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DIVISION OF AIR
RESOURCE MANAGEMENT

REPORT

AIR CONSTRUCTION PERMIT AND TITLE V PERMIT REVISION APPLICATION

Crystal River Power Plant

Concrete Batch Plant

0170004
~~1070004~~ 034-AC - module AB062
~~1070004~~ 0170004 - 035 - AV - module AB063

Submitted To: Florida Power Corporation dba Progress Energy Florida
299 First Avenue North, PEF-903
St. Petersburg, FL 33701-3308

Submitted By: Golder Associates Inc.
5100 W. Lemon Street, Suite 208
Tampa, FL 33609 USA

Distribution: 4 Copies – Florida Department of Environmental Protection
2 Copies – Progress Energy Florida
1 Copy – Golder Associates Inc.

February 2012

Project No. 11389625

A world of capabilities delivered locally

Golder Associates

Progress Energy

Robby A. Odom
Plant Manager
Crystal River Fossil Plant & Fuel Operations

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DIVISION OF AIR
RESOURCE MANAGEMENT

February 14, 2012

Mr. Jon Holtom, P.E.
Florida Department of Environmental Regulation
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Re: Crystal River Facility – Facility ID No. 0170004
Minor Source Air Construction Permit and
Title V Permit (Permit No. 0170004-025-TV) Revision Application
On-site Concrete Batch Plant Operations

Dear Mr. Holtom:

Please find enclosed one original and three copies of a permit aplication for the addition of concrete bactch plant operations at the Progress Energy Florida Crystal River Plant. This application is for an air construction permit and Title V revision to Permit No. 0170004-025-AV for construction and operation of a concrete batch plant to support the repairs associated with the Crystal River Unit 3 and other future projects, as needed.

Thank you for your help in this matter. Please contact Jamie Hunter at (727) 820-5764 if you have any questions.

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Sincerely,

Robby Odom
Plant Manager,
Crystal River Fossil Plant & Fuel Operations

Table of Contents

PROJECT DESCRIPTION

Progress Energy Florida, Inc. (PEF) operates the existing Crystal River Power Plant located in Citrus County at 15760 West Power Line Street, Crystal River Florida. The facility consists of the following operations:

- Four coal-fired fossil fuel steam generating (FFSG) units;
- Two natural draft cooling towers for FFSG Units 4 and 5;
- Helper mechanical cooling towers for FFSG Units 1, 2, and nuclear Unit 3;
- Handling facilities for coal, fly ash, and bottom ash; and
- Relocatable diesel fired generators.

This application is for an air construction permit and concurrent Title V revision to Permit No. 0170004-025-AV for the construction and operation of a concrete batch plant to support the repairs to Crystal River's nuclear Unit 3 (CR 3) and other future projects, as needed. Completed application forms (DEP Form No. 62-210.900(1)) are provided in Attachment A.

The proposed concrete batch plant operations will typically be provided by outside vendors' relocatable concrete batch plant facilities operating at the Crystal River Title V facility. Trucks will deliver sand and aggregate to the site. Sand and aggregate will be stored in partially enclosed (covered and walled on three sides) stockpiles. The sand and aggregate will then be transferred to hoppers via frontend loaders. Cement and cement additives will be stored in sealed silos, which will be equipped with bin vent filters. The aggregate and sand will pass through weigh hoppers and then mixed with cement, cement additives, and water to manufacture concrete. The mixing will occur in trucks. The process flow diagram of the concrete batching operations is provided in Attachment B.

Emissions for particulate matter (PM), particulate matter less than 10 microns (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$) were estimated for the concrete batching operations, the stock piles, and associated truck traffic. The maximum potential fugitive emission estimates from the batch plant operations and associated activities are based on the maximum production rate of 20,000 cubic yard per year (cu.yd/yr) while maintaining Prevention of Significant Deterioration (PSD) avoidance. The maximum potential fugitive emission estimates are provided in Table 2 of Attachment C.

Reasonable precautions per Rule 62-296.320(4)(c), F.A.C. will be taken to prevent unconfined PM emissions. Attachment D provides the types of reasonable precautions the facility will take to control PM emissions.

Additional temporary ancillary equipment will be brought onsite as part of the CR 3 repair. This equipment will consist of:

- Nine (9) hydro-demolition diesel pumps with a rating of 475 horsepower (HP) each;
- Two (2) water transfer diesel pumps with a rating of 20 HP each; and
- Twelve (12) air compressors with a rating of 575 HP each.

Sulfur dioxide (SO_2), nitrogen oxide (NO_x), carbon dioxide (CO), volatile organic compounds (VOC), and PM emissions were estimated from the 23 ancillary engines and are summarized in Table 3 of Attachment C. Emissions were conservatively estimated based on the New Source Performance

Standards (NSPS) of Subpart IIII - *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. Because these engines are portable and not stationary emission units, they qualify for exemption from NSPS Subpart IIII, NSPS Subpart JJJJ - *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, and National Emissions Standards for Hazardous Air Pollutants (NESHAP) *Subpart ZZZZ - National Emission Standards for Reciprocating Internal Combustion Engines* as long as they are not stationary for more than 12 consecutive months.

As demonstrated in Table 1, the total emissions of the batch plant operations, the stock piles, the associated truck traffic, and the ancillary engines will be below the PSD Significant Emission Rates (SERs).

ATTACHMENT A

APPLICATION FOR AIR PERMIT - LONG FORM

DEP Form No. 62-210.900(1)

Department of Environmental Protection

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DIVISION OF AIR RESOURCE MANAGEMENT

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: **Florida Power Corporation dba Progress Energy Florida**	
2. Site Name: **Crystal River Power Plant**	
3. Facility Identification Number: **0170004**	
4. Facility Location... Street Address or Other Locator: **North of Crystal River, West of US 19** City: **Crystal River** County: **Citrus** Zip Code: **34428**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Jamie Hunter, Lead Environmental Specialist**
2. Application Contact Mailing Address... Organization/Firm: **Florida Power Corporation dba Progress Energy Florida, Inc.** Street Address: **299 First Avenue North, PEF-903** City: **St. Petersburg** State: **Florida** Zip Code: **33701-3308**
3. Application Contact Telephone Numbers... Telephone: **(727) 820 - 5764** ext. Fax: **(727) 820 - 5292**
4. Application Contact E-mail Address: **John.Hunter@pgnmail.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 2-17-12	3. PSD Number (if applicable):
2. Project Number(s): 0170004-034-AC 0170004-035-TV	4. Siting Number (if applicable):

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)

[X] 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:

[X] 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

This application is for an air construction permit and concurrent Title V revision to Permit No. 0170004-025-AV for the construction and operation of a concrete batch plant to support the repairs to Crystal River Unit 3 (CR 3) and other future projects, as needed.

Additional temporary ancillary equipment will be brought onsite as part of the CR 3 repair. This equipment will consist of:

- **Nine (9) hydro-demolition diesel pumps with a rating of 475 horsepower (HP) each;**
- **Two (2) water transfer diesel pumps with a rating of 20 HP each; and**
- **Twelve (12) air compressors with a rating of 575 HP each.**

FACILITY INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
TBD	Concrete Batch Plant Operations	AC	

Application Processing Fee

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

FACILITY INFORMATION

Owner/Authorized Representative Statement – N/A

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

1. Owner/Authorized Representative Name :		
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City:	State:	Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ( ) - ext.	Fax: ( ) -	
4. Owner/Authorized Representative E-mail Address:		
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	Date	

FACILITY 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: **Robby Odom, Plant Manager**

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 or CAIR source.

3. Application Responsible Official Mailing Address...
Organization/Firm: **Florida Power Corporation dba Progress Energy Florida, Inc.**
Street Address: **299 First Avenue North, CN77**
City: **St. Petersburg** State: **FL** Zip Code: **33701**

4. Application Responsible Official Telephone Numbers...
Telephone: **(352) 563-4910** ext. Fax: **(352) 563-4496**

5. Application Responsible Official E-mail Address: **Robby.Odom@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.

Signature: _____ Date: 2/14/12

FACILITY INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Scott H. Osbourn**
   Registration Number: **57557**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc. ****
   Street Address: **5100 West Lemon Street, Suite 208**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287 - 1717** ext. Fax: **(813) 287 - 1716**
4. Professional Engineer E-mail 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 [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(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 Date 2/10/12

(seal)

SCOTT OSBOURN LICENSE NO. 57557 STATE OF FLORIDA PROFESSIONAL ENGINEER

* Attach any exception to certification statement.
****Board of Professional Engineers Certificate of Authorization #0000167**

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **334.3** North (km) **3204.5**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **28/57/34** Longitude (DD/MM/SS) **82/42/01**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Jamie Hunter, Lead Environmental Specialist**
2. Facility Contact Mailing Address... Organization/Firm: **Florida Power Corporation dba Progress Energy Florida, Inc.** Street Address: **299 First Avenue North, PEF-903** City: **St. Petersburg** State: **Florida** Zip Code: **33701-3308**
3. Facility Contact Telephone Numbers: Telephone: **(727) 820 - 5764** ext. Fax: **(727) 820 - 5292**
4. Facility Contact E-mail Address: **John.Hunter@pgnmail.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. [x] Title V Source	
4. [x] Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. [x] Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. [x] One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. [x] One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. [x] 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:	

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
$PM_{2.5}$	A	N
CO	A	N
VOC	A	N
NOx	A	N
SO_2	A	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
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:_____ [x] Previously Submitted, Date: May 20, 2009
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:_____ [x] Previously Submitted, Date: May 20, 2009
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:_____ [x] Previously Submitted, Date: May 20, 2009

Additional Requirements for Air Construction Permit Applications

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

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

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

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID:_____
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☐ Not Applicable

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:_____ [x] Previously Submitted, Date: May 20, 2009
   [x] 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:_____ [x] Previously Submitted, Date: May 20, 2009
   ☐ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   [x] Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ [x] Previously Submitted, Date: May 20, 2009
   ☐ 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.

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Concrete Batch Plant Operations

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)

   [ ] 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.

   [x] 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: **Concrete Batch Plant**

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

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

8. Federal Program Applicability: (Check all that apply) – **N/A**

   [ ] Acid Rain Unit

   [ ] CAIR Unit

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Concrete Batch Plant Operations

Emissions Unit Control Equipment/Method: Control **1** of **3**

1. Control Equipment/Method Description: **Water Sprays**
2. Control Device or Method Code: **153**

Emissions Unit Control Equipment/Method: Control **2** of **3**

1. Control Equipment/Method Description: **Fabric Filter**
2. Control Device or Method Code: **127**

Emissions Unit Control Equipment/Method: Control **3** of **3**

1. Control Equipment/Method Description: **Dust Supression**
2. Control Device or Method Code: **108**

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

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: **20,000 cubic yard**			
3. Maximum Heat Input Rate: million Btu/hr			
4. Maximum Incineration Rate: pounds/hr tons/day			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment:			

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:	2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Emission points are detailed in the Process Flow Diagram (see Attachment B).**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **4**

1. Segment Description (Process/Fuel Type): **3-05-011-21 - Concrete Batching /Aggregate Delivery to Ground Storage** **3-05-011-22 - Concrete Batching /Sand Delivery to Ground Storage**		
2. Source Classification Code (SCC): **See above**	3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment **2** of **4**

1. Segment Description (Process/Fuel Type): **3-05-011-04 - Concrete Batching /Aggregate Transfer to Elevated Storage** **3-05-011-05 - Concrete Batching /Sand Transfer to Elevated Storage**		
2. Source Classification Code (SCC): **See above**	3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **3** of **4**

1. Segment Description (Process/Fuel Type): **3-05-011-07 – Concrete Batching /Cement Unloading to Elevated Storage Silo** **3-05-011-17 – Concrete Batching /Cement Supplement Unloading to Elevated Storage Silo**		
2. Source Classification Code (SCC): **See above**	3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

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

1. Segment Description (Process/Fuel Type): **3-05-011-08 – Concrete Batching /Weight Hopper Loading of Sand and Aggregate** **3-05-011-10 – Concrete Batching /Truck Loading of Cement/Sand/Aggregate**		
2. Source Classification Code (SCC): **See above**	3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

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	**153, 127, 108**		
PM_{10}	**153, 127, 108**		
$PM_{2.5}$	**153, 127, 108**		

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: lb/hour **4.6** tons/year		4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: Reference:		7. Emissions Method Code:
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: **Emission estimates are summarized in Attachment C.**		
11. Potential, Fugitive, and Actual Emissions Comment:		

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 __ 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):	

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):	

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_{10}	2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour **1.3** tons/year		4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: Reference:		7. Emissions Method Code:
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: **Emission estimates are summarized in Attachment C.**		
11. Potential, Fugitive, and Actual Emissions Comment:		

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 __ 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):	

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):	

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: **$PM_{2.5}$**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour **0.7** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
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: **Emission estimates are summarized in Attachment C.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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 __ 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):	

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):	

G. VISIBLE EMISSIONS INFORMATION – N/A

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 __ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation __ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION– N/A

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

Continuous Monitoring System: Continuous Monitor ___ of ___

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

Continuous Monitoring System: Continuous Monitor ___ of ___

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

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)
   [x] Attached, Document ID: **Attachment B** [ ] 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: **NA** [ ] 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)
   [x] Attached, Document ID: **Attachment D** [ ] 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 _____
   [x] 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 _____
   [x] 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: _____
   [x] 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: _____ [x] 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

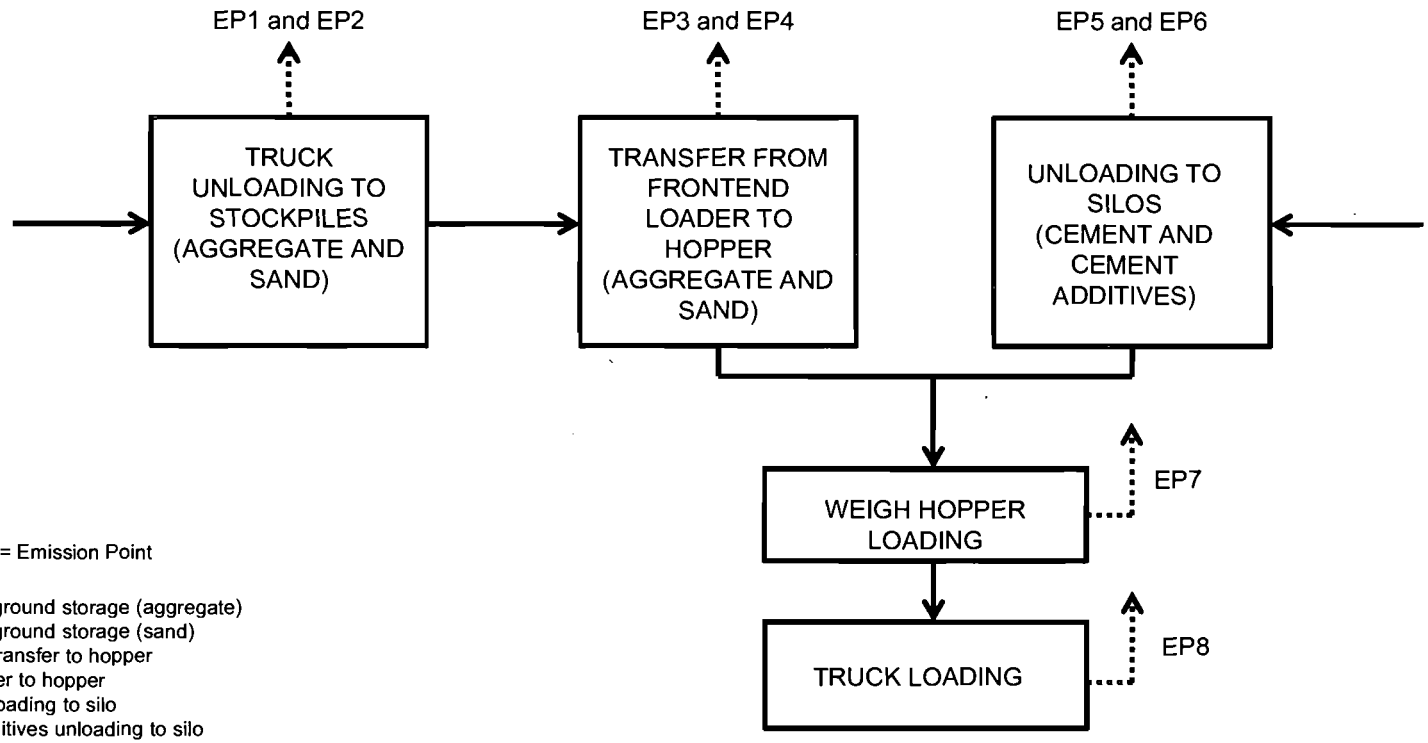
1. Identification of Applicable Requirements:	☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring:	☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation:	☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading):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

Additional Requirements Comment

ATTACHMENT B

PROCESS FLOW DIAGAM

ATTACHMENT B
PROPOSED CONCRETE BATCHING PROCESS



EP = Emission Point

EP1 - Delivery to ground storage (aggregate)
EP2 - Delivery to ground storage (sand)
EP3 - Aggregate transfer to hopper
EP4 - Sand transfer to hopper
EP5 - Cement unloading to silo
EP6 - Cement additives unloading to silo
EP7 - Transfer of material to weigh hopper (aggregate + sand)
EP8 - Truck loading (cement + additive)

SOURCE: USEPA AP-42 Figure 11.12-1

CLIENT/PROJECT	TAMPA, FLORIDA	TITLE:
Crystal River Power Plant **Facility ID No. 0170004**	Golder Associates	**Process Flow Diagram**

DRAWN BY:	REVIEWED BY:	DATE:	NOT TO SCALE	FILE NO.:	JOB NO.:	FIGURE NO.: 1	REV. NO.
PP	DL	2/7/12			11389625		

ATTACHMENT C
EMISSION CALCULATIONS

ATTACHMENT C
EMISSION CALCULATIONS

Table 1: Summary of Potential Emissions from the Proposed Project

	Annual Emissions (TPY)							
Pollutant	Hydro Demolition Diesel Pumps	Water Transfer Diesel Pumps	Air Compressors	Concrete Batch Plant	Stockpiles	Truck Traffic	TOTAL	PSD SERs
SO_2	0.02	2.0E-04	2.8E-04	NA	NA	NA	0.02	40
NO_x	1.46	0.15	0.01	NA	NA	NA	1.6	40
CO	2.04	0.16	0.02	NA	NA	NA	2.2	100
VOC	0.90	0.04	0.01	NA	NA	NA	0.9	NA
PM	0.12	0.16	1.1E-03	0.4	0.07	3.8	4.6	25
PM_{10}	0.12	0.16	1.1E-03	0.2	0.03	0.8	1.3	15
$PM_{2.5}$	0.12	0.16	1.1E-03	0.2	0.005	0.2	0.7	10

Notes: Assumed PM = PM_{10} = $PM_{2.5}$.

Table 2: Maximum Estimated Fugitive Air Emission from the Batch Plant Operations and Associated Activities

Construction Activity	Type of Operation	Amount	Units	Pollutant	Emissions	Units	Controls
Vehicle Traffic (Paved Roads)	Delivery of Raw Materials	2,184	VMT	PM	3.3	tons	Watering as necessary
				PM_{10}	0.7	tons	Watering as necessary
				$PM_{2.5}$	0.2	tons	Watering as necessary
	Delivery of Concrete	307	VMT	PM	0.59	tons	Watering as necessary
				PM_{10}	0.12	tons	Watering as necessary
				$PM_{2.5}$	0.03	tons	Watering as necessary
Open Areas	Wind Erosion	0.28	acres	PM	0.07	tons	Watering
				PM_{10}	0.03	tons	Watering
				$PM_{2.5}$	0.005	tons	Watering
Batch Plants	Concrete[1]	38,570	tons[2]	PM	0.44	tons	Fabric Filter, watering
				PM_{10}	0.20	tons	Fabric Filter, watering
				$PM_{2.5}$	0.20	tons	Fabric Filter, watering

Notes:
[1] Includes max production to avoid PSD. Assumed PM_{10} = $PM_{2.5}$.
[2] Equivalent to approximately 20,000 cubic yard per year of concrete.
VMT = vehicle miles traveled.
Sources:
USEPA, 1992 Fugitive Dust Background and Technical Information Document for Best Available Control Measures; Section 2.3.1.3.3, Wind Emissions from Continuously Active Piles.
USEPA, 6/06; AP-42, Section 11.12 Concrete Batching.
USEPA, 1/11; AP-42, Section 13.2.1 Paved Roads.
USEPA,11/06; AP-42, Section 13.2.2 Unpaved Roads.
USEPA, 11/06; AP-42, Section 13.2.4 for Aggregate Handling and Storage Piles.
USEPA, 2004; Exhaust and Crankcase Emissions Factors for Nonroad Engine Modeling-Compression Ignition.
Golder, 2011.

ATTACHMENT C
EMISSION CALCULATIONS (continued)

Table 3: Performance and Emission Data for Temporary Ancillary Equipment

Parameter	Hydro Demolition Diesel Pumps	Water Transfer Diesel Pumps	Air Compressors
Performance			
Number of Units	9	2	12
Rating (kW)	354	15	429
Rating (hp - each pump)	475	20	575
Rating (hp - total)	4,275	40	6,900
Fuel	Diesel	Diesel	Diesel
Fuel Heat content (Btu/lb) (HHV)	19,300	19,300	19,300
Fuel density (lb/gal)	7.1	7.1	7.1
Fuel usage (gallons/hr) - total	135.0	1.27	218.4
Maximum operation (hours/yr) - total	1,500	1,500	12
Maximum fuel usage (gallons/yr) - total	202,500	1,905	2,621
Emissions			
SO_2 - Basis (%weight of sulfur)	0.0015%	0.0015%	0.0015%
Conversion of S to SO_2	100	100	100
Molecular weight SO_2/ S (64/32)	2	2	2
Emission rate (lb/hr) - Total	2.9E-02	2.7E-04	4.7E-02
(TPY) - Total	2.2E-02	2.0E-04	2.8E-04
NO_x - Basis Subpart IIII of Part 60 (g/hp-hr)	1.86	4.46	1.86
Emission rate (lb/hr) - Total	1.9	0.2	2.4
(TPY) - Total	1.46	0.15	0.01
CO - Basis Subpart IIII of Part 60 (g/hp-hr)	2.6	4.9	2.6
Emission rate (lb/hr) - Total	2.7	0.2	3.3
(TPY) - Total	2.04	0.16	0.02
VOC - Basis AP-42 Table 3.3-1 (g/hp-hr)	1.14	1.14	1.14
Emission rate (lb/hr) - Total	1.19	0.05	1.45
(TPY) - Total	0.90	0.04	0.01
PM - Basis Subpart IIII of Part 60 (g/hp-hr)	0.15	4.90	0.15
Emission rate (lb/hr) - Total	0.16	0.22	0.19
(TPY) - Total	0.12	0.16	0.001

Source: Golder, 2011; 40 CFR Part 60, Subpart IIII, AP-42 Table 3.3-1, and 40 CFR 89.112.

ATTACHMENT D

DESCRIPTION OF CONTROL METHODS

ATTACHMENT D
DESCRIPTION OF CONTROL METHODS

The types of reasonable precautions that the Crystal River Power Plant (Facility ID No. 0170004) will take to prevent unconfined emissions are as follows:

(a) Management of roads and stockpiles, which shall include one or more of the following:

- Maintenance of roads, and storage piles.
- Application of water or environmentally safe dust-suppressant chemicals when necessary to control emissions.
- Removal of particulate matter from roads and other paved areas under control of the owner or operator to mitigate re-entrainment, and from building or work areas to reduce airborne particulate matter.

(b) Use of partial enclosure to mitigate emissions at drop points.

(c) Minimization of interior truck traffic.

(d) Covering of stockpiles to reduce particulate emissions.

[Rule 62-296.320(4)(c), F.A.C.]

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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