

David S

RECEIVED

NOV 17 2011

DIVISION OF AIR  
RESOURCE MANAGEMENT



November 14, 2011

11389534

Jeff Koerner, Program Administrator  
Division of Air Resource Management  
Office of Permitting and Compliance  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

0530380-001-AC

**RE: FLORIDA CRUSHED STONE COMPANY BROOKSVILLE SOUTH CEMENT PLANT'S STEAM ELECTRIC GENERATING PLANT (FACILITY ID NO. 053-0021/PA82-17); SUPPLEMENTAL INFORMATION TO SUPPORT APPLICATION FOR A MINOR SOURCE AIR CONSTRUCTION PERMIT**

Dear Mr. Koerner:

On September 23, 2011, Golder submitted to the Florida Department of Environmental Protection (FDEP) an application for the above-referenced project. Subsequently, a discussion was held on October 31, 2011, between Bob Noble, on behalf of the project team, and the Department. As requested by the Department, this letter serves to provide supplemental project information that will assist in the permit processing effort. The issues are addressed by subject area, as indicated below.

**Proposed Methods for Compliance Assurance**

The Project proposes that continuous emission monitoring systems be used for compliance with the standards for NOx, SO<sub>2</sub> and CO. In addition, a continuous opacity monitor (COM) is proposed for compliance assurance with respect to the visible emission standard. Initial and annual stack testing is proposed for compliance with the standards for sulfuric acid mist (SAM), filterable particulate matter (PM/PM<sub>10</sub>) and volatile organic compounds (VOCs). The respective pages from the air application form have been revised and are included as Attachment 1 to this letter.

**Emission Unit Numbering (Current and Proposed)**

After reviewing the DEP's comments and our application, Golder has the following comments/changes:

- Emission Units 007 and 011 should not be included as part of the FPD Woody Biomass-Fueled project. There is no cooling tower nor will the coal receiving, handling and transfer activities be part of the project.
- The corresponding Facility 05300021 Emission Unit ID numbers seem to be shifted (see below).
- Facility 05300380 EU 003 Contaminated Fly Ash & Filter Dust Bin – this is EU No. 036 for facility 05300021 not 035. Table C-4 of Appendix C of the air construction application package provides the silo handling system emissions that were considered for the project.
- Facility 05300380 EU 004 Limestone Screening System – this is EU No. 037 for facility 05300021, not 036. EU 004 (037) Limestone Screening System is not being used and is not being affected by the proposed modification.



- Facility 05300380 EU 005- Limestone Fines Storage Bin (**now EU004- Hydrated Lime Storage Bin**) – this is EU No. 038 for facility 05300021, not 037 and will be used for the storage of hydrated lime.
- Facility 05300380 EU 006- Lime Dust Storage Bin (**now EU005- Trona Storage Bin**) – this is EU No. 039 for facility 05300021, not 038. EU 006 (039) Lime Dust Storage Bin is currently being used as an emergency storage silo. Golder did not include it in our fugitive emission analysis since it was not being affected by the proposed modification. However, the Project now wants to reserve the option for Trona injection (vs. hydrated lime) in the event that additional acid gas control is required. Therefore, this unit (EU005) will be designated for proposed Trona storage.
- Facility 05300380 EU 007 Coal Receiving, Handling and Transfer Activities (Fugitives) – this is EU No. 042 for facility 05300021 not 039. This is deleted, as it will not be associated with the proposed project
- Facility 05300380 EU 008 (**now EU006**) List of Insignificant Emissions Units and/or Activities – this has no EU ID No. for facility 05300021.
- EU010 (**now EU008**) 250 kW Emergency Fire Pump should say Ditch Pump not Fire Pump. Specifically, the fire pump on site is electric and has no association with the ditch pump.
- Golder estimated emissions for Facility 05300021 EU ID No. 001 Filter Dust Bin (**which would now be EU009- Fly Ash Storage Bin**) because it is associated with the boiler; thus this emission unit should be included in the list. Table C-4 of Appendix C of the air construction application package provides the silo handling system emissions that were considered for the project.

A site layout with the revised EU numbering is presented in Attachment 2 to this letter. Therefore, a summary of the proposed revisions is as follows:

**Summary of Emission Units at the FPD Woody Biomass-Fueled Project.**

Facility 05300380 EU ID No.	Emissions Unit Description	Facility 05300021 EU ID No.
001	Biomass Handling, Storage and Processing (New EU)	
002	Woody Biomass-Fueled Boiler (Formerly Coal-Fired Boiler)	018
003	Fly Ash Storage Bin (formerly Contaminated FlyAsh & Filter Bin)	036 035 (D-28)
004	Limestone Screening System	036-037
004	Hydrated Lime Storage Bin (formerly Limestone Fines Storage)	038 037 (D-16)
006-005	Trona Storage Bin (formerly Lime Dust Storage Bin)	038-039 (Z-30)
007	Coal Receiving, Handling and Transfer Activities (Fugitives)	039-042
006	List of Insignificant Emissions Units and/or Activities	042
007	500 kilowatt (kW) Emergency Generator	
008	250 kW Emergency Fire Ditch Pump	
011	Cooling Tower	
009	Fly Ash Storage Bin (formerly Filter Dust Bin)	001 (D-72)

**Revised Stack Height**

The proposed project will include the construction of new and independent emissions control equipment, with a new and independent exhaust stack. The initial air application assumed that this new stack would be 150 feet in height and that the existing stack would continue to be used by the cement plant.



Subsequent to the application submittal, CEMEX initiated an air modeling study (conducted by Koogler Associates) to determine the optimum stack heights for the proposed project and for Kiln No. 1, in the event that CEMEX also elects to abandon the existing site stack. The optimum heights were determined to be 165 feet for both stacks.

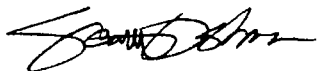
Golder has reviewed the Koogler model file (Attachment 3) and the results. The modeling used the same parameters, receptors, meteorological data, etc. that were used previously, except that the proposed project was modeled with a 165 foot stack and CEMEX Kiln No. 1 with a new 165 Foot stack. The attached model run indicates that the proposed Project, with a 165 foot stack and CEMEX Kiln No. 1, with a new 165 foot stack, and with other sources as existing, will comply with the 1-hour NOx AAQS, which is the most restrictive standard applicable to this operating scenario. The maximum modeled NOx impact of all sources at the fence line is  $142.7 \text{ ug/m}^3$  (98<sup>th</sup> percentile 1-hour average). This was reduced by the Tier 2 factor of 0.8 (i.e., to  $114.2 \text{ ug/m}^3$ ) and the background of  $73 \text{ ug/m}^3$ , developed by Golder, was added, resulting in the maximum fence line impact to  $187 \text{ ug/m}^3$ . The 1-hour NOx AAQS is  $188 \text{ ug/m}^3$ . In Golder's opinion, these results provide a conservative estimate of total air quality and provide assurance that new proposed 165 foot stacks, both for the Project and for Kiln No. 1, will comply with the respective AAQS. Attached is a pdf file which is based on the ADO file that was received from Koogler (ADO file extension is AERMOD output file using LAKES program).

### Revised GHG Summary Table

At the Department's request, Golder has revised the GHG emissions summary table (see Attachment 4, Revised Table 4-1) to include and report the CO<sub>2</sub> contribution from the firing of biomass for the proposed project. It is understood that there is currently an exemption in the consideration of these emissions for regulatory applicability purposes (Federal Register [76 FR 139, pp. 43490-43508] "Deferral for CO<sub>2</sub> Emissions from Bioenergy and Other Biogenic Sources under the Prevention of Significant Deterioration (PSD) and Title V Programs; Final Rule," which is the final rule deferring, for three years, the applicability of PSD and Title V programs to biogenic CO<sub>2</sub>). The EPA will study the issues related to biogenic CO<sub>2</sub> emissions and then undertake a rulemaking specifying how biogenic CO<sub>2</sub> emissions should be treated in PSD and Title V permitting. Therefore, the EPA is still requiring that these emissions be reported.

On behalf of Florida Power Development LLC, thank you in advance for your consideration of this supplemental information and for your timely processing of the requested permit. Please don't hesitate to contact me at (813) 287-1717 if you should have any questions or comments.

### GOLDER ASSOCIATES INC.



Scott Osbourn, P.E.  
Associate and Tampa Operations Manager

cc: Cindy Mulkey, FDEP Siting Office  
Daniel A. Hopkins (Tony) Hopkins, Florida Power Development LLC  
James Daniel, Plant Manager, CEMEX Construction Materials Florida LLC  
Gary Perko, Esq. HG&S

Attachments  
SO/KJK

**APPLICATION INFORMATION**

**Owner/Authorized Representative Statement**

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

1. Owner/Authorized Representative Name : <b>Daniel A Hopkins</b>
2. Owner/Authorized Representative Mailing Address... Organization/Firm: <b>Florida Power Development, LLC</b> Street Address: <b>700 Louisiana Suite 1000</b> City: <b>Houston</b> State: <b>TX</b> Zip Code: <b>77002</b>
3. Owner/Authorized Representative Telephone Numbers... Telephone: <b>(713) 236-3046</b> ext. Fax: <b>(713) 250-3005</b>
4. Owner/Authorized Representative E-mail Address: <b><u>tony.d.hopkins@jpmorgan.com</u></b>
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

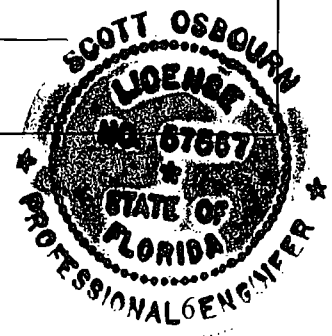
# APPLICATION INFORMATION

## Professional Engineer Certification

1. Professional Engineer Name: <b>Scott H. Osbourn</b> Registration Number: <b>57557</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Golder Associates Inc. **</b> Street Address: <b>5100 West Lemon Street, Suite 208</b> City: <b>Tampa</b> State: <b>FL</b> Zip Code: <b>33609</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(813) 287-1717</b> ext. <b>53304</b> Fax: <b>(813) 287-1716</b>
4. Professional Engineer E-mail Address: <b>sosbourn@golder.com</b>
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>  _____ Signature  _____ Date <i>11/14/11</i>  (seal)

\* Attach any exception to certification statement.

\*\* Board of Professional Engineers Certificate of Authorization #00001670



**ATTACHMENT 1**  
**Application Form- Revised Pages**

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]

Page[1] of [12]

Boiler - CO

**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: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>12-month rolling average</b>	4. Equivalent Allowable Emissions: <b>40.5 lb/hour      177.4 tons/year</b>
5. Method of Compliance: <b>CO Continuous Emissions Monitoring System</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>177.4 TPY Proposed to Avoid PSD Review.</b>	

Allowable Emissions Allowable Emissions    of   

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

Allowable Emissions Allowable Emissions    of   

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):	

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]

Page[2] of [12]

Boiler - NOx

**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: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>12 month-rolling average</b>	4. Equivalent Allowable Emissions: <b>135.0 lb/hour      591.3 tons/year</b>
5. Method of Compliance: <b>NOx Continuous Emissions Monitoring System</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Emissions based on NSPS Subpart Da for nitrogen dioxide, although it does not apply.</b>	

Allowable Emissions Allowable Emissions \_\_\_ of \_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_ of \_\_\_

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):	



**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]  
Boiler – PM/PM<sub>10</sub>

Page[3] of [12]

**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:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance: <b>Initial and annual testing by EPA Method 5.</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

**Allowable Emissions** Allowable Emissions    of   

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

**Allowable Emissions** Allowable Emissions    of   

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):	

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]

Page[5] of [12]

Boiler – SO<sub>2</sub>

**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: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>12-month rolling average</b>	4. Equivalent Allowable Emissions: <b>135 lb/hour                      591.3 tons/year</b>
5. Method of Compliance: <b>SO<sub>2</sub> and flow monitoring by Continuous Emissions Monitoring System</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Emissions based on NSPS Subpart Da for sulfur dioxide, although it does not apply.</b>	

Allowable Emissions Allowable Emissions    of   

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

Allowable Emissions Allowable Emissions    of   

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):	

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]  
Boiler – VOC

Page [6] of [12]

**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:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance: <b>Initial and annual testing by EPA Method 25A.</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

**Allowable Emissions** Allowable Emissions \_\_\_ of \_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_ of \_\_\_

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):	

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1] of [2]

Page[8] of [12]

Boiler - SAM

**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:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance: <b>Initial and annual testing by EPA Method 8 or 8A.</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

**Allowable Emissions** Allowable Emissions    of   

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

**Allowable Emissions** Allowable Emissions    of   

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):	

**EMISSIONS UNIT INFORMATION**

Section [1] of [2]

Boiler

**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 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions:                      % Maximum Period of Excess Opacity Allowed:                      min/hour	
4. Method of Compliance: <b>Continuous opacity monitoring system (COMS).</b>	
5. Visible Emissions Comment:	

**Visible Emissions Limitation:** Visible Emissions Limitation    of   

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions:                      %                      Exceptional Conditions:                      % Maximum Period of Excess Opacity Allowed:                      min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

**EMISSIONS UNIT INFORMATION**

Section [1] of [2]

Boiler

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>NOx, SO<sub>2</sub>, CO</b>
3. CMS Requirement: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date: <b>TBD</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>NSPS, Subpart Db PSD avoidance.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date: <b>TBD</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

**EMISSIONS UNIT INFORMATION**

Section [1] of [2]

Boiler

**H. CONTINUOUS MONITOR INFORMATION (CONTINUED)**

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

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>VE</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date: <b>TBD</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

**Continuous Monitoring System:** Continuous Monitor 4 of 4

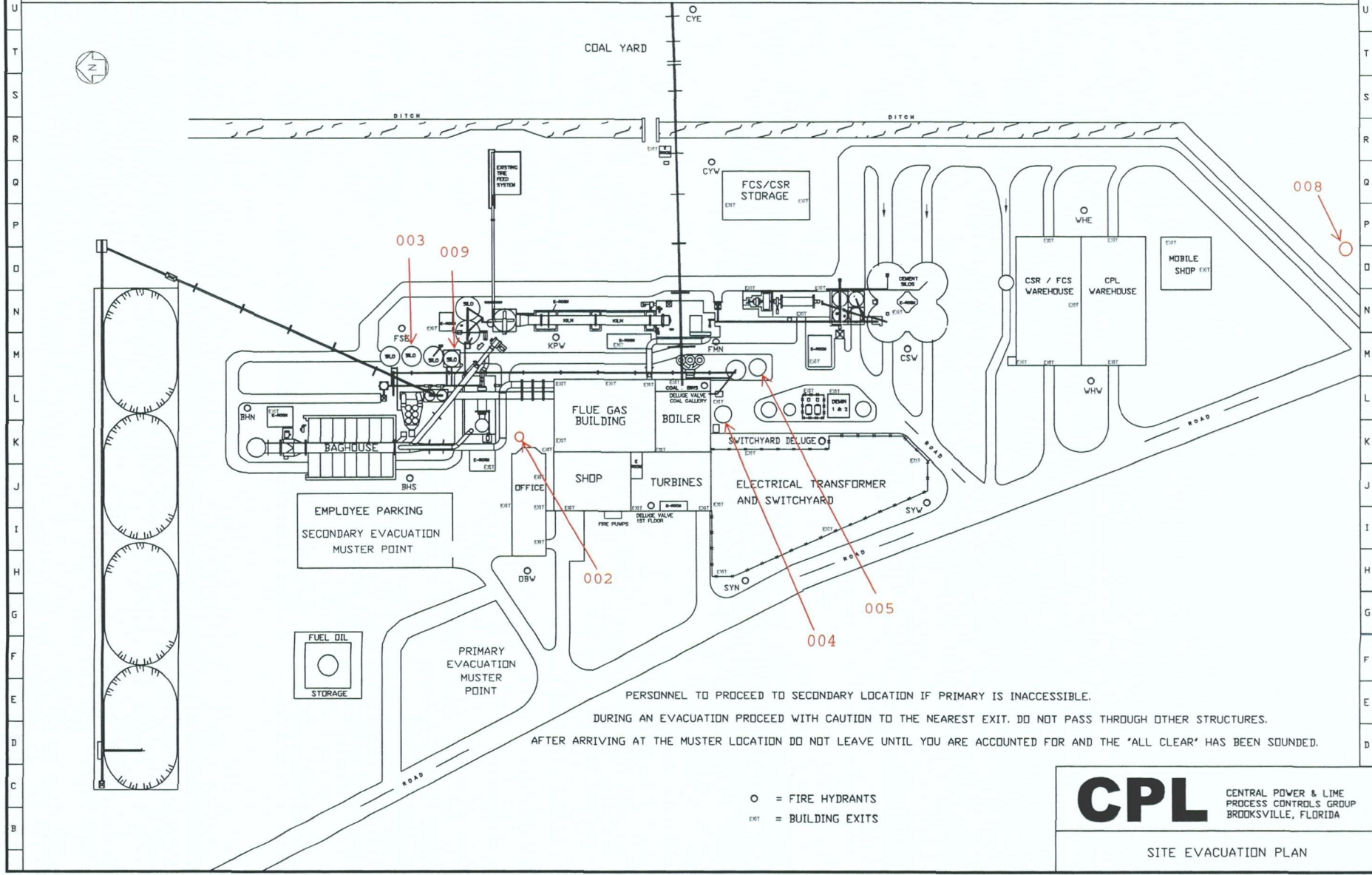
1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>CO<sub>2</sub></b>
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date: <b>TBD</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Diluent gas for CEMS corrections.</b>	

**ATTACHMENT 2**  
**Site Layout- Revised Numbering**



03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

SITE EVACUATION PLAN



PERSONNEL TO PROCEED TO SECONDARY LOCATION IF PRIMARY IS INACCESSIBLE.  
 DURING AN EVACUATION PROCEED WITH CAUTION TO THE NEAREST EXIT. DO NOT PASS THROUGH OTHER STRUCTURES.  
 AFTER ARRIVING AT THE MUSTER LOCATION DO NOT LEAVE UNTIL YOU ARE ACCOUNTED FOR AND THE 'ALL CLEAR' HAS BEEN SOUNDED.

- = FIRE HYDRANTS
- EXIT = BUILDING EXITS

**CPL** CENTRAL POWER & LIME  
 PROCESS CONTROLS GROUP  
 BROOKSVILLE, FLORIDA

SITE EVACUATION PLAN

U  
T  
S  
R  
Q  
P  
D  
N  
M  
L  
K  
J  
I  
H  
G  
F  
E  
D  
C  
B

U  
T  
S  
R  
Q  
P  
D  
N  
M  
L  
K  
J  
I  
H  
G  
F  
E  
D  
C  
B

**ATTACHMENT 3**  
**Koogler Modeling Files**

**File has been transmitted to the DEP via email.**

**ATTACHMENT 4**  
**Revised Table 4-1, GHG Summary Table**

REVISED Table 4-1: Greenhouse Gas (GHG) Emission Calculations

	Table C-1 Default HHV	Table C1 & C2 Default Emission Factors		
		CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>
Wood and Wood Residuals	15.38 MMBtu/short ton	3.2E-02 kg/MMBtu	4.2E-03 kg/MMBtu	93.8 kg/MMBtu
No. 2 fuel oil	0.138 MMBtu/gal	3.0E-03 kg/MMBtu	6.0E-04 kg/MMBtu	73.96 kg/MMBtu

**Annual Fuel Usage**

Fuels	Annual Operating Hours (hrs/yr)	Fuel Use	
Boiler - Biomass (Wood)	8,760	736,547 ton/yr	11,328,094 MMBtu/yr
Startup Fuel for Boiler - No. 2 fuel oil	100	66,176 gal/yr	9,132 MMBtu/yr

Notes:

Example Equation: Fuel Use in MMBtu/yr = Fuel Use (scf/yr) x HHV (Default high heat value from 40 CFR 98, Table C-1) in MMBtu/scf.

**GHG Emission Calculations**

Allowable Fuels	CO <sub>2</sub> <sup>b</sup>	N <sub>2</sub> O <sup>c,d</sup>	CH <sub>4</sub> <sup>c,d</sup>	Total CO <sub>2</sub> Equivalent <sup>a</sup>
	metric tons			metric tonnes
Boiler - Biomass (Wood)	1,062,575	48	362	1,084,937
Startup Fuel for Boiler - No. 2 fuel oil	675	0.005	0.027	678
	<b>1,063,251</b>	<b>47.58</b>	<b>362.53</b>	<b>1,085,615</b>

Allowable Fuels	CO <sub>2</sub> <sup>b</sup>	N <sub>2</sub> O <sup>c,d</sup>	CH <sub>4</sub> <sup>c,d</sup>	Total CO <sub>2</sub> Equivalent <sup>a</sup>
	short tons			short tons
Boiler - Biomass (Wood)	1,168,833	52	399	1,193,431
Startup Fuel for Boiler - No. 2 fuel oil	743	0.006	0.030	745
	<b>1,169,576</b>	<b>52</b>	<b>399</b>	<b>1,194,176</b>

Step 1 GHG Tailoring Rule Threshold (modification): 75,000

Allowable Fuels	CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	Total GHG Emissions <sup>a</sup>
	short tons			short tons
Boiler - Biomass (Wood)	1,168,833	52	399	1,169,284
Startup Fuel for Boiler - No. 2 fuel oil	743.0	0.006	0.030	743
	<b>1,169,576</b>	<b>52</b>	<b>399</b>	<b>1,170,027</b>

Step 2 GHG Tailoring Rule Threshold: 250

Notes:

tonne = metric ton; 1 metric ton = 1000 kg; 1 tonne = 1.1 short ton.

<sup>a</sup> On July 20, 2011, EPA promulgated the final rule deferring regulations on biogenic CO<sub>2</sub> emissions, Federal Register [FR 76 43490-43508]. In it, EPA finalizes changes to the PSD and Title V programs deferring, for three years, the application of those programs to biogenic CO<sub>2</sub> emissions. However, the deferral does not apply to other greenhouse gases, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

<sup>b</sup> CO<sub>2</sub> emissions based on Tier 1 methodology. Tier 1 uses annual fuel usage, default fuel heat content, and default emission factors to estimate CO<sub>2</sub> emissions.

Fuel type CO<sub>2</sub> (tonnes) = Fuel Use (MMBtu/yr) x EF (Default emission factor for CO<sub>2</sub> from 40 CFR 98, Table C-1)/1000 (tonnes/kg).

<sup>c</sup> N<sub>2</sub>O and CH<sub>4</sub> emissions based on fuel use, default fuel heat content, and default emission factor.

Fuel type: N<sub>2</sub>O or CH<sub>4</sub> = Fuel Use (MMBtu/yr) x EF (Default emission factor for CH<sub>4</sub> or N<sub>2</sub>O from 40 CFR 98, Table C-2)/1000 (tonnes/kg)

<sup>d</sup> N<sub>2</sub>O is multiplied by a factor of 310 to determine CO<sub>2</sub> equivalence. CH<sub>4</sub> is multiplied by a factor of 21 to determine CO<sub>2</sub> equivalence.

Startup fuel emissions are conservatively based solely on No. 2 fuel oil usage.