APPLICATION FOR THE ALLOWABLE USE OF USED OIL IN EU-052 FINISH MILL AND AIR HEATER

CEMEX Construction Materials Florida, LLC
Brooksville, Florida

307-12-11

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 ▪ FAX/377-7158

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

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

- For 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 Construction Materials Florida, LLC**	
2. Site Name: **CEMEX 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? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Maxwell R. Lee, Ph. D, P. E.**
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. Fax: **(352) 377 - 7158**
4. Application Contact E-mail Address: **mlee@kooglerassociates.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	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 the allowable use of used oil for purposes of heating in EU052 – Finish Mill and Air Heater

The project description and engineering analysis regarding potential change in emissions is summarized in the attached Appendix 1.

Additionally, it is being requested that FDEP note that PM emissions in Table E.4 of 0530021-029-AV need to be updated to match the emissions limit described in Table E.5 of 0530021-029-AV.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
052	Finish Mill & Air Heater	N/A	N/A

Application Processing Fee

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

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name : **Mr. Jim Daniel, Plant Manager**

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **CEMEX Construction Materials Florida, LLC**
   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, 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.

Signature

9/4/12
Date

Dept. Of Environmental Protection
SEP 07 2012
Southwest District

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):

- ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
- ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
- ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
- ☐ The designated representative at an Acid Rain source or CAIR 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, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Maxwell R. Lee, Ph. D, P. E.**
   Registration Number: **58091**
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. Fax: **(352) 377 - 7158**
4. Professional Engineer E-mail Address: **mlee@kooglerassociates.com**
5. Professional Engineer Statement:

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

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

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

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

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

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

Signature 8/28/12
Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** **360.0** East (km) **3162.5** North (km)		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
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

1. Facility Contact Name: **George Townsend - Environmental Engineer**
2. Facility Contact Mailing Address... Organization/Firm: **CEMEX Construction Materials Florida, LLC** Street Address: **10311 Cement Plant Road** City: **Brooksville** State: **Florida** Zip Code: **34601**
3. Facility Contact Telephone Numbers: Telephone: **(352) 799 - 7881** ext. 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 INFORMATION

Facility Regulatory Classifications

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

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

See Appendix 1 for project regulations.

Facility is subject to applicable portions of:
40 CFR 51, 52, 70, 71 – GHG Tailoring Rule
40 CFR 63 Subpart LLL
40 CFR 60 Subpart F (superseded by NESHAP Subpart LLL)
40 CFR 60 Subpart Y
40 CFR 60 Subpart OOO
40 CFR 63 Subpart ZZZZ and 40 CFR 60 Subpart IIII as applicable.
Rules 62-4 through 62-297, F.A.C. ; specifically 62-297.407, F.A.C. for cement plants
40 CFR 98

FACILITY INFORMATION

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**
NOx	**A**	**N**
CO	**A**	**N**
HAPs	**A**	**N**
D/F	**B**	**N**
H114	**B**	**N**
SAM	**B**	**N**
FL	**B**	**N**

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

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

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date:_____
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date:_____
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

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

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

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)

Additional Requirements Comment

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.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

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

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

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

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

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

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

2. Description of Emissions Unit Addressed in this Section: **Finish Mill and Air Heater**

3. Emissions Unit Identification Number: **052**

4. Emissions Unit Status Code: **A**	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: **32**

8. Federal Program Applicability: (Check all that apply)

   [ ] Acid Rain Unit

   [ ] CAIR Unit

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
Project details: Allow the additional use of used oil for purposes of heating the finish mill system.

Additionally, it is being requested that the PM emissions in Table E.4 of 0530021-029-AV be updated to match the emissions limit described in Table E.5 of 0530021-029-AV.

Emissions Unit Control Equipment/Method: Control 1 of 1

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: **45.0 million Btu/hr (hot gas generator unit)**	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **The maximum heat input rate represents the maximum rate of the hot gas generator unit.** ***Maximum operation for the hot gas generator unit is 2,500 hr/yr.**	

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: **Finish Mill**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Baghouse ID 531.BF500**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **207** feet	7. Exit Diameter: **6.5** feet
8. Exit Temperature: **246** °F	9. Actual Volumetric Flow Rate: **92,500** acfm	10. Water Vapor: **9** %
11. Maximum Dry Standard Flow Rate: **64,000** 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: **Alternate mode of Operation (hot gas heater off):** **Flow Rate: 35,800 acfm; 22,900 dscfm.** **Stack Temperature: 245°F** **Moisture Content: 16%** **Stack Flow parameters based on stack testing on October 8, 2010.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): **Industrial Processes; Mineral Products; Cement Manufacturing (Dry Process); Finish Grinding Mill**		
2. Source Classification Code (SCC): **3-05-006-29**	3. SCC Units: **Tons Material Processed**	
4. Maximum Hourly Rate: **240**	5. Maximum Annual Rate: **2,102,400**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Annual rate is based on the hourly rate and 8,760 hr/yr.**		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Distillate Oil; General**		
2. Source Classification Code (SCC): **3-90-005-89**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **0.306**	5. Maximum Annual Rate: **764.8**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **147.1**
10. Segment Comment: **Based on 45.0 MMBtu/hr and 2,500 hr/yr. Applies to the hot gas generator unit.**		

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

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Liquified Petroleum Gas (LPG); General**		
2. Source Classification Code (SCC): **3-90-010-89**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **2.38**	5. Maximum Annual Rate: **5,946.6**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **0.315**
10. Segment Comment: **Based on 318.0 scf/hr, 7.48 gal/scf, and 2,500 hr/yr. Applies to the hot gas generator unit. Propane is used for the pilot light on the unit.**		

Segment Description and Rate: Segment 4 of 4 **NEW SEGMENT**

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Liquid Waste – Used Oil**		
2. Source Classification Code (SCC): **3-90-013-99**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **0.319**	5. Maximum Annual Rate: **797.5**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.0**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **141.1**
10. Segment Comment: **Based on 45.0 MMBtu/hr, 2,500 hr/yr and .141062 MMBtu/gallon (from fuel oil spec. sheet – See Attachment 2)**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**016**		**EL**
PM_{10}	**016**		**EL**
SO_2			**EL**
NO_x			**EL**
CO			**EL**
VOC			**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **24.45** lb/hour **30.56** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.029 lb/ton feed** Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Potential emissions based on the equivalent allowable emissions, 2,500 hrs/yr and 2,107,875 tons of preheater feed/consecutive 12-month period**	
11. Potential, Fugitive, and Actual Emissions Comment: **Used oil not expected to affect emissions.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.029 lb/ton feed**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **16.86** lb/hour **21.1** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.020 lb/ton feed** Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on the equivalent allowable emissions, 2,500 hrs/yr and 2,107,875 tons of preheater feed/consecutive 12-month period

11. Potential, Fugitive, and Actual Emissions Comment:
Used oil not expected to affect emissions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.020 lb/ton feed**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Annual Method 5 (as surrogate for PM)**	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **14.06** lb/hour **17.58** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **14.06 lb/hr** Reference:	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based onAP-42 emission factor of 147(S) in Table 1.11-2., adsorption factor of alkaline cement product defined in AP-42 (11.6-6), average heating value of used oil (defined in spec sheet – See Attachment 2), maximum heat input into the emission unit and maximum operation of 2,500 hr/yr.

147 lbs SO2/1000 gal burned * 1 (S) * (1-0.7 removal efficiency) = 44.1 lbs SO2/1000 gal burned

44.1 lbs SO2/1000 gal burned * 1000 gal burned/141.1 MMBtu * 45.0 MMBtu/hr * 2500 hr/yr * 1 ton/2000 lbs = 17.58 tons SO2/yr

17.58 tons SO2/yr * 2000 lbs/ton * 1 yr/2500 hrs = 14.06 lb SO2/hr

11. Potential, Fugitive, and Actual Emissions Comment:
See Attachment 1

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **14.06 lb/hr**	4. Equivalent Allowable Emissions: **14.06** lb/hour **17.58** tons/year
5. Method of Compliance: **Demonstrated by compliance with the maximum sulfur fuel limitations.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies only when hot gas heater on.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.40** lb/hour **6.75** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.40 lb/hr** Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on the equivalent allowable emissions and 2,500 hr/yr

11. Potential, Fugitive, and Actual Emissions Comment:
Used oil not expected to affect emissions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.4 lb/hr**	4. Equivalent Allowable Emissions: **5.7** lb/hour tons/year
5. Method of Compliance: **Annual Method 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies only when hot gas heater on.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.5** lb/hour **1.88** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.5 lb/hr** Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on the equivalent allowable emissions and 2,500 hr/yr

11. Potential, Fugitive, and Actual Emissions Comment:
Represents emissions from the hot gas generator unit.

Used oil not expected to affect emissions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.5 lb/hr**	4. Equivalent Allowable Emissions: **1.5** lb/hour tons/year
5. Method of Compliance: **Annual Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies only when hot gas heater on.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.38** lb/hour **2.97** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.0 lb/1,000 gal** Reference: **AP-42 Table 1.5-1**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on the worst-case fuel.

11. Potential, Fugitive, and Actual Emissions Comment:

Represents emissions from the hot gas generator unit burning propane.

Used oil not expected to affect emissions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **N/A** of **N/A**

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual Method 9**	
5. Visible Emissions Comment: **Based on Permit No. 0530021-029-AV and Rule 62-297.620(4), F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE00**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **0** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Monthly 1-minute Method 22**	
5. Visible Emissions Comment: **Based on 40 CFR 63.1350(e).**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **N/A** of **N/A**

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

EMISSIONS UNIT INFORMATION
Section [1] of [1] Finish Mill & Air Heater

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **Appendix 2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Previously Submitted, Date: **8/25/2011**
   Test Date(s)/Pollutant(s) Tested: **8/11/2011, PM/NOx/CO/VE**
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

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)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT 1

CEMEX Construction Materials Florida, LLC

FACILITY IDENTIFICATION NUMBER: 0530021

APPENDIX FOR APPLICATION TO ALLOW THE ADDITIONAL USE OF ON-SPECIFICATION USED OIL FOR PURPOSES OF HEATING EU-052 FINISH MILL AND AIR HEATER

INTRODUCTION

CEMEX Construction Materials, Inc. (CEMEX) submits this application to allow the additional use of used oil for purposes of heating the finish mill and air heater (EU-052). Currently, the only fuels permitted for use in this emission unit is distillate oil and liquefied petroleum gas. The overall maximum heat input into the system is 45.0 million Btu/hr and the maximum operation for the hot gas generator is 2,500 hr/yr. This project will not result in an increase in capable production at the Brooksville South Cement Plant. Additionally, this project will not result in a significant increase in PSD pollutant emissions at the Brooksville South Cement Plant.

This attachment accompanies the FDEP long form which addresses the site specific details of the facility as well as the emission units affected by this request.

PSD ANALYSIS – ESTIMATED EMISSIONS AT THE BROOKSVILLE SOUTH FACILITY

For conservative measures within the purposes of this project, it will be assumed that 100% of the total heat input into this emissions unit will be substituted with used oil. Pollutants of concern include PSD pollutants PM/PM10/PM2.5, NO_x, CO, VOCs, SO_2, and greenhouse gases (GHG).

PARTICULATE MATTER

While used oil has a higher potential of containing particulate matter within the fuel itself when compared to the typical fuels that are used in this emission unit, ultimately, the actual emissions of particulate matter are going to be a function of the efficiency of the baghouse. Furthermore, a large portion of the ash loading that may result from the use of used oil will be collected in the finished product and not be released through emissions. As well, the contribution of dust loading to the baghouse from used oil when compared to the dust from the finish mill is insignificant. Note that the baghouse loading includes all finish mill product. Therefore, the emissions from the finish mill and air heater should not be significantly impacted when switching to used oil.

Nitrogen Oxides

Nitrogen Oxide (NO_x) emissions are not expected to change. Additionally, data from AP-42 suggests that NO_x emissions from distillate oil are 20 lbs/1000 gallons (Table 1.3-1.), whereas used oil NO_x emissions under the worst case scenario for used oils are 19 lbs/1000 gallons (Table 1.11-2.).

Carbon Monoxide

Carbon Monoxide (CO) emissions are not expected to increase as a result of introducing used oil into this system. Data from AP-42 suggests that CO emissions from distillate oil are 5 lbs/1000 gallons (Table 1.3-1.), CO emissions from liquefied petroleum gas are 7.5 lbs/1000 gallons (Table 1.5-1.), and CO emissions from used oil are 5 lbs/1000 gallons (Table 1.11-2.). As such, considering the fuels the unit is currently able to use, the CO emissions should not be expected to increase.

Volatile Organic Compounds

Data from AP-42 suggests that VOC (as TOC) emissions from distillate oil are 0.252 lbs/1000 gallons (Table 1.3-3.), VOC (as TOC) emissions from liquefied petroleum gas are 1.0 lbs/1000 gallons (Table 1.5-1.), and VOC (as TOC) emissions from used oil are 1.0 lbs/1000 gallons (Table 1.11-3.). As such, considering the fuels the unit is currently able to use, the VOC (as TOC) emissions should not be expected to increase.

Sulfur Dioxide

For purposes of this project, it is being requested that the used oil have an allowable sulfur fuel limitation of 1.0%. This amount is higher than the currently permitted sulfur fuel limitation. As such, it is expected that sulfur dioxide emission may potentially increase. However, PSD applicability is not expected to be triggered. According to the Brooksville South cement plant permit (0530021-029-AV), the current allowable SO_2 emissions are 2.1 lbs/hr. This equates to 2.63 tons/year, when assuming the maximum operation for the hot gas generator unit of 2,500 hr/yr. According to AP-42 (11.6-6.), the alkaline nature of cement provides for direct adsorption of SO_2 into the product. Within the finish mill, the raw clinker is ground down to the finalized grey cement powder. This creates a large potential for available surface sites for SO_2 to ultimately adsorb onto the product. In fact, AP-42 states that depending on the process and the source of sulfur, SO_2 adsorption ranges from about 70% to more than 95%.

Under the worst case scenario in burning used oils, according to AP-42 (Table 1.11-2.), the SO_2 emissions will be 147 lbs/1000 gallons burned for a used oil with 1.00% sulfur. However, assuming a conservative adsorption of 70% by the alkaline cement product, the emissions will decrease down to 44.1 lbs/1000 gallons burned. The average heating value of used oil (according to the fuel specification sheet – Attachment 2) is 141.1 Btu/1000 gallons, the maximum heat input into the emission unit is 45.0 MMbtu/hr, and the maximum operation for the hot gas generator unit is 2,500 hr/yr. With these values and assumptions, the potential increase in SO_2 emissions is as follows:

$$\frac{44.1\ lbs\ SO2}{1000\ gal\ burned} * \frac{1000\ gal\ burned}{141.1\ MMBtu} * \frac{45.0\ MMBtu}{hr} * \frac{2{,}500\ hr}{yr} * \frac{1\ ton}{2000\ lbs} = 17.58\ \frac{tons\ SO2}{yr}$$

In total, assuming a complete substitution using used oil (which is highly conservative), the increase of SO_2 as a result of this project will be 14.96 tons SO_2/yr. Also, please note that this includes the emission factor determined on the low end of SO_2 adsorption (70%) rather than the middle or high end.

As such, there will be a possible increase in SO_2 emissions from EU-052. Assuming emissions will increase to 17.58 tons SO_2/yr, the new SO_2 emissions will change to 14.06 lbs/hr.

GREENHOUSE GASES

Greenhouse gases (GHG) emissions are not expected to increase as a result of introducing used oil into this system. Data from AP-42 suggests that CO_2 emissions from distillate oil average 23,300 lbs/1000 gallons (Table 1.3-12.), CO_2 emissions from liquefied petroleum gas are 12,500 lbs/1000 gallons (Table 1.5-1.), and CO_2 emissions from used oil are 22,000 lbs/1000 gallons (Table 1.11-3.). As such, considering the fuels the unit is currently able to use, the CO_2 emissions should not be expected to increase.

EMISSIONS MONITORING

In addition to these conclusions, the Brooksville South cement plant will continue to test for CO, PM/PM10 and NO_x every once every five years, as indicated in Permit No. 0530021-018-AC and 0530021-029-AV. Additionally, the Brooksville South cement plant will continue to demonstrate SO_2 compliance through the maximum sulfur fuel limitations.

ATTACHMENT 2

CEMEX Construction Materials Florida, LLC

FACILITY IDENTIFICATION NUMBER: 0530021

ON-SPECIFICATION USED OIL SPECIFICATION SHEET

Laboratory Report

Client:
Address: Miami, Fl
Sample type: Fuel oil
Date: 6/29/2012
Batch #/Tk5 6M4
Laboratory ID# 1212940-02
Manifest #

Parameter	Results	Unit	Test Method
Arsenic	<1.0	PPM	6010
Cadmium	<0.1	PPM	6010
Chromium	<4.0	PPM	6010
Lead	3.4	PPM	6010
API Gravity	26.0	60 F	D287
Heat of combustion	141062	BTU/Gal	D-240-02
Flash point(PMCC)	159	F	1010
PCB	<1.0	PPM	8082
Sulfur, wt%	0.5333	%	D-4294
Total Halogen, PPM	215	PPM	9075
Water	<2.0%	%	D-95
Viscosity SUS @100F	590	SSU	D-445
Density	7.481	Lbs/Gal	Calculation

The analyses were performed in accordance with EPA, ASTM or other FDER approved procedures. Some of the analyses may be performed on a monthly basis.

Quality Assurance Officer

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