

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

SEP 05 2008

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

| | |
|---|--|
| 1. Facility Owner/Company Name: CEMEX, Inc. (Florida Crushed Stone Company) | |
| 2. Site Name: Brooksville South Cement Plant | |
| 3. Facility Identification Number: 0530021 | |
| 4. Facility Location... Street Address or Other Locator: 10311 Cement Plant Road City: Brooksville County: Hernando Zip Code: 34601 | |
| 5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Application Contact

| | |
|---|--|
| 1. Application Contact Name: Fawn Bergen | |
| 2. Application Contact Mailing Address... Organization/Firm: Koogler and Associates, Inc. Street Address: 4014 NW 13th Street City: Gainesville State: Florida Zip Code: 32609 | |
| 3. Application Contact Telephone Numbers... Telephone: (352) 377-5822 ext.15 Fax: (352) 377-7158 | |
| 4. Application Contact E-mail Address: FBergen@kooglerassociates.com | |

Application Processing Information (DEP Use)

| | |
|--|-----------------------------------|
| 1. Date of Receipt of Application: 9/5/08 | 3. PSD Number (if applicable): |
| 2. Project Number(s): 0530021-017-AL | 4. Siting Number (if applicable): |

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

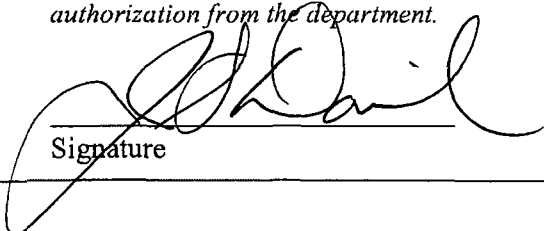
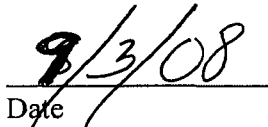
Application Comment

Application is for a 30-day trial period to burn wood and agricultural materials in the Cement Kiln No. 2 as an alternative fuel. CEMEX does not expect an increase in emissions due to the use of wood materials as a fuel. However, CEMEX plans to conduct the 30-day trial and will monitor emissions and perform compliance testing to determine the effect on emissions.

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

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|---|
| 1. Owner/Authorized Representative Name: Mr. James S. Daniel, Plant Manager |
| 2. Owner/Authorized Representative Mailing Address... Organization/Firm: CEMEX, Inc. (Florida Crushed Stone Company) Street Address: 10311 Cement Plant Road City: Brooksville State: Florida Zip Code: 34601 |
| 3. Owner/Authorized Representative Telephone Numbers... Telephone: (352) 799-7881 ext. Fax: (352) 540-4794 |
| 4. Owner/Authorized Representative E-mail Address: jdaniel@cemexusa.com |
| 5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature  Date |

APPLICATION INFORMATION

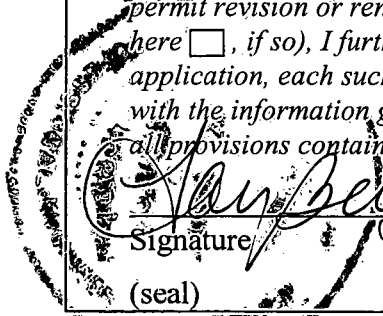
Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

| |
|---|
| 1. Application Responsible Official Name: |
| 2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source. |
| 3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code: |
| 4. Application Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () - |
| 5. Application Responsible Official E-mail Address: |
| 6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i> _____ Signature _____ Date |

APPLICATION INFORMATION

Professional Engineer Certification

| |
|---|
| 1. Professional Engineer Name: Fawn Bergen, PE Registration Number: 61614 |
| 2. Professional Engineer Mailing Address... Organization/Firm: Koogler and Associates, Inc. Street Address: 4014 NW 13th Street City: Gainesville State: Florida Zip Code: 32609 |
| 3. Professional Engineer Telephone Numbers... Telephone: (352) 377-5822 ext.15 Fax: (352) 377-7158 |
| 4. Professional Engineer E-mail Address: FBergen@kooglerassociates.com |
| 5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>; if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  <u>Fawn Bergen</u> Signature (seal) <u>9/4/08</u> Date |

Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

| | | | |
|---|---|--|------------------------------------|
| 1. Facility UTM Coordinates... Zone 17 East (km) 360.0 North (km) 3162.5 | | 2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 28/35/00 Longitude (DD/MM/SS) 82/25/53 | |
| 3. Governmental Facility Code: 0 | 4. Facility Status Code: A | 5. Facility Major Group SIC Code: 32 | 6. Facility SIC(s): 3241 |
| 7. Facility Comment : | | | |

Facility Contact

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|--|
| 1. Facility Contact Name: Mr. George Townsend, Environmental Manager |
| 2. Facility Contact Mailing Address... Organization/Firm: CEMEX, Inc. (Florida Crushed Stone Company) Street Address: 10311 Cement Plant Road City: Brooksville State: Florida Zip Code: 34601 |
| 3. Facility Contact Telephone Numbers: Telephone: (352) 799-7881 Fax: (352) 799-6088 |
| 4. Facility Contact E-mail Address: GTownsend@cemexusa.com |

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

| |
|--|
| 1. Facility Primary Responsible Official Name: |
| 2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code: |
| 3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () - |
| 4. Facility Primary Responsible Official E-mail Address: |

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

| | |
|---|----------------------------------|
| 1. <input type="checkbox"/> Small Business Stationary Source | <input type="checkbox"/> Unknown |
| 2. <input type="checkbox"/> Synthetic Non-Title V Source | |
| 3. <input checked="" type="checkbox"/> Title V Source | |
| 4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs) | |
| 5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs | |
| 6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs) | |
| 7. <input type="checkbox"/> Synthetic Minor Source of HAPs | |
| 8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60) | |
| 9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60) | |
| 10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63) | |
| 11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5)) | |
| 12. Facility Regulatory Classifications Comment: | |

List of Pollutants Emitted by Facility

| 1. Pollutant Emitted | 2. Pollutant Classification | 3. Emissions Cap [Y or N]? |
|----------------------|-----------------------------|-------------------------------|
| PM | A | N |
| PM ₁₀ | A | N |
| SO ₂ | A | N |
| NO _x | A | N |
| CO | A | N |
| VOC | A | N |
| HAPS - Total | A | N |
| DIOX | B | N |
| H114 (Mercury) | B | N |
| SAM | B | N |
| FL | B | N |
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B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps N/A

| 1. Pollutant Subject to Emissions Cap | 2. Facility-Wide Cap [Y or N]? (all units) | 3. Emissions Unit ID's Under Cap (if not all units) | 4. Hourly Cap (lb/hr) | 5. Annual Cap (ton/yr) | 6. Basis for Emissions Cap |
|---------------------------------------|--|---|-----------------------|------------------------|----------------------------|
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7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

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|--|
| 1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>9/20/04</u> |
| 2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>9/20/04</u> |
| 3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>9/20/04</u> |

Additional Requirements for Air Construction Permit Applications

| |
|---|
| 1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility) |
| 2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: <u>A</u> |
| 3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <u>A</u> |
| 4. List of Exempt Emissions Units: N/A <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility) |
| 5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications N/A

1. List of Exempt Emissions Units:
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications N/A

1. List of Insignificant Activities: (Required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
 Attached, Document ID: _____
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
 Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____
 Equipment/Activities Onsite but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

 Attached, Document ID: _____ Previously Submitted, Date: _____ Not Applicable (not an Acid Rain source)Phase II NO_x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.): Attached, Document ID: _____ Previously Submitted, Date: _____ Not Applicable

New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

 Attached, Document ID: _____ Previously Submitted, Date: _____ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

 Attached, Document ID: _____ Previously Submitted, Date: _____ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):

 Attached, Document ID: _____ Previously Submitted, Date: _____ Not Applicable (not a Hg Budget unit)**Additional Requirements Comment**

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EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Kiln No. 2/Preheater/Precalciner/Clinker Cooler/Air Heater

3. Emissions Unit Identification Number: **044**

| | | | |
|--|--------------------------------|--------------------------|---|
| 4. Emissions Unit Status Code: C | 5. Commence Construction Date: | 6. Initial Startup Date: | 7. Emissions Unit Major Group SIC Code: 32 |
|--|--------------------------------|--------------------------|---|

8. Federal Program Applicability: (Check all that apply) **N/A**
- Acid Rain Unit
- CAIR Unit
- Hg Budget Unit

9. Package Unit:
 Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

Emissions Unit Control Equipment/Method: Control 1 of 3

- | |
|--|
| 1. Control Equipment/Method Description: Baghouse – High Temperature |
| 2. Control Device or Method Code: 016 |

Emissions Unit Control Equipment/Method: Control 2 of 3

- | |
|--|
| 1. Control Equipment/Method Description: Selective Noncatalytic Reduction (SNCR) |
| 2. Control Device or Method Code: 107 |

Emissions Unit Control Equipment/Method: Control 3 of 3

- | |
|--|
| 1. Control Equipment/Method Description: Multi-Staged Combustion (MSC) |
| 2. Control Device or Method Code: 025 |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2**B. EMISSIONS UNIT CAPACITY INFORMATION**

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

| | | |
|--|--|-------------------------|
| 1. Maximum Process or Throughput Rate: 206.3 TPH (1-hr); 4,620 TPD; 1,686,300 TPY dry preheater feed & flyash rate | | |
| 2. Maximum Production Rate: 125 TPH (1-hr); 2,800 TPD; 1,022,000 tons/consecutive 12-mo. clinker | | |
| 3. Maximum Heat Input Rate: 390 million Btu/hr (pyroprocessing system) | | |
| 4. Maximum Incineration Rate: pounds/hr tons/day | | |
| 5. Requested Maximum Operating Schedule: | | |
| 24 hours/day | | 7 days/week |
| 52 weeks/year | | 8,760 hours/year |
| 6. Operating Capacity/Schedule Comment: Based on Permit No. 0530021-009-AC/PSD-FL-351. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

| | | | |
|--|--|---|--|
| 1. Identification of Point on Plot Plan or Flow Diagram: Kiln 2 | | 2. Emission Point Type Code: 1 | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: | | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: | | | |
| 5. Discharge Type Code: V | 6. Stack Height: 350 feet | 7. Exit Diameter: 13.6 feet | |
| 8. Exit Temperature: 550°F | 9. Actual Volumetric Flow Rate: 370,000 acfm | 10. Water Vapor: % | |
| 11. Maximum Dry Standard Flow Rate: dscfm | | 12. Nonstack Emission Point Height: feet | |
| 13. Emission Point UTM Coordinates... Zone: East (km): North (km): | | 14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS) | |
| 15. Emission Point Comment: Common baghouse for kiln, preheater, precalciner, clinker cooler, and air heater. Stack parameters based on PSD permit application for the Kiln 2 project. | | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 10

| | | |
|--|---|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; Mineral Products; Cement Manufacturing (Dry Process); Preheater Kiln | | |
| 2. Source Classification Code (SCC): 3-05-006-22 | | 3. SCC Units: Tons Preheater Feed |
| 4. Maximum Hourly Rate: 206.3 | 5. Maximum Annual Rate: 1,686,300 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment: Hourly rate is a 1-hour average. Maximum rates based on Permit No. 0530021-009-AC. | | |

Segment Description and Rate: Segment 2 of 10

| | | |
|--|---|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; Mineral Products; Cement Manufacturing (Dry Process); Clinker Cooler | | |
| 2. Source Classification Code (SCC): 3-05-006-14 | | 3. SCC Units: Tons Clinker Produced |
| 4. Maximum Hourly Rate: 125 | 5. Maximum Annual Rate: 1,022,000 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment: Hourly rate is a 1-hour average. Maximum rates based on Permit No. 0530021-009-AC. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 3 of 10

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Bituminous Coal; Cement Kiln/Dryer – Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-002-01 | | 3. SCC Units: Tons Burned |
| 4. Maximum Hourly Rate: 20.0 | 5. Maximum Annual Rate: 175,200 | 6. Estimated Annual Activity Factor: |
| 7. Maximum Typical % Sulfur: 0.7 | 8. Maximum Typical % Ash: 7.9 | 9. Million Btu per SCC Unit: 25.7 |
| 10. Segment Comment: Hourly rate based on Permit No. 0530021-012-AC (amends -009-AC). Annual rate based on the hourly rate and 8,760 hr/yr. Typical % sulfur, % ash, and MMBtu/ton burned based on average actual fuel analysis data. | | |

Segment Description and Rate: Segment 4 of 10

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Natural Gas; Cement Kiln/Dryer – Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-006-02 | | 3. SCC Units: Million Cubic Feet Burned |
| 4. Maximum Hourly Rate: 0.432 | 5. Maximum Annual Rate: 3,784.3 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: negligible | 8. Maximum % Ash: negligible | 9. Million Btu per SCC Unit: 1,050 |
| 10. Segment Comment: Maximum hourly rate based on Permit No. 0530021-009-AC (rate has been corrected). The annual rate is based on the hourly rate and 8,760 hr/yr. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 5 of 10

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Coke – Petroleum Coke in Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-008-99 | 3. SCC Units: Tons Burned | |
| 4. Maximum Hourly Rate: 20.0 | 5. Maximum Annual Rate: 175,200 | 6. Estimated Annual Activity Factor: |
| 7. Maximum Typical % Sulfur: 0.5 – 1.0 | 8. Maximum Typical % Ash: 0.5 – 5.0 | 9. Million Btu per SCC Unit: 26.6 |
| 10. Segment Comment: Hourly rate based on Permit No. 0530021-009-AC. Annual rate based on the hourly rate and 8,760 hr/yr. Typical % sulfur, % ash, and MMBtu/ton burned based on AP-42 Appendix A. | | |

Segment Description and Rate: Segment 6 of 10

| | | |
|--|--|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Liquefied Petroleum Gas – Propane in Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-006-02 | 3. SCC Units: 1,000 Gallons | |
| 4. Maximum Hourly Rate: 4.15 | 5. Maximum Annual Rate: 36,354 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: negligible | 8. Maximum % Ash: negligible | 9. Million Btu per SCC Unit: 94 |
| 10. Segment Comment: Maximum hourly rate based on Permit No. 0530021-009-AC. Annual rate is based on the hourly rate and 8,760 hr/yr. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 7 of 10

| | | |
|---|--|--|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Distillate Oil; Cement Kiln/Dryer – No. 2 Fuel Oil in Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-005-02 | 3. SCC Units: 1,000 Gallons Burned | |
| 4. Maximum Hourly Rate: 3.08 | 5. Maximum Annual Rate: 26,981 | 6. Estimated Annual Activity Factor: |
| 7. Maximum Typical % Sulfur: 0.2-1.0 | 8. Maximum % Ash: negligible | 9. Million Btu per SCC Unit: 140 |
| 10. Segment Comment: Hourly rate based on Permit No. 0530021-009-AC. Annual rate based on hourly rate and 8,760 hr/yr. Typical % sulfur, % ash, and MMBtu/1,000 gallons burned based on AP-42 Appendix A. | | |

Segment Description and Rate: Segment 8 of 10

| | | |
|--|--|--|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Liquid Waste – On-Spec Used Oil in Kiln and Precalciner | | |
| 2. Source Classification Code (SCC): 3-90-013-89 | 3. SCC Units: 1,000 Gallons Burned | |
| 4. Maximum Hourly Rate: 1.883 | 5. Maximum Annual Rate: 16,495 | 6. Estimated Annual Activity Factor: |
| 7. Maximum Typical % Sulfur: 0.2-4.0 | 8. Maximum Typical % Ash: 0.05-0.1 | 9. Million Btu per SCC Unit: 145 |
| 10. Segment Comment: Maximum rates are based on heat input rate of 273 MMBtu/hr (70% of total heat input rate per Permit No. 0530021-009-AC) and heat content of 145,000 Btu/gal. Annual rate based on hourly rate and 8,760 hr/yr. Typical % sulfur, % ash, and MMBtu/ton burned based on AP-42 Appendix A. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 9 of 10

| | | |
|---|-------------------------|--------------------------------------|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Solid Waste | | |
| 2. Source Classification Code (SCC): 3-90-012-89 | | 3. SCC Units: Tons Burned |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment: Segment represents non-hazardous solid waste including whole tires and flyash. | | |

Segment Description and Rate: Segment 10 of 10

| | | |
|--|------------------------------|---|
| 1. Segment Description (Process/Fuel Type): Industrial Processes; In-Process Fuel Use; Wood | | |
| 2. Source Classification Code (SCC): 3-90-009-89 | | 3. SCC Units: Tons Burned |
| 4. Maximum Hourly Rate: * | 5. Maximum Annual Rate: * | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: 12 |
| 10. Segment Comment: *The maximum hourly and annual rates of wood materials will be determined during the 30-day trial period. The expected total wood materials heat substitution of the kiln is 20%. It is estimated that up to 10 tons per hour of wood materials will be used during the 30-day trial. The heat content is approximately 6,000 Btu/lb. | | |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

| |
|---|
| 1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date April 2005 |
| 2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date April 2005 |
| 3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date April 2005 |
| 4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application) |
| 5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date April 2005 <input type="checkbox"/> Not Applicable |
| 6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application. |
| 7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Kiln No. 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

| |
|--|
| 1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |

Additional Requirements for Title V Air Operation Permit Applications N/A

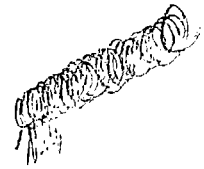
| |
|---|
| 1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ |
| 2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable |
| 3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable |
| 4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable |

Additional Requirements Comment

ATTACHMENT A
DESCRIPTION OF PROPOSED PROJECT

ATTACHMENT A

DESCRIPTION OF PROPOSED PROJECT



CEMEX, Inc. (Florida Crushed Stone Company) operates a Cement Plant located in Brooksville, Florida, designated in Brooksville South. The cement plant consists of two dry-process kilns with preheater, precalciner, and clinker coolers capable of producing up to 1,300,000 tons per year (TPY) of clinker in Kiln No. 1 and 1,022,000 TPY clinker in Kiln No. 2. Cement Kiln No. 2 is permitted to utilize coal, natural gas, petroleum coke, propane, No. 2 fuel oil, on-specification used oil, flyash, and whole tires as fuels (authorized by Permit No. 0530021-009-AC/PSD-FL-351). CEMEX is requesting a 30-day trial period to evaluate the use of wood materials as an alternative fuel for Kiln No. 2. The wood materials that will be used may include the following:

- Yard waste;
- Construction wood debris;
- Other wood waste such as pressure-treated lumber, telephone poles, railroad ties, etc.; and
- Agricultural waste/biomass such as bagasse, rice hulls, cotton gin or other crop waste.

Water Technologies

CEMEX will monitor emissions using the Continuous Emissions Monitoring Systems (CEMS) and conduct performance testing for the following pollutants during the trial period to determine the effect of burning wood materials on emissions:

- SO₂ - CEMS;
- NO_x - CEMS;
- CO - CEMS;
- VOC - CEMS;
- PM/PM₁₀ - EPA Method 5 or 201/201A;
- Mercury - EPA Method 29;
- Lead - EPA Method 29; and
- Sulfuric Acid Mist - EPA Method 8.

Walton Plant in Pennsylvania
"engineered feed"

wood
sawdust
shavings
MRS
PDF

'compacted wood'

It is estimated that up to 10 tons per hour (TPH) of wood materials will be used in Kiln No. 2 during the trial period. The expected heat substitution of the wood materials in each kiln is 20%

Hg 1.12 ppm

Do they waste CKD? encapsulate in the system?

Raw material abundance of Cl & Cu

more is available that is needed to form a program concentration

If you add more, it will not upset the balance.

The alternative fuels will not change that balance.

and

with raw materials alternatives

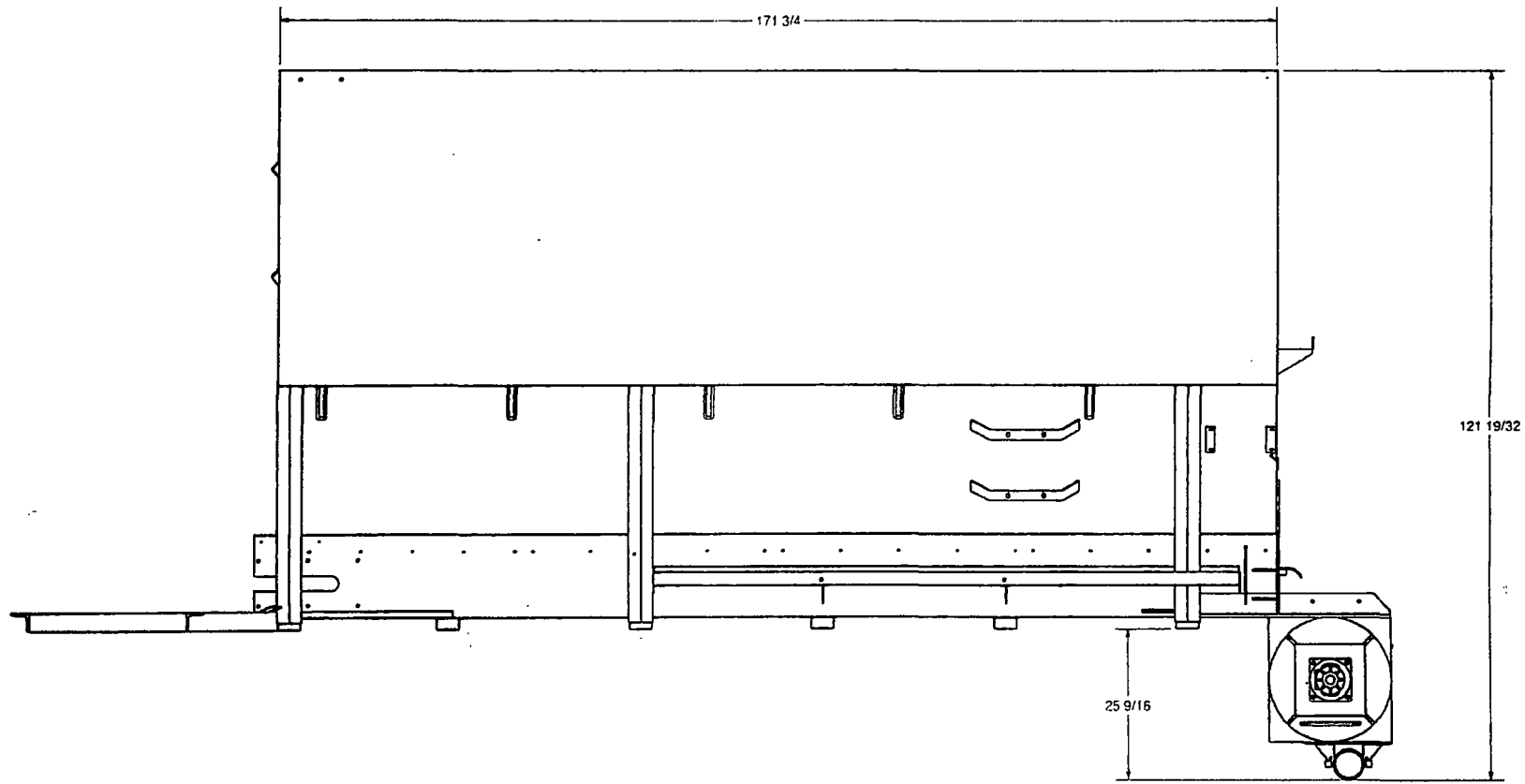
of the total heat input. The wood materials will be blown into the riser just above the kiln feed shelf. A temporary system will be used for the trial period. During the trial period, CEMEX will determine the amount of wood materials that will be needed to obtain the desired kiln fuel mix.

During the trial period, a "mobile mulch blower" will be used to feed the wood materials into the kiln feed shelf. The mulch blower will consist of a hopper with a belt conveyor to control the feed rate, a rotary air lock to feed the material into the conveying pipe, and a blower to blow the material through a pipe and hoses to the kiln. The material will be brought in to the facility in open-bed trucks and will be stored in storage piles. A front-end loader will load the wood materials into the mulch blower hopper, which will feed the materials at a controlled rate. A similar system was recently permitted at CEMEX's Clinchfield Cement Plant located in Clinchfield, Georgia. For reference, drawings and specifications on the system that is permitted at the Clinchfield Cement plant is attached to this report. CEMEX plans to use a nearly identical system on Kiln No. 2 at the Brooksville South Cement plant.

There will not be any change in kiln production rate as a result of this project. It is not expected that the emission rates will increase due to the use of wood materials as a fuel in the kilns. In fact, it is expected that greenhouse gas emissions may be reduced by substituting the fossil fuels (expected 20% total heat input substitution) that are currently used as kiln fuel with an alternative fuel. In addition, wood and agricultural waste is a renewable source of fuel for the kiln, and is a way to reuse a waste product from another industrial process or material that might otherwise be sent to a landfill. During the 30-day trial, CEMEX will monitor emissions and conduct stack tests as stated above to determine the effect on emissions. Therefore, emission calculations have not been submitted with this application and this project is not subject to PSD review.

- necessary going out with the fly ash
 -) with Power plant & cement plant unless they are drawing dust.
- when test is conducted with new material down free get + depend result
 - in ^{out} with draw solids
 - out ^{out} stack
 - (A-2)

| REVISION HISTORY | | | | |
|------------------|-------|-------------|-------|-----------|
| REV | ECN | DESCRIPTION | BY | DATE |
| 1 | Value | Value | Value | 4/11/2008 |

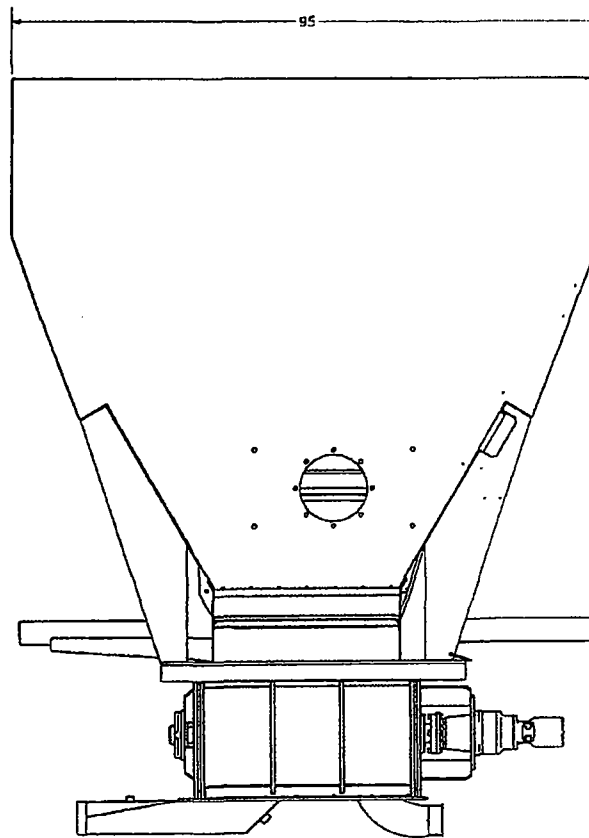


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS FOLLOWS:

| | |
|-----------|--------|
| FRACTIONS | ± 1/32 |
| DECIMALS | ± .02 |
| ANGLES | ± 1' |

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| | | | |
|--------------------------------|------------------|--|--|
| FAIRFIELD CORPORATION | | OHIO | |
| PART NAME | PART NO. | SHEET 1 OF 2 | |
| UNIT | CEMEX1222 | DRAWN Chris Miller SCALE CHD DATE 4/11/2008 | |
| PART HISTORY: DWG'S SUPERSEDES | | DWG'S SUPERSEDED BY | |
| | | SHEET SIZE: 11 x 17 | |



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS FOLLOWS: FRACTIONS = 1/32 DECIMALS = .002 ANGLES = 1°

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| PART NAME | | PART NO. | CEMEX 1222 | |
| UNIT | | DRAWN | Chris Miller | SCALE |
| | | CHKD | | DATE 4/11/2008 |
| PART HISTORY: OHG'S SUPERSEDES | | OHG'S SUPERSEDED BY | | SHEET 2 OF 2 |
| | | | | 11 x 17 |