Golder Associates

9/5/06

August 31, 2006

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BUREAU OF AIR REGULATION

Florida Department of Environmental Protection
North Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Attention: Mr. Jonathan Holtom, P.E.

RE: REQUEST FOR ADDITIONAL INFORMATION REGARDING AIR CONSTRUCTION AND TITLE V PERMIT REVISION APPLICATION FILE NO.: 0170004-014-AC & 0170004-015-AV, CRYSTAL RIVER POWER PLANT – COAL UNLOADING MODIFICATION

Dear Mr. Holtom:

This correspondence provides the additional information requested by the Florida Department of Environmental Protection (Department or FDEP) concerning the Air Construction Application that was submitted by Progress Energy Florida (PEF), July 12, 2006. This information is presented in the same sequence as the requested information in the Department's letter dated August 10, 2006.

Comment 1: Page 5 of the combined air construction and Title V permit application needs to be completed and signed by the responsible official.

Response: DEP application form page 5 has been signed and is included in Attachment A.

Comment 2: On page 6 of the application in box 5 of the professional engineer's certification, item (4) needs to be checked in the second check box (for combined projects) instead of the first check box (for air construction permits).

Response: A revised DEP application form page 6, professional engineer's certification, is included in Attachment A.

Comment 3: On page 12 of the application, items 1 – 6 of the Additional Requirements for Title V Air Operation Permit Applications need to be addressed.

Response: A revised DEP application form page 12 is included in Attachment A.

Comment 4: On page 16 of the application, the Maximum Process or Throughput Rates are listed as 3,118,925 TPY coal for units 1 and 2, and 5,076,991 TPY coal for units 4 and 5, for a total of 8,195,916 TPY for all units combined. Please clarify whether this is the existing throughput capacity based on the current physical limitations of the combustors and associated fuel feed equipment, or if this will be the new throughput capacity after the completion of this project.

Response: The above coal throughput numbers are based on the permitted heat input for Crystal River units 1, 2, 4, & 5 and an assumed heating value of the coal:

- Units 1 & 2 – (3,750 + 4,795) mmbtu/hr x 8760 hr/yr x 1,000,000 btu/mmbtu x (1/12,000 btu/lb) x (1/2000 lb/t) = 3,118,925 tons
- Units 4 & 5 - (6,665 + 6,665) mmbtu/hr x 8760 hr/yr x 1,000,000 btu/mmbtu x (1/11,500 btu/lb) x (1/2000 lb/t) = 5,076,991 tons

Comment 5: On page 24 of the application, Section I. Emissions Unit Additional Information, item 2 is left blank. Please complete as appropriate.

Response: A revised DEP application form page 24 is included in Attachment A.

Comment 6: On page 25 of the application, Section I. Emissions Unit Additional Information, Additional Requirements for Title V Operation Permit Applications, items 1 -5 are left blank. Please complete as appropriate.

Response: A revised DEP application form page 25 is included in Attachment A.

Comment 7: What is the relationship, if any, between the requested coal yard modifications and any plans the company has to burn Powder River Basin coal on a continuing basis?

Response: There is no relationship between the coal yard modification project and the plans to burn Powder River Basin coal. The reason for replacing the barge unloader is the age of the current barge unloader and the ability to respond to market conditions for water deliveries. The reason for upgrading the conveyor belt to units 1 & 2 is to decrease the time it requires to bunker coal, allowing more time for maintenance. There is only one belt conveying coal to units 1 and 2, if this belt were to go down the units would run out of fuel.

Additional Information:

PEF is currently preparing an air construction permit application to be submitted to the Department that addresses CAIR and CAMR regulations (Crystal River Power Plant, Pollution Control Project Air Permit Application). In preparation of the Pollution Control Project application, PEF has updated fugitive emission estimates associated with the coal yard traffic. As such, PEF proposes to update the Coal Unloading Modification Project with these updated emission estimates. The emission estimate revision is due to updated unpaved road silt content. The current application emission estimates utilize an unpaved road silt content of 5% and the updated emissions provided are based on a more realistic silt content of 3%. This modification results in slightly lower estimated fugitive emissions from vehicle traffic in the coal yard. See Attachment B for the appropriate revised application pages.

PEF wishes to resolve all of the Department's questions as expeditiously as possible so that they may move forward with the proposed project in a timely manner. Please call me or Dave Meyer at (727) 820-5295, Progress Energy Florida, if you need any additional information.

Sincerely,

GOLDER ASSOCIATES INC.

Scott Osbourn, P.E.
Senior Consultant

David T. Larocca
Senior Project Engineer

DTL/dtl

Enclosures

cc: Ms. Mara Nasca, DEP, Southwest District Office
Mr. Dave Meyer, Progress Energy Florida
Mr. Bernie M Cumbie, Progress Energy Florida

ATTACHMENT A
REVISED APPLICATION FORMS

APPLICATION INFORMATION

Application Responsible Official Certification

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

1. Application Responsible Official Name:
   BERNIE M. CUMBIE, MANAGER, CRYSTAL RIVER FOSSIL PLANT & FUEL OPERATIONS

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - [X] 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.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **PROGRESS ENERGY**
   Street Address: **100 CENTRAL AVE CN77**
   City: **ST PETERSBURG** State: **FL** Zip Code: **33701**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(352) 563-4484** ext. Fax: **(352) 563-4496**

5. Application Responsible Official Email Address: **BERNIE.CUMBIE@PGNMAIL.COM**

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.

Bernie M Cumbie — Signature

9/1/06 — Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **SCOTT OSBOURN**
   Registration Number: **57557**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **5100 West Lemon St., Suite 114**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287-1717** ext.**211** Fax: **(813) 287-1716**
4. Professional Engineer Email Address: **SOSBOURN@GOLDER.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 8/31/06 Date

(seal)

* Attach any exception to certification statement.
** **Board of Professional Engineers Certificate of Authorization #00001670**


SCOTT OSBOURN
STATE OF
FLORIDA

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ 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:**N/A**
   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 On site 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:**See Part II** ☐ Not Applicable

Additional Requirements Comment

EMISSIONS UNIT INFORMATION
Section [1]
MATERIAL-HANDLING ACTIVITIES

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: **Drawing 11127** ☐ 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: **See Part II** ☐ 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: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ 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

EMISSIONS UNIT INFORMATION
Section [1]
MATERIAL-HANDLING ACTIVITIES

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 (Rule 62-212.400(4)(d), F.A.C., and Rule 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: **See Part II** ☐ Not Applicable
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
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: ____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☒ Not Applicable

ATTACHMENT B
REVISED FUGITIVE EMISSION
APPLICATION PAGES

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **12.8**lb/hour **34.7**tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Part II** Reference:	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): **21.7** 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: **See Tables 1 through 3 of Part II. Hourly rate is based on the daily rate and 24 hr/day assumed operation.**	
11. Potential Fugitive and Actual Emissions Comment: **PSD applicability is based on past actual vs. future potential.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.17** lb/hour **12.52** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Part II** Reference:	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): **8.11** 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: **See Tables 1 through 3 of Part II. Hourly rate is based on daily rate and 24 hr/day assumed operation.**	
11. Potential Fugitive and Actual Emissions Comment: **PSD applicabitlity is based on past actual vs. future potential.**	

3.0 EMISSIONS

Emissions from the proposed modifications are particulate matter (PM) and PM_{10}. All conveyors are enclosed and are assumed to result in negligible fugitive emissions. Fugitive PM/PM_{10} emissions occur during drop operations from conveyor to conveyor and from conveyor to pile. A summary of the drop operations associated with the coal handling system is provided in Table 1. A summary of the past actual and future potential emissions is provided in Table 2. Table 3 presents a summary of coal yard vehicle traffic emissions. The net PM/PM_{10} emission changes associated with the proposed modifications are as follows:

	Past Actual Coal Yard Drop Operations (TPY)	**Past Actual Traffic (TPY)**	**Future Potential Coal Yard Operations (TPY)**	**Future Traffic (TPY)**	**Net Change (TPY)**	**PSD Threshold (TPY)**
PM	12.38	**9.33**	16.9	**17.8**	**13**	25
PM_{10}	5.94	**2.17**	8.1	**4.42**	**4.4**	15

Table 3. Unpaved Road Emissions

Original Source	Original Description	Past Actual Emissions: Vehicle Miles Traveled Annual VMT/YR	Vehicle Miles Traveled Daily VMT/DAY	Hours Per Year Annual HR/YR	Hours Per Day Daily HR/DAY	Annual TSP TPY	Annual PM10 TPY	Daily TSP LB/D	Daily PM10 LB/D	Future Potential Emissions: Vehicle Miles Traveled Annual VMT/YR	Vehicle Miles Traveled Daily VMT/DAY	Hours Per Year Annual HR/YR	Hours Per Day Daily HR/DAY	Annual TSP TPY	Annual PM10 TPY	Daily TSP LB/D	Daily PM10 LB/D	AP-42
MR-4	FEL Traffic	5,475	15			1.931	0.448	10.583	2.455	21,900	60			7.726	1.792	42.332	9.821	13.2.2 12/03
		5,475	15			1.178	0.273	6.455	1.498	21,900	60			4.712	1.093	25.821	5.990	13.2.2 12/03
CP-3	Front end loader	5,475	15			1.931	0.448	10.583	2.455					0.000	0.000	0.000	0.000	13.2.2 12/03
		5,475	15			1.178	0.273	6.455	1.498					0.000	0.000	0.000	0.000	13.2.2 12/03
CP-4	Scraper	4,200	200			0.265	0.119	25.250	11.358	7,300	20			0.627	0.475	3.437	2.605	
CP-5	Bulldozer			724	2	1.690	0.344	9.339	1.902			730	2	1.704	0.347	9.339	1.902	11.9 10/98
	Water Truck	2,738	8			1.153	0.267	6.315	1.465	7,300	20			3.073	0.713	16.841	3.907	13.2.2 12/03
	Total					9.327	2.174	74.980	22.630					17.843	4.421	97.769	24.225	