitive)
ARMS No.	Raw Mill System	Raw Materials Handling
ARMS No.	Kiln System	Raw Mill, Dry Process Kiln with Preheater (PH) Precalciner (PC), and Clinker Cooler: Main stack
ARMS No.	Finish Mill System	Clinker Cement Handling and Storage
ARMS No.	Coal Mill System	Coal Mill, Fuel Bin Coal Handling and Storage (Fugitive)

SUBSECTION B. REGULATORY CLASSIFICATION

This industry is listed in Table 62-212.400-1 of Chapter 62-212, F.A.C., "Major Facility Categories." Therefore, stack and fugitive emissions of over 100 tons per year of carbon monoxide, volatile organic compounds, sulfur dioxide, nitrogen oxides, or particulate matter characterize the installation as a major facility subject applicability review for the requirements of Rule 62-212.400, F.A.C. As a cement plant, the facility is subject to Rule 62-204.800, F.A.C. which incorporates 40 CFR Subpart F, New Source Performance Standards (NSPS) for Portland Cement Plants. This facility is a Title V source pursuant to Rule 62-213, F.A.C.

SUBSECTION C. PERMIT SCHEDULE:

- (DATE) Notice of Intent published in [issue of Newspaper]
- 06/23/97 Issued Notice of Intent to issue Permit
- 05/27/97 Application deemed complete

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AIR CONSTRUCTION PERMIT 0250014-002-AC

SECTION I. FACILITY INFORMATION

SUBSECTION D. RELEVANT DOCUMENTS:

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

1. Application received December 4, 1996
2. Department's letters dated December 31, 1996 and May 9, 1997
3. Koogler & Associates letters dated March 24, April 16, and May 27, 1997
4. EPA's letters dated May 22, 1997

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AIR CONSTRUCTION PERMIT 0250014-002-AC

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION A. ADMINISTRATIVE

- A.1 Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Air Program section of the Dade County Department of Environmental Resources Management (DERM), Suite 900, 33 Southwest Second Avenue, Miami, Florida 33130-1540, and phone number 305/372-6925. All applications for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) with a mailing address at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (904)488-1344.
- A.2 General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- A.3 Emission Unit(s) Common Specific Conditions: The owner and operator is subject to and shall operate under the attached Emission Unit(s) Common Specific Conditions listed in *Appendix CSC* of this permit. The Emission Unit(s) Common Specific Conditions are binding and enforceable pursuant to Chapters 62-204 through 62-297 of the Florida Administrative Code.
- A.4 Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
- A.5 Forms and Application Procedures: 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. [Rule 62-210.900, F.A.C.]
- A.6 Expiration: This air construction permit shall expire on May 30, 1999 [Rule 62-210.300(1), F.A.C.]. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify DERM of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C.]
- A.7 Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213 F.A.C., must be submitted to DERM's air program office in Dade County. [Chapter 62-213, F.A.C.]

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. COMMON CONDITIONS: 40 CFR 60 NEW SOURCE PERFORMANCE STANDARDS

EMISSION UNITS

This permit addresses the following emission units.

EMISSIONS UNIT No.	SYSTEM	EMISSIONS UNITS DESCRIPTION
ARMS No.	Raw Materials Processed	Material Handling (Fugitive) Handling and Storage (Fugitive)
ARMS No.	Raw Mill System	Raw Materials Handling
ARMS No.	Kiln System	Raw Mill, Dry Process Kiln with Preheater (PH) Precalciner (PC), and Clinker Cooler: Main stack
ARMS No.	Finish Mill System	Clinker Handling Cement Handling and Storage
ARMS No.	Coal Mill System	Coal Mill, Fuel Bin Coal Handling and Storage (Fugitives)

These emission units shall comply with all applicable requirements of 40 CFR 60, General Provisions, Subpart A.

- A.1 [40 CFR 60.7, Notification and record keeping]
- A.2 [40 CFR 60.8, Performance tests]
- A.3 [40 CFR 60.11, Compliance with standards and maintenance requirements]
- A.4 [40 CFR 60.12, Circumvention]
- A.5 [40 CFR 60.13, Monitoring requirements]
- A.6 [40 CFR 60.19, General notification and reporting requirements]

This cement plant is subject to the applicable requirements of the federal New Source Performance Standards (NSPS) including:

- 40 CFR 60 Subpart F, Standards of Performance for Portland Cement Plants.
- 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants
- 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants
- 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
- 40 CFR 60, Subpart Eb-Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994. (Co-fired combustor reporting requirements only)

AIR CONSTRUCTION PERMIT 0250014-002-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION B. SPECIFIC CONDITIONS:

The following Specific Conditions apply to the following emission units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
ARMS No.	Kiln System	Raw Mill, Dry Process Kiln with Preheater and Precalciner, and Clinker Cooler.

This emission unit shall comply with all applicable provisions of the 40 CFR 60 New Source Performance Standards for Portland Cement Plants, Subpart F [Rule 62-204.800, F.A.C.].

EMISSION LIMITATIONS

- B.1 The maximum allowable emission rates for the kiln, clinker cooler, raw mill, and preheater/precalciner shall not exceed the limits listed in Table 1-2. Air Pollutant Standards and Terms (attached). [Rule 62-210.200(198) and 62-212.400, F.A.C.]
- B.2 In order to minimize excess emissions during startup/shutdown/malfunction this emission units shall adhere to best operational practices. [Rule 62-210.700, F.A.C. and 40 CFR 60.7]

OPERATIONAL LIMITATIONS

- B.3 This emission unit is allowed to operate continuously (8760 hours/year) [Rule 62-210.200(223), F.A.C.] Definitions-Potential to emit (PTE).

B.4 PROCESS OPERATING RATES

The kiln clinker production rate shall not exceed 137 tons per hour (TPH) on a 24-hour basis. The permitted maximum preheater feed is 220 TPH on a 24-hour basis. [Rule 62-210.200(223), F.A.C.]

B.5 FUEL COMBUSTION

- (1) Fuels fired in the pyroprocessing system (kiln and precalciner) shall not exceed a total heat input rate of 437 MMBtu/hr and shall consist only of:
- a. Bituminous coal, natural gas, petroleum coke, propane, No. 2 fuel oil, residual fuel oil, on-specification and off-specification used oil.
 - b. Whole tires and tire derived fuel (up to 40% total heat input) may be used as a supplemental fuel, but not as a start-up fuel
 - c. Combustion of non-hazardous solid waste, oil filters, booms and rags from spill clean up, generated on site. This non-hazardous solid waste material shall be used as supplemental fuel not as a start-up fuel.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- d. Combustion of non-hazardous solid waste (up to 30% of total heat input) may be used as supplemental fuel: Unused Diapers, Papers products, Non-chlorinated Plastic Waste, Sewage Sludge from Publicly Owned Treatment Works (POTW). This non-hazardous solid waste material shall be not be used as a start-up fuel.
- e. The combined percent heat input from tires, tire-derived fuel and solid waste shall not exceed 40 percent of the total heat input from all fuels on a 24-hour basis.

COAL AND PETROLEUM COKE

- (2) The coal usage rate shall not exceed 16.8 TPH based on a 24-hour average. The petroleum coke usage rate shall not exceed 14.6 TPH on a 24 hour basis.

TIRES

- (3) Whole tires and tire-derived fuel along with the permitted non-hazardous solid waste material may be fed continuously at the kiln inlet at the base of the precalciner at a rate not to exceed 174.8 MMBtu/hr (40% of total kiln and precalciner fuel input) on a 24-hour basis.
- (4) Before initiating tire firing, the gases exiting the kiln shall reach a minimum temperature of 1400 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 1750 degrees F.

USED OIL

- (5) 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 279.10 (July 1, 1996 version), which is adopted by reference in Rule 62-730.181, 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	1000 ppm maximum
Flash Point	140 ° F minimum
Polychlorinated Byphenyls (PCBs)	Less than 2 ppm

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- (6) *On-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), Florida Statutes.
- (7) *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 off-spec used oil shall be burned in compliance with Section 403.769(3), Florida Statutes.
- (8) *The on and off-specification used oil samples from Specific Condition No. B.5(5),(6), B.5 (7) and B.22 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
Density	lbs/gal	
Polychlorinated Byphenyls (PCB's)	ppm	EPA SW-846(0010) and EPA 680
Ash		

NOTE: Other test methods may be used only after receiving written prior approval from the Department.

- (9) The maximum annual consumption rate of used oil shall not exceed 31,886 gallons.
- B.6 Any other operating parameters (including control equipment operating parameters) established during compliance testing and/or inspection that will confirm the proper operation of each emission unit shall be included in the operating permit [Rule 62-297.310, F.A.C. and 62-4.070(3), F.A.C.]

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

MONITORING OF OPERATIONS

- B.7 The owner or operator shall record the daily production and the preheater-kiln system feed rate. [Rule 62-204.800, F.A.C., 40 CFR 60.63(a)]
- B.8 The owner or operator shall install, calibrate, maintain, and operate in accordance with 40 CFR 60.13 a *continuous opacity monitoring system* to measure the opacity of emissions from the cement kiln and clinker cooler control device stack. [Rule 62-204.800, F.A.C., 40 CFR 60.63(b)]
- B.9 Continuous process monitors shall be installed for CO or O₂ to insure proper combustion practices and for use in determining plant operating parameters to optimize emissions of CO, NO_x, and SO₂. [Rule 62-4.070(3) F.A.C.]
- B.10 Continuous monitoring equipment shall also be installed, calibrated, maintained, operated, and used to determine compliance for NO_x and SO₂. Continuous emission monitors shall be installed and certified, before the initial performance test, and operated in compliance with 40 CFR 60, Appendix F, Quality Assurance Procedures (1996 version) or other Department approved QA plan; 40 CFR 60, Appendix B, Performance Specification 1, 2, and 3 (1996 version). [Rule 62-4.070 (3) F.A.C. and Rule 62-204.800, F.A.C.]

Compliance By Continuous Emission Monitoring System (CEMS)

- B.11 Compliance with the emission limits for NO_x and SO₂ in Table 1-2 shall be demonstrated by the continuous emission monitoring system (CEMS). The CEMS shall calculate and record emission rates in units of pounds of NO_x and SO₂ per hour. Clinker production rates shall be recorded daily. The permittee may establish a relationship between material feed rates and production rates of clinker if material feed rates are measured more accurately than clinker production rates and the relationship is accurate within 10%.

Every day, the 24-hour average NO_x and SO₂ emission rate for the previous day shall be calculated. Emissions shall be calculated in units of pounds per hour and pounds per ton of clinker. Daily averages are to be calculated as the arithmetic mean of each monitored operating hour. A monitored operating hour is each hour in which fuel is fired in the unit and at least two emission measurements are recorded at least 15 minutes apart. Data taken during periods of startup, or when fuel is not fired to the unit, or when the CEMS is not calibrated shall be excluded from the daily average.

For compliance with the emission limits in Table 1-2, the daily average shall not include data from periods of startup when no clinker is being produced. However, emissions during startup periods shall not exceed the pound per hour limits in Table 1-2. Data recorded during periods of shutdown, malfunction, load change, and continuous operating periods shall be included in the daily average.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

To the extent the monitoring system is available to record emissions data, the CEMS shall be operated and shall record data at all operating hours when fuel is fired in the unit, including periods of startup, shutdown, load change, continuous operation and malfunction.

Monitor downtimes and excess emissions based on daily averages, which include startup emissions, shall be reported on a quarterly basis using the SUMMARY REPORT in 40 CFR 60.7. A detailed report of the cause, duration, magnitude, and corrective action taken or preventative measures adopted for each excess emission occurrence, and a listing of monitor downtime occurrences shall accompany the SUMMARY REPORT when the total duration of excess emissions is 1% or greater or if the monitoring system downtime is 5% or greater of the total monitored operating hours.

Mass emission rates (lb/hr, and lb/ton clinker) shall be calculated based on source specific and fuel specific F factors calculated using 40 CFR 60 Appendix A, Method 19. These F factors shall be recalculated when fuel properties vary significantly from those used in the previously calculated F factors but not less than once per year.

- B.12 The monitoring device shall meet the applicable requirements of Chapter 62-204, F.A.C., 40 CFR 60, Appendix F, and 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) Notification Requirements. Data on monitoring equipment specifications, manufacturer, type calibration and maintenance requirements, and the proposed location of each monitor shall be provided to *DERM* for review at least 90 days prior to installation of a new CEMS. [Rule 62-4.070 (3) F.A.C and Rule 62-204.800, F.A.C.]

TEST METHODS AND PROCEDURES

- B.13 Compliance with the allowable emission limiting standards listed in Table 1-2 shall be determined by using the following reference methods as described in 40 CFR 60, Appendix A (1996, version) and 40 CFR 61 Appendix B 1996, version) adopted by reference in Chapter 62-204, F.A.C.

Method 5	Determination of Particulate Matter Emissions from Stationary Sources (I) and (A).
Method 8	Determination of Sulfuric Acid Mist from Stationary Sources (I).
Method 9	Visual Determination of the Opacity of Emissions from Stationary Sources (I) and (A).
Method 10	Determination of Carbon Monoxide Emissions from Stationary Sources (I) and (A).
Method 25	Determination of Volatile Organic Compound Emissions from Stationary Sources (I) and (A).
Method 29	Determination of Lead, Beryllium, and Mercury from Stationary Sources (I).

Emission testing shall be performed at the kiln/cooler main stack during a period when the kiln precalciner, cooler, raw mill and preheater are operating simultaneously and under normal operating conditions. EPA-reference methods for sampling pollutants shall be as specified in 40 CFR 60, Appendix A.

These emission units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements and 40 CFR 60.8. Performance Tests. Table 2-1, Compliance Requirements (attached) also lists the EPA methods.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

Testing of emissions shall be conducted with the emission unit operating at capacity and under the different permitted fuels scenarios (petroleum coke, coal, on or off specification used oil, TDF, solid waste, etc.) as specified in Specific Condition No.B.5. Fuel Combustion. 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. The frequency of testing shall be determined by DERM.

Permitted capacity is defined as 90-100% of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the unit may be tested at less than 90% of the maximum operating rate allowed by the permit; in this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit. [Rules 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C., and 40 CFR 60 Appendix A and 40 CFR 60.8, Subpart A].

- B.14 The visible emissions test shall be conducted by a certified observer and be a minimum of 180 minutes in duration. The test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur [40 CFR 60.11 and Rule 62-297.310 (7), F.A.C.].
- B.15 Compliance with the particulate matter standard contained in Table 1-2 (attached) shall be determined using EPA Method 5. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

E = (c_s x Q_sd)/(P x K)

where:

- E = emission rate of particulate matter, kg/metric ton (lb/ton) of kiln feed
- c_s = concentration of particulate matter, g/dscm (g/dscf)
- Q_sd = volumetric flow rate of effluent gas, dscm/hr (dscf/hr)
- P = total kiln feed (dry basis) rate, metric ton/hr (ton/hr)
- K = conversion factor, 1000 g/kg (453.6 g/lb)

- B.16 The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30.0 dscf) for the kiln and at least 60 minutes and 1.15 dscm (40.6 dscf) for the clinker cooler. [Rules 62-204.800 and 62-297.401, F.A.C. 40 CFR 60.64(b)(1) - (3)].
- B.17 Suitable methods shall be used to determine the kiln feed rate (P), except fuels, for each run. Material balances over the production system shall be used to confirm the feed rate [40 CFR 60.64(3)].
- B.18 Operating procedures shall include good combustion practices and proper training of all operators and supervisors. The good combustion practices shall meet the guidelines and procedures as established by

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the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.].

RECORDKEEPING AND REPORTING REQUIREMENTS

- B.19 The owner or operator shall submit reports of excess emissions based upon data from the continuous opacity monitoring system. Periods of excess emissions that shall be reported are defined as all 6 minute periods during which the average opacity exceeds that allowed in Tables 1-1 and 1-2. The content of these reports must comply with the requirements in 40 CFR 60.7(d). Such reports shall be submitted quarterly pursuant to 40 CFR 60.7 (c). [Rule 62-204.800, F.A.C.; 40 CFR 60.63(d), 60.65(a) and 40 CFR 60.7].
- B.20 In order to document compliance with Specific Condition No. B5(3) Tires:
- A log shall be established and maintained for the hours of operation using tires as supplemental fuel. The log shall include the daily tire usage (hours) as supplemental fuel at the facility, a monthly running total of the tire usage (hours), and a cumulative 12 month running total (hours), to ensure that the annual limit is not exceeded.
 - A log shall be maintained that includes the date of all tire deliveries to the facility, and the total quantity (nearest 0.1 tons) of tires received.
 - A tire usage control system shall be installed to assure that the tire usage as supplemental fuel at the facility does not exceed the maximum of 178.4 million Btu heat input to the kiln and precalciner or 6.7 tons per hour. The control system shall include a verification method and a log that insures and documents that the tires usage and heat input limits are not exceeded.
 - A log for the utilization rate (tons per hour) of tires shall be maintained. The utilization rate of tires as supplemental fuel shall be determined by a continuous weighing method and shall be recorded.
 - All logs shall be maintained on file for at least five (5) years and shall be made available to the Department upon request.
- B.21 In order to document compliance with Specific Condition No. B5(2) Coal and Petroleum coke:
- A fuel usage control system shall be established to assure that the coal and petroleum coke usage rates does not exceed 16.8 and 14.6 TPH respectively.
- B.22 In order to document compliance with Specific Conditions No. B5(5) through B5(8) Used Oils , the following requirements shall be adhered to as a minimum:
- Recordkeeping when burning used oil shall be in accordance with applicable provisions of 40 CFR Part 279, Subpart B and Subpart G (July 1, 1996 version), Standards For The Management of Used Oil and Chapter 62.710, F.A.C.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

Pursuant to Permit AO 13-233208, the following shall be recorded on the delivery receipt:

- the use of tamper proof seals on the delivery receipt
- the volume of fuel delivery
- a cross reference to the analysis which establishes that the used oil meets EPA used oil fuel specifications
- the results of the screening analysis
- the name of the person performing the test
- the specific test kit used
- the amount of oil sampled
- the amount and name of the solution used to dilute the oil

The following procedures shall be implemented:

- Used oil fuel that is delivered without a delivery receipt containing all the above information, or which is not properly sealed, or for which the delivery receipt does not contain all the necessary information, is not to be accepted and DERM is to be notified by phone immediately (with written confirmation to follow), if such a delivery is attempted.
- Verification by signature on the delivery receipt shall be provided by plant personnel that the delivery truck arrived on site with all seals intact. As delivered samples of all used oil fuel received shall be accumulated through each quarter for each supplier.
- The results of each sample analysis (on the laboratory's letterhead) shall be submitted to DERM within 30 days after a sample is taken and analyzed.
- The dates and quantities of both on and off-spec purchased fuel oil transferred to the facility storage tank shall be reported quarterly (i.e., Jan-Mar, April-June, July-Sept, and Oct-Dec). The report is due in the month following the ending quarter.
- The unused portion of the fuel oil sample shall be retained for six months following the submittal of the analyses in case further testing is required.

B.24 All measurements, records, and other data required to be maintained by the permittee shall be reported to DERM on a quarterly basis with the start of commercial operation in accordance with 40 CFR 60.7. All measurements, records and other data required to be maintained by the permittee shall be retained for at least 5 years following the date on which such measurements, records, or data are recorded. The data shall be available to DERM or FDEP staff as requested. [40 CFR 60.7]

B.25 The owner or operator shall submit reports of the malfunction information required to be recorded by 40 CFR 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in de-energization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere. [Rule 62-204.800, F.A.C., 40 CFR 60.65 (c)]

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

Daily Operation and Maintenance (O&M) Log:

B.26 This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. Operators shall keep a daily O&M log to include, at a minimum, the following information:

- The data collected from in-stack monitoring instruments
- The records on daily feed rates and clinker production rate
- The amount and type of fuel burned
- Total quantity (by weight) of tires used as supplemental fuel
- The firing rate of whole tires shall be quantified (weighed) continuously and recorded
- Calibration logs for all instruments
- Maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit;
- Total coal, petroleum coke, natural gas, solid waste material, and oil usage.

All measurements, records, and any other data required to be maintained by Rinker shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the FDEP and to DERM upon request. DERM shall be notified in writing at least 15 days prior to the testing (auditing) of any instrument required to be operated by these specific conditions in order to allow witnessing by authorized personnel. [Rule 62-4.070(3), F.A.C.]

SOLID WASTE SPECIFIC CONDITIONS

Compliance with these conditions will be determined by the Solid Waste Section of the Department of Environmental Protection and/or Dade County Environmental Resources Management. If enforcement is necessary for these conditions, it is the Solid Waste Section's responsibility.

B.27 The Permittee shall maintain compliance in accordance with Chapter 62-701 and Chapter 62-711, F.A.C. All original submittals in response to this Specific Condition shall be submitted to:

Waste Tire Financial Coordinator
Solid Waste Management Section
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Solid Waste Section
Department of Environmental Protection
Southeast District Office
P O Box 15425
West Palm Beach, Florida 33416

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- B.28 The maximum number of waste tires that shall be stored on site at any time is 28,000. Only whole waste tires shall be stored on site.
- B.29 No processed waste tires shall be stored or burned at this site at any time unless the permittee obtains a permit modification from the Department. Waste tires shall only be received in enclosed trailers from registered waste tire collectors who possess valid registrations pursuant to Chapter 62-711, F.A.C.
- B.30 The Permittee shall not place waste tires on the ground. Waste tires shall be received in closed vans and unloaded directly into the tire feeding hopper. Also, in order to control mosquitoes at the site, waste tires shall be sprayed with an insecticide prior to receipt at the facility.
- B.31 The Permittee shall document the number of tires burned during a week and then establish storage and inventory based on a typical weekly requirement. The Permittee shall keep all documentation concerning tire inventory at the site and make the information available for Department review during inspections.
- B.32 Storage of solid waste at the facility shall not be in violation of the prohibitions of F.A.C. Rule 62-701.300. In addition, all solid waste materials to be used in cement production shall be stored under cover, on compacted clay, to prevent the generation of runoff or leachate.
- B.33 No RCRA hazardous waste or used oil may be burned. Cement Kiln Dust (CKD) collected in the baghouses will be returned to the process. Any CKD not returned to the process shall be handled in accordance with Subtitle C rules under development by EPA. In the interim, the permittee shall develop a contingent management practice (CMP) for storage, sales, or disposal of any CKD not reused. The CMP will be a condition of the operating permit.
- B.34 In the event that baghouses catches come in contact with the soil, the waste shall be collected and a hazardous waste determination performed for metals in accordance with 40 CFR 262.11 and F.A.C. Rule 62-730.160. If the hazardous waste determination indicates that the material is hazardous, it shall be disposed of in a permitted hazardous waste disposal facility. If the material is not hazardous, the waste material is a solid waste as defined in F.A.C. Chapter 62-701 and must be disposed of in a permitted, lined landfill. The Permittee shall contact the Solid Waste Section of the Southeast District office, at telephone number 407/681-6600, prior to disposal of the fugitive baghouses catches which are to be disposed of as solid waste.
- B.35 The Permittee shall store all hazardous waste generated at the site in D.O.T. approved containers and send it for disposal to a permitted hazardous waste facility in compliance with F.A.C. Chapter 62-730.
- B.36 The Permittee shall manage used oil and used oil filters generated at the facility in compliance with F.A.C. Chapter 62-710 and 40 CFR 279.12.
- B.37 The permittee shall comply with Sections 62-711.530(3) and (4) inclusive. The permittee shall submit an annual report to the Department's Southwest District Office not later than March on DEP Form 62-711.900(4).

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION C. SPECIFIC CONDITIONS

The following Specific Conditions apply to the following emission units:

EMISSIONS UNIT NO.	SYSTEM	EMISSIONS UNITS DESCRIPTION
ARMS No.	Raw Materials Processed	Material Handling (Fugitive) Handling and Storage (Fugitive)
ARMS No.	Raw Mill System	Raw Materials Handling
ARMS No.	Finish Mill System	Clinker Handling Cement Handling and Storage
ARMS No.	Coal Mill System	Coal Mill, Fuel Bin Coal Handling and Storage (Fugitives)

EMISSION LIMITATIONS

- C.1 The permittee shall not cause or allow to be discharged into the atmosphere visible emissions which exceed the limits given in Table 1-1, Allowable Opacity Limits. [Rule 62-210.200(198) and 62.212.400, F.A.C.]
- C.2 In order to minimize excess emissions during startup/shutdown/malfunction these emission units shall adhere to best operational practices. [Rule 62-210.700, F.A.C. and 40 CFR 60.7]

OPERATIONAL LIMITATIONS

- C.3 This cement plant and associated equipment is allowed to operate continuously (8760 hours/year) [Rule 62-210.200(223), F.A.C. Definitions-Potential to Emit (PTE)].
- C.4 The maximum emission rates are as specified in Table 1-1. Allowable Opacity Limits.

TEST METHODS AND COMPLIANCE PROCEDURES

- C.5 The maximum permitted allowable particulate emission rate (lb/hr and gr/dscf) from these emissions units are as stated in Table 1-1 Allowable Opacity Limits. The permittee shall demonstrate compliance by adhering to an opacity limit of 5% in lieu of particulate stack tests. [Rule 62-297.620(4), F.A.C.]

In accordance with Rule 62-297.620(4), minor particulate sources equipped with baghouses with visible emissions which are greater than or equal to 5 percent opacity shall require the permittee to perform a stack test in accordance with approved methods to verify compliance with the lb/hr emission limit contained in Table 1.1.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- C.6 Compliance with the allowable emission limiting standards listed in Table 1-1 shall be determined by using the following reference methods as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Chapter 62-204, F.A.C.

Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources (I) and (A).

A protocol to determine fugitive emissions compliance with EPA Method 9 shall be submitted to DERM before applying for the Title V operating permit for this Cement Plant.

Testing of emissions must be accomplished within 90 to 100% of the permitted capacity [Rule 62-297.310(2), F.A.C]. Failure to submit the input rates and actual operating conditions may invalidate the test [Rule 62-297.310 (2), F.A.C.].

These emission units shall comply with all applicable requirements of Rule 62-297.310 General Test Requirements and 40 CFR 60.8, Subpart A, Performance Tests.

- C.7 The visible emissions test, EPA Method 9, shall be conducted by a certified observer and be a minimum of 180 minutes in duration. The test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.[Rule 62-297.310, F.A.C.]
- C.8 Should DERM have reason to believe the particulate matter standards set forth in Table 1-1 are not being met, DERM may require that compliance with the particulate emission standards be demonstrated by testing (applicable emission unit) in accordance with Rule 62-297.620 (4) F.A.C. [Rule 62-297.620(4) and 62-297.310, F.A.C.]
- C.9 Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.].
- C.10 Particulate emissions from coal handling facilities shall be minimized by following the procedures listed below: [Rule 62-296.320(4)(c), F.A.C.]
- a. All conveyers and transfer points shall be enclosed to preclude particulate emissions (except those directly associated with coal stacking/reclaiming).
 - b. Coal storage piles shall be shaped, compacted and oriented to minimize wind erosion.
 - c. Water sprays or chemical wetting agents and stabilizers shall be applied to storage piles, handling equipment, etc., during dry periods and as necessary to all facilities to maintain an opacity of less than 5 percent, except when adding, moving or removing coal from the coal pile, during which the opacity shall be no more than 20%.
- C.11 The fly ash handling system (including transfer equipment, flyash bin, and pneumatic system exhaust) will be totally enclosed and vented through fabric filters.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

C.12 The provisions of Rule 62-296. 320 (4) (c) F.A.C., shall apply to all sources of unconfined particulate emissions, including but not limited to vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or related activities such as loading, unloading, storing and handling.

Rinker shall follow the following protocol for the unconfined particulate matter (UPM, Fugitive Emissions):

The material handling activities at the plant covered by this protocol include loading and unloading, storage, and conveying of:

- Limestone and overburden
- Iron oxide source (coal ash, iron ore, or other)
- Gypsum
- Coal

The following reasonable precautions shall be implemented at the facility:

- All materials at the plant will be stored under roof on compacted clay or concrete.
- The plant area will be paved to limit the generation of UPM from truck and equipment traffic.
- A sweeper truck will be maintained and operated at the plant to limit dust buildup on paved surfaces.
- All materials are to be received and used with excess surface moisture.
- Water supply lines, hoses and sprinklers will be located near all material stockpiles.
- All plant equipment operators will be trained in basic environmental compliance, and will perform visual inspections of materials before handling. If the visual inspections indicate a lack of excess surface moisture, the materials will be wetted with the sprinklers. Such wetting will continue until the materials can be handled without generating UPM.

The permittee shall "immediately collect" any spilled CKD to prevent fugitive emissions.

RECORDKEEPING AND REPORTING REQUIREMENTS

Daily Operation and Maintenance (O&M) Log:

C.13 This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. Operators shall keep a daily O&M log to include, at a minimum, the following information:

Calibration logs for all instruments.

Maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit.

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AIR CONSTRUCTION PERMIT 0250014-002-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

All measurements, records, and any other data required to be maintained by Rinker shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to DERM or the FDEP staff upon request. DERM shall be notified in writing at least 15 days prior to the testing (auditing) of any instrument required to be operated by these specific conditions of certification in order to allow witnessing by authorized personnel. [Rule 62-4.070(3), F.A.C.]

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Table 1-2. Air Pollutant Standards and Terms.

FACILITY ID NUMBER: 0250014

Permittee:
Rinker Materials Corporation

DRAFT Permit No.: 0250014-002-AC
Portland Cement Plant and Associated Equipment
Dry Process Technology

Emission Unit - Kiln System
Cement Plant Modernization

E.U. ID#	Description	Pollutant ID	Fuel(s) [2]	Allowable Emissions [3]		Equivalent Emissions [4]	Basis
				Permit limits	lb/hr	TPY	
ARMS #	Kiln/Cooler/Raw Mill	PM	coal/gas/WTDF/oil	0.20 lb/ton kiln _{ph} feed *	44	193	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	PM ₁₀	coal/gas/WTDF/oil	0.17 lb/ton kiln feed *	37.40	164	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	SO ₂	coal/gas/WTDF/oil	0.7 lb/MMBTU	306	1340	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	NO _x	coal/gas/WTDF/oil	1.53 lb/MMBTU	671	2940	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	CO	coal/gas/WTDF/oil	3.01 lb/ton clinker	412	1807	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	VOC	coal/gas/WTDF/oil	0.1 lb/ton clinker	13.7	60	RMC - Data
ARMS #	Kiln/Cooler/Raw Mill	H ₂ SO ₄ mist	coal/gas/WTDF/oil	0.014 lb/ton clinker	1.92	8.4	AP - 42
ARMS #	Kiln/Cooler/Raw Mill	Beryllium	coal/gas/WTDF/oil	6.6x10 ⁻⁷ lb/ton clinker	9.04E-05	0.000396	AP - 42
ARMS #	Kiln/Cooler/Raw Mill	Mercury	coal/gas/WTDF/oil	2.4x10 ⁻⁵ lb/ton clinker	3.30E-03	0.014	AP - 42
ARMS #	Kiln/Cooler/Raw Mill	Lead	coal/gas/WTDF/oil	7.5x10 ⁻⁵ lb/ton clinker	0.01	0.045	AP - 42
ARMS #	Kiln/Cooler/Raw Mill	VE	coal/gas/WTDF/oil	10% opacity			NSPS

ALLOWABLE OPERATING RATES

Kiln/Cooler/Raw Mill

Hours of operation per year		8760
Kiln preheater feed rate (kiln _{ph}) *	TPH	220
Kiln Heat Input	MMBtu/hr	437
Clinker Production (1)	TPH	137
Cooler throughput rate	TPH	137

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).
- (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 based on annual emissions at 8760 hrs/yr. The "Equivalent Emissions" are also listed for informational purpose and for PSD and recordkeeping tracking purposes.

Table 2-1. Compliance Requirements.

FACILITY ID NUMBER: 0250014

DRAFT Permit No.: AC27-274892(A)
and PSD-FL-227(A)

Permittee:
Rinker Materials Corportion
Portland Cement Plant No. 2 and Associated Equipment

E.U. ID#	Description	Pollutant Name or parameter	Fuel(s) [1]	EPA/Reference Method/CMS *	Testing Time Frequency	Min. Compliance Test Duration	CMS * Compliance
ARMS #	Kiln/Cooler/Raw Mill	PM/PM ₁₀	Oil/Coal /Gas/WTDF	5 or 201/201A	initial/annual [8]	3 one-hr run	No [4] Yes [6] Yes [3]
ARMS #	Kiln/Cooler/Raw Mill	VE	Oil/Coal/Gas/WTDF	9/COMS	initial/annual/COMS	3 one-hr run	
ARMS #	Kiln/Cooler/Raw Mill	SO ₂	Oil/Coal/Gas/WTDF	CEMS	daily average	continuous	
ARMS #	Kiln/Cooler/Raw Mill	NO _x	Oil/Coal/Gas/WTDF	CEMS	daily average	continuous	
ARMS #	Kiln/Cooler/Raw Mill	CO	Oil/Coal/Gas/WTDF	10 [5]	initial/annual	3 one-hr run	
ARMS #	Kiln/Cooler/Raw Mill	VOC	Oil/Coal/Gas/WTDF	25 or 25A [2]	initial	3 one-hr run	
ARMS #	Kiln/Cooler/Raw Mill	H ₂ SO ₄ mist	Oil/Coal/Gas/WTDF	8	initial	3 one-hr run	
ARMS #	Kiln/Cooler/Raw Mill	Hg, Pb, Be	Oil/Coal/Gas/WTDF	29	initial	3 one-hr run	
ARMS #	Fugitive sources	VE		9	Protocol [7]		
ARMS #	Minor Sources	VE		9	initial/annual	3 one-hr run	

Notes:

- [1] Initial compliance testing shall be conducted under all the scenarios this facility is planning to operate under. Specific condition B.13. Annual testing of emissions shall be conducted during the worst case scenario that this facility would normally operate under. Frequency of testing after initial compliance shall be determined by DERM. Fuels to be burned are specified in Specific Condition B.5.
- [2] VOC emission shall be tested initially to comply with the condition of this permit. Thereafter, compliance will be assumed provided the CO allowable emission rate is reached.
- [3] NO_x - The continuous emission monitor (CEM) data shall be used for the Kiln for compliance requirement. The CEM 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 exhaust system shall be equipped with continuous opacity monitor 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 O₂ to optimize combustion conditions for pollution control shall be part of the process.
- [6] SO₂ - The continuous emission monitor (CEM) data shall be used for the Kiln compliance requirement. The CEM 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.

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Table 1-1
 Allowable Opacity Limits (Minor Particulate Sources)
 Rinker Materials Corporation

Description	Control	Grain Loading (gr/acf)	OPACITY	PM lb/hr	PM TPY	PM10 lb/hr	PM10 TPY
Emission Unit: Raw Material Processed							
Material Processing (Fugitive)	Reasonable Precautions		10		negligible		negligible
Crusher (Fugitive)	Reasonable Precautions		15		negligible		negligible
Paved and Unpaved Roads (Fugitive)	Reasonable Precautions		20		31.91		11.49
Emission Unit: Raw Mill System							
Raw Materials Handling							
Soil Bin	Baghouse	0.01	5	0.86	3.75	0.73	3.19
Transfer	Baghouse	0.01	5	0.60	2.63	0.51	2.23
Add Bin	Baghouse	0.01	5	1.71	7.51	1.46	6.38
Raw Meal Silo	Baghouse	0.01	5	1.10	4.81	0.93	4.08
Raw Meal Silo	Baghouse	0.01	5	1.37	6.01	1.17	5.11
Meal Transfer	Baghouse	0.01	5	1.37	6.01	1.17	5.11
Waste Soil	Baghouse	0.01	5	0.39	1.69	0.33	1.44
Waste Soil/Coal Transfer	Baghouse	0.01	5	0.60	2.63	0.51	2.23
Rail Transfer--Rail Cars	Baghouse	0.01	5	0.49	2.14	0.42	1.82
PM Transfer--Coal	Baghouse	0.01	5	0.49	2.14	0.42	1.82
PM Transfer--Gypsum	Baghouse	0.01	5	0.49	2.14	0.42	1.82
PM Feed Mill Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
PM Feed Mill Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Coal Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Coke/Coal Transfer	Baghouse	0.01	5	0.86	3.75	0.73	3.19
Soil Transfer	Baghouse	0.01	5	1.71	7.51	1.46	6.38
Emission Unit: Kiln System							
Raw Mill/Kiln/PI/PC/Cooler	Main Baghouse		10	44.00	192.72	37.40	163.81
Emission Unit: Finish Mill:							
Clinker and Cement Handling							
Clinker Storage Silo	Baghouse	0.01	5	0.39	1.73	0.34	1.47
Clinker Pan Conveyor	Baghouse	0.01	5	0.39	1.73	0.34	1.47
Clinker Retrofit Silo	Baghouse	0.01	5	0.39	1.73	0.34	1.47
Clinker Discharge Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Clinker Discharge Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Feed Bin	Baghouse	0.01	5	0.39	1.73	0.34	1.47
Additional Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Gypsum Bin Transfer	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Flyash Bin	Baghouse	0.01	5	0.60	2.63	0.51	2.23
Clinker Mill (Pulse Type)	Baghouse	0.01	5	2.31	10.14	1.97	8.62
Separator (Pulse Type)	Baghouse	0.01	5	6.17	27.03	5.25	22.98
Mill Return Conveyor	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Silo Feed Conveyor	Baghouse	0.01	5	0.49	2.14	0.42	1.82
Emission Unit: Coal Mill System							
Coal Mill	Baghouse	0.01	5	1.80	7.88	1.53	6.70
Coal Handling and Storage	Fugitive		20				
Fuel Bin	Baghouse	0.01	5	0.49	2.14	0.42	1.82
TOTAL				73.38	351.21	62.48	284.71

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

- 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.

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

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 ()
 - (b) Determination of Prevention of Significant Deterioration (); and
 - (c) Compliance with New Source Performance Standards ().
- 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

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

facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 1.0 CONSTRUCTION REQUIREMENTS

- 1.1 Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60, adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800 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 requirements or regulations. [Rule 62-210.300, F.A.C.]

SUBSECTION 2.0 EMISSION LIMITING STANDARDS

- 2.1 General Particulate Emission Limiting Standards. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). [Rule 62-296-320(4)(b)1, F.A.C.]
- 2.2 Unconfined Emissions of Particulate Matter [Rule 62-296.320(4)(c), F.A.C.]
- (a) The owner or operators shall not cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling, without taking reasonable precautions to prevent such emission.
- (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- (c) Reasonable precautions include the following:
- Paving and maintenance of roads, parking areas and yards.
 - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

NOTE: Facilities that cause frequent, valid complaints may be required by the Permitting Authority to take these or other reasonable precautions. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

2.3 General Pollutant Emission Limiting Standards: [Rule 62-296.320, F.A.C.]

- (a) The owner or operator shall not store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems.
- (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

NOTE: An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [F.A.C. 62-210.200(198)]

SUBSECTION 3.0 OPERATION AND MAINTENANCE

- 3.1 Changes/Modifications: The owner or operator shall submit to the Permitting Authority(s), for review any changes in, or modifications to: the method of operation; process or pollution control equipment; increase in hours of operation; equipment capacities; or any change which would result in an increase in potential/actual emissions. Depending on the size and scope of the modification, it may be necessary to submit an application for, and obtain, an air construction permit prior to making the desired change. *Routine maintenance of equipment will not constitute a modification of this permit.* [Rule 62-4.030, 62-210.300 and 62-4.070(3), F.A.C.]
- 3.2 Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

the Permitting Authority as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

3.3 Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

3.4 Excess Emissions Requirements [Rule 62-210.700, F.A.C.]

(a) Excess emissions resulting from start-up, shutdown or malfunction of these emissions units 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 Permitting Authority office for longer duration. [Rule 62-210.700(1), F.A.C.]

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

(c) In case of excess emissions resulting from malfunctions, the owner or operator shall notify Permitting Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the problem; and the corrective actions being taken to prevent recurrence. [Rule 62-210.700(6), F.A.C.]

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

SUBSECTION 4.0 MONITORING OF OPERATIONS

4.1 Determination of Process Variables

(a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

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EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- (b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C]

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EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 5.0 TEST REQUIREMENTS

- 5.1 Test Performance Within 60 days after achieving the maximum production rate at which these emission units will be operated, but not later than 180 days after initial startup and annually thereafter, the owner or operator of this facility shall conduct performance test(s) pursuant to 40 CFR 60.8, Subpart A, General Provisions and 40 CFR 60, Appendix A. No other test method shall be used unless approval from the Department has been received in writing. Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emission unit(s) operating at permitted capacity pursuant to Rule 62-297.310(2), F.A.C. [Rules 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C.]
- 5.2 Test Procedures shall meet all applicable requirements of the Florida Administrative Code Chapter 62-297. [Rule 62-297.310, F.A.C.]
- 5.3 Test Notification: The owner or operator shall notify the Permitting Authority in writing at least (30) days (initial) and 15 days (annual) prior to each scheduled compliance test to allow witnessing. The notification shall include the compliance test date, place of such test, the expected test time, the facility contact person for the test, and the person or company conducting the test. The (30) or (15) day notification requirement may be waived at the discretion of the Department. Likewise, if circumstances prevent testing during the test window specified for the emission unit, the owner or operator may request an alternate test date before the expiration of this window. [Rule 62-297.310 and 40 CFR 60.8, F.A.C.]
- 5.4 Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rule 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Permitting Authority. [Rule 62-297.310(7)(b), F.A.C.]
- 5.5 Stack Testing Facilities: The owner or operator shall install stack testing facilities in accordance with Rule 62-297.310(6), F.A.C..
- 5.6 Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Air Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in Rule 62-297.620, F.A.C.
- 5.7 Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

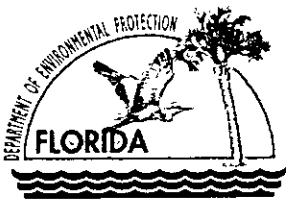
impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities 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) and (3)]

SUBSECTION 6.0 REPORTS AND RECORDS

- 6.1 Duration: All reports and records required by this permit shall be kept for at least (5) years from the date the information was recorded. [Rule 62-4.160(14)(b), F.A.C.]
- 6.2 Emission Compliance Stack Test Reports:
- (a) A *test report* indicating the results of the required compliance tests shall be filed with the Permitting Authority as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]
 - (b) The *test report* shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in **Rule 62-297.310(8), F.A.C.**
- 6.3 Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Permitting Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]
- 6.4 Annual Operating Report for Air Pollutant Emitting Facility: Before March 1st of each year, the owner or operator shall submit to the Permitting Authority this required report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION 7.0 OTHER REQUIREMENTS

- 7.1 Waste Disposal: The owner or operator shall treat, store, and dispose of all liquid, solid, and hazardous wastes in accordance with all applicable Federal, State, and Local regulations. This air pollution permit does not preclude the permittee from securing any other types of required permits, licenses, or certifications.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

P.E. Certification Statement

Permittee:
Rinker Materials Corporation
Miami Cement Facility

DRAFT Permit No. 0250014-002-AC]
Facility ID No. 0250014

Project type: Air Construction Permit to Modernize and Expand Production

I HEREBY CERTIFY that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

A.A. Linero, P.E.
Registration Number: 26032

6/23/97

Date

Department of Environmental Protection
Bureau of Air Regulation
New Source Review Section
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (904) 488-1344
Fax (904) 922-6979

aal

6/23

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

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SENDER:

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

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

- 1. Addressee's Address
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Consult postmaster for fee.

3. Article Addressed to:
 James Jenkins VP
 Pinker Materials Corp
 1200 NW 137th Ave
 Miami, FL 33182

4a. Article Number
 P 265 659 232

4b. Service Type
 Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery
 6-26-97 C.7

5. Received By: (Print Name)

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

6. Signature (Addressee or Agent)
 X *Lena Martinez*

PS Form 3811, December 1994

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Sent to	
<i>James Jenkins</i>	
Street & Number	
<i>Pinker Materials</i>	
Post Office, State, & ZIP Code	
<i>Miami, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	<i>6-24-97</i>
<i>0250014-002-AC</i>	

PS Form 3800, April 1995