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

KA 263-94-04

December 3, 1996

VIA FEDEX

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

Subject: Application to Construct/Modify
Air Pollution Source
Rinker Materials Corporation
Miami Cement Plant
Miami, Dade County, Florida
AIRS I.D. No. 0250014
Permit No. A013-233208

Dear Mr. Linero:

Enclosed are four signed copies of the permit application and a check for $5,000 (processing fee) for the subject facility.

If you have any questions concerning this application, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:wa
Enc.

c: Mr. Mike Vardeman, Rinker
Mr. Scott Benyon, Rinker
Mr. Richard Donelan, Carleton, Fields

CC: SED
DERM

0250014-002-AC

Rinker

P.O. BOX 24635
WEST PALM BEACH, FL 33416-4635
PHONE (407) 833-5555

63-568
631

BARNETT BANK
CALHOUN AT JEFFERSON ST.
TALLAHASSEE, FL 32301

237935

DATE	CHECK NO.	NET AMOUNT
11/19/96	00237935	******5,000.00

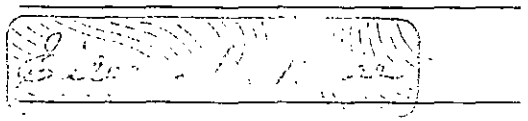
PAY **********

FIVE THOUSAND AND 00/100

TO THE ORDER OF

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399-2405

RINKER MATERIALS CORPORATION
TWO SIGNATURES REQUIRED IF OVER $25,000.00



⑈237935⑈ ⑆063105683⑆ 200000 2688⑈

PLEASE DETACH BEFORE DEPOSITING

Rinker

01-000-090374 RINKER MATERIALS 00237935

VOUCHER NUMBER	INVOICE NUMBER	PURCHASE ORDER	INVOICE DATE	AMOUNT	DISCOUNT	NET AMOUNT
733904	205491		11-14-96	5,000.00	.00	5,000.00
		TOTALS		5,000.00	.00	5,000.00

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

RECEIVED
DEC 4 1996
BUREAU OF AIR REGULATION

1. Facility Owner/Company Name: **Rinker Materials Corporation**	
2. Site Name: **Miami Cement Plant**	
3. Facility Identification Number: **0250014**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **1200 NW 137th Ave** City: **Miami** County: **Dade** Zip Code: **33182**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	December 4, 1996
2. Permit Number:	0250014-002-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

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

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Rinker Materials Corporation**
Street Address: **1200 NW 137th Avenue**
City: **Miami** State: **FL** Zip Code: **33182**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
Telephone: **(305) 229-2951** Fax: **(305) 229-8015**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature 10/18/96
Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID	Description of Emissions Unit	Permit Type
NO CORRESPONDING ID	**Raw Material Handling**	
NO CORRESPONDING ID	**Raw Mill, Dry Process Kiln with Preheater and Precalciner, and Clinker Cooler**	
NO CORRESPONDING ID	**Clinker & Cement Handling and Storage**	
NO CORRESPONDING ID	**Coal Mill**	

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be revised: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

[ ] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

_____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain:

[X] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: **AO13-233208**

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

[X] Attached - Amount: **$5000** [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

This project is the modernization of the existing cement plant in Miami, Dade County, Florida. Features of this project include:

- **A new primary crushing facility will be constructed.**
- **A new raw material handling system will be constructed.**
- **A new raw mill system and new raw meal handling and storage equipment will be constructed.**
- **The existing two wet process cement kilns 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 finish grinding mill and associated equipment will be constructed.**
- **A new Coal/Coke preparation system will be constructed. This will allow indirect firing of Coal/Coke.**

The dry process preheater/precalciner kiln is the most fuel efficient cement manufacturing technology currently available. The increased fuel efficiency of the modernized plant will provide environmental benefits.

Full compliance with all applicable requirements will be achieved.

2. Projected or Actual Date of Commencement of Construction:
Upon Dade County and FDEP Approval: Expected April 1997

3. Projected Date of Completion of Construction:
Approximately 36 months after commencement of construction

Professional Engineer Certification

1. Professional Engineer Name: **John B. Koogler, Ph.D., P.E.** Registration Number: **12925**
2. Professional Engineer Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **FL** Zip Code: **32609**
3. Professional Engineer Telephone Numbers: Telephone: **(352) 377 - 5822** Fax: **(352) 377 - 7158**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

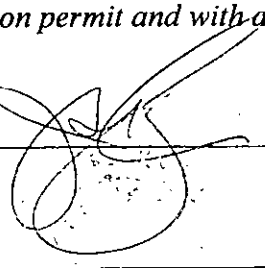
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X] if so), I further certify that the engineering features of each such emissions unit described in this application have been ~~designed or~~ examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.



10/18/96

Signature Date

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact: **Steve Cullen - Project Engineer**

2. Application Contact Mailing Address:

   Organization/Firm: **Koogler & Associates**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **FL** Zip Code: **32609**

3. Application Contact Telephone Numbers:
   Telephone: **(352) 377 - 5822** Fax: **(352) 377 - 7158**

Application Comment

This application is to obtain an air construction permit for the modernization of the existing cement plant. This application addresses only those plant activities which will be affected by the modernization project.

This is a Title V facility, and all existing activities have been addressed in a Title V air operation permit application, submitted under separate cover.

The modernization of the cement plant will result in an 18% decrease in permitted combined emissions of PM, PM10, SO2, NOx, CO, and VOC.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **558.20** North (km): **2851.20**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **25/46/45** Longitude (DD/MM/SS): **80/25/10**			
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241 4953 3271 1422 3273**
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: **Michael D. Vardeman - Cement Division Environmental Manager**
2. Facility Contact Mailing Address: Organization/Firm: **Rinker Materials Corporation** Street Address: **1200 NW 137th Avenue** City: **Miami** State: **FL** Zip Code: **33182**
3. Facility Contact Telephone Numbers: Telephone: **(305) 229-2955** Fax: **(305) 223-5403**

Facility Regulatory Classifications

1. Small Business Stationary Source? [ ] Yes [X] No [ ] Unknown
2. Title V Source? [X] Yes [ ] No
3. Synthetic Non-Title V Source? [ ] Yes [X] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? [X] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs? [ ] Yes [X] No
6. Major Source of Hazardous Air Pollutants (HAPs)? [X] Yes [ ] No
7. Synthetic Minor Source of HAPs? [ ] Yes [X] No
8. One or More Emissions Units Subject to NSPS? [X] Yes [ ] No
9. One or More Emission Units Subject to NESHAP? [ ] Yes [X] No
10. Title V Source by EPA Designation? [ ] Yes [X] No
11. Facility Regulatory Classifications Comment (limit to 200 characters): **Raw Material Handling Subject to NSPS Subpart OOO** **Kiln and Clinker Cooler Subject to NSPS Subpart F** **Coal Handling System Subject to NSPS Subpart Y**

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Title V Core List	**F.S. 403**
Rule 62-4, F.A.C.	**Rule 62-204, F.A.C.**
Rule 62-210, F.A.C.	**Rule 62-212, F.A.C.**
Rule 62-213, F.A.C.	**Rule 62-214, F.A.C.**
Rule 62-252, F.A.C.	**Rule 62-256, F.A.C.**
Rule 62-257, F.A.C.	**Rule 62-281, F.A.C.**
Rule 62-296, F.A.C.	**Rule 62-297, F.A.C.**
42 U.S.C. Section 7412	**40 CFR 61**
40 CFR 63	**40 CFR 52, Subpart K**
40 CFR 55	**40 CFR 82**
40 CFR 60, Appendix A	**Code of Metropolitan Dade County Chapter 24**

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM	**A**
PM10	**A**
SO2	**A**
NOX	**A**
CO	**A**
VOC	**A**
HAPS	**A**
H106	**A**
H017	**A**
PB	**B**
H150	**B**

D. FACILITY POLLUTANT DETAIL INFORMATION [NA]

Facility Pollutant Detail Information: Pollutant ____ of ____

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information: Pollutant ____ of ____

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
6. Supplemental Information for Construction Permit Application: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested

Additional Supplemental Requirements for Category I Applications Only **[NA]**

7. List of Proposed Exempt Activities: [ ] Attached, Document ID:_____ [ ] Not Applicable
8. List of Equipment/Activities Regulated under Title VI: [ ] Attached, Document ID:_____ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ ] Not Applicable
9. Alternative Methods of Operation: [ ] Attached, Document ID:_____ [ ] Not Applicable
10. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID:_____ [ ] Not Applicable

11. Identification of Additional Applicable Requirements: [ ] Attached, Document ID:_____ [ ] Not Applicable
12. Compliance Assurance Monitoring Plan: [ ] Attached, Document ID:_____ [ ] Not Applicable
13. Risk Management Plan Verification: [ ] Plan Submitted to Implementing Agency - Verification Attached, Document ID:_____ [ ] Plan to be Submitted to Implementing Agency by Required Date [ ] Not Applicable
14. Compliance Report and Plan: [ ] Attached, Document ID:_____ [ ] Not Applicable
15. Compliance Certification (Hard-copy Required): [ ] Attached, Document ID:_____ [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Raw Material Handling**		
2. Emissions Unit Identification Number: [**X**] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **14**
6. Emissions Unit Comment (limit to 500 characters): **This emissions unit includes the new primary crusher, and all raw material handling and storage activities leading up to the raw mill. It also includes raw meal handling after the raw mill.** **This emissions unit includes the handling and storage of solid fuels. The coal/coke grinding mill is addressed in a separate emissions unit.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Fabric Filters -- Low Temperature (T<180^{0}F)**

Soil Bin
Waste Soil Handling
Waste Soil/Coal Transfer
Soil Transfer
Additive Bin
Additive Transfer
Rail Transfer
Coal Transfer
Coal Transfer
Gypsum Transfer
Raw Mill Transfer
Raw Mill Transfer
Raw Meal Silo
Raw Meal Silo
Raw Meal Transfer
Coke/Coal Transfer

2. Control Device or Method Code: **018**

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA** Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA** Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **NA**		mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **1200 TPH of Limestone and Overburden through Primary Crusher**		
4. Maximum Production Rate: **NA**		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Title V Core List	**F.S. 403**
Rule 62-4, F.A.C.	**Rule 62-204, F.A.C.**
Rule 62-210, F.A.C.	**Rule 62-212, F.A.C.**
Rule 62-213, F.A.C.	**Rule 62-214, F.A.C.**
Rule 62-252, F.A.C.	**Rule 62-256, F.A.C.**
Rule 62-257, F.A.C.	**Rule 62-281, F.A.C.**
Rule 62-296, F.A.C.	**Rule 62-297, F.A.C.**
42 U.S.C. Section 7412	**40 CFR 61**
40 CFR 63	**40 CFR 52, Subpart K**
40 CFR 55	**40 CFR 82**
40 CFR 60, Appendix A	**40 CFR 60, Subpart OOO**
Code of Metropolitan Dade County Chapter 24	**40 CFR 60, Subpart F**
40 CFR 60 Subpart Y	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Baghouses**	
2. Emission Point Type Code: [ ] 1 [ ] 2 [X] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Baghouses for:** **Soil Bin** **Waste Soil Handling** **Waste Soil/Coal Transfer** **Soil Transfer** **Additive Bin** **Additive Transfer** **Rail Transfer** **Coal Transfer** **Coal Transfer** **Gypsum Transfer** **Raw Mill Transfer** **Raw Mill Transfer** **Raw Meal Silo** **Raw Meal Silo** **Raw Meal Transfer** **Coke/Coal Transfer**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [X] W	
6. Stack Height: **NA**	feet
7. Exit Diameter: **NA**	feet
8. Exit Temperature:	77°F

9. Actual Volumetric Flow Rate: **NA**	acfm
10. Percent Water Vapor : **NA**	%
11. Maximum Dry Standard Flow Rate: **NA**	dscfm
12. Nonstack Emission Point Height:	**0** feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **16 baghouses for material handling activities, all expected to have weather caps.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Mineral Products: Stone Quarrying/Processing: Primary Crushing**	
2. Source Classification Code (SCC): **3-05-020-01**	
3. SCC Units: **Tons Raw Material**	
4. Maximum Hourly Rate: **1200 Tons Raw Material**	5. Maximum Annual Rate: **10,512,000 Tons Raw Material**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters): **This segment represents all raw material handling activities at the cement plant.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			**EL**
PM10			**EL**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 1 of 2

1. Pollutant Emitted: **PM**	
2. Total Percent Efficiency of Control:	**99%**
3. Potential Emissions: **13.50** lb/hour	**59.1** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No	
5. Range of Estimated Fugitive/Other Emissions: **Negligible due to material moisture** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 gr/acf** Reference: **Specified performance level**	
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters): **16 baghouses = 157,500 acfm** **157,500 acfm x 0.01 gr/acf ÷ 7000 grains/lb x 60 min/hr = 13.50 lb/hr** **@ 8760 hr/yr = 59.1 tpy**	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.01 gr/acf**		
4. Equivalent Allowable Emissions:	**13.50** lb/hour	**59.1** tons/year
5. Method of Compliance (limit to 60 characters): **Method 9, alternative opacity limitation of 5%, Rule 62-297.620(4), FAC**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Pollutant Detail Information: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**11.48** lb/hour	**50.3** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No		
5. Range of Estimated Fugitive/Other Emissions: **Negligible due to material moisture** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **0.85 x PM** Reference: **Process knowledge, AP-42**		
7. Emissions Method Code: **[X]** 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **16 baghouses = 157,500 acfm** **157,500 acfm x 0.01 gr/acf ÷7000 grains/lb x 60 min/hr x 0.85 = 11.48 lb/hr** **@ 8760 hr/yr = 50.3 tpy**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	**11.48** lb/hour	**50.3** tons/year
5. Method of Compliance (limit to 60 characters): **Method 9, alternative opacity limitation of 5%, Rule 62-297.620(4), FAC**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 4

1. Visible Emissions Subtype: **VE15**	
2. Basis for Allowable Opacity: [X] Rule [ ] Other **40 CFR 60.672(c), NSPS Subpart OOO**	
3. Requested Allowable Opacity: Normal Conditions: **15%** Exceptional Conditions:	**15%**
Maximum Period of Excess Opacity Allowed:	**0** min/hour
4. Method of Compliance: **EPA Method 9 as modified at 40 CFR 60.675(c)**	
5. Visible Emissions Comment (limit to 200 characters): **This opacity limitation applies to crushers regulated by NSPS Subpart OOO**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 4

1. Visible Emissions Subtype: **VE10**	
2. Basis for Allowable Opacity: [X] Rule [ ] Other	
3. Requested Allowable Opacity: Normal Conditions: **10%** Exceptional Conditions:	**10%**
Maximum Period of Excess Opacity Allowed:	**0** min/hour
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **This opacity limitation applies to affected facilities except crushers regulated by NSPS Subpart OOO, and affected facilities regulated by NSPS Subpart F.**	

Visible Emissions Limitation: Visible Emissions Limitation 3 of 4

1. Visible Emissions Subtype: **VE05**
2. Basis for Allowable Opacity: [X] Rule [ ] Other **Rule 62-297.620(4), FAC**
3. Requested Allowable Opacity: Normal Conditions: **5%** Exceptional Conditions: **5%** Maximum Period of Excess Opacity Allowed: **0** min/hour
4. Method of Compliance: **EPA Method 9**
5. Visible Emissions Comment (limit to 200 characters): **Alternative opacity limitation for baghouses**

Visible Emissions Limitation: Visible Emissions Limitation 4 of 4

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance: **EPA Method 9**
5. Visible Emissions Comment (limit to 200 characters): **This opacity limitation applies to affected facilities subject to NSPS Subpart Y, and activities subject to the General Visible Emissions Standard of Rule 62-296.320, FAC.**

J. CONTINUOUS MONITOR INFORMATION [NA]
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter ~~or Sulfur Dioxide~~?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide? **[NA]**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[X] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters): **Existing primary crusher is a baseline source**			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only [NA]

10. Alternative Methods of Operation [ ] Attached, Document ID:_____ [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:_____ [ ] Not Applicable
12. Identification of Additional Applicable Requirements [ ] Attached, Document ID:_____ [ ] Not Applicable
13. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:_____ [ ] Not Applicable
14. Acid Rain Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:_____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:_____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:_____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:_____ [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Raw Mill, Dry Process Cement Kiln with Preheater and Precalciner, and Clinker Cooler**		
2. Emissions Unit Identification Number: [**X**] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **32**
6. Emissions Unit Comment (limit to 500 characters):		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Fabric Filter - High Temperature (T > 250°F)** **Kiln, Cooler and Raw Mill Baghouse**
2. Control Device or Method Code: **016**

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA** Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA** Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		**437** mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **220 tons/hr of dry kiln feed**		
4. Maximum Production Rate: **137 tons/hr of Clinker Produced**		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Title V Core List	**F.S. 403**
Rule 62-4, F.A.C.	**Rule 62-204, F.A.C.**
Rule 62-210, F.A.C.	**Rule 62-212, F.A.C.**
Rule 62-213, F.A.C.	**Rule 62-214, F.A.C.**
Rule 62-252, F.A.C.	**Rule 62-256, F.A.C.**
Rule 62-257, F.A.C.	**Rule 62-281, F.A.C.**
Rule 62-296, F.A.C.	**Rule 62-297, F.A.C.**
42 U.S.C. Section 7412	**40 CFR 61**
40 CFR 63	**40 CFR 52, Subpart K**
40 CFR 55	**40 CFR 82**
40 CFR 60, Appendix A	**40 CFR 60, Subpart F**
Code of Metropolitan Dade County Chapter 24	**40 CFR 61, Subpart E**

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Kiln, Cooler and Raw Mill Baghouse Stack**	
2. Emission Point Type Code: [X] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NA**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**130** feet
7. Exit Diameter:	**8** feet

8. Exit Temperature: **428°F, Mill Off; 194°F, Mill On**	
9. Actual Volumetric Flow Rate: **360,000 acfm Mill Off ; 270,000 acfm, Mill On**	
10. Percent Water Vapor : **NA**	%
11. Maximum Dry Standard Flow Rate: **NA**	dscfm
12. Nonstack Emission Point Height: **NA**	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Mineral Products: Cement Manufacturing: Dry Process: Preheater/Precalciner Kilns**	
2. Source Classification Code (SCC): **3-05-006-23**	
3. SCC Units: **Tons Produced (Clinker)**	
4. Maximum Hourly Rate: **137 Tons Produced**	5. Maximum Annual Rate: **1,200,000 Tons Produced**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters):	

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 2 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Industrial Process: In-Process Fuel Use: Natural Gas: Cement Kiln**
2. Source Classification Code (SCC): **3-90-006-02**
3. SCC Units: **Million Cubic Feet Burned**

4. Maximum Hourly Rate: **0.42 Million Cubic Feet Burned**	5. Maximum Annual Rate: **3,646 Million Cubic Feet Burned**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**

9. Million Btu per SCC Unit: **1050 MMBtu/MMcf**
10. Segment Comment (limit to 200 characters): **437 MMBtu/hr x 1.0 MMcf/1050 MMBtu = 0.42 MMcf/hr** **@ 8760 hr/yr = 3,646 MMcf/yr**

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 3 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Industrial Process: In-Process Fuel Use: Bituminous Coal : Cement Kiln

2. Source Classification Code (SCC): **3-90-002-01**

3. SCC Units: **Tons Burned**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
16.8 Tons Burned	**147,168 Tons Burned**

6. Estimated Annual Activity Factor: **NA**

7. Maximum Percent Sulfur: **3.5**	8. Maximum Percent Ash: **28.0**

9. Million Btu per SCC Unit: **26 MMBtu/Ton**

10. Segment Comment (limit to 200 characters):

437 MMBtu/hr x 1.0 tons/26 MMBtu = 16.8 tons/hr
@ 8760 hr/yr = 147,168 tons/yr

Segment Description and Rate: Segment 4 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Industrial Process: In-Process Fuel Use: Coke: Cement Kiln

Petroleum Coke as In-Process Fuel

2. Source Classification Code (SCC): **3-90-008-99**

3. SCC Units: **Tons Burned**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
14.6 Tons Burned	**127,896 Tons Burned**

6. Estimated Annual Activity Factor: **NA**

7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**

9. Million Btu per SCC Unit: **30 MMBtu/Ton**

10. Segment Comment (limit to 200 characters):

437 MMBtu/hr x 1.0 tons/30 MMBtu = 14.6 tons/hr
@ 8760 hr/yr = 127,896 tons/yr

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 5 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Industrial Process: In-Process Fuel Use: Liquefied Petroleum Gas (LPG) : General** **Use of Propane in Kiln**
2. Source Classification Code (SCC): **3-90-010-99**
3. SCC Units: **Thousand Gallons Burned**

4. Maximum Hourly Rate: **4.65 Thousand Gallons Burned**	5. Maximum Annual Rate: **40,734 Thousand Gallons Burned**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **Negligible**	8. Maximum Percent Ash: **NA**

9. Million Btu per SCC Unit: **94 MMBtu/Thousand Gallons Burned**
10. Segment Comment (limit to 200 characters): **437 MMBtu/hr x 1.0 Thousand Gallons Burned/94 MMBtu = 4.65 TGB/hr** **@ 8760 hr/yr = 40,734 TGB/yr**

Segment Description and Rate: Segment 6 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Industrial Process: In-Process Fuel Use: Distillate Oil: Cement Kiln

Use of No. 2 Fuel Oil in Kiln

2. Source Classification Code (SCC): **3-90-005-02**

3. SCC Units: **Thousand Gallons Burned**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
3.1 Thousand Gallons Burned	**27,156 Thousand Gallons Burned**

6. Estimated Annual Activity Factor: **NA**

7. Maximum Percent Sulfur: **0.5**	8. Maximum Percent Ash: **NA**

9. Million Btu per SCC Unit: **141 MMBtu/Thousand Gallons Burned**

10. Segment Comment (limit to 200 characters):

437 MMBtu/hr x 1.0 Thousand Gallons Burned/141 MMBtu = 3.1 TGB/hr
@ 8760 hr/yr = 27,156 TGB/yr

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 7 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Industrial Process: In-Process Fuel Use: Residual Oil : Cement Kiln**
2. Source Classification Code (SCC): **3-90-004-02**
3. SCC Units: **Thousand Gallons Burned**

4. Maximum Hourly Rate: **2.99 Thousand Gallons Burned**	5. Maximum Annual Rate: **26,192 Thousand Gallons Burned**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **2.5**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **146 MMBtu/Thousand Gallons Burned**	

10. Segment Comment (limit to 200 characters):

437 MMBtu/hr x 1.0 Thousand Gallons Burned/146 MMBtu = 2.99 TGB/hr
@ 8760 hr/yr = 26,192 TGB/yr

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 8 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Industrial Process: In-Process Fuel Use: Liquid Waste: General** **Use of Used Oil in Kiln**
2. Source Classification Code (SCC): **3-90-013-99**
3. SCC Units: **Thousand Gallons Burned**
4. Maximum Hourly Rate: **3.64 Thousand Gallons Burned** | 5. Maximum Annual Rate: **31,886 Thousand Gallons Burned**
6. Estimated Annual Activity Factor: **NA**
7. Maximum Percent Sulfur: **0.4** | 8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **120 MMBtu/Thousand Gallons Burned**
10. Segment Comment (limit to 200 characters): **437 MMBtu/hr x 1.0 Thousand Gallons Burned/120 MMBtu = 3.64 TGB/hr @ 8760 hr/yr = 31,886 TGB/yr**

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Segment Description and Rate: Segment 9 of 9

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Industrial Process: In-Process Fuel Use: Solid Waste : Cement Kiln

Combustion of nonhazardous solid waste at up to 40% of heat input. Materials include, but are not limited to:

- **Whole Tires and/or Tire-Derived Fuel (TDF)**
- **Oil Filters**
- **Booms and Rags from Spill Cleanup**
- **Unused Diapers**
- **Paper Products**
- **Plastics Waste from Non-chlorinated Plastics**
- **Sewage Sludge from Publically Owned Treatment Works (POTW)**

2. Source Classification Code (SCC): **3-90-012-99**

3. SCC Units: **Tons Burned**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6.7 Tons Burned	**58,692 Tons Burned**

6. Estimated Annual Activity Factor: **NA**

7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**

9. Million Btu per SCC Unit: **~26 MMBtu/Ton**

10. Segment Comment (limit to 200 characters):

437 MMBtu/hr x 40% = 174.8 MMBtu/hr
174.8 MMBtu/hr x 1.0 tons/26 MMBtu = 6.7 tons/hr
@ 8760 hr/yr = 58,692 tons/yr

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**016**		**EL**
PM10	**016**		**EL**
NOX			**EL**
SO2			**EL**
CO			**EL**
VOC			**NS**
HAPS			**NS**
DIOX			**NS**
H017			**NS**
H106			**NS**
H114			**NS**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 1 of 5

1. Pollutant Emitted: **PM**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**44.00** lb/hour	**192.7** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3	_____ to _____	tons/year
6. Emission Factor: **0.2 lb/ton dry feed** Reference: **Process Knowledge**		
7. Emissions Method Code: **[X]** 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **0.2 lb/ton x 220 tph of dry kiln feed = 44.00 lb/hr** **@ 8760 hrs/yr = 192.7 tons/yr**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.2 lb/ton of dry feed to the kiln**		
4. Equivalent Allowable Emissions:	**44.00** lb/hour	**192.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The requested emission limitation is more stringent than NSPS Subpart F and Rule 62-296.407, FAC (0.30 lb/ton of dry feed for the kiln and 0.1 lb/ton of dry feed for the clinker cooler).**		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Pollutant Detail Information: Pollutant 2 of 5

1. Pollutant Emitted: **PM10**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**37.40** lb/hour	**163.8** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **85% x PM = 0.17 lb/ton dry feed** Reference: **Process Knowledge, AP-42**		
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **0.17 lb/ton x 220 tph of dry kiln feed = 37.40 lb/hr** **@ 8760 hrs/yr = 163.8 tons/yr**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.17 lb/ton of dry feed to the kiln**		
4. Equivalent Allowable Emissions:	**37.40** lb/hour	**163.8** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Pollutant Detail Information: Pollutant 3 of 5

1. Pollutant Emitted: **NOX**		
2. Total Percent Efficiency of Control: **NA**		%
3. Potential Emissions:	**764.75** lb/hour	**3349.6** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **1.75 lb/MMBtu** Reference: **OGC Case No. 96-1751**		
7. Emissions Method Code: **[X]** 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **1.75 lb/MMBtu x 437 MMBtu/hr = 764.75 lb/hr** **@ 8760 hrs/yr = 3349.6 tons/yr**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **OTHER (OGC Case No. 96-1751)**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **1.75 lb/MMBtu**		
4. Equivalent Allowable Emissions:	**764.75** lb/hour	**3349.6** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 7**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The proposed emission limit is more stringent than that required by the NOx RACT in Rule 62-296.570(4)(b)8., FAC (2.0 lb/MMBtu).**		

B.

1. Basis for Allowable Emissions Code: **NA**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **NA**		
4. Equivalent Allowable Emissions: **NA**	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters): **NA**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **NA**		

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Pollutant Detail Information: Pollutant 4 of 5

1. Pollutant Emitted: **SO2**	
2. Total Percent Efficiency of Control: **NA**	%
3. Potential Emissions:	**349.60** lb/hour **1531.2** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No	
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.8 lb/MMBtu** Reference: **Process Knowledge**	
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters): **0.8 lb/MMBtu x 437 MMBtu hr = 349.60 lb/hr** **@ 8760 hrs/yr = 1531.2 tons/yr**	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.8 lb/MMBtu**		
4. Equivalent Allowable Emissions:	**349.60** lb/hour	**1531.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 6**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **This limit is more stringent than that contained in the Dade County Code**		

B.

1. Basis for Allowable Emissions Code: **RULE** **Section 24-17(2)(a)(ii), Dade County Code**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units:	**Solid Fuels 1.5 lb/MMBtu** **Liquid Fuels 1.1 lb/MMBtu**	
4. Equivalent Allowable Emissions: **Solid**	**655.50** lb/hour	**2871.1** tons/year
Liquid	**480.70** lb/hour	**2105.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 6**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Emissions Unit Information Section 2 of 4 [Kiln, Cooler, Raw Mill]

Pollutant Detail Information: Pollutant 5 of 5

1. Pollutant Emitted: **CO**		
2. Total Percent Efficiency of Control: **NA**		%
3. Potential Emissions:	**412.49** lb/hour	**1806.7** tons/year
4. Synthetically Limited? [ ] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3	_____ to _____	tons/year
6. Emission Factor: **3.7 lb/ton clinker** Reference: **AP-42, Fifth Edition, Table 11.6-8**		
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **3.01 lb/ton clinker x 137 tph clinker = 412.49 lb/hr** **@ 8760 hrs/yr = 1806.7 tons/yr**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **3.01 lb/ton clinker**		
4. Equivalent Allowable Emissions:	**412.49** lb/hour	**1806.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code: **NA**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **NA**		
4. Equivalent Allowable Emissions: **NA**	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters): **NA**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **NA**		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**
2. Basis for Allowable Opacity: [ ] Rule [ ] Other **40CFR60.62(b)(2), [NSPS Subpart F]**
3. Requested Allowable Opacity: Normal Conditions: **10%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance: **EPA Method 9**
5. Visible Emissions Comment (limit to 200 characters): **This opacity limitation applies to the clinker cooler and the raw mill. As the kiln, raw mill and clinker cooler have a common stack, this is the appropriate opacity limitation.**

Visible Emissions Limitation: Visible Emissions Limitation ____ of _____

1. Visible Emissions Subtype: **NA**
2. Basis for Allowable Opacity: **NA** [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance: **NA**
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **VE**	2. Pollutant(s): **NA**
3. CMS Requirement: [X] Rule [ ] Other **40CFR60.63(b), [NSPS Subpart F]**	
4. Monitor Information: **Information not yet available** Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____ **[NA]**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[**X**] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[**X**] Unknown
SO2	[ ] C	[ ] E	[**X**] Unknown
NO2	[ ] C	[ ] E	[**X**] Unknown

4. Baseline Emissions:		
PM	lb/hour	tons/year
SO2	lb/hour	tons/year
NO2		tons/year

5. PSD Comment (limit to 200 characters): **Existing plant is a baseline source**

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID: _____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only [NA]

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Clinker and Cement Handling and Storage**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **32**
6. Emissions Unit Comment (limit to 500 characters): **This emissions unit is for the handling and storage of clinker after the clinker cooler, the new finish mill, the handling and storage of cement; and the handling and storage of gypsum, limestone, and mineral aggregates for use in the finish mills.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Fabric Filters - High Temperature (T > 250°F)** **Clinker Pan Conveyor** **Clinker Silo** **Clinker Retrofit Silo**
2. Control Device or Method Code: **016**

B.

1. Description (limit to 200 characters): **Fabric Filters - Medium Temperature ($180^{o}F < T < 250^{o}F$)** **Clinker Discharge Transfer** **Clinker Discharge Transfer** **Finish Mill Feed Bin** **Additional Transfer** **Finish Mill No. 6** **Finish Mill Air Separator** **Finish Mill Return Conveyor** **Silo Feed Conveyor**
2. Control Device or Method Code: **017**

C.

1. Description (limit to 200 characters): **Fabric Filters - Low Temperature ($T < 180^{o}F$)** **Gypsum Bin Transfer** **Flyash Bin**
2. Control Device or Method Code: **018**

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA**		
Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA**		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **NA**		mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **100 tph of Clinker and additives to Finish Mill No. 6**		
4. Maximum Production Rate: **NA**		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Title V Core List	**F.S. 403**
Rule 62-4, F.A.C.	**Rule 62-204, F.A.C.**
Rule 62-210, F.A.C.	**Rule 62-212, F.A.C.**
Rule 62-213, F.A.C.	**Rule 62-214, F.A.C.**
Rule 62-252, F.A.C.	**Rule 62-256, F.A.C.**
Rule 62-257, F.A.C.	**Rule 62-281, F.A.C.**
Rule 62-296, F.A.C.	**Rule 62-297, F.A.C.**
42 U.S.C. Section 7412	**40 CFR 61**
40 CFR 63	**40 CFR 52, Subpart K**
40 CFR 55	**40 CFR 82**
40 CFR 60, Appendix A	**40 CFR 60, Subpart F**
Code of Metropolitan Dade County Chapter 24	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	**Clinker Cooler and Finish Mill Area**
2. Emission Point Type Code: [ ] 1 [ ] 2 [X] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	**Baghouses for the following activities:** **Clinker Pan Conveyor** **Clinker Silo** **Clinker Retrofit Silo** **Clinker Discharge Transfer** **Clinker Discharge Transfer** **Finish Mill Feed Bin** **Additional Transfer** **Finish Mill No. 6** **Finish Mill Air Separator** **Finish Mill Return Conveyor** **Silo Feed Conveyor** **Gypsum Bin Transfer** **Flyash Bin**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [X] W	
6. Stack Height: **NA**	feet
7. Exit Diameter: **NA**	feet

8. Exit Temperature: **Various**	°F
9. Actual Volumetric Flow Rate: **NA**	acfm
10. Percent Water Vapor : **NA**	%
11. Maximum Dry Standard Flow Rate: **NA**	dscfm
12. Nonstack Emission Point Height: **Various**	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Baghouses listed will have horizontal discharge or weather caps.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Mineral Products: Cement Manufacturing: Dry Process: Clinker Grinding** **Grinding of clinker, gypsum, limestone, grinding aids, and mineral aggregates in Finish Mill No. 6.**
2. Source Classification Code (SCC): **3-05-006-17**
3. SCC Units: **Tons Processed**

4. Maximum Hourly Rate: **100 Tons Produced**	5. Maximum Annual Rate: **876,000 Tons Produced**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	

10. Segment Comment (limit to 200 characters): **100 tph through Finish Mill No. 6.** **This segment includes the grinding of slag and other mineral aggregates in this finish mill.**

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**018**	**017**	**EL**
PM10	**018**	**017**	**EL**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 1 of 2

1. Pollutant Emitted: **PM**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**13.59** lb/hour	**59.5** tons/year
4. Synthetically Limited? [ ] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3	_____ to _____	tons/year
6. Emission Factor: **0.01 gr/acf** Reference: **Specification for Baghouses**		
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **158,600 acfm for 13 baghouses x 0.01 gr/acf x 60 min/hr x 1.0 lb/7000 gr = 13.59 lbs/hr @ 8760 hrs/yr = 59.5 TPY**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.01 gr/acf for baghouses**		
4. Equivalent Allowable Emissions:	**13.59** lb/hour	**59.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 in lieu of Method 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Rule 62-297.620(4), FAC**		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Pollutant Detail Information: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**11.56** lb/hour	**50.6** tons/year
4. Synthetically Limited? [ ] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3	_____ to _____	tons/year
6. Emission Factor: **PM10 = 85% of PM** Reference: **Process Knowledge**		
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **PM = 13.59 lbs/hr; PM10 = 11.56 lb/hr** **@ 8760 hrs/yr = 50.6 TPY**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **85% of PM**		
4. Equivalent Allowable Emissions:	**11.56** lb/hour	**50.6** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 in lieu of Method 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Rule 62-297.620(4), FAC**		

B. [NA]

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	
2. Basis for Allowable Opacity: [X] Rule [ ] Other **40 CFR 60.62(c), NSPS Subpart F**	
3. Requested Allowable Opacity: Normal Conditions: **10%** Exceptional Conditions:	**10%**
Maximum Period of Excess Opacity Allowed:	**0** min/hour
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE05**	
2. Basis for Allowable Opacity: [X] Rule [ ] Other **Rule 62-297.620(4), FAC**	
3. Requested Allowable Opacity: Normal Conditions: **5%** Exceptional Conditions:	**5%**
Maximum Period of Excess Opacity Allowed:	**0** min/hour
4. Method of Compliance: **EPA Method 9 in lieu of EPA Method 5**	
5. Visible Emissions Comment (limit to 200 characters):	

J. CONTINUOUS MONITOR INFORMATION [NA]
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter ~~or Sulfur Dioxide~~?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [**X**] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide? **[NA]**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[X] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters): **Existing plant is a baseline source**			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only [NA]

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Coal/Coke Mill & Bin**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **32**
6. Emissions Unit Comment (limit to 500 characters): **This emissions unit is the Coal Mill for grinding and drying coal and petroleum coke before conveying to a storage bin.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Fabric Filters - Low Temperature (T < 180^{0}F)** **Coal/Coke Mill** **Coal/Coke Bin**
2. Control Device or Method Code: **018**

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA** Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA** Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **NA**		mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **20 tph of Coal/Coke through Coal Mill**		
4. Maximum Production Rate: **NA**		
5. Operating Capacity Comment (limit to 200 characters): **NA**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Title V Core List	**F.S. 403**
Rule 62-4, F.A.C.	**Rule 62-204, F.A.C.**
Rule 62-210, F.A.C.	**Rule 62-212, F.A.C.**
Rule 62-213, F.A.C.	**Rule 62-214, F.A.C.**
Rule 62-252, F.A.C.	**Rule 62-256, F.A.C.**
Rule 62-257, F.A.C.	**Rule 62-281, F.A.C.**
Rule 62-296, F.A.C.	**Rule 62-297, F.A.C.**
42 U.S.C. Section 7412	**40 CFR 61**
40 CFR 63	**40 CFR 52, Subpart K**
40 CFR 55	**40 CFR 82**
40 CFR 60, Appendix A	**40 CFR 60, Subpart Y**
Code of Metropolitan Dade County Chapter 24	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Coal Mill**	
2. Emission Point Type Code: [ ] 1 [ ] 2 [X] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Baghouses for:** **Coal/Coke Mill** **Coal/Coke Bin**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**160** feet
7. Exit Diameter:	**3** feet
8. Exit Temperature:	**176**°F

9. Actual Volumetric Flow Rate:	**21000** acfm
10. Percent Water Vapor :	**5%**
11. Maximum Dry Standard Flow Rate: **NA**	**16,600** dscfm
12. Nonstack Emission Point Height: **NA**	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Emission point information is for coal mill baghouse.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION (Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Mineral Products: Coal Cleaning: Material Handling: Crushing**	
2. Source Classification Code (SCC): **3-05-010-10**	
3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **20 Tons Processed**	5. Maximum Annual Rate: **175,200 Tons Processed**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**018**		**EL**
PM10	**018**		**EL**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: **Pollutant __1__ of __2__**

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: **99%**

3. Potential Emissions: **2.29** lb/hour **10.0** tons/year

4. Synthetically Limited?
   [ ] Yes [**X**] No

5. Range of Estimated Fugitive/Other Emissions: **NA**
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **0.01 gr/acf**
   Reference: **Specification for Baghouses**

7. Emissions Method Code:
   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

21,000 acfm for coal mill baghouse x 0.01 gr/acf x 60 min/hr x 1.0 lb/7000 gr = 1.80 lbs/hr @ 8760 hrs/yr = 7.9 TPY

5700 acfm for coal bin baghouse x 0.01 gr/acf x 60 min/hr x 1.0 lb/7000 gr = 0.49 lbs/hr @ 8760 hrs/yr = 2.1 TPY

TOTAL = 0.49 + 1.80 = 2.29 lb/hr
@ 8760 hr/yr = 10.0 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **NA**
3. Requested Allowable Emissions and Units: **0.01 gr/acf for baghouse**
4. Equivalent Allowable Emissions: **2.29** lb/hour **10.0** tons/year
5. Method of Compliance (limit to 60 characters): **Coal Mill:** **EPA Method 5 for initial compliance, then EPA Method 9 per Rule 62-297.620(4), FAC** **Coal Bin:** **EPA Method 9**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The requested emissions limitation (0.01 gr/acf) is more stringent than NSPS Subpart Y (0.031 gr/dscf) for thermal dryers, which is applicable to the coal mill baghouse.**

Emissions Unit Information Section 4 of 4 [Coal Mill]

Pollutant Detail Information: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**		
2. Total Percent Efficiency of Control:		**99%**
3. Potential Emissions:	**1.95** lb/hour	**8.5** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No		
5. Range of Estimated Fugitive/Other Emissions: **NA** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **85% x PM** Reference: **Process Knowledge**		
7. Emissions Method Code: **[X]** 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **TOTAL PM = 0.49 + 1.80 = 2.29 lb/hr; PM10 = 85%PM = 1.95 lb/hr @ 8760 hr/yr = 8.5 TPY**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **NA**
3. Requested Allowable Emissions and Units: **85% x PM**
4. Equivalent Allowable Emissions: **1.95** lb/hour **8.5** tons/year
5. Method of Compliance (limit to 60 characters): **Coal Mill:** **EPA Method 5 for initial compliance, then EPA Method 9 per Rule 62-297.620(4), FAC** **Coal Bin:** **EPA Method 9**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [X] Rule [ ] Other **40 CFR 60.252(a)(2), NSPS Subpart Y**
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: **20%** Maximum Period of Excess Opacity Allowed: **0** min/hour
4. Method of Compliance: **EPA Method 9**
5. Visible Emissions Comment (limit to 200 characters):

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE05**
2. Basis for Allowable Opacity: [X] Rule [ ] Other **Rule 62-297.620(4), FAC**
3. Requested Allowable Opacity: Normal Conditions: **5%** Exceptional Conditions: **5%** Maximum Period of Excess Opacity Allowed: **0** min/hour
4. Method of Compliance: **EPA Method 9 in lieu of EPA Method 5**
5. Visible Emissions Comment (limit to 200 characters): **This opacity limitation is requested in lieu of EPA Method 5 after initial compliance is demonstrated for the coal mill baghouse; and initially for the coal bin baghouse.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **TEMP**	2. Pollutant(s): **NA**
3. CMS Requirement: [X] Rule [ ] Other **40 CFR 60.253(a)(1), NSPS Subpart Y**	
4. Monitor Information: **Not yet available** Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____ **[NA]**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter ~~or Sulfur Dioxide~~?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide? **[NA]**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[**X**] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown

4. Baseline Emissions:		
PM	lb/hour	tons/year
SO2	lb/hour	tons/year
NO2		tons/year

5. PSD Comment (limit to 200 characters): **Existing plant is a baseline source.**

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only [NA]

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

REPORT IN SUPPORT OF
A CONSTRUCTION PERMIT APPLICATION

PREPARED FOR:

RINKER MATERIALS CORPORATION
MIAMI, DADE COUNTY, FLORIDA

DECEMBER 1996

PREPARED BY:

KOOGLER & ASSOCIATES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(352) 377-5822

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APPENDICES

1. Precautions to Control Unconfined Particulate Matter
2. Emission Calculations

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1.0 APPLICATION SYNOPSIS

1.1 Applicant

Rinker Materials Corporation
1200 N.W. 137th Ave.
Miami, Florida

1.2 Facility Location

Rinker Materials Corporation currently operates a wet-process cement plant located at 1200 N.W. 137th Avenue in Miami, Dade County, Florida. The UTM coordinates of the Rinker plant are Zone 17, 558.2 km East and 2851 km North.

A location map for the site is presented in Figure 1-1. A plot plan of the plant is presented in Figure 1-2.

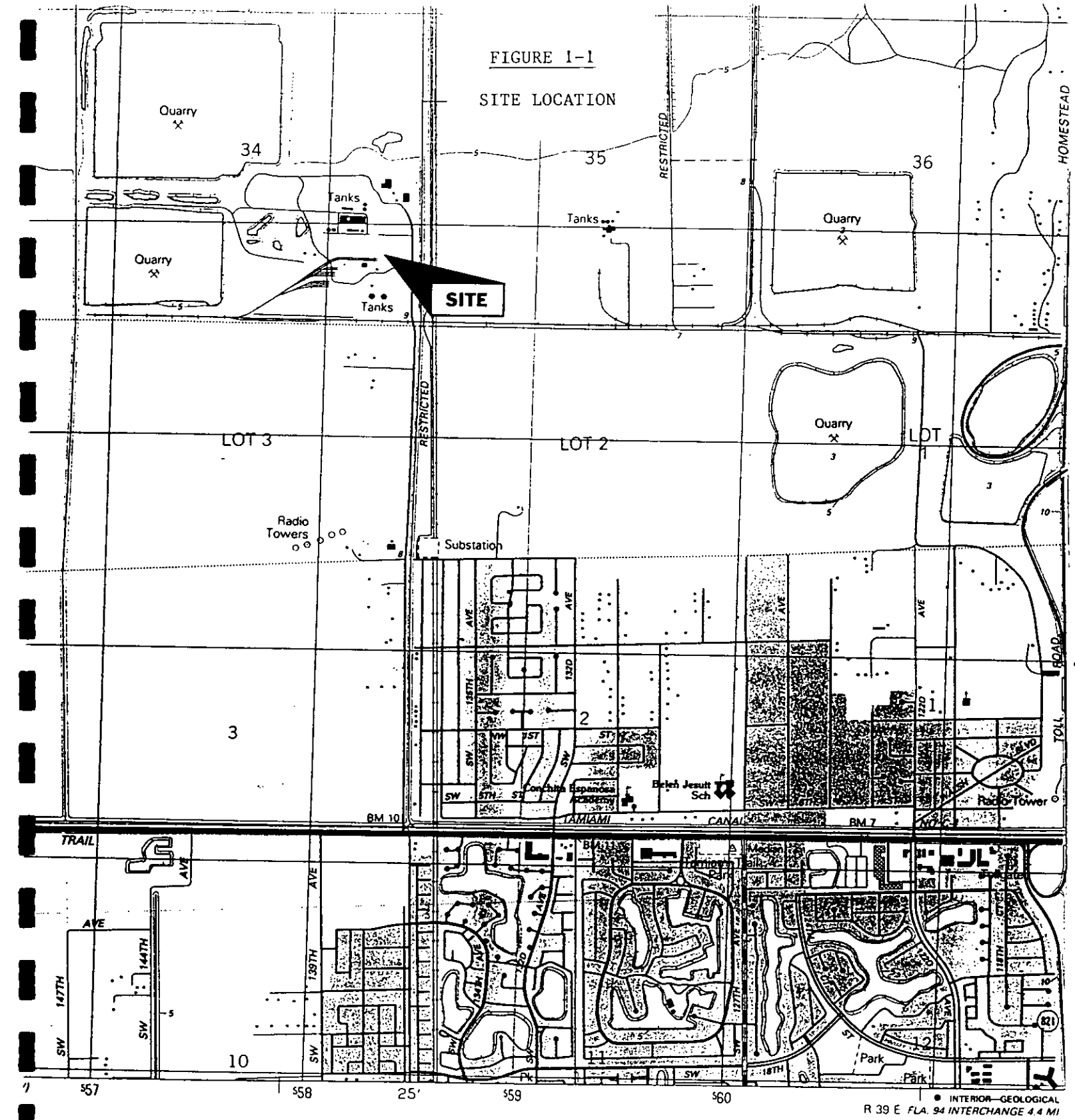
1.3 Project Overview

Rinker Materials Corporation proposes to modernize the existing Miami Portland cement manufacturing facility by replacing the existing 650,000 tons per year (tpy) wet-process cement plant with a dry-process line capable of producing about 1,200,000 tpy (about 3300 tons per day) clinker. A flow diagram for the modernized dry-process cement plant is presented in Figure 1-3.

The plant modernization project will result in higher cement production along with environmental benefits. There will be a reduction in the emissions of particulate matter (PM), particulate matter less than 10 microns in size (PM10), sulfur dioxide (SO2), nitrogen oxides (NOx) and most hazardous air pollutants (HAPs) and increases in the emissions of carbon monoxide (CO) and total hydrocarbons (THC). Overall there will be a reduction in emissions of over 1580 tpy; mainly NOx. This represents an 18 percent decrease in air emissions.

FIGURE 1-1

SITE LOCATION



USGS QUADRANGLE: HIALEAH SW

6000 7000 8000 9000 10 000

1000 2000

FEET
UM OF 1929

ACCURACY STANDARDS
ADO 80225, OR RESTON, VIRGINIA 22092
BOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

ROAD CLAS

Primary highway, hard surface .....

Secondary highway, hard surface .....

Interstate Route

Coun

FIGURE 1-2

FACILITY PLOT PLAN

RINKER MATERIALS CORPORATION
MIAMI, FLORIDA

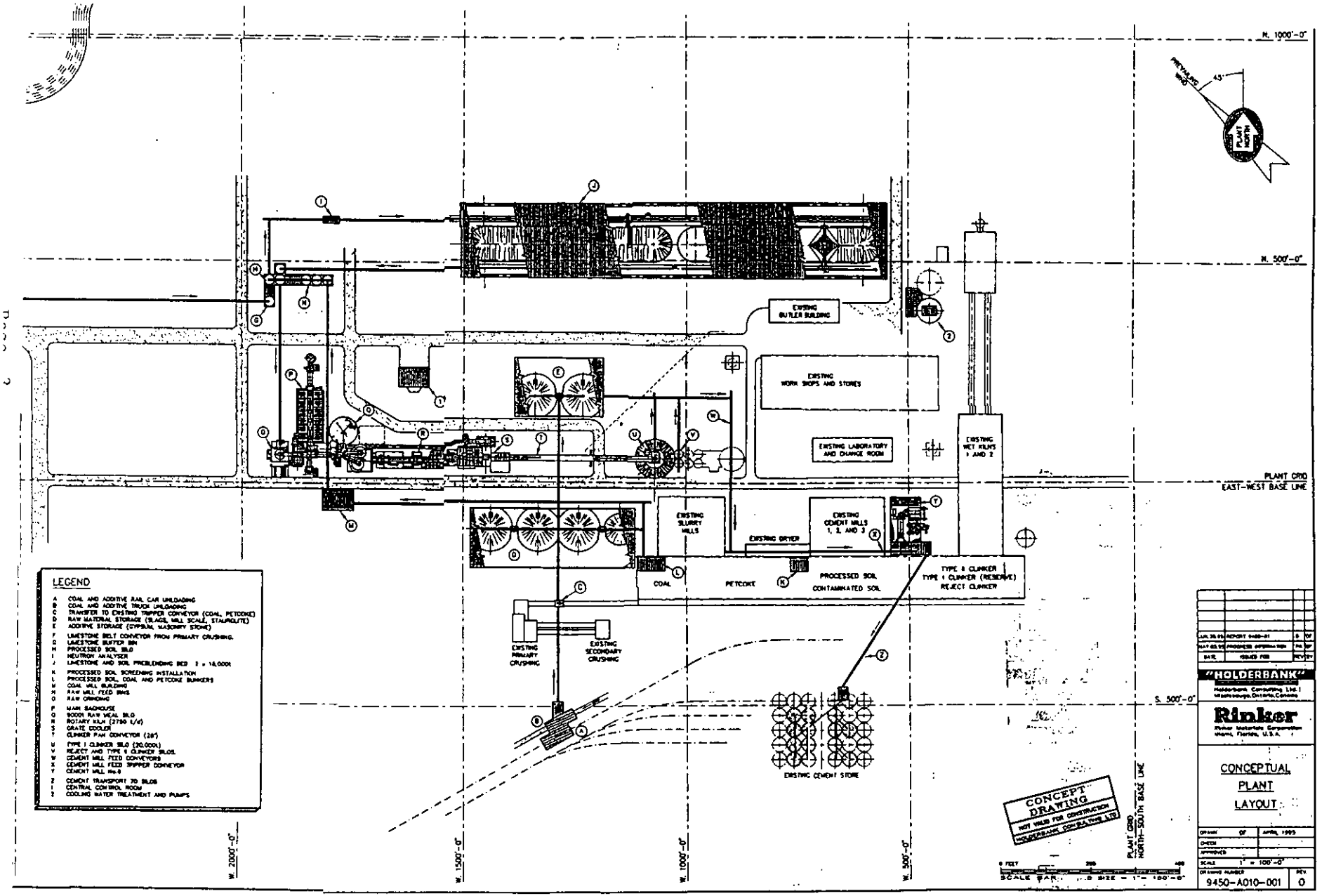
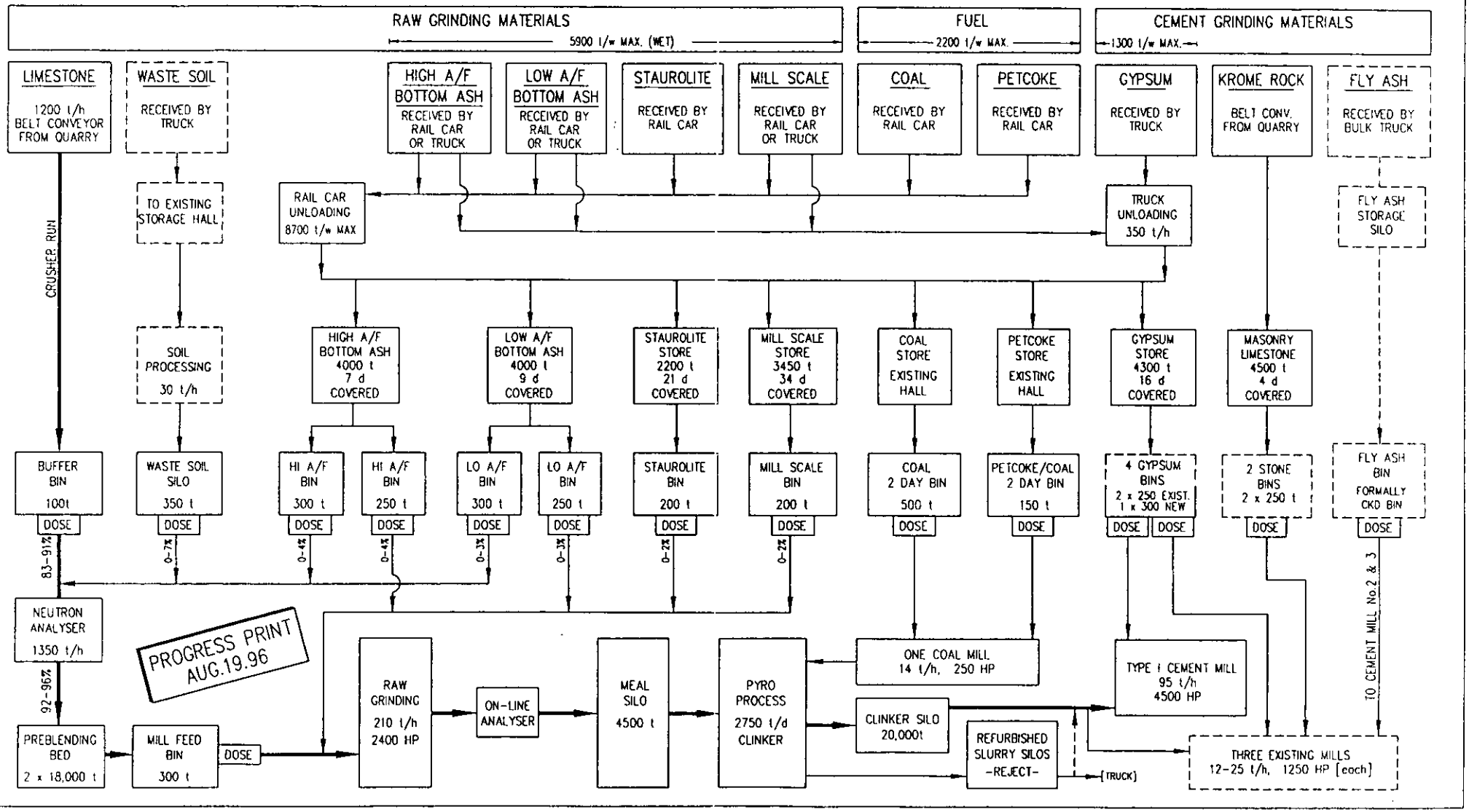


FIGURE 1-3

RINKER CEMENT – MIAMI – PLANT EXPANSION STUDY – PROJECT 9453

PRELIMINARY RAW MATERIAL MASS FLOW DIAGRAM

NOTE: All figures in short tons.



2.0 PROJECT DESCRIPTION

Rinker Materials Corporation plans to modernize the existing Miami facility by replacing the wet-process cement plant with a 1.2 million tpy clinker dry-process cement production line.

The currently permitted Rinker facility consists of a quarry; limestone crushing; 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, an 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.

Rinker proposes to construct a limestone crushing operation located close to the quarry, a single raw roller mill, one homogenizing silo, a single pyro line (preheater/precalciner/kiln), an additional finish mill, a coal roller mill, and associated processed material storage and handling systems, all featuring latest technology with state-of-the-art process equipment and optimized system designs.

2.1 Raw Material Receiving

Rinker's existing quarry will supply limestone to a crushing system located close to the quarry. The crushed limestone will be conveyed to the plant via overland belt conveyors to a surge bin and then to a 40,000 ton capacity covered preblending area.

The existing soil dryer system will supply soil via a front end loader to a belt conveyor. The material will be transported to the existing dryer system. A belt conveyor will then transfer soil from the dryer system to a storage silo. From the silo, the soil will be control fed to a covered preblending area, and stacked longitudinally. A bridge reclaimer is proposed for increased feed homogenization.

Other raw materials (mineral aggregates), received by truck and/or by rail, will be conveyed to a covered storage area. These mineral aggregates will then be conveyed to individual raw mill feed bins and control fed to a raw mill.

2.2 Raw Mill System

Rinker proposes a vertical roller mill equipped with an integral high efficiency separator. External material recirculation will reduce the pressure drop across the mill and lower power consumption of the exhaust fan. The mill exhaust system will include cyclonic collectors and a baghouse. Raw meal from the cyclones and baghouse will be conveyed to a homogenization (continuous blending) silo.

Preheater and clinker cooler exhaust gases will be used in the raw mill for drying the raw material. The integrated kiln/cooler/mill exhaust system will include fans to enable the recirculating of preheater and cooler waste gases during mill operation. Particulate matter emissions will be controlled by a single reverse air baghouse. When the roller mill is down, the kiln gases will be cooled by spraying water in the downcomer duct prior to the reverse air baghouse.

2.3 Coal Grinding System

The coal grinding system will include vertical roller coal mill. Coke may also be utilized. The system will be inert with the mill using hot gases from the preheater for drying. Coal mill product will be collected in a baghouse dust collector and transferred by screw conveyors to the pulverized coal weighing and firing system where the pulverized coal will be pneumatically transported to both the kiln and calciner burners. The burner system will include a custom kiln burner for optimal flame control. The primary air flow will be controlled with a remote operated exhaust valve and the swirl will be induced with tangential slots.

2.4 Preheater/Precalciner/Kiln System

The raw meal will be conveyed from the homogenization silo to a kiln feed bin which will control feed material to the top of a preheater tower via a bucket elevator. The material will travel through a five stage suspension preheater followed by a precalciner prior to entering a kiln.

An in-line calciner (ILC) is proposed for several reasons. First, the tower dimensions will be the smallest possible even though the calciner will be installed in line with the cyclone tower. Second, an ILC is very well suited for all fuel types, even low volatile fuels, as the combustion in the calciner takes place in hot atmospheric air (tertiary air). Finally, high material and gas retention times in the calciner will be attained with moderate calciner dimensions.

The proposed rotary kiln will feature three supports, 4% inclination hydraulic thrust roller with spherical roller bearings, and an operating speed of 3.0 RPM.

2.5 Clinker Cooler

The proposed clinker cooler will contain the latest state-of-the-art grate systems. Two types of grates are proposed for the cooler. They are similar in appearance, but differ with respect to the introduction of cooling air into the clinker. For sections comprised of one type of grates, conventional means of supplying cooling air via pressurization of the undergrate area will be implemented. For sections comprised of the second type of grates, cooling air will be supplied directly by a special distribution system to groups consisting of two to four individual grate plates. The proposed cooler will contain the first type (CFG) grates in the entire first drive section and part of the second drive sections. The second type (RFT) grates will be used in the remaining part of the second drive section.

Operators will have the ability to control the quantity and distribution of air to at least every four grates via manual valves and undergrate fan dampers. This will aid in reducing clinker fluidization and the presence of "Red Rivers" commonly found in conventional grate coolers, thereby reducing maintenance costs and downtime while contributing to increased cooler efficiency. Greater control of air distribution will result in a reduced amount of cooling air compared to a conventional cooler, and consequently a smaller cooler vent volume and improved kiln fuel consumption.

2.6 Clinker Handling and Storage

Clinker from the cooler will be conveyed by a pan conveyors to a 20,000 ton storage silo. The clinker silos withdrawal and handling system will be using pan conveyors interconnected with belt conveyors to handle material to the existing feed bunkers or to cement mill bins.

2.7 Finish Mill System

A single closed circuit system is proposed for the additional (sixth) finish mill. The system will include a ball mill, high efficiency separator and two dust collectors, designed to grind cement to a fineness of 3700 Blaine.

Clinker and gypsum will be weighed and then fed to the shell supported ball mill. Mill discharge material will be classified in the high efficiency separator. The separator will remove product while coarse rejects will be returned to the ball mill inlet for further grinding.

The separator will be vented to a pulse type dust collector where entrained product will be removed and then conveyed to cement storage. The mill will be separately vented, with entrained dust returned to the separator feed. Gases exiting the two dust collectors will pass through collector I.D. fans and will be vented to the atmosphere through a common stack.

2.8 Cement Storage and Loadout

Cement from the finish mill will be conveyed by bucket elevator and belt conveyor to the existing battery of cement silos. The existing loadout facility will continue to be used.

Details on the proposed project, including process flow diagrams, fuel specifications and air pollution control equipment information, are attached.

2.9 Air Emissions

Potential emission parameters for the new plant have been compiled by the equipment manufacturer based upon samples that were analyzed during research and development. The manufacturer will provide performance guarantees for SO2, NOx and PM from the pyroprocessing system; and, for the PM from miscellaneous dust collectors.

PM emissions from the main baghouse serving the kiln/cooler/raw mill will not exceed 0.2 pounds per ton of kiln feed. Emissions of unconfined particulate matter (UPM) from construction activities, vehicular traffic, and from open material storage piles will be minimized using reasonable precautions (see Appendix 1).

The pyroprocessing design is expected to achieve NOx emissions of 1.75 lb/MMBtu; SO2 emissions of 0.8 lb/MMBtu; CO emissions of 3.01 lb/ton clinker; and, THC emissions of 0.12 lb/ton clinker. The amounts of CO and VOC emissions may vary with tire burning.

PM emissions from the plant will be controlled using baghouses. Emissions of NOx, CO and THC from the pyroprocessing system will be controlled by burner technology and process design. The SO2 emissions from pyroprocessing are controlled inherently by the raw material processing.

Normally, since there is not a well-defined correlation between opacity of visible emissions and PM emissions, it is difficult to predict the opacity outside the stack. However, provided little condensation takes place in the stack, opacity can be used as a continuous measurement that can indicate relative amounts of PM. An opacity of less than 10% can be expected during normal operation.

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. The proposed project is expected to result in an increase in emissions of CO and THC, but a decrease in emissions of PM, PM10, SO2 and NOx (see Table 2-1). The emission calculations are presented in Appendix 2.

TABLE 2-1

PROPOSED AIR EMISSION RATES

RINKER MATERIALS CORPORATION
MIAMI, FLORIDA

POLLUTANT	ANNUAL EMISSIONS (TPY) ACTUAL(1)	PROPOSED(2)	NET INCREASE (DECREASE)	PSD SIG.(3)
PM	563.8	353.3	(-210.5)	25
PM10	304.2	284.7	(-19.5)	15
SO2	1623.9	1531.2	(-92.7)	40
NOx	4738.3	3349.6	(-1388.7)	40
CO	1707.7	1806.7	99.0	100
VOC	46.1	72.0	25.9	40
TOTAL	8984.0	7397.5	(-1586.5) (4)	

NOTE:

(1) Actual emissions are based on the 1994-95 operation period.
(2) Proposed emissions represent the new replacement units.
(3) PSD significant emission levels pursuant to Rule 62-212, FAC.
(4) There will be a net decrease (present actual compared with proposed potential) in emissions.

3.0 APPLICABLE RULES

The applicable rules are listed on Page 13 of the application form. There are, however, specific emission limiting standards which apply to the proposed project.

NSPS Subpart F: Standards of Performance for Portland Cement Plants (40CFR60.60)

The affected facilities are kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading system.

The pollutant regulated is PM, with the following emission standards:

Kiln emissions: 0.30 lb/ton of dry feed, 20% opacity
Clinker cooler: 0.10 lb/ton dry feed, 10% opacity
Other facilities: 10% opacity

NSPS Subpart Y: Standards of Performance for Coal Preparation Plants (40CFR60.250)

The affected facilities are thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.

The pollutant regulated is PM, with the following emission standards:

Thermal dryers: 0.031 gr/dscf, 20% opacity
Pneumatic coal cleaning equipment: 0.018 gr/dscf, 10% opacity
Other facilities: 20% opacity

NSPS Subpart 000: Standards of Performance for Nonmetallic Mineral Processing Plants (40CFR60.670)

The affected facilities are crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. It should be noted that the affected facilities subject to subpart F are not covered by subpart 000; also affected facilities that follow in the plant process any affected facilities under subpart F are not covered by subpart 000. Therefore, subpart 000 applies to all nonmetallic mineral processing affected facilities upstream of raw material storage.

The pollutant regulated is PM, with the following emission standards:

Transfer Points: 0.022 gr/dscf, or 7% opacity,
Fugitive emissions <10% opacity
Other facilities: 0.022 gr/dscf, or 7% opacity
Fugitive emissions <10% opacity
Crusher w/o APC: Fugitive <15% opacity

The proposed project is subject to permitting requirements, in accordance with Rule 62-210.300, of the Florida Administrative Code (FAC). Rinker's existing facility in Dade County is located in an area designated as attainment for all the criteria pollutants except ozone. Dade County is designated as a maintenance area for ozone.

The proposed project is not subject to a prevention of significant deterioration (PSD) preconstruction review, in accordance with Rule 62-212.300, FAC. The net increase in CO emissions resulting from the proposed modernization project will be less than significant (per Table 212.400.2, in Rule 62-212, F.A.C.).

The proposed project is not subject to nonattainment area new source (NAA) review. The net increase in VOC emissions resulting from the proposed project will be less than significant (per Table 212.400.2, in Rule 62-212, F.A.C.). The project will result in a decrease in the overall emissions of nitrogen oxides.

The existing Rinker facility, being modified as a result of the proposed project, is subject to Rule 62-213, F.A.C., reflecting requirements under Title V of the Clean Air Act Amendments of 1990.

The proposed project is subject to the General Particulate Emission Limiting Standards, and the General Pollutant Emission Limiting Standards in Rules 62-296.310 and 62-296.320, F.A.C., respectively. These standards include: a process weight-based emission limit for particulate matter from process operations; a general visible emissions limit of 20 percent opacity; reasonable precautions to minimize emissions of unconfined particulate matter; reasonable precautions, or other requirements as imposed by the Department, to minimize emissions of VOCs; and, an objectionable odor prohibition.

The proposed project is subject to the provisions of Rule 62-296.407, FAC, which limits particulate matter emissions from cement kilns to 0.3 pounds per ton of feed to the kiln, and from clinker coolers to 0.1 pounds per ton of feed to the kiln.

The proposed project is also subject to Reasonably Available Control Technology (RACT) requirements pursuant to Rule 62-296.570, FAC, limiting NOx from the cement kiln to 2.0 lb/MMBtu.

Additionally, Chapter 24 of the Code of Metropolitan Dade County, limits the allowable SO2 from combustion of solid and liquid fuels to 1.2 and 1.1 lb/MMBtu, repectively.

The proposed project will also be subject to several general requirements for compliance testing, reporting, recordkeeping, etc., included in FDEP's Core Requirements List.

4.0 CONCLUSION

It can be concluded based on the information in this report that the proposed plant modernization project at Rinker's existing Miami facility will not cause or contribute to a violation of any air quality standard, PSD increment, or any other provision of Chapter 62, FAC.

APPENDIX 1

Precautions to Prevent Emission of Unconfined Particulate Matter

Reasonable precautions to minimize the emissions of unconfined particulate matter may include, but shall not be limited to the following:

1. Paving and maintenance of roads, parking areas and yards.

2. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.

3. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar sources.

4. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the source to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.

5. Landscaping or planting of vegetation.

6. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

7. Confining abrasive blasting where possible.

8. Enclosure or covering of conveyor systems.

APPENDIX 2

EMISSION CALCULATIONS

RINKER PLANT MODERNIZATION PROJECT
MIAMI, DADE COUNTY, FLORIDA

The proposed project will include the replacement of some existing equipment (listed below). Other existing equipment will continue to operate. In accordance with FDEP guidance, only the equipment affected by this modification is addressed below.

In order to determine PSD applicability, the past actual emissions are compared to future potential emissions to determine if a significant increase occurs for any of the regulated pollutants.

ESTIMATED ACTUAL EMISSIONS:

The annual operation reports for 1994 and 1995 documented the actual emissions for point sources, production quantities and fuel use quantities for the past two years. This information is summarized below:

Unit	Pollutant	Annual Emissions (tpy)		
		1994	1995	Average
Kilns 1 & 2	PM	169.5	126.6	148.1
	PM10	144.1	107.61	125.9
	SO2	1788.7	1459.04	1623.9
	NOx	4649.4	4827.12	4738.3
	CO	1675.7	1739.78	1707.7
	VOC	45.23	46.97	46.1
Cooler 1 & 2	PM	48.55	50.41	49.5
	PM10	41.26	42.85	42.1
Clinker Conveyor	PM	2.5	2.59	2.5
	PM10	2.12	2.2	2.2
Clinker Box	PM	6.14	6.37	6.3
	PM10	5.22	5.41	5.3

There will be a substantial reduction in the traffic on unpaved roads at the facility as a result of proposed belt conveyors and bucket elevators. The fugitive emissions from the existing and proposed facility operations had been quantified in an emission inventory prepared by Environmental Quality Management, Inc (attached). An emission inventory prepared for 1992-93 was used as a basis for determining the actual emissions by prorating the 1992-93 emissions to those

for the 1994-95 period. Clinker production was assumed to be a representative yardstick for the operation level at the facility.

Clinker production for 1992-93 period = 534309 tpy

Clinker production for 1994-95 period = 505889 tpy

Actual unpaved road PM emissions = 377.51 tpy x 505889/534309 = 357.43 tpy

Actual unpaved road PM10 emissions = 135.9 tpy x 505889/534309 = 128.67 tpy

Therefore total actual PM and PM10 emissions are as follows:

PM = 148.1 + 49.5 + 2.5 + 6.3 + 357.4 = 563.8 tpy

PM10 = 125.9 + 42.1 + 2.2 + 5.3 + 128.67 = 304.2 tpy

The total emissions of the other criteria pollutants from the point sources are simply the averages indicated in the above table.

PROPOSED EMISSIONS:

The proposed emissions for the affected units are as follows:

PM emissions for all proposed baghouses, except the main baghouse are estimated based on an emission rate of 0.01 gr/cf (see attached table). The main kiln/cooler/raw mill baghouse emissions are estimated based on an emission factor of 0.2 lb/ton dry kiln feed (measured as preheater feed). PM10 emissions from the baghouses is assumed to be 85 percent of PM, based on AP-42 factors. The point source emissions tabulated indicate the following:

PM emissions proposed from point sources = 321.4 tpy

PM10 emissions proposed from point sources = 273.2 tpy

Fugitive PM and PM10 emissions from the EQM analysis reflect the proposed facility operations (attached):

Proposed unpaved road PM emissions = 31.91 tpy

Proposed unpaved road PM10 emissions = 11.49 tpy

The total proposed PM and PM10 emissions are estimated to be:

PM = 321.4 + 31.91 = 353.3 tpy

PM10 = 273.2 + 11.49 = 284.7 tpy

The proposed emissions of other criteria pollutants are simply those emitted from the pyro system and can be estimated based on the following factors:

SO2 = 0.8 lb/MMBtu, based on PSD netting and similar source emissions.

NOx = 1.75 lb/MMBtu, based on Rinker's Consent Order commitment.

CO = 3.01 lb/ton clinker, proposed limit to avoid PSD (calculates to 3.0111).

THC = 0.12 lb/ton clinker, based on AP-42 factor.

The resulting estimated emissions are as follows:

SO2 = 0.8 lb/MMBtu x 437 MMBtu/hr x 8760 hrs/yr x ton/2000 lbs = 1531.2 tpy

NOx = 1.75 lb/MMBtu x 437 MMBtu/hr x 8760/2000 = 3349.6 tpy

CO = 3.0111 lb/ton x 1,200,000 tpy clinker x ton/2000 lbs = 1806.7 tpy

THC = 0.12 lb/ton x 1,200,000 tpy clinker x ton/2000 lbs = 72.0 tpy

In the case of HAPs, emitted as a result of fuel combustion, it can be assumed that there will be an overall decrease in emissions roughly proportionate to the proposed decrease in fuel consumption. The 1994 and 1995 hours of operation were documented as 7867 and 8168, respectively. The two year average is 8018 hours per year.

Actual Fuel Input = 524 MMBtu/hr x 8018 = 4,201,432 MMBtu/yr

Proposed Fuel Input = 437 MMBtu/hr x 8760 = 3,828,120 MMBtu/yr

Net Reduction in Fuel Input = 4,201,432 - 3,828,120 = 373,312 MMBtu/yr

The net changes (increases and decreases) in emissions can be summarized as follows:

POLLUTANT	ANNUAL EMISSIONS (TPY) ACTUAL	PROPOSED	NET INCREASE (DECREASE)
PM	563.8	353.3	(-210.5)
PM10	304.2	284.7	(-19.5)
SO2	1623.9	1531.2	(-92.7)
NOx	4738.3	3349.6	(-1388.7)
CO	1707.7	1806.7	99.0
VOC	46.1	72.0	25.9
TOTAL	8984.0	7397.5	(-1586.5)

1992 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U1	Quarry/ dump	0.90	Mill Scale	18	12	30	11	37	24			26	4288	165	0	0	0	120	0	23.02	42.22
			Sand	18	12	30	11	37	24			26	318	12	0	0	0	120	0	23.02	42.22
			Gypsum	18	12	30	12	37	25			25	30889	1236	0	0	0	120	0	24.04	42.22
			Staurolite	6	12	30	40	80	60			40	22735	568	0	0	0	120	0	20.34	28.77
			Limestone	6	12	30	40	89	64	x	x	49	786620	16190	14571	14571	29142	120	0	20.34	30.28
			Coal	6	12	30	40	80	60			40	9433	236	0	0	0	120	0	20.34	28.77
			Coke	6	12	30	40	80	60			40	0	0	0	0	0	120	0	20.34	28.77
			Bauxite	18	12	30	11	37	24			26	7333	282	0	0	0	120	0	23.02	42.22
			CKD	18	12	30	11	36	24			25	2023	81	0	0	0	120	0	23.02	41.64
											SUBTOTAL			32380	14571	14571	29142			20.34	30.28

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U2	Silo/ pile	0.25	Mill Scale	18	12	15	11	37	24	x	x	26	4288	165	41	41	82	120	0	11.51	21.11
			Sand	18	12	15	11	37	24	x	x	26	318	12	3	3	6	120	0	11.51	21.11
			Gypsum	18	12	15	12	37	25	x	x	25	30889	1236	309	309	618	120	0	12.02	21.11
			Staurolite	6	12	15	40	80	60			40	22735	568	0	0	0	120	0	10.17	14.39
			Limestone	6	12	15	40	89	64			49	786620	16190	0	0	0	120	0	10.17	15.14
			Coal	6	12	15	40	80	60			40	9433	236	0	0	0	120	0	10.17	14.39
			Coke	6	12	15	40	80	60			40	0	0	0	0	0	120	0	10.17	14.39
			Bauxite	18	12	15	11	37	24			26	7333	282	0	0	0	120	0	11.51	21.11
			CKD	18	12	15	11	36	24			25	2023	81	0	0	0	120	0	11.51	20.82
											SUBTOTAL			2825	353	353	706			11.96	21.11

1992 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U1	Quarry/ dump	0.90	Mill Scale	18	12	30	42.22	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	30	42.22	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	30	42.22	8.66	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	30	28.77	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	30	30.28	7.32	10.90	148.22	220.58	368.80	53.36	79.41	132.77
			Coal	6	12	30	28.77	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	30	28.77	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	30	42.22	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	30	41.64	8.29	14.99	0.00	0.00	0.00	0.00	0.00	0.00
							30.28	7.32	10.90	148.22	220.58	**368.80**	53.36	79.41	**132.77**

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U2	Silo/ pile	0.25	Mill Scale	18	12	15	21.11	4.14	7.60	0.24	0.44	0.67	0.09	0.16	0.24
			Sand	18	12	15	21.11	4.14	7.60	0.02	0.03	0.05	0.01	0.01	0.02
			Gypsum	18	12	15	21.11	4.33	7.60	1.86	3.26	5.12	0.67	1.17	1.84
			Staurolite	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	15	15.14	3.66	5.45	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	15	21.11	4.14	7.60	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	15	20.82	4.14	7.50	0.00	0.00	0.00	0.00	0.00	0.00
							21.11	4.30	7.60	2.11	3.73	**5.84**	0.76	1.34	**2.10**

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	40	80	60	x	x	40	4288	107	16	16	32	120	0	6.78	9.59
			Sand	18	12	10	11	37	24			26	318	12	0	0	0	120	0	7.67	14.07
			Gypsum	18	12	10	12	37	25			25	30889	1236	0	0	0	120	0	8.01	14.07
			Staurolite	6	12	10	40	80	60	x	x	40	22735	568	85	85	171	120	0	6.78	9.59
			Limestone	6	12	10	40	89	64			49	786620	16190	0	0	0	120	0	6.78	10.09
			Coal	6	12	10	40	80	60	x	x	40	9433	236	35	35	71	120	0	6.78	9.59
			Coke	6	12	10	40	80	60	x	x	40	0	0	0	0	0	120	0	6.78	9.59
			Bauxite	18	12	10	11	37	24			26	7333	282	0	0	0	120	0	7.67	14.07
			CKD	18	12	10	11	36	24			25	2023	81	0	0	0	120	0	7.67	13.88
											SUBTOTAL			1823	137	137	273			6.78	9.59

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	40	80	60			40	4288	107	0	0	0	120	0	8.48	11.99
			Sand	18	15	10	11	37	24			26	318	12	0	0	0	120	0	9.59	17.59
			Gypsum	18	15	10	12	37	25			25	30889	1236	0	0	0	120	0	10.02	17.59
			Staurolite	6	15	10	40	80	60			40	22735	568	0	0	0	120	0	8.48	11.99
			Limestone	6	15	10	40	89	64			49	786620	16190	0	0	0	120	0	8.48	12.62
			Coal	6	15	10	40	80	60			40	9433	236	0	0	0	120	0	8.48	11.99
			Coke	6	15	10	40	80	60			40	0	0	0	0	0	120	0	8.48	11.99
			Bauxite	18	15	10	11	37	24			26	7333	282	0	0	0	120	0	9.59	17.59
			CKD	18	15	10	11	36	24	x	x	25	2023	81	8	8	16	120	0	9.59	17.35
											SUBTOTAL			162	8	8	16			9.59	17.35

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)								
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	2.44	3.45	0.05	0.08	0.13	0.02	0.03	0.05
			Sand	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	10	2.89	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	10	2.44	3.45	0.29	0.41	0.70	0.10	0.15	0.25
			Limestone	6	12	10	2.44	3.63	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	10	2.44	3.45	0.12	0.17	0.29	0.04	0.06	0.10
			Coke	6	12	10	2.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							2.44	3.45	0.46	0.66	1.12	0.17	0.24	0.40

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)								
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	15	10	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	15	10	3.61	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	15	10	3.05	4.54	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	15	10	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	15	10	3.45	6.25	0.04	0.07	0.11	0.01	0.03	0.04
							3.45	6.25	0.04	0.07	0.11	0.01	0.03	0.04

1992 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
1X	Pile / load rail	0.05	Mill Scale	6	12	10	40	80	60			40	4288	107	0	0	0	120	0	6.78	9.59
			Sand	18	12	10	11	37	24			26	318	12	0	0	0	120	0	7.67	14.07
			Gypsum	4	12	10	30	38	34	x	x	8	30889	3861	193	193	386	120	0	4.42	4.98
			Staurolite	4	12	10	30	38	34	x	x	8	22735	2842	142	142	284	120	0	4.42	4.98
			Limestone	6	12	10	40	89	64			49	786620	16190	0	0	0	120	0	6.78	10.09
			Coal	4	12	10	30	38	34	x	x	8	9433	1179	59	59	118	120	0	4.42	4.98
			Coke	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	0	4.42	4.98
			Bauxite	18	12	10	11	37	24			26	7333	282	0	0	0	120	0	7.67	14.07
			CKD	18	12	10	11	36	24			25	2023	81	0	0	0	120	0	7.67	13.88
											SUBTOTAL			15764	394	394	788			4.42	4.98

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	30	38	34	x	x	8	8575	1072	161	161	322	120	0	4.42	4.98
			Sand	4	12	10	30	38	34	x	x	8	318	40	6	6	12	120	0	4.42	4.98
			Gypsum	0	12	10	30	38	34			8	30889	3861	0	0	0	120	0	0.00	0.00
			Staurolite	4	12	10	30	38	34			8	22735	2842	0	0	0	120	0	4.42	4.98
			Limestone	6	12	10	40	89	64			49	786620	16190	0	0	0	120	0	6.78	10.09
			Coal	4	12	10	30	38	34			8	9433	1179	0	0	0	120	0	4.42	4.98
			Coke	4	12	10	30	38	34			8	0	0	0	0	0	120	0	4.42	4.98
			Bauxite	4	12	10	30	38	34	x	x	8	7333	917	137	137	275	120	0	4.42	4.98
			CKD	18	12	10	11	36	24			25	2023	81	0	0	0	120	0	7.67	13.88
											SUBTOTAL			4057	304	304	608			4.42	4.98

1992 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Unpaved Road Data: Silt %	Unpaved Road Data: Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
1X	Pile / load rail	0.05	Mill Scale	6	12	10	2.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	4	12	10	1.59	1.79	0.43	0.48	0.91	0.15	0.17	0.33
			Staurolite	4	12	10	1.59	1.79	0.31	0.35	0.67	0.11	0.13	0.24
			Limestone	6	12	10	2.44	3.63	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	1.59	1.79	0.13	0.15	0.28	0.05	0.05	0.10
			Coke	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							1.59	1.79	0.87	0.98	1.85	0.31	0.35	0.67

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Unpaved Road Data: Silt %	Unpaved Road Data: Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	1.59	1.79	0.36	0.40	0.76	0.13	0.14	0.27
			Sand	4	12	10	1.59	1.79	0.01	0.01	0.03	0.00	0.01	0.01
			Gypsum	0	12	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	10	2.44	3.63	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	4	12	10	1.59	1.79	0.30	0.34	0.65	0.11	0.12	0.23
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							1.59	1.79	0.67	0.76	1.43	0.24	0.27	0.51

TOTAL UNPAVED ROADS **379.15** **136.49**

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U1	Quarry/ dump	0.90	Mill Scale	18	12	30	11	37	24			26	4106	158	0	0	0	120	0	23.02	42.22
			Sand	18	12	30	11	37	24			26	0	0	0	0	0	120	0	23.02	42.22
			Gypsum	18	12	30	12	37	25			25	30194	1208	0	0	0	120	0	24.04	42.22
			Staurolite	6	12	30	40	80	60			40	22306	558	0	0	0	120	0	20.34	28.77
			Limestone	6	12	30	40	87	63	x	x	47	753828	16190	14571	14571	29142	120	0	20.34	29.93
			Coal	6	12	30	40	80	60			40	7301	183	0	0	0	120	0	20.34	28.77
			Coke	6	12	30	40	80	60			40	1144	29	0	0	0	120	0	20.34	28.77
			Bauxite	18	12	30	11	37	24			26	2275	88	0	0	0	120	0	23.02	42.22
			CKD	18	12	30	11	36	24			25	3479	139	0	0	0	120	0	23.02	41.64
											SUBTOTAL			32380	14571	14571	29142			20.34	29.93

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U2	Silo/ pile	0.25	Mill Scale	18	12	15	11	37	24	x	x	26	4106	158	39	39	79	120	0	11.51	21.11
			Sand	18	12	15	11	37	24	x	x	26	0	0	0	0	0	120	0	11.51	21.11
			Gypsum	18	12	15	12	37	25	x	x	25	30194	1208	302	302	604	120	0	12.02	21.11
			Staurolite	6	12	15	40	80	60			40	22306	558	0	0	0	120	0	10.17	14.39
			Limestone	6	12	15	40	87	63			47	753828	16190	0	0	0	120	0	10.17	14.96
			Coal	6	12	15	40	80	60			40	7301	183	0	0	0	120	0	10.17	14.39
			Coke	6	12	15	40	80	60			40	1144	29	0	0	0	120	0	10.17	14.39
			Bauxite	18	12	15	11	37	24			26	2275	88	0	0	0	120	0	11.51	21.11
			CKD	18	12	15	11	36	24			25	3479	139	0	0	0	120	0	11.51	20.82
											SUBTOTAL			2731	341	341	683			11.96	21.11

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U1	Quarry/ dump	0.90	Mill Scale	18	12	30	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	30	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	30	8.66	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	30	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	30	7.32	10.77	148.22	218.04	366.26	53.36	78.49	131.85
			Coal	6	12	30	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	30	7.32	10.36	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	30	8.29	15.20	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	30	8.29	14.99	0.00	0.00	0.00	0.00	0.00	0.00
							7.32	10.77	148.22	218.04	366.26	53.36	78.49	131.85

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U2	Silo/ pile	0.25	Mill Scale	18	12	15	4.14	7.60	0.23	0.42	0.64	0.08	0.15	0.23
			Sand	18	12	15	4.14	7.60	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	15	4.33	7.60	1.81	3.19	5.00	0.65	1.15	1.80
			Staurolite	6	12	15	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	15	3.66	5.39	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	15	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	15	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	15	4.14	7.60	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	15	4.14	7.50	0.00	0.00	0.00	0.00	0.00	0.00
							4.31	7.60	2.04	3.60	5.65	0.74	1.30	2.03

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	40	80	60	x	x	40	4106	103	15	15	31	120	0	6.78	9.59
			Sand	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67	14.07
			Gypsum	18	12	10	12	37	25			25	30194	1208	0	0	0	120	0	8.01	14.07
			Staurolite	6	12	10	40	80	60	x	x	40	22306	558	84	84	167	120	0	6.78	9.59
			Limestone	6	12	10	40	87	63			47	753828	16190	0	0	0	120	0	6.78	9.98
			Coal	6	12	10	40	80	60	x	x	40	7301	183	27	27	55	120	0	6.78	9.59
			Coke	6	12	10	40	80	60	x	x	40	1144	29	4	4	9	120	0	6.78	9.59
			Bauxite	18	12	10	11	37	24			26	2275	88	0	0	0	120	0	7.67	14.07
			CKD	18	12	10	11	36	24			25	3479	139	0	0	0	120	0	7.67	13.88
											SUBTOTAL			1743	131	131	261			6.78	9.59

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded										
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	40	80	60			40	4106	103	0	0	0	120	0	8.48	11.99
			Sand	18	15	10	11	37	24			26	0	0	0	0	0	120	0	9.59	17.59
			Gypsum	18	15	10	12	37	25			25	30194	1208	0	0	0	120	0	10.02	17.59
			Staurolite	6	15	10	40	80	60			40	22306	558	0	0	0	120	0	8.48	11.99
			Limestone	6	15	10	40	87	63			47	753828	16190	0	0	0	120	0	8.48	12.47
			Coal	6	15	10	40	80	60			40	7301	183	0	0	0	120	0	8.48	11.99
			Coke	6	15	10	40	80	60			40	1144	29	0	0	0	120	0	8.48	11.99
			Bauxite	18	15	10	11	37	24			26	2275	88	0	0	0	120	0	9.59	17.59
			CKD	18	15	10	11	36	24	x	x	25	3479	139	14	14	28	120	0	9.59	17.35
											SUBTOTAL			278	14	14	28			9.59	17.35

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Unpaved Road Data: Silt %	Unpaved Road Data: Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	2.44	3.45	0.05	0.07	0.13	0.02	0.03	0.05
			Sand	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	10	2.89	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	10	2.44	3.45	0.28	0.40	0.68	0.10	0.14	0.25
			Limestone	6	12	10	2.44	3.59	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	10	2.44	3.45	0.09	0.13	0.22	0.03	0.05	0.08
			Coke	6	12	10	2.44	3.45	0.01	0.02	0.04	0.01	0.01	0.01
			Bauxite	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							2.44	3.45	0.44	0.63	1.07	0.16	0.23	0.39

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Unpaved Road Data: Silt %	Unpaved Road Data: Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	15	10	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	15	10	3.61	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	15	10	3.05	4.49	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	15	10	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	15	10	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	15	10	3.45	6.25	0.07	0.12	0.19	0.02	0.04	0.07
							3.45	6.25	0.07	0.12	0.19	0.02	0.04	0.07

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
1X	Pile / load rail	0.05	Mill Scale	6	12	10	40	80	60			40	4106	103	0	0	0	120	0	6.78	9.59
			Sand	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67	14.07
			Gypsum	4	12	10	30	38	34	x	x	8	30194	3774	189	189	377	120	0	4.42	4.98
			Staurolite	4	12	10	30	38	34	x	x	8	22306	2788	139	139	279	120	0	4.42	4.98
			Limestone	6	12	10	40	87	63			47	753828	16190	0	0	0	120	0	6.78	9.98
			Coal	4	12	10	30	38	34	x	x	8	7301	913	46	46	91	120	0	4.42	4.98
			Coke	4	12	10	30	38	34	x	x	8	1144	143	7	7	14	120	0	4.42	4.98
			Bauxite	18	12	10	11	37	24			26	2275	88	0	0	0	120	0	7.67	14.07
			CKD	18	12	10	11	36	24			25	3479	139	0	0	0	120	0	7.67	13.88
											SUBTOTAL			15236	381	381	762			4.42	4.98

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT	TSP Loaded Trucks lb/VMT
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	30	38	34	x	x	8	8212	1027	154	154	308	120	0	4.42	4.98
			Sand	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	0	4.42	4.98
			Gypsum	0	12	10	30	38	34			8	30194	3774	0	0	0	120	0	0.00	0.00
			Staurolite	4	12	10	30	38	34			8	22306	2788	0	0	0	120	0	4.42	4.98
			Limestone	6	12	10	40	87	63			47	753828	16190	0	0	0	120	0	6.78	9.98
			Coal	4	12	10	30	38	34			8	7301	913	0	0	0	120	0	4.42	4.98
			Coke	4	12	10	30	38	34			8	1144	143	0	0	0	120	0	4.42	4.98
			Bauxite	4	12	10	30	38	34	x	x	8	2275	284	43	43	85	120	0	4.42	4.98
			CKD	18	12	10	11	36	24			25	3479	139	0	0	0	120	0	7.67	13.88
											SUBTOTAL			2622	197	197	393			4.42	4.98

1993 UNPAVED ROAD EMISSIONS FOR RINKER MATERIALS

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
1X	Pile / load rail	0.05	Mill Scale	6	12	10	2.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	4	12	10	1.59	1.79	0.42	0.47	0.89	0.16	0.17	0.32
			Staurolite	4	12	10	1.59	1.79	0.31	0.35	0.66	0.11	0.12	0.24
			Limestone	6	12	10	2.44	3.59	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	1.59	1.79	0.10	0.11	0.21	0.04	0.04	0.08
			Coke	4	12	10	1.59	1.79	0.02	0.02	0.03	0.01	0.01	0.01
			Bauxite	18	12	10	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							1.59	1.79	0.84	0.95	1.79	0.30	0.34	0.64

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	1.59	1.79	0.34	0.38	0.72	0.12	0.14	0.26
			Sand	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	0	12	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	6	12	10	2.44	3.59	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	4	12	10	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	4	12	10	1.59	1.79	0.09	0.11	0.20	0.03	0.04	0.07
			CKD	18	12	10	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							1.59	1.79	0.43	0.49	0.92	0.16	0.18	0.33

TOTAL UNPAVED ROADS **375.88** **135.32**

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded									
U1	Quarry/ dump	0.10	Mill Scale	18	12	5	11	37	24			26	48698	1873	0	0	0	120	90	0.38
			Sand	18	12	5	11	37	24			26	0	0	0	0	0	120	90	0.38
			Gypsum	18	12	5	12	37	25			25	89089	3564	0	0	0	120	90	0.40
			Staurolite	6	12	5	40	80	60			40	0	0	0	0	0	120	90	0.34
			Limestone	4	12	5	30	38	34	x	x	8	1853821	231728	23173	23173	46346	120	90	0.22
			Coal	6	12	5	40	80	60			40	8641	216	0	0	0	120	90	0.34
			Coke	6	12	5	40	80	60			40	3703	93	0	0	0	120	90	0.34
			Bauxite	18	12	5	11	37	24			26	0	0	0	0	0	120	90	0.38
			CKD	18	12	5	11	36	24			25	8172	327	0	0	0	120	90	0.38
											SUBTOTAL			463455	23173	23173	46346			0.22

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded									
U2	Silo/ pile	0.25	Mill Scale	18	12	15	11	37	24	x	x	26	48698	1873	468	468	936	120	0	11.51
			Sand	18	12	15	11	37	24	x	x	26	0	0	0	0	0	120	0	11.51
			Gypsum	18	12	15	12	37	25	x	x	25	89089	3564	891	891	1782	120	0	12.02
			Staurolite	6	12	15	40	80	60			40	0	0	0	0	0	120	0	10.17
			Limestone	4	12	15	30	38	34			8	1853821	231728	0	0	0	120	0	6.63
			Coal	6	12	15	40	80	60			40	8641	216	0	0	0	120	0	10.17
			Coke	6	12	15	40	80	60			40	3703	93	0	0	0	120	0	10.17
			Bauxite	18	12	15	11	37	24			26	0	0	0	0	0	120	0	11.51
			CKD	18	12	15	11	36	24			25	8172	327	0	0	0	120	0	11.51
											SUBTOTAL			10873	1359	1359	2718			11.85

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)									
U1	Quarry/ dump	0.10	Mill Scale	18	12	5	0.70	0.14	0.25	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	5	0.70	0.14	0.25	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	5	0.70	0.14	0.25	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	5	0.48	0.12	0.17	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	12	5	0.25	0.08	0.09	2.56	2.88	5.44	0.92	1.04	1.96
			Coal	6	12	5	0.48	0.12	0.17	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	5	0.48	0.12	0.17	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	5	0.70	0.14	0.25	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	5	0.69	0.14	0.25	0.00	0.00	0.00	0.00	0.00	0.00
							0.25	0.08	0.09	2.56	2.88	5.44	0.92	1.04	1.96

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)									
U2	Silo/ pile	0.25	Mill Scale	18	12	15	21.11	4.14	7.60	2.69	4.94	7.64	0.97	1.78	2.75
			Sand	18	12	15	21.11	4.14	7.60	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	15	21.11	4.33	7.60	5.35	9.40	14.76	1.93	3.39	5.31
			Staurolite	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	12	15	7.46	2.39	2.69	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	12	15	14.39	3.66	5.18	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	12	15	21.11	4.14	7.60	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	15	20.82	4.14	7.50	0.00	0.00	0.00	0.00	0.00	0.00
							21.11	4.26	7.60	8.05	14.35	22.39	2.90	5.16	8.06

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	40	80	60	x	x	40	24349	609	91	91	183	120	0	6.78
			Sand	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67
			Gypsum	18	12	10	12	37	25			25	89089	3564	0	0	0	120	0	8.01
			Staurolite	6	12	10	40	80	60	x	x	40	0	0	0	0	0	120	0	6.78
			Limestone	4	12	10	30	38	34			8	1853821	231728	0	0	0	120	0	4.42
			Coal	6	12	10	40	80	60	x	x	40	8641	216	32	32	65	120	0	6.78
			Coke	6	12	10	40	80	60	x	x	40	3703	93	14	14	28	120	0	6.78
			Bauxite	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67
			CKD	18	12	10	11	36	24			25	8172	327	0	0	0	120	0	7.67
											SUBTOTAL			1835	138	138	275			6.78

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	Truck Weights: Empty (Tons)	Loaded (Tons)	Avg (Tons)	Truck Trips: Empty	Loaded	Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	40	80	60			40	24349	609	0	0	0	120	0	8.48
			Sand	18	15	10	11	37	24			26	0	0	0	0	0	120	0	9.59
			Gypsum	18	15	10	12	37	25			25	89089	3564	0	0	0	120	0	10.02
			Staurolite	6	15	10	40	80	60			40	0	0	0	0	0	120	0	8.48
			Limestone	4	15	10	30	38	34			8	1853821	231728	0	0	0	120	0	5.53
			Coal	6	15	10	40	80	60			40	8641	216	0	0	0	120	0	8.48
			Coke	6	15	10	40	80	60			40	3703	93	0	0	0	120	0	8.48
			Bauxite	18	15	10	11	37	24			26	0	0	0	0	0	120	0	9.59
			CKD	18	15	10	11	36	24	x	x	25	8172	327	33	33	65	120	0	9.59
											SUBTOTAL			654	33	33	65			9.59

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U3	Rail dump/ pile	0.15	Mill Scale	6	12	10	9.59	2.44	3.45	0.31	0.44	0.75	0.11	0.16	0.27
			Sand	18	12	10	14.07	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	12	10	14.07	2.89	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	12	10	9.59	2.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	12	10	9.59	2.44	3.45	0.11	0.16	0.27	0.04	0.06	0.10
			Coke	6	12	10	9.59	2.44	3.45	0.05	0.07	0.11	0.02	0.02	0.04
			Bauxite	18	12	10	14.07	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	13.88	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							9.59	2.44	3.45	0.47	0.66	1.13	0.17	0.24	0.41

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data: Number of Wheels	Silt %	Vehicle Speed (mph)	TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
U4	CKD dump/ landfill	0.10	Mill Scale	6	15	10	11.99	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	15	10	17.59	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	18	15	10	17.59	3.61	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	6	15	10	11.99	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	15	10	6.22	1.99	2.24	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	6	15	10	11.99	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	6	15	10	11.99	3.05	4.32	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	18	15	10	17.59	3.45	6.33	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	15	10	17.35	3.45	6.25	0.16	0.28	0.44	0.06	0.10	0.16
							17.35	3.45	6.25	0.16	0.28	0.44	0.06	0.10	0.16

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded									
1X	Pile / load rail	0.05	Mill Scale	6	12	10	40	80	60			40	24349	609	0	0	0	120	0	6.78
			Sand	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67
			Gypsum	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	.0	4.42
			Staurolite	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	0	4.42
			Limestone	4	12	10	30	38	34			8	1853821	231728	0	0	0	120	0	4.42
			Coal	4	12	10	30	38	34	x	x	8	8641	1080	54	54	108	120	0	4.42
			Coke	4	12	10	30	38	34	x	x	8	3703	463	23	23	46	120	0	4.42
			Bauxite	18	12	10	11	37	24			26	0	0	0	0	0	120	0	7.67
			CKD	18	12	10	11	36	24			25	8172	327	0	0	0	120	0	7.67
											SUBTOTAL			3086	77	77	154			4.42

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			Truck Weights			Truck Trips		Material Net (Tons)	Material (T/yr)	Material Trips (#/yr)	Empty Mileage (Mi/yr)	Loaded Mileage (Mi/yr)	Total Mileage (Mi/yr)	Rain Days (year)	Water Control %	TSP Empty Trucks lb/VMT
				Number of Wheels	Silt %	Vehicle Speed (mph)	Empty (Tons)	Loaded (Tons)	Avg (Tons)	Empty	Loaded									
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	30	38	34	x	x	8	24349	3044	457	457	913	120	0	4.42
			Sand	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	0	4.42
			Gypsum	4	12	10	30	38	34			8	0	0	0	0	0	120	0	4.42
			Staurolite	4	12	10	30	38	34			8	0	0	0	0	0	120	0	4.42
			Limestone	4	12	10	30	38	34			8	1853821	231728	0	0	0	120	0	4.42
			Coal	4	12	10	30	38	34			8	8641	1080	0	0	0	120	0	4.42
			Coke	4	12	10	30	38	34			8	3703	463	0	0	0	120	0	4.42
			Bauxite	4	12	10	30	38	34	x	x	8	0	0	0	0	0	120	0	4.42
			CKD	18	12	10	11	36	24			25	8172	327	0	0	0	120	0	7.67
											SUBTOTAL			6087	457	457	913			4.42

UNPAVED ROAD EMISSIONS FOR FUTURE RINKER FACILITY

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)									
1X	Pile / load rail	0.05	Mill Scale	6	12	10	9.59	2.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00
			Sand	18	12	10	14.07	2.76	5.07	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	4	12	10	4.98	1.59	1.79	0.12	0.13	0.25	0.04	0.05	0.09
			Bauxite	18	12	10	14.07	2.76	5.07	0.05	0.06	0.11	0.02	0.02	0.04
			CKD	18	12	10	13.88	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							4.98	1.59	1.79	0.17	0.19	0.36	0.06	0.07	0.13

Segment No.	Segment Name	Segment Length (mi)	Material	Unpaved Road Data			TSP Loaded Trucks lb/VMT	PM-10 Empty Trucks lb/VMT	PM-10 Loaded Trucks lb/VMT	Empty Truck TSP Emissions (T/yr)	Loaded Truck TSP Emissions (T/yr)	Total Emissions TSP (T/yr)	Empty Truck PM10 Emissions (T/yr)	Loaded Truck PM10 Emissions (T/yr)	Total Emissions PM10 (T/yr)
				Number of Wheels	Silt %	Vehicle Speed (mph)									
2X	Yard / rail dump	0.15	Mill Scale	4	12	10	4.98	1.59	1.79	1.01	1.14	2.15	0.36	0.41	0.77
			Sand	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Gypsum	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Staurolite	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Limestone	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coal	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Coke	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			Bauxite	4	12	10	4.98	1.59	1.79	0.00	0.00	0.00	0.00	0.00	0.00
			CKD	18	12	10	13.88	2.76	5.00	0.00	0.00	0.00	0.00	0.00	0.00
							4.98	1.59	1.79	1.01	1.14	2.15	0.36	0.41	0.77

TOTAL UNPAVED ROADS **31.91** **11.49**

		PROPOSED BAGHOUSES							
			Emission	Exit	Emissions Estimates				
Item	Operation	ID	Basis	Flow Rate	PM		PM10		
				(acfm)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	
1	Soil Bin	DC	0.01 gr/cf	10000	0.86	3.75	0.73	3.19	
2	Transfer	DC	0.01 gr/cf	7000	0.60	2.63	0.51	2.23	
3	Add Bin	DC	0.01 gr/cf	20000	1.71	7.51	1.46	6.38	
4	Raw Meal Silo	DC	0.01 gr/cf	12800	1.10	4.81	0.93	4.08	
5	Raw Meal Silo	DC	0.01 gr/cf	16000	1.37	6.01	1.17	5.11	
6	Main Kiln/Cooler/Raw Mill	BH	0.2 lb/ton	255000	44.00	192.72	37.40	163.81	
7	Meal Transfer	DC	0.01 gr/cf	16000	1.37	6.01	1.17	5.11	
8	Clinker Storage Silo	DC	0.01 gr/cf	4600	0.39	1.73	0.34	1.47	
9	Clinker Pan Conveyer	DC	0.01 gr/cf	4600	0.39	1.73	0.34	1.47	
10	Clinker Retrofit Silo	DC	0.01 gr/cf	4600	0.39	1.73	0.34	1.47	
11	Clinker Discharge Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
12	Clinker Discharge Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
13	Feed Bin	DC	0.01 gr/cf	4600	0.39	1.73	0.34	1.47	
14	Additional Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
15	Gypsum Bin Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
16	Flyash Bin	DC	0.01 gr/cf	7000	0.60	2.63	0.51	2.23	
17	Clinker Mill (Pulse Type)	DC	0.01 gr/cf	27000	2.31	10.14	1.97	8.62	
18	Separator (Pulse Type)	DC	0.01 gr/cf	72000	6.17	27.03	5.25	22.98	
19	Mill Return Conveyer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
20	Silo Feed Conveyer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
21	Waste Soil	DC	0.01 gr/cf	4500	0.39	1.69	0.33	1.44	
22	Waste Soil/Coal Transfer	DC	0.01 gr/cf	7000	0.60	2.63	0.51	2.23	
23	Rail Transfer–rail cars	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
24	PM Transfer–Coal	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
25	PM Transfer–Gypsum	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
26	PM Feed Mill Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
27	PM Feed Mill Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
28	Coal Transfer	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
29	Coke/Coal Transfer	DC	0.01 gr/cf	10000	0.86	3.75	0.73	3.19	
30	Soil Transfer	DC	0.01 gr/cf	20000	1.71	7.51	1.46	6.38	
31	Coal Mill	DC	0.01 gr/cf	21000	1.80	7.88	1.53	6.70	
32	Fuel Bin	DC	0.01 gr/cf	5700	0.49	2.14	0.42	1.82	
			TOTAL	597800	73.4	321.4	62.4	273.2	

Over-all and Fractional Collection Efficiencies of Particulate Control Equipment

Collector Type	Over-all Efficiency	Fractional Efficiency for Given Particle-Size Range (μ)				
		0–5	5–10	10–20	20–44	>44
Baffled settling chamber	58.6	7.5	22	43	80	90
Simple cyclone	65.3	12	33	57	82	91
Long-cone cyclone	84.2	40	79	92	95	97
Electrostatic precipitator	97.0	72	94.5	97	99.5	100
Spray tower	94.5	90	96	98	100	100
Venturi scrubber (for 30-in. water-pressure drop)	99.5	99	99.5	100	100	100
Bag house	99.7	99.5	100	100	100	100

Source: NAPCA. *Compilation of Air Pollutant Emission Factors*, AP-42. Washington, D.C.: HEW, 1968.