ECT
Environmental Consulting & Technology, Inc.

March 2, 2010
ECT No. 080213-0002

RECEIVED
MAR 03 2010
BUREAU OF AIR REGULATION

Ms. Trina L. Vielhauer, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Re: Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center – Combined Cycle Unit B
FDEP File No. 0950137-020-AC, Permit No. PSD-FL-373
Title V Permit Revision Application

Dear Ms. Vielhauer: Project No.: 0950137-031-AV

Operation of the OUC Curtis H. Stanton Energy Center electrical generation facility located at 5100 South Alafaya Trail in Orlando, Orange County, Florida, is currently authorized by Florida Department of Environmental Protection (FDEP) Title V Permit No. 0950137-027-AV. This permit was issued with an effective date of January 1, 2010, and an expiration date of December 31, 2014.

As authorized by FDEP Air Construction Permit No. 0950137-020-AC, OUC recently modified the Stanton Energy Center by constructing a nominal 300-megawatt (MW) dual-fuel, combined-cycle combustion turbine unit (Unit B). Unit B is comprised of a single nominal 150-MW General Electric (GE) 7FA combustion turbine generator, a fired heat recovery steam generator, a nominal 150-MW steam turbine generator, and ancillary supporting equipment. Air Construction Permit No. 0950137-020-AC was issued on May 9, 2008, with an expiration date of December 31, 2011.

The Unit B project was completed on September 4, 2009. Section II, Condition No. 8, of Air Construction Permit No. 0950137-020-AC requires the submittal of a Title V permit revision application at least 90 days prior to expiration (i.e., by October 2, 2011), but no later than 180 days after completing the required work and commencing operation (i.e., by March 3, 2010). On behalf of OUC, four copies of a Title V permit revision application to incorporate the modifications authorized by Air Construction Permit No. 0950137-020-AC are enclosed for your review.

If you have any questions regarding the Stanton Unit B Project, please contact Ms. Denise Stalls at 407/737-4236.

Sincerely,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.

Thomas W. Davis, P.E.
Principal Engineer

TWD/dlm

cc: Ms. Denise Stalls, OUC

Y:\GDP-10\PRJ\OUC\TWD0302.DOC.1

3701 Northwest 98th Street
Gainesville, FL 32606

(352) 332-0444

FAX (352) 332-6722

ORLANDO UTILITIES COMMISSION
CURTIS H. STANTON ENERGY CENTER

COMBINED-CYCLE UNIT B

TITLE V AIR OPERATION PERMIT REVISION APPLICATION

RECEIVED
MAR 03 2010
BUREAU OF AIR REGULATION

Prepared for:

OUC

The *Reliable* One®

Orlando, Florida

Prepared by:

ECT

Environmental Consulting & Technology, Inc.
3701 Northwest 98th Street
Gainesville, Florida 32606

ECT No. 100187-0002

March 2010

INTRODUCTION

The Orlando Utilities Commission (OUC) Curtis H. Stanton Energy Center is an electrical generation facility located at 5100 South Alafaya Trail in Orlando, Orange County, Florida. The Stanton Energy Center includes two fossil fuel-fired steam electric generating stations (Units 1 and 2), an auxiliary boiler, two General Electric (GE) 7FA dual fuel combined-cycle units (Unit A), and storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash.

Operation of the Stanton Energy Center is presently authorized by Florida Department of Environmental Protection (FDEP) Title V Permit No. 0950137-027-AV, issued with an effective date of January 1, 2010, and expiration date of December 31, 2014. The permitting authority for this permit is the FDEP Division of Air Resource Management, Bureau of Air Regulation, located in Tallahassee. The compliance authority is the FDEP Central District Office located in Orlando.

On May 9, 2008, OUC received authorization from FDEP to construct a nominal 300-megawatt (MW) dual fuel combined-cycle combustion turbine unit (Unit B) at the Stanton Energy Center (reference FDEP File No. 0950137-020-AC and Permit No. PSD-FL-373A). Unit B is comprised of a single nominal 150-MW GE 7FA combustion turbine generator (CTG), a fired heat recovery steam generator (HRSG), a nominal 150-MW steam turbine generator (STG), and ancillary supporting equipment. Air Construction Permit No. 0950137-020-AC was issued with an expiration date of December 31, 2011.

The Unit B project authorized by FDEP Air Construction Permit No. 0950137-020-AC and Permit No. PSD-FL-373A was completed on September 4, 2009. Section II, Condition No. 8, requires the submittal of a Title V permit revision application at least 90 days prior to expiration (i.e., by October 2, 2011), but no later than 180 days after completing the required work and commencing operation (i.e., by March 3, 2010). In accordance with the requirements of Condition No. 8, this application is for a revision to Title V

Permit No. 0950137-027-AV to incorporate the Unit B project authorized by Air Construction Permit No. 0950137-020-AC.

This application package, consisting of the FDEP's Application for Air Permit – Long Form, Effective 03/16/08, and all required supplemental facility and emission unit information, constitutes OUC's Title V permit revision application for the Stanton Energy Center Unit B project. The following attachments are included as referenced in the permit application:

- A—Compliance Report.
- B—Verification of Risk Management Plan Submittal.
- C—Procedures for Startup and Shutdown.
- D—Identification of Applicable Requirements (Unit B).
- E—Alternative Methods of Operation.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR AIR PERMIT – LONG FORM

ECT
Environmental Consulting & Technology, Inc.

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

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

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

RECEIVED
MAR 03 2010
BUREAU OF AIR REGULATION

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: **Orlando Utilities Commission (OUC)**	
2. Site Name: **Curtis H. Stanton Energy Center**	
3. Facility Identification Number: **0950137**	
4. Facility Location: Street Address or Other Locator: **5100 South Alafaya Trail** City: **Orlando** County: **Orange** Zip Code: **32831-2005**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **David R. Báez, Project Engineer, Environmental Affairs**
2. Application Contact Mailing Address Organization/Firm: **Orlando Utilities Commission** Street Address: **P.O. Box 3193** City: **Orlando** State: **Florida** Zip Code: **32802-3193**
3. Application Contact Telephone Numbers... Telephone: **(407) 658-6444** ext. **3691** Fax: **(407) 244-8794**
4. Application Contact Email Address: **DBaez@ouc.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 3-3-10	3. PSD Number (if applicable):
2. Project Number(s): 0950137-031-AV	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

☐ Air construction permit.

☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).

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

Air Operation Permit

☐ Initial Title V air operation permit.

☒ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

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

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

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

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

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

Application Comment

On May 9, 2008, OUC received authorization from the Florida Department of Environmental Protection (FDEP) to construct a nominal 300 megawatts (MW) dual fuel combined cycle combustion turbine unit (Unit B) at the Curtis H. Stanton Energy Center; reference DEP File No. 0950137-020-AC and Permit No. PSD-FL-373A. Unit B is comprised of a single nominal 150-MW GE 7FA combustion turbine generator (CTG), a fired heat recovery steam generator (HRSG), a nominal 150-MW steam turbine generator (STG), and ancillary supporting equipment.

In accordance with Section II, Condition No. 8 of the air construction permit, this application requests a revision to Title V Permit No.: 0950137-027-AV to incorporate the modifications authorized by Air Construction Permit No.: 0950137-020-AC.

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
030	Unit B Combined-Cycle Combustion Turbine	N/A	N/A
031	Unit B Cooling Tower	N/A	N/A
The Unit B ultralow sulfur (ULSD) fuel oil storage tank qualifies as an *insignificant activity* in accordance with Rule 62-213.430(6)(b), F.A.C. The ULSD fuel oil storage tank is not subject to a unit-specific applicable requirement, and has potential emissions less than the thresholds specified in Rule 62-213.430(6), F.A.C.			

Application Processing Fee

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

~~Note: The Curtis H Stanton Energy Center~~ has been issued Final Title V Operation Permit Number 0950137-027-AV. An application processing fee is not required pursuant to Rule 62-213.205(4), F.A.C.

Owner/Authorized Representative Statement **NOT APPLICABLE**

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 Email 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

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:
   Denise M. Stalls, Vice President Environmental Affairs

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

   ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☒ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☒ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address:
   Organization/Firm: **Orlando Utilities Commission**
   Street Address: **P.O. Box 3193**
   City: **Orlando** State: **Florida** Zip Code: **32802-3193**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(407) 423-9100**ext. 168 Fax: **(407) 236-9606**

5. Application Responsible Official E-mail Address: **dstalls@ouc.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.

Denise M Stalls — Signature

2/25/2010 — Date

Professional Engineer Certification

1. Professional Engineer Name: **Thomas W. Davis**
   Registration Number: **36777**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Environmental Consulting & Technology, Inc.**
   Street Address: **3701 Northwest 98th Street**
   City: **Gainesville** State: **Florida** Zip Code: **32606-5004**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 248– 3351** ext. Fax: **(352) 332 - 6722**
4. Professional Engineer Email Address: **tdavis@ectinc.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

3/2/10
Date

(seal)

STATE OF FLORIDA PROFESSIONAL ENGINEER No 36777 THOMAS W. DAVIS LICENSED

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **483.6** North (km) **3,151.1**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **28/29/17** Longitude (DD/MM/SS) **81/10/03**	
3. Governmental Facility Code: **4**	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: **David R. Báez, Project Engineer, Environmental Affairs**
2. Facility Contact Mailing Address Organization/Firm: **Orlando Utilities Commission** Street Address: **P.O. Box 3193** City: **Orlando** State: **Florida** Zip Code: **32802-3193**
3. Facility Contact Telephone Numbers: Telephone: **(407) 658-6444** ext. **3691** Fax: **(407) 244-8794**
4. Facility Contact Email Address: **DBaez@ouc.com**

Facility Primary Responsible Official **NOT APPLICABLE**

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

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

Facility Regulatory Classifications

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

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

Unit B combustion turbine (EU ID 030) is subject to New Source Performance Standard Subpart KKKK, *Standards of Performance for Stationary Combustion Turbines.*

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NOx	**A**	**N**
CO	**A**	**N**
PM/PM10	**A**	**N**
SO2	**A**	**N**
VOC	**A**	**N**
HAPS	**A**	**N**

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps **NOT APPLICABLE**

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: ☒ Previously Submitted, Date: **February 2008**
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID: ☒ Previously Submitted, Date: **February 2008**
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID: ☒ Previously Submitted, Date: **February 2008**

Additional Requirements for Air Construction Permit Applications **NOT APPLICABLE**

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications **NOT APPLICABLE**

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

Additional Requirements for Title V Air Operation Permit Applications

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

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: **Attachment 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 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: **Attachment B** ☐ Not Applicable

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

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

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **May 13, 2009**
   ☐ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

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

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **April 18, 2008**
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

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

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

Emissions Unit Description and Status

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

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

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

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

2. Description of Emissions Unit Addressed in this Section:
Combined-cycle unit comprised of one GE 7FA combustion turbine generator (CTG) and one heat recovery steam generator (HRSG) equipped with duct burners (DBs). The CTG is fired with either pipeline natural gas or ULSD fuel oil, and is equipped with inlet air evaporative cooling and power (steam) augmentation. The HRSG DBs are fired exclusively with pipeline natural gas.

3. Emissions Unit Identification Number: **030**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**09/07/07**	**09/04/09**	**49**

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

☒ Acid Rain Unit

☒ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **GE** Model Number: **7FA**

10. Generator Nameplate Rating: **300** MW **(CTG/HRSG unit, nominal)**

11. Emissions Unit Comment:
Combustion Turbine Generator – 150 MW, nominal
Steam Turbine Generator – 150 MW, nominal

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

1. Control Equipment/Method Description: **Natural Gas** **NO_x - Dry low-NO_x (DLN) combustion**
2. Control Device or Method Code: **025**

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

1. Control Equipment/Method Description: **ULSD Fuel Oil** **NO_x – wet injection**
2. Control Device or Method Code: **028**

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

1. Control Equipment/Method Description: **NO_x - Selective Catalytic Reduction (SCR)**
2. Control Device or Method Code: **139**

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:	
3.	Maximum Heat Input Rate: **(CT only)**	**1,765** million Btu/hr **(HHV) @ 70° F CTG compressor inlet air temperature and 100% load (NG)** **1,935** million Btu/hr **(HHV) @ 70° F CTG compressor inlet air temperature and 100% load (FO)**
4.	Maximum Incineration Rate:	pounds/hr tons/day
5.	Requested Maximum Operating Schedule:	**24** hours/day **7** days/week **52** weeks/year **8,760** hours/year
6.	Operating Capacity/Schedule Comment:	

Maximum heat input rate will vary with CTG characteristics, ambient conditions, alternative methods of operation, and CTG inlet air evaporative cooling.

HHV = higher heating value
NG = natural gas
FO = ULSD fuel oil

ULSD fuel oil combustion is limited to no more than 1,000 hours per year.

Heat input for the Unit B HRSG DBs is 531 x 10^6 Btu/hr, HHV basis. The Unit B HRSG DBs are fired exclusively with pipeline natural gas.

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: **Unit B CTG/HRSG**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **205** feet	7. Exit Diameter: **20.0** feet
8. Exit Temperature: **212** °F	9. Actual Volumetric Flow Rate: **1,045,225** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates Zone: **17** East (km): **483.616** North (km): **3,150.955**		14. Emission Point Latitude/Longitude **N/A** Latitude (DD/MM/SS) **N/A** Longitude (DD/MM/SS)
15. Emission Point Comment: **Exit temperature (Field 8) and volumetric flow rate (Field 9) are for natural gas at 100% load, 95°F ambient temperature, CTG steam augmentation and inlet air evaporative cooling, and HRSG duct burner firing.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **2**

1. Segment Description (Process/Fuel Type): **Combustion turbine and heat recovery steam generator duct burners fired with pipeline natural gas.**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **2.305**	5. Maximum Annual Rate: **20,191.8**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **<0.1**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **1,025 HHV**
10. Segment Comment:		

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

1. Segment Description (Process/Fuel Type): **Combustion turbine fired with ULSD distillate fuel oil.**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **Thousands Gallons Used**	
4. Maximum Hourly Rate: **15.273**	5. Maximum Annual Rate: **15,273**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **137.3 (HHV)**
10. Segment Comment: **Combustion of ULSD fuel is limited to no more than 1,000 hours per year.**		

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
1 – NOX	**025, 028**	**139**	**EL**
2 – CO			**EL**
3 – VOC			**NS**
4 – SO2			**EL**
5 – SAM			**EL**
6 – PM/PM10			**EL**
Notes:	**025 – DLN Combustors** **028 – water or steam injection**	**139 - SCR**	**NS – no standard** **EL – emissions limited**
SAM, SO_2, and $PM/PM_{10}/PM_{2.5}$ are subject to fuel sulfur specifications.			

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control: **+90%**
3. Potential Emissions: **60.3** lb/hour **92.6** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Hourly Rate (ULSD Fuel Oil):

NOX = 60.3 lb/hr

Annual Rate (ULSD Fuel Oil and Natural Gas):

$$\text{NOX} = \frac{[(60.3\ \text{lb/hr}) \times (1{,}000\ \text{hrs/yr})] + [(16.1\ \text{lb/hr} \times 7{,}760\ \text{hr/yr})]}{2{,}000\ \text{lb/ton}} = 92.6\ \text{ton/yr}$$

11. Potential, Fugitive, and Actual Emissions Comment:

Combustion of ULSD fuel is limited to no more than 1,000 hours per year.

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 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **2.0 ppmvd @ 15% O_2** **(stack test 3-run and 24-hour block average)**	4. Equivalent Allowable Emissions: **12.7** lb/hour **N/A** tons/year
5. Method of Compliance: **NOX CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal operating load and natural gas combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **2.0 ppmvd @ 15% O_2** **(stack test 3-run and 24-hour block average)**	4. Equivalent Allowable Emissions: **16.1** lb/hour **N/A** tons/year
5. Method of Compliance: **NOX CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal operating load, DB firing, and natural gas combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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 **3** of **3**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **8.0 ppmvd @ 15% O_2** **(stack test 3-run and 24-hour block average)**	4. Equivalent Allowable Emissions: **60.3** lb/hour **N/A** tons/year
5. Method of Compliance: **NOX CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal operating load and ULSD fuel oil combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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: **CO**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **37.2** lb/hour **128.6** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Hourly Rate (CTG + DB, Natural Gas):

CO = 37.2 lb/hr

Annual Rate (Natural Gas):

$$\text{CO} = \frac{[(6.0 \text{ ppmvd} / 7.6 \text{ ppmvd}) \times (37.2 \text{ lb/hr} \times 8{,}760 \text{ hr/yr})]}{2{,}000 \text{ lb/ton}} = 128.6 \text{ ton/yr}$$

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 **1** of **5**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **4.1 ppmvd @ 15% O_2** **(stack test 3-run average)**	4. Equivalent Allowable Emissions: **15.9** lb/hour **N/A** tons/year
5. Method of Compliance: **CO CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal operating load and natural gas combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions **2** of **5**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **7.6 ppmvd @ 15% O_2** **(stack test 3-run average)**	4. Equivalent Allowable Emissions: **37.2** lb/hour **N/A** tons/year
5. Method of Compliance: **CO CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal operating load, DB firing, and natural gas combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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 3 of 5

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **8.0 ppmvd @ 15% O_2** **(24-hour block average)**	4. Equivalent Allowable Emissions: **N/A** lb/hour **N/A** tons/year
5. Method of Compliance: **CO CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions are based on CTG normal or low operating loads, with or without DB, and natural gas combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions 4 of 5

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **8.0 ppmvd @ 15% O_2** **(stack test 3-run and 24-hour block average**	4. Equivalent Allowable Emissions: **36.7** lb/hour **N/A** tons/year
5. Method of Compliance: **CO CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions and equivalent allowable hourly emissions are based on CTG normal load and ULSD fuel oil combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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 **5** of **5**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **6.0 ppmvd @ 15% O_2** **(12-month block average)**	4. Equivalent Allowable Emissions: **N/A** lb/hour **N/A** tons/year
5. Method of Compliance: **CO CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions are based on CTG for all operating modes and either natural gas or ULSD fuel oil combustion.** **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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: **VOC**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **8.0** lb/hour **18.3** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: **N/A** Reference: **Southern Power Company (SPC) Data**	7. Emissions Method Code: **5**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions for ULSD fuel oil at 20°F CTG compressor inlet air temperature.

Potential annual emissions at 79°F turbine inlet with 8,760 hrs/yr natural gas with steam augmentation, evaporative cooling, and duct burner firing.

Combustion of ULSD fuel is limited to no more than 1,000 hours per year.

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 **N/A**

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

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: **SO2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **12.4** lb/hour **54.4** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: **N/A** Reference: **Southern Power Company (SPC) Data**	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly and annual emissions for natural gas at 79°F CTG compressor inlet air temperature, power (steam) augmentation, evaporative cooling, duct burner firing, and 8,760 hrs/yr operation.

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 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **2.0 grains S / 100 scf - natural gas (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **12.5** lb/hour **54.4** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **0.0015 weight % S - ULSD fuel oil (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **3.2** lb/hour **1.6** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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: **SAM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **1.9** lb/hour **8.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: **N/A** Reference: **Southern Power Company (SPC) Data**	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly and annual emissions for natural gas at 79°F CTG compressor inlet air temperature, power (steam) augmentation, evaporative cooling, duct burner firing, and 8,760 hrs/yr operation.

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 **2**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **2.0 grains S / 100 scf - natural gas (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **1.9** lb/hour **8.3** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **0.0015 weight % S - ULSD fuel oil (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **0.5** lb/hour **0.3** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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/PM10/PM2.5**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **34.6** lb/hour **107.9** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** To tons/year	
6. Emission Factor: **N/A** Reference: **Southern Power Company (SPC) Data**	7. Emissions Method Code: **5**
8.a. Baseline Actual Emissions (if required): Tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): Tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions for ULSD fuel oil at 20°F turbine inlet

Potential annual emissions for natural gas at 79°F CTG compressor inlet air temperature, power (steam) augmentation, evaporative cooling, duct burner firing, and 8,760 hrs/yr operation.

Combustion of ULSD fuel is limited to no more than 1,000 hours per year.

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 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **2.0 grains S / 100 scf - natural gas (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **24.6** lb/hour **107.9** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **0.0015 weight % S - ULSD fuel oil (fuel sulfur specification)**	4. Equivalent Allowable Emissions: **34.6** lb/hour **17.3** tons/year
5. Method of Compliance: **Fuel sulfur content monitoring per 40 CFR Part 75.**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III A, Condition 13.** **Rule 62-212.400 (BACT), F.A.C.**	

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: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **20 %** Maximum Period of Excess Opacity Allowed: *** min/hour**	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: *** - Visible emissions due to startups, shutdowns, and malfunctions may not exceed 20% opacity except for up to ten, 6-minute averaging periods per calendar day.** **DEP File No. 0950137-020-AC, Section III A, Condition 17.**	

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

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

Continuous Monitoring System: Continuous Monitor **1** of **3**

1. Parameter Code: **EM**	2. Pollutant(s): **NOX**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Thermo Scientific** Model Number: **42ILS-ANSSPCB**	Serial Number: **908635169**
5. Installation Date: **November 20, 2009**	6. Performance Specification Test Date: **December 11, 2009**
7. Continuous Monitor Comment: **Required by 40 CFR Part 75 (Acid Rain Program), 40 CFR Part 96 (CAIR), and NSPS Subpart KKKK excess emissions monitoring. Also used as a continuous as a continuous compliance method pursuant to 40 CFR Part 64 (Compliance Assurance Monitoring).** **DEP File No. 0950137-020-AC, Section III A, Condition 26.**	

Continuous Monitoring System: Continuous Monitor **2** of **3**

1. Parameter Code: **O2**	2. Pollutant(s): **N/A**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Siemens** Model Number: **OXYMAT 61**	Serial Number: **F-NR. N1-X$-553**
5. Installation Date: **November 20, 2009**	6. Performance Specification Test Date: **December 11, 2009**
7. Continuous Monitor Comment: **Required by 40 CFR Part 75 (Acid Rain Program), 40 CFR Part 96 (CAIR), and NSPS Subpart GG excess emissions monitoring. Also used as a continuous as a continuous compliance method pursuant to 40 CFR Part 64 (Compliance Assurance Monitoring)** **DEP File No. 0950137-020-AC, Section III A, Condition 26.**	

H. CONTINUOUS MONITOR INFORMATION

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

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

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Thermo Scientific** Model Number: **48I-ANPCB**	Serial Number: **CM09040055**
5. Installation Date: **November 20, 2009**	6. Performance Specification Test Date: **December 11, 2009**
7. Continuous Monitor Comment: **DEP File No. 0950137-020-AC, Section III A, Condition 26.**	

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)
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **February 2008**

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: ☒ Previously Submitted, Date: **February 2008**

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: **February 2008**

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: **Attachment C** ☐ 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: **January 28, 2010**
   Test Date(s)/Pollutant(s) Tested: **December 11-17, 2009**
   NO_x, CO, VOC, NH_3, VE
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

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

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications **NOT APPLICABLE**

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: **Attachment D** ☐ Not Applicable
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☒ Attached, Document ID: **Attachment E** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

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

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

Emissions Unit Description and Status

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

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

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

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

2. Description of Emissions Unit Addressed in this Section:
Unit B water cooling tower comprised of six cells each equipped with an individual exhaust fan. Tower is equipped with drift eliminators for control of PM/PM_{10} emissions.

3. Emissions Unit Identification Number: **031**

4. Emissions Unit Status Code: **A**	5. Commence Construction Date: **11/08**	6. Initial Startup Date: **09/04/09**	7. Emissions Unit Major Group SIC Code: **49**

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

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit: **N/A**
Manufacturer: Model Number:

10. Generator Nameplate Rating: **N/A** MW

11. Emissions Unit Comment:

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

1. Control Equipment/Method Description: **Mist (Drift) Eliminators – Low Velocity (V<250 ft/min)**
2. Control Device or Method Code: **015**

Emissions Unit Control Equipment/Method: Control of

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

Emissions Unit Control Equipment/Method: Control ___ of ___

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

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: **56,000 gal/min**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	
Field 1 maximum process rate is the cooling tower water recirculation rate.	

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: **Cooling Tower**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Cooling tower consists of 6 cells.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **50** feet	7. Exit Diameter: **33.5** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates Zone: East (km): **N/A** North (km): **N/A**	14. Emission Point Latitude/Longitude **N/A** Latitude (DD/MM/SS) **N/A** Longitude (DD/MM/SS)	
15. Emission Point Comment: **Cooling tower consists of 6 cells with 6 individual exhaust fans. Stack height and diameter data provided in Fields 6 and 7 are for each cell. Exhaust volume and temperature will vary with ambient temperatures.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Cooling Tower – process cooling, mechanical draft**		
2. Source Classification Code (SCC): **3-85-001-01**	3. SCC Units: **Million gallons throughput**	
4. Maximum Hourly Rate: **3.36**	5. Maximum Annual Rate: **29,434**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment:		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
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	**015**	**N/A**	**NS**
PM10	**015**	**N/A**	**NS**
Notes:	**015 – mist eliminators**		**NS – no standard**

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: **0.53** lb/hour **2.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **N/A** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**
10. Calculation of Emissions: **Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.**	
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 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **0.0005-percent drift loss**	4. Equivalent Allowable Emissions: **0.53** lb/hour **2.3** tons/year
5. Method of Compliance: ***Cooling tower vendor design data***	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III B, Condition 1.** **Rule 62-212.400 (BACT), F.A.C.**	

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: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.21** lb/hour **0.94** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year	
6. Emission Factor: **N/A** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year **N/A**	8.b. Baseline 24-month Period: **N/A** From: To:
9.a. Projected Actual Emissions (if required): tons/year **N/A**	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years **N/A**

10. Calculation of Emissions:

Detailed emission calculations are provided in Appendix A of the February 2008 air construction permit application.

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 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Allowable Emissions and Units: **0.0005-percent drift loss**	4. Equivalent Allowable Emissions: **0.21** lb/hour **0.94** tons/year
5. Method of Compliance: **Cooling tower vendor design data**	
6. Allowable Emissions Comment (Description of Operating Method): **DEP File No. 0950137-020-AC, Section III B, Condition 1.** **Rule 62-212.400 (BACT), F.A.C.**	

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

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation. **NOT APPLICABLE**

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

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

Continuous Monitoring System: Continuous Monitor __ of __ **NOT APPLICABLE**

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)
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **February 2008**

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: ☒ Not Applicable

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: **February 2008**

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

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

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications **NOT APPLICABLE**

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: **Attachment D**	☐ 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

Additional Requirements Comment

ATTACHMENT A

COMPLIANCE REPORT

ATTACHMENT A

STANTON ENERGY CENTER UNIT B
COMPLIANCE REPORT

Attachment D to this Title V operation permit revision application identifies the requirements that are applicable to Stanton Energy Center Unit B. Unit B is in compliance, and will continue to comply, with the respective applicable requirements.

ATTACHMENT B

VERIFICATION OF RISK MANAGEMENT PLAN SUBMITTAL

U.S. Environmental Protection Agency

RMP Submit to Certify

Recent Additions | Contact Us

Logged in as, MSRIDDLE.

100000140661 Stanton Energy Center Transaction Type: Resubmission

About CDX
MyCDX
Inbox
Change Password
Frequently Asked Questions
Help & Support
CDX Home
Terms & Conditions
Logout

Thank you for using RMP*eSubmit. Your RMP is submitted for certification. Shortly, an e-mail will be sent to your Certifier's mailbox that your RMP is ready for certification.

Facility ID	100000140661
Facility Name	Stanton Energy Center
Submission Type	Resubmission
Reference Transaction ID	_b3c7162b-df2d-41be-bcb9-b5428f0863ea
Document Name	tmp\RMP000120091009152957MSRIDDLE.zip
User ID	MSRIDDLE
Submit Date	10/09/2009 15:30:10

Riddle, Matthew

From: EPA CDX [epacdx@csc.com]
Sent: Monday, October 12, 2009 4:10 PM
To: Riddle, Matthew
Subject: Risk Management Plan (RMP) submission has been CERTIFIED

Your Risk Management Plan (RMP) submission has been PREPARED, CERTIFIED and SENT to U.S. EPA for the facility shown below.

Reference Transaction ID: _b3c7162b-df2d-41be-bcb9-b5428f0863ea
Document Name: RMP00012009081411113lMSRIDDLE Prepared by: Matthew Riddle (MSRIDDLE) Date Prepared: 8/14/2009 Certifying Official:
Name: Mark Mitchell (MKMITCHELL)
Date Certified and Sent to EPA: 10/12/2009 EPA Facility ID: 1000 0014 0661

Facility: Stanton Energy Center
5100 South Alafaya Trail
Orlando FL, 32831

You may wish to print a copy of this receipt and keep it for your records.
Do NOT send this receipt to EPA.

United States Environmental Protection Agency
Central Data Exchange
A New Paradigm for Environmental Reporting.

Golder Associates Inc.

9428 Baymeadows Road, Suite 400
Jacksonville, FL USA 32256-7979
Telephone (904) 363-3430
Fax (904) 363-3445

REPORT ON

RISK MANAGEMENT PLAN SUBMITTAL FOR THE ORLANDO UTILITIES COMMISSION STANTON ENERGY CENTER ANHYDROUS AMMONIA AND CHLORINE PROCESSES ORLANDO, FLORIDA

Submitted to:

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
P.O. BOX 3193
ORLANDO, FLORIDA 32802

Submitted by:

Golder Associates Inc.
9428 Baymeadows Road, Suite 400
Jacksonville, Florida 32256

Distribution:

2 Copies Orlando Utilities Commission
2 Copies Golder Associates Inc.

October 2009 093-82563

TABLE OF CONTENTS

IN ORDER
FOLLOWING
PAGE 14

LIST OF TABLES

ATTACHMENT C

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT C

STANTON COMBINED CYCLE UNIT B
PROCEDURES FOR STARTUP AND SHUTDOWN

This procedural outline description is conceptual and is intended to be a guideline for the overall combined-cycle control philosophy relative to Stanton Unit B startup and shutdown operations. All values shown herein are typical values and are subject to change. This document is not a substitute for other project-specific documents that have been issued to support commissioning and O&M efforts.

COLD STARTUP PROCEDURE

Cold startup will take approximately 6 hours. Cold startup is defined by the steam turbine being down for more than 48 hours.

Plant preparation to be completed before unit startup:

1. Prestart the combustion turbine. The following systems should be placed in service:
   - Demin water makeup system.
   - Auxiliary circulating water system.
   - Circulating water system.
   - Closed-loop cooling water system.
   - Condensate makeup system.
   - Compressed air system.
   - Condensate system.
   - Feedwater system.
   - Duct burner scanner cooling air system.
   - Steam seal system.
   - Steam turbine drain system.
   - High-pressure steam system.
   - Intermediate pressure steam system.
   - Reheat steam system.
   - Low-pressure steam system.
   - Power augmentation steam system.
   - Anhydrous ammonia system.
   - Duct burner system.
   - Steam turbine lubricating oil system.

Plant preparation to be completed-before unit is scheduled for release:

1. Set drum levels for startup.
2. Use automated gas turbine control system to initiate a start on the combustion turbine.
3. Control load setpoints and allow for matching of steam and gas turbine temperatures.

When temperature matching is sufficient:

1. Roll steam turbine.
2. Load steam turbine.
3. Load combustion turbine:
   - Place ammonia system in service.

WARM STARTUP PROCEDURE

Warm startup is defined by the steam turbine being down for more than 0 hours but less than 48 hours.

Plant preparation to be completed before unit startup

1. Prestart the combustion turbine. The following systems should be placed in service.
   - Demin water makeup system.
   - Auxiliary circulating water system.
   - Circulating water system.
   - Closed loop cooling water system.
   - Condensate makeup system.
   - Compressed air system.
   - Condensate system.
   - Feedwater system.
   - Duct burner scanner cooling air system.
   - Steam seal system.
   - Steam turbine drain system.
   - High-pressure steam system.
   - Intermediate pressure steam system.
   - Reheat steam system.
   - Low-pressure steam system.
   - Power augmentation steam system.
   - Anhydrous ammonia system.
   - Duct burner system.
   - Steam turbine lubricating oil system.

Plant preparation, to be completed before unit is release:

1. Set drum levels for startup.
2. Use automated gas turbine control system to initiate a start on the combustion turbine.
3. Control load setpoints and allow for matching of steam and gas turbine temperatures.

When temperature matching is sufficient:

1. Roll steam turbine.
2. Load steam turbine.
3. Load combustion turbine:
   - Place ammonia system in service.

NORMAL SHUTDOWN PROCEDURE

1. Enter a setpoint equal to actual gas turbine load; allow time to match.
2. Ensure duct burner system is off.
3. Reduce total combined-cycle load gradually.
4. Allow steam pressures and temperatures to stabilize.
5. Remove ammonia injection to SCR system.
6. Select shutdown on steam turbine control system.
7. When the generated power reaches approximately 0 percent, the steam turbine will TRIP automatically.
8. Initiate a "STOP" command, unit will unload, open breaker, and shutdown.
9. Gas turbine will cycle down in the cool down mode and flame out.

ATTACHMENT D

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT D

STANTON ENERGY CENTER UNIT B
IDENTIFICATION OF APPLICABLE REQUIREMENTS

A. GENERAL REQUIREMENTS

Federal:

40 CFR 82	Protection of Stratospheric Ozone
40 CFR 82, Subpart F	Recycling and Emissions Reduction

State:

CHAPTER 62-4, F.A.C.: PERMITS, effective 03-16-08

62-4.030, F.A.C.	General Prohibition
62-4.040, F.A.C.	Exemptions
62-4.050, F.A.C.	Procedure to Obtain Permits; Application
62-4.060, F.A.C.	Consultation
62-4.070, F.A.C.	Standards for Issuing or Denying Permits; Issuance; Denial
62-4.080, F.A.C.	Modification of Permit Conditions
62-4.090, F.A.C.	Renewals
62-4.100, F.A.C.	Suspension and Revocation
62-4.110, F.A.C.	Financial Responsibility
62-4.120, F.A.C.	Transfer of Permits.
62-4.130, F.A.C.	Plant Operation - Problems
62-4.150, F.A.C.	Review
62-4.160, F.A.C.	Permit Conditions
62-4.210, F.A.C.	Construction Permits
62-4.220, F.A.C.	Operation Permit for New Sources

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-29-09

62-210.300, F.A.C.	Permits Required
62-210.300(1), F.A.C.	Air Construction Permits
62-210.300(2), F.A.C.	Air Operation Permits
62-210.300(3), F.A.C.	Exemptions
62-210.300(5), F.A.C.	Notification of Startup
62-210.300(6), F.A.C.	Emissions Unit Reclassification
62-210.300(7), F.A.C.	Transfer of Air Permits
62-210.350, F.A.C.	Public Notice and Comment
62-210.350(1), F.A.C.	Public Notice of Proposed Agency Action

ATTACHMENT D

STANTON ENERGY CENTER UNIT B
IDENTIFICATION OF APPLICABLE REQUIREMENTS

62-210.350(2), F.A.C.	Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Non-attainment-Area Preconstruction Review
62-210.350(3), F.A.C.	Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources
62-210.360, F.A.C.	Administrative Permit Corrections
62-210.370(2), F.A.C.	Computation of Emissions
62-210.370(3), F.A.C.	Annual Operating Report for Air Pollutant Emitting Facility
62-210.650, F.A.C.	Circumvention
62-210.700, F.A.C.	Excess Emissions
62-210.900, F.A.C.	Forms and Instructions
62-210.900(1), F.A.C.	Application for Air Permit – Long Form, Form and Instructions
62-210.900(5), F.A.C.	Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions
62-210.900(7), F.A.C.	Application for Transfer of Air Permit – Title V and Non-Title V Source

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 06-29-09

62-212.300, F.A.C.	General Preconstruction Review Requirements
62-212.400, F.A.C.	Prevention of Significant Deterioration (PSD)
62-212.500, F.A.C.	Preconstruction Review for Nonattainment Areas
62-212.710, F.A.C.	Air Emissions Bubble
62-212.720, F.A.C.	Actuals Plantwide Applicability Limits (PALS)

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 10-12-08

62-213.205, F.A.C.	Annual Emissions Fee
62-213.400, F.A.C.	Permits and Permit Revisions Required
62-213.405, F.A.C.	Concurrent Processing of Permit Applications
62-213.410, F.A.C.	Changes Without Permit Revision
62-213.412, F.A.C.	Immediate Implementation Pending Revision Process
62-213.415, F.A.C.	Trading of Emissions Within a Source

ATTACHMENT D

STANTON ENERGY CENTER UNIT B
IDENTIFICATION OF APPLICABLE REQUIREMENTS

62-213.420, F.A.C.	Permit Applications
62-213.430, F.A.C.	Permit Issuance, Renewal, and Revision
62-213.440, F.A.C.	Permit Content
62-213.450, F.A.C.	Permit Review by EPA and Affected States
62-213.460, F.A.C.	Permit Shield
62-213.900, F.A.C.	Forms and Instructions
62-213.900(1), F.A.C.	Major Air Pollution Source Annual Emissions Fee Form
62-213.900(7), F.A.C.	Statement of Compliance Form
62-213.900(8), F.A.C.	Responsible Official Notification Form

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 10-06-08

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 10-06-08

62-296.320(2), F.A.C.	Objectionable Odor Prohibited
62-296.320(3), F.A.C.	Permitted Open Burning
62-296.320(4)(b), F.A.C.	General Visible Emissions Standard
62-296.320(4)(c), F.A.C.	Unconfined Emissions of Particulate Matter

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 02-12-04

62-297.310, F.A.C.	General Test Requirements
62-297.320, F.A.C.	Standards for Persons Engaged in Visible Emissions Observations
62-297.401, F.A.C.	Compliance Test Methods
62-297.440, F.A.C.	Supplementary Test Procedures
62-297.620, F.A.C.	Exceptions and Approval of Alternate Procedures and Requirements

Miscellaneous:

CHAPTER 28-106, F.A.C.: DECISIONS DETERMINING SUBSTANTIAL INTERESTS, effective 12-24-07

CHAPTER 62-110, F.A.C.: EXCEPTION TO THE UNIFORM RULES OF PROCEDURE, effective 07-01-98

ATTACHMENT D

STANTON ENERGY CENTER UNIT B
IDENTIFICATION OF APPLICABLE REQUIREMENTS

B. COMBUSTION TURBINE AND HEAT RECOVERY STEAM GENERATOR; EU ID NO. 030

ACID RAIN PROGRAM (ARP)

40 CFR 72	Permits Regulation
40 CFR 75	Continuous Emissions Monitoring
40 CFR 77	Excess Emissions
40 CFR 78	Appeal Procedures

CLEAN AIR INTERSTATE RULE (CAIR)

40 CFR 96	NO_x Budget Trading Program and CAIR NO_x and SO_2 Trading Programs for State Implementation Plans

NEW SOURCE PERFORMANCE STANDARDS

40 CFR 60, Subpart A	General Provisions §60.7: Notification and Recordkeeping §60.8: Performance Tests §60.11: Compliance with Standards and Maintenance Requirements §60.12: Circumvention §60.13: Monitoring Requirements §60.19: General Notification and Reporting Requirements
40 CFR 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines §60.4305: Applicability §60.4315: Regulated Pollutants §60.4320: NO_x Emission Limits §60.4325: NO_x Emission Limits for Dual Fuel Units §60.4320(a)(1) or (a)(2): SO_2 Emission Limits §60.4333: General Compliance Requirements §60.4335(b): Alternative use of NO_x CEMS for Monitoring (ULSD Fuel Oil) §60.4340(b): Alternative use of NO_x CEMS for Monitoring (Natural Gas) §60.4345: NO_x/Diluent CEMS Monitoring Requirements §60.4350: NO_x/Diluent CEMS Excess Emission Provisions §60.4365: Exemption from Monitoring Fuel Total Sulfur Content §60.4375: Reporting Requirements

§60.4380(b): NO_x/Diluent CEMS Excess Emission Definition
§60.4395: Due Dates for Report Submittals
§60.4405: Initial Performance Tests for NO_x/Diluent CEMS
§60.4420: Definitions
Table 1 to Subpart KKKK - NO_x Emission Limits

Rule 62-213.413, F.A.C. Fast-Track Revision of Acid Rain Parts

CHAPTER 62-214, F.A.C.: REQUIREMENTS FOR SOURCES SUBJECT TO THE FEDERAL ACID RAIN PROGRAM, effective 03-16-08

Rule 62-296.470, F.A.C. Implementation of Federal Clean Air Interstate Rule (CAIR)

C. <u>AIR CONSTRUCTION PERMIT NO. 0950137-020-AC, PERMIT NO. PSD-FL-373A</u>

Section II, Conditions 1 – 6
Section III A, Conditions 1 – 21, 23 – 34
Section III B, Conditions 1 and 2

ATTACHMENT E

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT E

STANTON ENERGY CENTER UNIT B
ALTERNATIVE METHODS OF OPERATION

COMBINED CYCLE COMBUSTION TURBINE (EU ID 030)

Method Number	Fuel Type	Operating Mode	Heat Input Range (10^6 Btu/hr)	Maximum Operating Hours		
				hr/day	day/wk	hr/yr
1	Natural gas	Normal	0 to 1,765*	24	7	8,760
2	ULSD fuel oil	Normal	0 to 1,935*	24	7	1,000
3	Natural gas	With DB	0 to 531†	24	7	8,760
4	Natural gas or ULSD fuel oil	With PAG	N/A	24	7	8,760 1,000§
5	Natural gas or ULSD fuel oil	With IAC	N/A	24‡	7‡	8,760‡ 1,000‡§
6	Natural gas or ULSD fuel oil	Any combination of Methods 3 through 5	N/A	24	7	8,760 1,000§

Note: DB = duct burners.
PAG = power (steam) augmentation.
IAC = CTG compressor inlet air cooling.

*At a CTG compressor inlet temperature of 70° F, fuel higher heating value (HHV), and 100 percent load. Heat input rates will vary depending upon CTG characteristics, ambient conditions, alternate methods of operation, and evaporative cooling.
†Heat input range is for DB only.
‡At ambient temperatures of 60° F or higher.
§ULSD fuel oil.

Source: ECT, 2010.