

June 30, 2003

Mr. Scott Sheplak, P.E.
Administrator - Title V Section
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

Via: UPS Next Day Air
Tracking #: 1Z 93A 8V8 01 9123 7617

Re: Orlando CoGen Limited, L.P.
Orlando CoGen Facility – Facility ID 0950203
Title V Operation Permit Renewal Application

RECEIVED

JUL 01 2003

BUREAU OF AIR REGULATION

Dear Mr. Sheplak:

Orlando CoGen Limited, L.P. operates a nominal 129 megawatt (MW) electric generation facility located in Orlando, Orange County, Florida. Operation of the Orlando CoGen Facility is presently authorized by Department FINAL Permit No. 0950203-001-AV. This permit was issued with an effective date of January 1, 1999 and an expiration date of December 31, 2003. Pursuant to Rules 62-213.420(1)(a)3. and 62-4.090, Florida Administrative Code (F.A.C.), an application for permit renewal must be submitted at least 180 days prior to permit expiration, or by July 5, 2003.

Please find enclosed four (4) copies of a Title V permit renewal application for the Orlando CoGen Facility. This application package, consisting of the Department's *Application for Air Permit – Title V Source* and all required supplemental facility and emission unit information, constitutes the Orlando CoGen Limited, L.P. Title V permit renewal application for the Orlando CoGen Facility and is submitted to satisfy the requirements of Chapter 62-213.400, F.A.C.

Please contact me at 407/851-1350 or Jennifer Mollhagen at 713/420-4771 if there are any questions concerning this application.

Sincerely,



Donald K. Day
Plant Manager

cc: Orange County Environmental Protection Division

ORLANDO COGEN FACILITY
TITLE V OPERATION PERMIT
RENEWAL APPLICATION

Prepared for:



Orlando, Florida

Prepared by:



Environmental Consulting & Technology, Inc.

*3701 Northwest 98th Street
Gainesville, Florida 32606*

ECT No. 030323-0100

June 2003

INTRODUCTION

Orlando CoGen Limited, L.P., operates a nominal 129-megawatt (MW) electric generation facility located in Orlando, Orange County, Florida. The Orlando CoGen Facility consists of one combined-cycle unit comprised of one combustion turbine (CT), one heat recovery steam generator (HRSG) equipped with duct burners (DBs), and one steam turbine (ST). The CT and ST drive one common electrical generator. A portion of the steam produced by the HRSG is also used by a chiller unit to produce chilled water. The CT and HRSG DBs are fired exclusively with pipeline-quality natural gas.

The facility also includes a four-cell mechanical draft freshwater cooling tower, one chiller unit, one natural gas-fired emergency generator, water treatment facilities, and other support equipment.

Pursuant to Rule 62-213.420(1)(a)3. and Section 62-4.090, Florida Administrative Code (F.A.C.), an application for renewal of a Title V operation permit must be submitted 180 days prior to expiration. Since FINAL Title V Permit No. 0950203-001-AV expires on December 31, 2003, the permit renewal application for the Orlando CoGen Facility must be submitted no later than July 5, 2003. This application package, consisting of the Department's *Application for Air Permit—Title V Source* and all required supplemental facility and emission unit information, constitutes the Orlando CoGen Limited, L.P., Title V permit renewal application for the Orlando CoGen Facility and is submitted to satisfy the requirements of Section 62-213.400, F.A.C. Regulatory applicability analyses and proposed Title V permit conditions are provided in Appendices A and B, respectively.



Department of Environmental Protection

Division of Air Resources Management

RECEIVED

JUL 01 2003

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Orlando CoGen Limited, L.P.	
2. Site Name: Orlando CoGen	
3. Facility Identification Number: 0950203 [] Unknown	
4. Facility Location: Street Address or Other Locator: 8275 Exchange Drive City: Orlando County: Orange Zip Code: 32809-7651	
5. Relocatable Facility? [] Yes [<input checked="" type="checkbox"/>] No	6. Existing Permitted Facility? [<input checked="" type="checkbox"/>] Yes [] No

Application Contact

1. Name and Title of Application Contact: Jennifer Mollhagen Senior Environmental Scientist	
2. Application Contact Mailing Address: Organization/Firm: El Paso Merchant Energy Company Street Address: 1001 Louisiana Street, Suite N2023A City: Houston State: TX Zip Code: 77002-5083	
3. Application Contact Telephone Numbers: Telephone: (713) 420-4771 Fax: (713) 420-6229	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: 0950203-001-AV

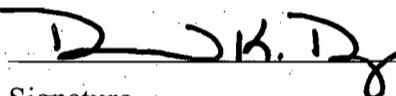
Reason for revision: Operation permit renewal

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Donald K. Day, Plant Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Orlando CoGen Limited, L.P. Street Address: 8275 Exchange Drive City: Orlando State: FL Zip Code: 32809-7651
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (407) 851-1350 Fax: (407) 851-1686
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [] , if so) or the responsible official (check here [✓], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.</i>  Signature _____ Date <u>30 JUNE 2003</u>

* Attach letter of authorization if not currently on file.

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: FL Zip Code: 32606-5004
3. Professional Engineer Telephone Numbers: Telephone: (352) 332-0444 Fax: (352) 332-6722

4. Professional Engineer Statement:

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

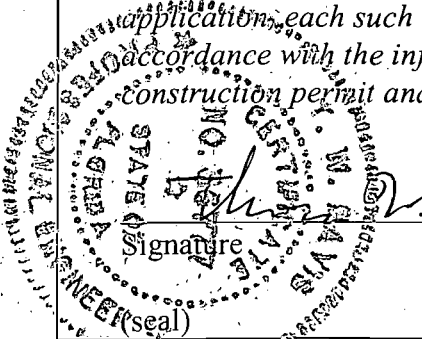
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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.



M. G. V. M.
Signature

6/26/03
Date

* Attach any exception to certification statement.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Orlando CoGen Limited, L.P. operates an electric generating facility located in Orlando, Florida. The Orlando CoGen Facility consists of one combined cycle unit comprised of one Asea Brown Boveri (ABB) Model 11N1-EV combustion turbine (CT), one heat recovery steam generator (HRSG) equipped with duct burners (DBs), and one steam turbine (ST). The CT and HRSG duct burners (DBs) are fired exclusively with pipeline quality natural gas. Ancillary equipment includes one, four-cell mechanical draft fresh water cooling tower, a chiller unit that utilizes steam generated by the HRSG, a natural gas-fired emergency generator, and water treatment processes.

Operation of the Orlando Cogen Facility is presently authorized by Department FINAL Permit No. 0950203-001-AV. This permit was issued with an effective date of January 1, 1999 and an expiration date of December 31, 2003. Pursuant to Rules 62-213.420(1)(a)3. and 62-4.090, Florida Administrative Code (F.A.C.), an application for permit renewal must be submitted at least 180 days prior to permit expiration, or by July 5, 2003. This application constitutes the Title V permit renewal application for the Orlando CoGen Facility.

2. Projected or Actual Date of Commencement of Construction: **N/A**

3. Projected Date of Completion of Construction: **N/A**

Application Comment

[Empty box for Application Comment]

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	
<p>The CT is subject to NSPS Subpart GG, <i>Standards of Performance for Stationary Gas Turbines</i>. The HRSG DBs are subject to NSPS Subpart Db, <i>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units</i>.</p>	

List of Applicable Regulations

See Appendix A	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
NOX	A	N/A	N/A	N/A	
SO2	B	N/A	N/A	N/A	
PM10	B	N/A	N/A	N/A	
CO	A	N/A	N/A	N/A	
VOC	B	N/A	N/A	N/A	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: [<input checked="" type="checkbox"/>] Attached, Document ID: <u>DOC. II.C.8</u> [<input type="checkbox"/>] Not Applicable
9. List of Equipment/Activities Regulated under Title VI: [<input type="checkbox"/>] Attached, Document ID: _____ [<input type="checkbox"/>] Equipment/Activities On site but Not Required to be Individually Listed [<input checked="" type="checkbox"/>] Not Applicable
10. Alternative Methods of Operation: [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
11. Alternative Modes of Operation (Emissions Trading): [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
12. Identification of Additional Applicable Requirements: [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
13. Risk Management Plan Verification: [<input type="checkbox"/>] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) [<input type="checkbox"/>] Plan to be submitted to CEPPO (Date required: _____) [<input checked="" type="checkbox"/>] Not Applicable
14. Compliance Report and Plan: [<input checked="" type="checkbox"/>] Attached, Document ID: <u>DOC. II.C.14</u> [<input type="checkbox"/>] Not Applicable
15. Compliance Certification (Hard-copy Required): [<input checked="" type="checkbox"/>] Attached, Document ID: <u>DOC. II.C.15</u> [<input type="checkbox"/>] Not Applicable

Emissions Unit Information Section 1 of 2

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Emission unit consists of one Asea Brown Boveri (ABB) 11N1-EV combustion turbine (CT). The CT operates only in combined-cycle mode of operation and is fired exclusively with pipeline quality natural gas.</p>			
<p>4. Emissions Unit Identification Number: ID: 001 (CT)</p>		<p><input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date: N/A</p>	<p>7. Emissions Unit Major Group SIC Code: 49</p>	<p>8. Acid Rain Unit? <input checked="" type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p>			

Emissions Unit Information Section 1 of 2

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

NO_x Controls

Dry low-NO_x combustors

2. Control Device or Method Code(s): **24 (dry low-NO_x combustors)**

Emissions Unit Details

1. Package Unit:
Manufacturer: **Asea Brown Boveri** Model Number: **11N1-EV**

2. Generator Nameplate Rating: **128.9 MW (at ISO standard day conditions)**

3. Incinerator Information:
Dwell Temperature: °F
Dwell Time: seconds
Incinerator Afterburner Temperature: °F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	856.9 (LHV)	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p>CT electric output is 78.9 MW at ISO standard day conditions. The Orlando CoGen Facility includes one common generator driven by both the CT and HRSG steam turbine (ST). Common (CT + HRSG ST) generator nameplate rating is 128.9 MW.</p> <p>Maximum heat input is lower heating value (LHV) at 100 percent load and ISO standard day conditions of 59°F, 60 percent relative humidity, and 14.7 psia pressure. Heat input will vary with CT load and ambient temperature.</p>		

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? CC-1 Stack		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): N/A			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Combustion Turbine (CT): EU 001 Heat Recovery Steam Generator (HRSG) Duct Burner (DB) System: EU 002			
5. Discharge Type Code: V	6. Stack Height: 115 feet	7. Exit Diameter: 15.7 feet	
8. Exit Temperature: 240 °F	9. Actual Volumetric Flow Rate: 668,145 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters): Stack flow rate represents operation at 100 percent CT load <u>without</u> duct burner firing; data is from March 2003 <i>Annual Compliance Source Test Report</i>. Stack temperature and flow rate will vary with CT load and ambient temperature.			

Emissions Unit Information Section 1 of 2

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Pipeline quality natural gas burned in the combustion turbine (CT)		
2. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.906	5. Maximum Annual Rate: 7,939.5	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,040
10. Segment Comment (limit to 200 characters): Maximum hourly and annual fuel rates based on 856.9 MMBtu/hr heat input (LHV), HHV/LHV ratio of 1.10:1, and a nominal natural gas heat content of 1,040 Btu/ft3 (HHV).		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):		3. SCC Units:
5. Maximum Hourly Rate:	6. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page 1 of 9

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 57.4 lb/hour 251.4 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 57.4 lb/hr Reference: Condition A.2. of FINAL Permit No.: 0950203-001-AV		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 15 ppmvd @ 15% O₂		4. Equivalent Allowable Emissions: 57.4 lb/hour 251.4 tons/year	
5. Method of Compliance (limit to 60 characters): NO_x CEMS			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. Unit is also subject to less stringent NO_x limits of 40 CFR Part 60, Subpart GG (NSPS).			

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page 2 of 9

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 57.4 lb/hr (24-hour rolling average)	4. Equivalent Allowable Emissions: 57.4 lb/hour 251.4 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 20 (annual test) NO_x CEMS (24-hour rolling average)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., excludes the HRSG DB system. Total 24-hour rolling average NO_x limit is 69.6 lb/hr for the CT <u>and</u> the HRSG DB system combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 251.4 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 57.4 lb/hour 251.4 tons/year
5. Method of Compliance (limit to 60 characters): NO_x CEMS	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., excludes the HRSG DB system. Total 12-month rolling average NO_x limit is 273.9 ton/yr for the CT <u>and</u> the HRSG DB system combined.	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 22.3 lb/hour		4. Synthetically Limited? [] 97.7 tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 22.3 lb/hr Reference: Condition A.3. of FINAL Permit No.: 0950203-001-AV		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 10 ppmvd		4. Equivalent Allowable Emissions: 22.3 lb/hour 92.1 tons/year	
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system.			

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page 4 of 9

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
4. Requested Allowable Emissions and Units: 22.3 lb/hr	4. Equivalent Allowable Emissions: 22.3 lb/hour 97.7 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. <u>Total</u> CO limit is 34.5 lb/hr for the CT <u>and</u> the HRSG DB system combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
4. Requested Allowable Emissions and Units: 92.1 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 22.3 lb/hour 92.1 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. Total 12-month rolling average CO limit is 114.6 ton/yr for the CT <u>and</u> the HRSG DB system combined.	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
 (Regulated Emissions Units -
 Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PM/PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 9.0 lb/hour 39.4 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 9.0 lb/hr Reference: Condition A.4. of FINAL Permit No.: 0950203-001-AV	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
4. Requested Allowable Emissions and Units: 0.01 lb/MMBtu	4. Equivalent Allowable Emissions: 9.0 lb/hour 39.4 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system.	

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page 6 of 9

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
5. Requested Allowable Emissions and Units: 9.0 lb/hr	4. Equivalent Allowable Emissions: 9.0 lb/hour 39.4 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. <u>Total</u> PM/PM₁₀ limit is 10.2 lb/hr for the CT <u>and</u> the HRSG DB system combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
5. Requested Allowable Emissions and Units: 39.4 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 9.0 lb/hour 39.4 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. <u>Total</u> 12-month rolling average PM/PM₁₀ limit is 41.6 ton/yr for the CT <u>and</u> the HRSG DB system combined.	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.0 lb/hour 13.0 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 3.0 lb/hr Reference: Condition A.5. of FINAL Permit No.: 0950203-001-AV	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rate.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 3.0 lb/hr	4. Equivalent Allowable Emissions: 3.0 lb/hour 13.0 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 25A (annual test; only required if EPA RM 10 annual CO test exceeds permit limits.)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. <u>Total</u> VOC limit is 6.7 lb/hr for the CT <u>and</u> the HRSG DB system combined.	

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page 8 of 9

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 13.0 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 3.0 lb/hour 13.0 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 25A (annual test; only required if EPA RM 10 annual CO test exceeds permit limits.)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the CT only; i.e., <u>excludes</u> the HRSG DB system. <u>Total</u> VOC limit is 19.8 lb/hr for the CT <u>and</u> the HRSG DB system combined.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.4 lb/hour 6.2 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: [0.94 x %S] lb SO₂ / MMBtu Reference: AP-42		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Hourly Emission Rate: SO₂ = ([0.94 x 0.00162] lb SO₂ / 10⁶ Btu) x 942.6 MMBtu/hr (HHV) SO₂ = 1.4 lb/hr Annual Emission Rate: SO₂ = 1.4 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) SO₂ = 6.2 ton/yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Natural gas sulfur weight percent based on sulfur content of 0.5 gr S / 100 scf.			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: Other		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 0.8 weight percent S		4. Equivalent Allowable Emissions: N/A lb/hour N/A tons/year	
5. Method of Compliance (limit to 60 characters): Periodic fuel sulfur analyses as provided by the natural gas supplier (Florida Gas Transmission)			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): NSPS Subpart GG §60.333(b). Data in Field 3 is for the CT only; i.e., <u>excludes</u> the HRSG DB system.			

Emissions Unit Information Section 1 of 2

H. VISIBLE EMISSIONS INFORMATION
 (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [] Rule [<input checked="" type="checkbox"/>] Other
3. Requested Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Reference Method 9 (annual test)	
5. Visible Emissions Comment (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT]	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: *	2. Basis for Allowable Opacity: [<input checked="" type="checkbox"/>] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: * % Maximum Period of Excess Opacity Allowed: * min/hour	
4. Method of Compliance: EPA Reference Method 9	
5. Visible Emissions Comment (limit to 200 characters): * Best operational practices to minimize emissions and duration. Excess opacity allowed for startups, shutdowns, and malfunctions. Maximum period of excess emissions allowed is two hours in any 24 hour period (for warm startups, shutdowns, or unavoidable malfunctions) and four hours in any 24 hour period (for cold startups). Total excess emissions shall not exceed four hours in any 24 hour period. Rule 62-210.700(1), F.A.C.	

Emissions Unit Information Section 1 of 2

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>DOC. II.C.3</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>DOC. III.J.2</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input checked="" type="checkbox"/> Attached, Document ID: <u>DOC. III.J.3</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>DOC. III.J.4</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously submitted, Date: <u>April 22, 2003</u> <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>DOC. III.J.6</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Emissions Unit Information Section 1 of 2

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: DOC. III.J.11 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable.
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input checked="" type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: DOC. III.J.15 <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

E.U. 002

Emissions Unit Information Section 2 of 2

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

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. Regulated or Unregulated Emissions Unit? (Check one)

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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of one Heat Recovery Steam Generator (HRSG) Duct Burner (DB) system. The HRSG DBs are fired exclusively with pipeline quality natural gas.

4. Emissions Unit Identification Number: No ID
 ID: **002 (HRSG DB System)** ID Unknown

5. Emissions Unit Status Code: A	6. Initial Startup Date: N/A	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input checked="" type="checkbox"/>
--	--	--	---

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Information Section 2 of 2

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

None

2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

1. Package Unit:

Manufacturer: **COEN Company, Incorporated**

Model Number: **N/A**

2. Generator Nameplate Rating: **128.9 MW (at ISO standard day conditions)**

3. Incinerator Information:

Dwell Temperature:

°F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	122.0 (LHV)	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:	24	hours/day
		7 days/week
	52	weeks/year
		8,760* hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p>HRSG steam turbine (ST) electric output is 50.0 MW at ISO standard day conditions. The Orlando CoGen Facility includes one common generator driven by both the CT and HRSG ST. Common (CT + HRSG ST) generator nameplate rating is 128.9 MW.</p> <p>Maximum heat input is lower heating value (LHV) at 100 percent DB load.</p> <p>* - Annual DB heat input is limited to no more than 450,000 MMBtu/yr. This limit is equivalent to 3,688 hr/yr at the maximum DB heat input rate. The DBs may operate at reduced heat input rates for more than 3,688 hr/yr (up to 8,760 hr/yr) as long as the 450,000 MMBtu/yr DB annual heat input cap is not exceeded.</p>		

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? CC-1 Stack		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): N/A			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Combustion Turbine (CT): EU 001 Heat Recovery Steam Generator (HRSG) Duct Burner (DB) System: EU 002			
5. Discharge Type Code: V	6. Stack Height: 115 feet	7. Exit Diameter: 15.7 feet	
8. Exit Temperature: 240 °F	9. Actual Volumetric Flow Rate: 713,910 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters): Stack flow rate represents operation at 100 percent CT load <u>with</u> duct burner firing; data is from March 2003 <i>Annual Compliance Source Test Report</i>. Stack temperature and flow rate will vary with CT load, extent of duct burner firing, and ambient temperature.			

Emissions Unit Information Section 2 of 2

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Pipeline quality natural gas burned in the HRSG duct burners		
2. Source Classification Code (SCC): 1-01-006-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.129	5. Maximum Annual Rate: 476.0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,040
10. Segment Comment (limit to 200 characters): Maximum hourly fuel rate based on 122.0 MMBtu/hr heat input (LHV), HHV/LHV ratio of 1.10:1, and a nominal natural gas heat content of 1,040 Btu/ft3 (HHV). Maximum annual fuel rate based on 450,000 MMBtu/yr heat input (LHV), HHV/LHV ratio of 1.10:1, and a nominal natural gas heat content of 1,040 Btu/ft3 (HHV).		

Segment Description and Rate: Segment of

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
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 (limit to 200 characters):		

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 12.2 lb/hour		4. Synthetically Limited? <input checked="" type="checkbox"/> [<input type="checkbox"/>] 22.5 tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 12.2 lb/hr Reference: Condition B.2. of FINAL Permit No.: 0950203-001-AV		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 0.1 lb/MMBtu		4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year	
5. Method of Compliance (limit to 60 characters): NO_x CEMS			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG/DB system only; i.e., <u>excludes</u> the CT. Unit is also subject to less stringent NO_x limit of 40 CFR Part 60, Subpart Db (NSPS).			

Emissions Unit Information Section 2 of 2

Pollutant Detail Information Page 2 of 8

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 12.2 lb/hr (24-hour rolling average)	4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 20 (annual test) NO_x CEMS (24-hour rolling average)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> 24-hour rolling average NO_x limit is 69.6 lb/hr for the HRSG DB system <u>and</u> the CT combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 22.5 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year
5. Method of Compliance (limit to 60 characters): NO_x CEMS	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> 12-month rolling average NO_x limit is 273.9 ton/yr for the HRSG DB system <u>and</u> the CT combined.	

Emissions Unit Information Section 2 of 2

Pollutant Detail Information Page 3 of 8

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 12.2 lb/hour	4. Synthetically Limited? <input checked="" type="checkbox"/> 22.5 tons/year
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 12.2 lb/hr Reference: Condition B.3. of FINAL Permit No.: 0950203-001-AV	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.1 lb/MMBtu	4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG/DB system only; i.e., <u>excludes</u> the CT.	

Emissions Unit Information Section 2 of 2

Pollutant Detail Information Page 4 of 8

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 12.2 lb/hr	4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> CO limit is 34.5 lb/hr for the HRSG DB system <u>and</u> the CT combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 22.5 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 12.2 lb/hour 22.5 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 10 (annual test)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> 12-month rolling average CO limit is 114.6 ton/yr for the HRSG DB system <u>and</u> the CT combined.	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: PM/PM₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1.2 lb/hour 2.2 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/>
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 1.2 lb/hr Reference: Condition B.4. of FINAL Permit No.: 0950203-001-AV	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.01 lb/MMBtu	4. Equivalent Allowable Emissions: 1.2 lb/hour 2.2 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT.	

Emissions Unit Information Section 2 of 2

Pollutant Detail Information Page 6 of 8

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 1.2 lb/hr	4. Equivalent Allowable Emissions: 1.2 lb/hour 2.2 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> PM/PM₁₀ limit is 10.2 lb/hr for the HRSG DB system <u>and</u> the CT combined.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 2.2 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 1.2 lb/hour 2.2 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 9 (substitute annual test for PM) EPA Reference Method 5 (annual test; only required if EPA RM 9 annual opacity test value exceeds 10%).	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> 12-month rolling average PM/PM₁₀ limit is 41.6 ton/yr for the HRSG DB system <u>and</u> the CT combined.	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.7 lb/hour 6.8 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/>
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 3.7 lb/hr Reference: Condition B.5. of FINAL Permit No.: 0950203-001-AV	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Hourly and annual emission rates based on permit allowable rates.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 3.7 lb/hr	4. Equivalent Allowable Emissions: 3.7 lb/hour 6.8 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 25A (annual test; only required if EPA RM 10 annual CO test exceeds permit limits.)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> VOC limit is 6.7 lb/hr for the HRSG DB system <u>and</u> the CT combined.	

Emissions Unit Information Section 2 of 2

Pollutant Detail Information Page 8 of 8

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 6.8 ton/yr (12-month rolling average)	4. Equivalent Allowable Emissions: 3.7 lb/hour 6.8 tons/year
5. Method of Compliance (limit to 60 characters): EPA Reference Method 25A (annual test; only required if EPA RM 10 annual CO test exceeds permit limits.)	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT] Data in Fields 3 and 4 are for the HRSG DB system only; i.e., <u>excludes</u> the CT. <u>Total</u> VOC limit is 19.8 lb/hr for the HRSG DB system <u>and</u> the CT combined.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Emissions Unit Information Section 2 of 2

H. VISIBLE EMISSIONS INFORMATION
 (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Reference Method 9 (annual test)	
5. Visible Emissions Comment (limit to 200 characters): FDEP Rule 62-212.400(5)(c), F.A.C. [BACT]	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: *	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: * % Maximum Period of Excess Opacity Allowed: * min/hour	
4. Method of Compliance: EPA Reference Method 9	
5. Visible Emissions Comment (limit to 200 characters): * Best operational practices to minimize emissions and duration. Excess opacity allowed for startups, shutdowns, and malfunctions. Maximum period of excess emissions allowed is two hours in any 24 hour period (for warm startups, shutdowns, or unavoidable malfunctions) and four hours in any 24 hour period (for cold startups). Total excess emissions shall not exceed four hours in any 24 hour period. Rule 62-210.700(1), F.A.C.	

Emissions Unit Information Section 2 of 2

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [<input checked="" type="checkbox"/>] Attached, Document ID: DOC. II.C.3 [<input type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
2. Fuel Analysis or Specification [<input checked="" type="checkbox"/>] Attached, Document ID: DOC. III.J.2 [<input type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
3. Detailed Description of Control Equipment [<input type="checkbox"/>] Attached, Document ID: DOC. III.J.3 [<input checked="" type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
4. Description of Stack Sampling Facilities [<input checked="" type="checkbox"/>] Attached, Document ID: DOC. III.J.4 [<input type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
5. Compliance Test Report [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Previously submitted, Date: April 22, 2003 [<input type="checkbox"/>] Not Applicable
6. Procedures for Startup and Shutdown [<input checked="" type="checkbox"/>] Attached, Document ID: DOC. III.J.6 [<input type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
7. Operation and Maintenance Plan [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable [<input type="checkbox"/>] Waiver Requested
8. Supplemental Information for Construction Permit Application [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
9. Other Information Required by Rule or Statute [<input type="checkbox"/>] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
10. Supplemental Requirements Comment:

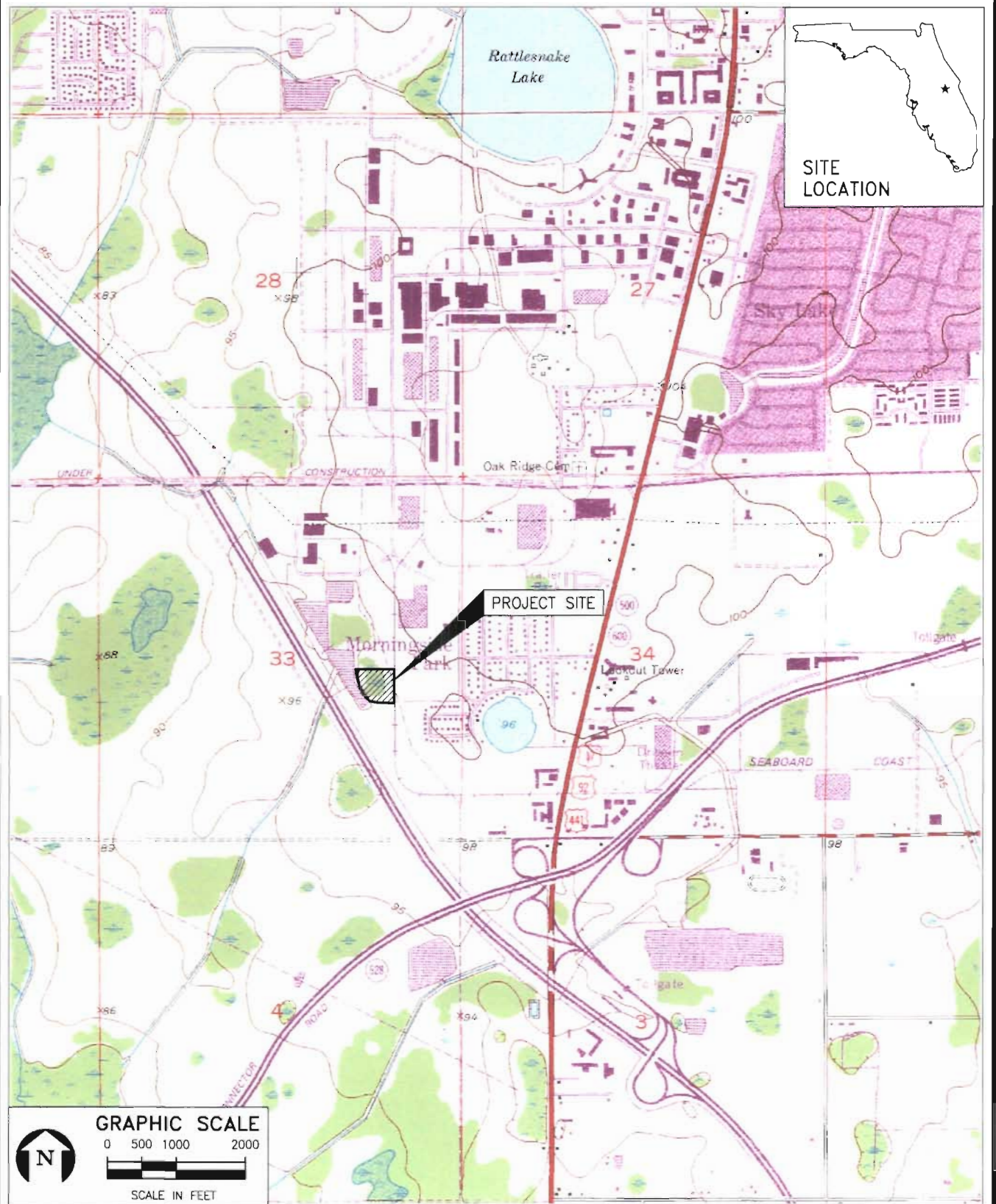
Emissions Unit Information Section 2 of 2

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [<input checked="" type="checkbox"/>] Attached, Document ID: <u>DOC. III.J.11</u> [] Not Applicable [] Waiver Requested
12. Alternative Modes of Operation (Emissions Trading) [] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
13. Identification of Additional Applicable Requirements [] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
14. Compliance Assurance Monitoring Plan [] Attached, Document ID: _____ [<input checked="" type="checkbox"/>] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [<input checked="" type="checkbox"/>] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: <u>DOC. III.J.15</u> [] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [] Not Applicable

DOC.II.C.1

AREA MAP



DOCUMENT II.C.1.

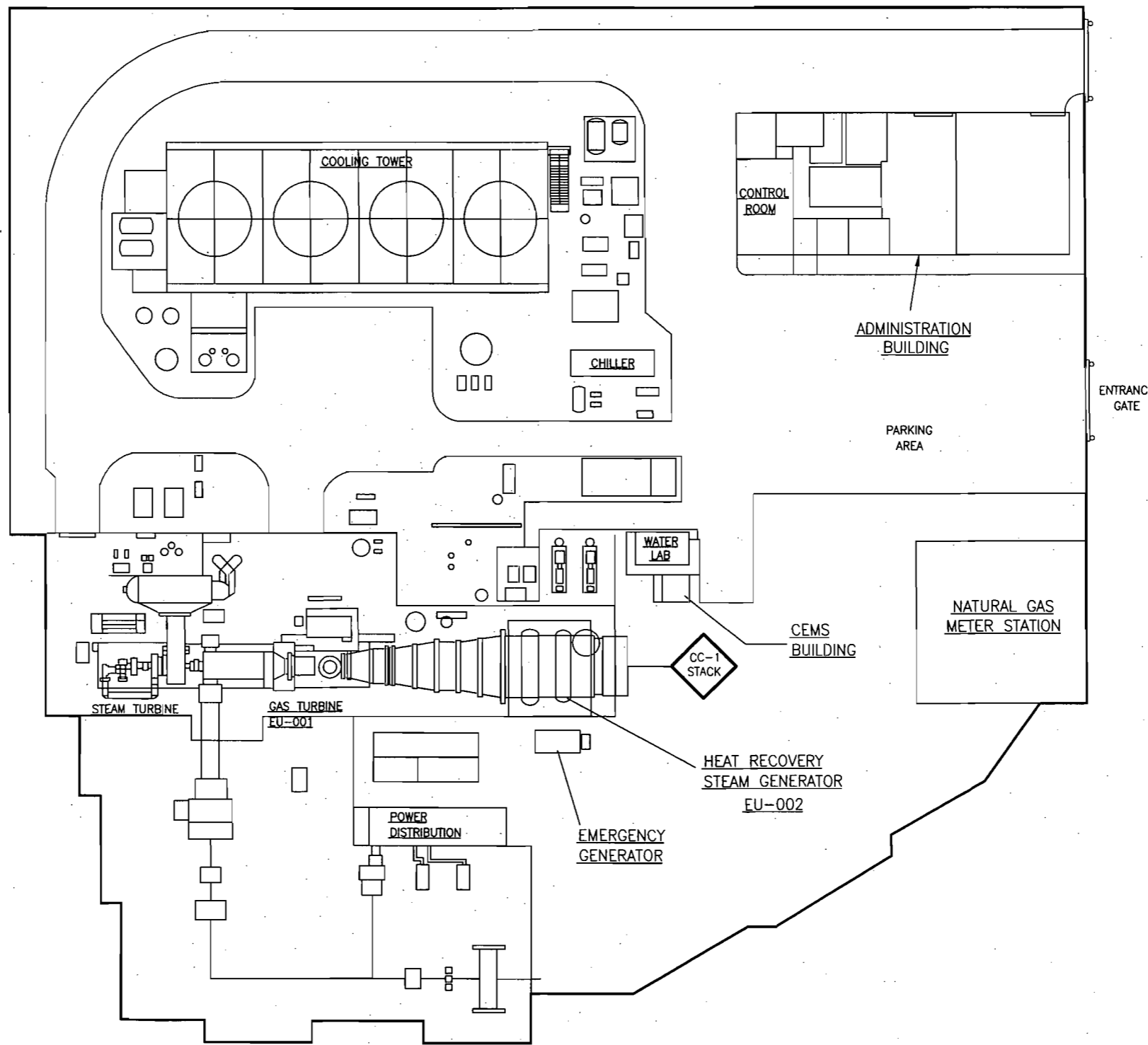
AREA MAP

Source: USGS Quad: Lake Jessamine, FL, 1980; ECT, 2002.



DOC.II.C.2

FACILITY PLOT PLAN



GRAPHIC SCALE

0 12.5 25 50



SCALE IN FEET

LEGEND



EMISSION POINT NUMBER AND LOCATION

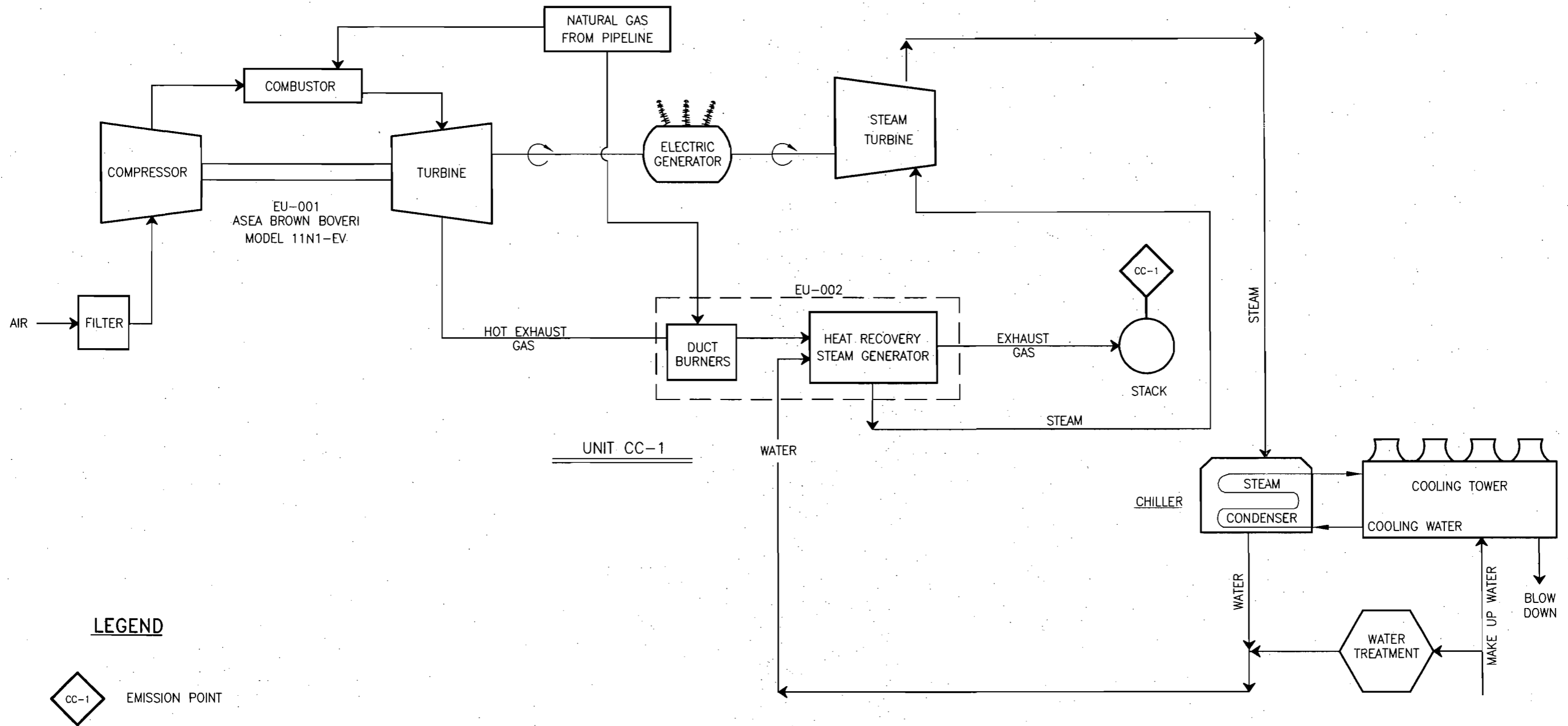
DOCUMENT II.C.2.
FACILITY PLOT PLAN

Source: ECT, 2003.



DOC.II.C.3

PROCESS FLOW DIAGRAM



LEGEND

CC-1 EMISSION POINT

DOCUMENT II.C.3.
PROCESS FLOW DIAGRAM

Source: ECT, 2003.



DOC.II.C.4

**PRECAUTIONS TO PREVENT EMISSIONS
OF UNCONFINED PARTICULATE MATTER**

**PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER
ORLANDO COGEN FACILITY**

Unconfined particulate matter (PM) emissions that may result from operations at the Orlando CoGen Facility include:

- Vehicular traffic on paved roads.
- Wind-blown dust from yard areas.
- Periodic abrasive blasting.

The following techniques may be used to control unconfined PM emissions on an as-needed basis:

- Maintenance of roads, parking areas, and yards.
- Landscaping or planting of vegetation.
- Confining abrasive blasting where possible.
- Other techniques, as necessary.

DOC.II.C.8

**LIST OF PROPOSED
INSIGNIFICANT ACTIVITIES**

**LIST OF PROPOSED
INSIGNIFICANT ACTIVITIES
ORLANDO COGEN FACILITY**

Brief Description of Emissions Units and/or Activities

1. Internal combustion engines - mobile sources
2. Vacuum pumps for labs
3. Steam cleaning equipment
4. Lab equipment used for chemical or physical analyses
5. Brazing, soldering or welding equipment
6. One or more emergency generators located within a single facility provided:
 - a. None of the emergency generators is subject to the Federal Acid Rain Program; and
 - b. Total fuel consumption by all such emergency generators within the facility is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
7. One or more heating units and general purpose internal combustion engines, or other combustion devices, all of which are located within a single facility are not listed elsewhere in Rule 62-210.300(3)(a), F.A.C., and are not pollution control devices, provided:
 - a. None of the heating units, general purpose internal combustion engines, or other combustion devices that would be exempted is subject to the Federal Acid Rain Program; and
 - b. Total fuel consumption by all such heating units, general purpose internal combustion engines, and other combustion devices that would be exempted is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
8. Fire and safety equipment
9. Surface coating operation within a single facility if the total quantity of coatings containing greater than 5.0 percent VOCs, by volume, used is 6.0 gallons per day or less, averaged monthly, provided:
 - a. Such operations are not subject to a volatile organic compound Reasonably Available Control Technology (RACT) requirement of Chapter 62-296, F.A.C.; and
 - b. The amount of coatings used shall include any solvents and thinners used in the process including those used for cleanup.
10. Surface coating operations utilizing only coatings containing 5.0 percent or less VOCs, by volume.
11. Space heating equipment (non-boilers)
12. Parts cleaning and degreasing stations not subject to 40 CFR 63, Subpart T.
13. Degreasing units using heavier-than air vapors exclusively, not subject to 40 CFR 63, Subpart T.
14. Turbine vapor extractors
15. Sand blasting and abrasive grit blasting
16. Freshwater cooling tower. The cooling tower does not use chromium-based treatment chemicals

**LIST OF PROPOSED
INSIGNIFICANT ACTIVITIES
ORLANDO COGEN FACILITY**

17. Storage tanks less than 550 gallons
18. Architectural (equipment) maintenance painting
19. Petroleum lubrication systems
20. Refrigeration equipment
21. Sanders less than five square feet
22. On-line turbine compressor cleaning
23. Any other emissions unit or activity that:
 - a. Is not subject to a unit-specific applicable requirement.
 - b. In combination with other units and activities proposed as insignificant, would not cause the Orlando CoGen Facility to exceed any major source threshold(s) as defined by Rule 62-213.420(3)(c)1., F.A.C. unless acknowledged in a permit application.
 - c. Would neither emit or have the potential to emit:
 - i. 500 pounds per year of lead and lead compounds expressed as lead;
 - ii. 1,000 pounds per year or more of any hazardous air pollutant;
 - iii. 2,500 pounds per year or more of total hazardous air pollutants; or
 - iv. 5.0 tons per year or more of any other regulated pollutant.

DOC.II.C.14 AND DOC.II.C.15

**COMPLIANCE REPORT AND PLAN
COMPLIANCE CERTIFICATION**

**COMPLIANCE REPORT, PLAN,
AND CERTIFICATION
ORLANDO COGEN FACILITY**

1. Compliance Report and Plan

Appendix A to this Title V operation permit renewal application identifies the requirements that are applicable to the emission units that comprise this Title V source. Each emissions unit is in compliance, and will continue to comply, with the respective applicable requirements.

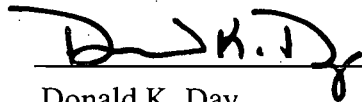
The emission units that comprise this Title V source will comply with future-effective applicable requirements on a timely basis.

2. Proposed Schedule for the Submission of Periodic Compliance Statements Throughout the Permit Term

Periodic compliance statements are proposed to be submitted on an annual basis consistent with FDEP Rule 62-213.440(3)(a)2., F.A.C. Compliance statement submittal date is proposed to be March 1st of each year consistent with the schedule required by 40 CFR §72.90 of the Acid Rain Program.

3. Compliance Certification

I, the undersigned, am the responsible official as defined in Chapter 62-210.200(220), F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.



Donald K. Day
Plant Manager

30 JUNE 2003
Date

DOC.III.J.2

FUEL ANALYSES OR SPECIFICATIONS

**FUEL SPECIFICATIONS
ORLANDO COGEN FACILITY**

Natural Gas (typical composition)

Component	Mole Percent (by volume)
-----------	-----------------------------

Gas Composition

Hexane+	0.018
Propane	0.190
I-butane	0.010
N-butane	0.007
Pentane	0.002
Nitrogen	0.527
Methane	96.195
CO ₂	0.673
Ethane	2.379

Other Characteristics

Heat content (HHV)	1,040 Btu/ft ³ at 14.73 psia, dry
Real specific gravity	0.5776
Sulfur content (maximum)	0.5 gr/100 scf

Note: Btu/ft³ = British thermal units per cubic foot.
psia = pounds per square inch absolute.
gr/100 scf = grains per 100 standard cubic foot.

DOC.III.J.3

**DETAILED DESCRIPTION
OF CONTROL EQUIPMENT**

DETAILED DESCRIPTION OF CONTROL EQUIPMENT ORLANDO COGEN FACILITY

The ABB Model 11N1-EV combustion turbine (CT) is equipped with dry low-NO_x (DLN) combustors to control NO_x emissions. A description of this NO_x control technology is provided in the following section.

Dry Low-NO_x Combustor Design

A number of turbine vendors have developed DLN combustors that premix turbine fuel and air prior to combustion in the primary zone. Use of a premix burner results in a homogeneous air/fuel mixture without an identifiable flame front. For this reason, the peak and average flame temperatures are the same, causing a decrease in thermal NO_x emissions in comparison to a conventional diffusion burner. A typical DLN combustor incorporates fuel staging using several operating modes as follows:

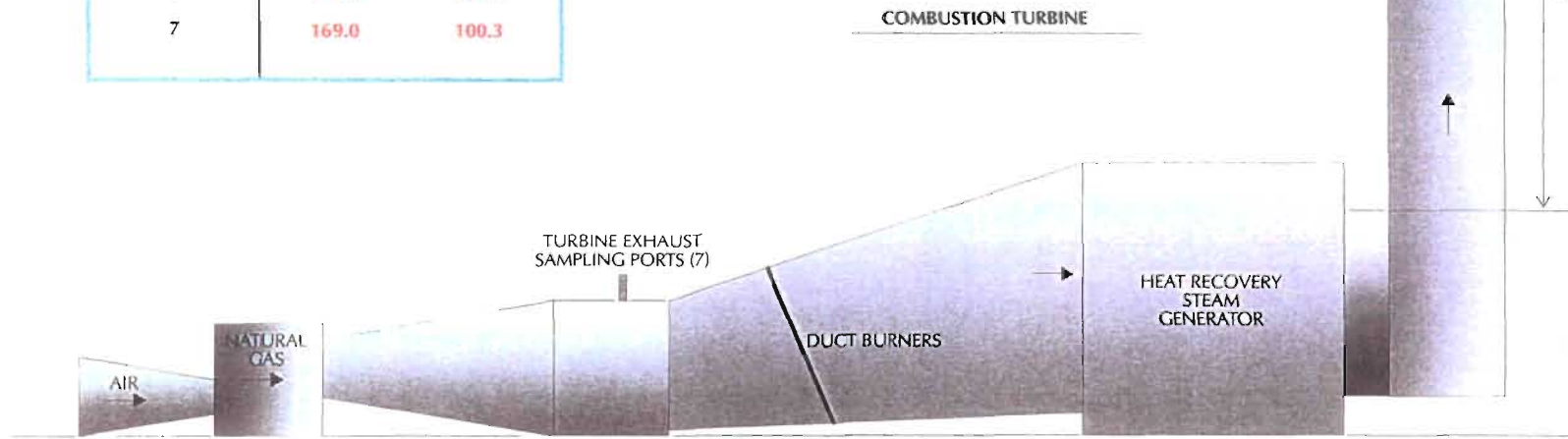
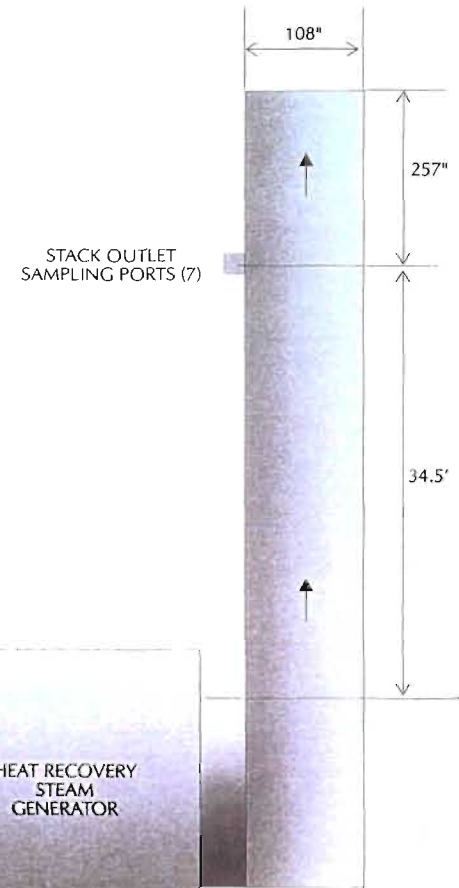
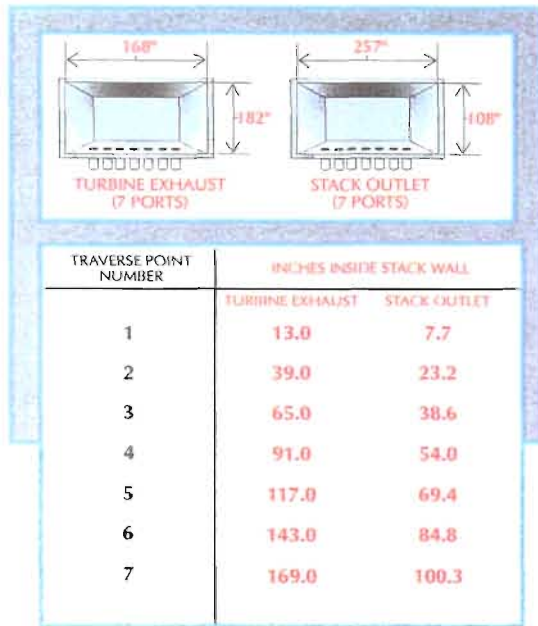
- Primary Mode—Fuel supplied to first stage only at turbine loads from 0 to 35 percent. Combustor burns with a diffusion flame with quiet, stable operation. This mode is used for ignition, warm-up, acceleration, and low-load operation.
- Lean-Lean Mode—Fuel supplied to both stages with flame in both stages at turbine loads from 35 to 50 percent. Most of the secondary fuel is premixed with air. Turbine loading continues with a flame present in both fuel stages. As load is increased, CO emissions will decrease, and NO_x levels will increase. Lean-lean operation will be maintained with increasing turbine load until a preset combustor fuel-to-air ratio is reached when transfer to premix operation occurs.
- Secondary Mode (Transfer to Premix)—At 70-percent load, all fuel is supplied to second stage.
- Premix Mode—Fuel is provided to both stages with approximately 80 percent furnished to the first stage at turbine loads from 70 to 100 percent. Flame is present in the second stage only.

Currently, premix burners are limited in application to natural gas and loads above approximately 35 to 50 percent of baseline due to flame stability considerations. For CTs capable of oil firing, wet injection is employed to control NO_x emissions.

In addition to lean premixed combustion, CT DLN combustors typically incorporate lean combustion and reduced combustor residence time to reduce the rate of NO_x formation. All CTs cool the high-temperature CT exhaust gas stream with dilution air to lower the exhaust gas to an acceptable temperature prior to entering the turbine. By adding additional dilution air, the hot CT exhaust gases are rapidly cooled to temperatures below those needed for NO_x formation. Reduced residence time combustors add the dilution air sooner than do standard combustors. The amount of thermal NO_x is reduced because the CT combustion gases are at a higher temperature for a shorter period of time.

DOC.III.J.4

**DESCRIPTION OF STACK
SAMPLING FACILITIES**



SOURCE: AIR CONSULTING & ENGINEERING, INC. (ORCOGEN) 3/20/01

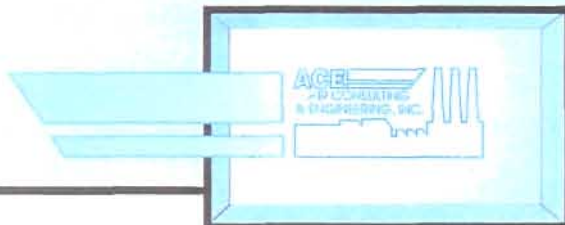


FIGURE 1.
SAMPLING POINT LOCATION
COMBUSTION TURBINE & STACK OUTLET EXHAUSTS
ORLANDO COGEN LIMITED
ORLANDO, FLORIDA

DOC.III.J.6

PROCEDURES FOR STARTUP AND SHUTDOWN

**PROCEDURES FOR STARTUP AND SHUTDOWN
ORLANDO COGEN FACILITY
COMBUSTION TURBINE (CT) AND HEAT
RECOVERY STEAM GENERATOR (HRSG)**

STARTING SEQUENCE

Startup of the ABB 11N1-EV combustion turbine (CT) is implemented by means of a 17-step computer controlled startup sequencer. The startup sequencer is given a Function Group ON command by the control room operator. The startup sequencer then controls startup and synchronization of the CT to the power grid while the control room operator monitors the CT startup and other plant processes.

Typical duration of a CT startup from the time the startup sequencer is given a Function Group ON command until power grid synchronization is 20 minutes. An additional 45 minutes is required to reach maximum CT load. During this 45-minute period, other facility processes also commence operation. The duration of CT startup and the time period to reach maximum CT load may increase should problems arise during the startup sequence.

SHUTDOWN SEQUENCE

CT shutdown occurs in a similar fashion as startup. Shutdown of the ABB 11N1-EV CT is implemented by means of a 9-step computer-controlled shutdown sequencer. The shutdown sequencer is given a Function Group OFF command by the control room operator. The shutdown sequencer then reduces CT load, disconnects the CT from the power grid (opens the generator breaker), closes the fuel supply to the CT, and allows the CT to cool in a controlled manner. Once the CT has cooled sufficiently, the CT is allowed to coast until rotation stops.

DOC.III.J.11

ALTERNATE METHODS OF OPERATION

**ALTERNATE METHODS OF OPERATION
ORLANDO COGEN FACILITY**

Method No.	Emission Unit	CT Heat Input Range (LHV)* (MMBtu/hr)	DB Heat Input Range (LHV) (MMBtu/hr)	Maximum Operating Hours		
				(Hrs/Dy)	(Dys/Wk)	(Hrs/Yr)
1	Combustion Turbine (CT)	0 – 856.9	0	24	7	8,760
2	Combustion Turbine (CT) and Duct Burners (DBs)	0 – 856.9	0 – 122.0	24	7	8,760†

*At ISO standard day conditions of 59°F, 60% relative humidity, and 14.7 psia pressure.

†Annual DB heat input is limited to no more than 450,000 MMBtu/yr (LHV). This limit is equivalent to 3,688 hr/yr at the maximum DB heat input rate of 122 MMBtu/hr. The DBs may operate at reduced heat input rates for more than 3,688 hr/yr (up to 8,760 hr/yr) as long as the 450,000 MMBtu/yr DB annual heat input cap is not exceeded.

Source: ECT, 2003.

DOC.III.J.15

ACID RAIN PART APPLICATION

Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: New Revised

STEP 1
Identify the source by plant name, State, and ORIS code from NADB.

Orlando CoGen	FL	54466
Plant Name	State	ORIS Code

STEP 2
Enter the boiler ID# from NADB for each affected unit, and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.

Compliance Plan				
a	b	c	d	e
Boiler ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units Commence Operation Date	New Units Monitor Certification Deadline
1	Yes	No	25 SEP 1993	1 JAN 1996
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

STEP 3
Check the box if the response in column c Step 2 is "Yes" for any unit.

For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

RECEIVED

DEC 04 1997

BUREAU OF
AIR REGULATION

Plant Name (from Step 1)

STEP 4
 For the standard
 requirements and
 certification, enter
 the name of the
 designated repre-
 sentative, and sign
 the date

Standard RequirementsPermit Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
 - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
 - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
 - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (ii) All emissions monitoring information, in accordance with 40 CFR part 75;
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1)

Recordkeeping and Reporting Requirements (cont.)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 7E.

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regarding electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Larry J. Adkins Name	
Signature <i>Larry J. Adkins</i>	Date 12-2-97

STEP 5 (optional)
Enter the source AIRS
and FINDS identification
numbers, if known

AIRS
FINDS

APPENDIX A

REGULATORY APPLICABILITY ANALYSIS

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 1 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
40 CFR Part 60 - Standards of Performance for New Stationary Sources.				
<i>Subpart A - General Provisions</i>				
Notification and Recordkeeping	§60.7(b) - (h)		CT HRSG/DB	General recordkeeping and reporting requirements.
Performance Tests	§60.8		CT HRSG/DB	Conduct performance tests as required by EPA or FDEP. (potential future requirement)
Compliance with Standards	§60.11(a) thru (d), and (f)		CT HRSG/DB	General compliance requirements. Addresses requirements for visible emissions tests.
Circumvention	§60.12		CT HRSG/DB	Cannot conceal an emission which would otherwise constitute a violation of an applicable standard.
Monitoring Requirements	§60.13(a), (b), (d), (e), and (h)		CT HRSG/DB	Requirements pertaining to continuous monitoring systems.
General notification and reporting requirements	§60.19		CT HRSG/DB	General procedures regarding reporting deadlines.
<i>Subpart Db - Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units</i>				
Standards for Sulfur Dioxide	§60.42b	X		Only applicable to units that combust coal or oil.
Standards for Particulate Matter	§60.43b	X		Only applicable to units that combust coal or oil.
Standards for Nitrogen Oxides	§60.44b(a)(4)(i)		HRSG/DB	Establishes NO _x limit of 0.20 lb/MMBtu, 30-day rolling average.
Compliance and Test Methods for Nitrogen Oxides	§60.46b(a)		HRSG/DB	NO _x emission standards apply at all times.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 2 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Compliance and Test Methods for Nitrogen Oxides	§60.46b(f)		HRSG/DB	NO _x emission standard compliance test procedures for duct burners in combined cycle systems.
Emission Monitoring for Nitrogen Oxides	§60.48b(h)		HRSG/DB	NO _x CEMS is <u>not</u> required for duct burners.
Recordkeeping and Reporting Requirements	§60.49b(d), (g), (h), and (o)		HRSG/DB	Reporting and recordkeeping requirements..
<i>Subpart GG - Standard of Performance for Stationary Gas Turbines (includes recent amendments proposed April 14, 2003)</i>				
Standards for Nitrogen Oxides	§60.332(a)(1) and (b), (f), and (i)		CT	Establishes NO _x limit of 75 ppmv at 15% (with corrections for heat rate and fuel bound nitrogen) for electric utility stationary gas turbines with peak heat input greater than 100 MMBtu/hr.
Standards for Sulfur Dioxide	§60.333		CT	Establishes exhaust gas SO ₂ limit of 0.015 percent by volume (at 15% O ₂ , dry) and maximum fuel sulfur content of 0.8 percent by weight (8,000 ppmw).
<i>Subpart GG - Standard of Performance for Stationary Gas Turbines (continued)</i>				
Monitoring Requirements	§60.334(a)		CT	Requires continuous monitoring of fuel consumption and ratio of water to fuel being fired in the turbine. Monitoring system must be accurate to 5.0 percent. Applicable to CTGs using water injection for NO _x control.
Monitoring Requirements	§60.334(b)(2) and (c)		CT	Requires periodic monitoring of fuel sulfur and nitrogen content. Sulfur sampling is not necessary for natural gas. Nitrogen sampling is only required if the nitrogen in fuel credit is taken. Defines excess emissions
Test Methods and Procedures	§60.335		CT	Specifies monitoring procedures and test methods.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 3 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
40 CFR Part 60 - Standards of Performance for New Stationary Sources: Subparts B, C, Cb, Cc, Cd, Ce, D, Da, Dc, E, Ea, Eb, Ec, F, G, H, I, J, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV, WW, XX, AAA, BBB, DDD, FFF, GGG, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, and WWW		X		None of the listed NSPS contain requirements that are applicable to the Orlando CoGen Facility.
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants: Subparts A, B, C, D, E, F, H, I, J, K, L, M, N, O, P, Q, R, T, V, W, Y, BB, and FF		X		None of the listed NESHAPS contain requirements that are applicable to the Orlando CoGen Facility.
40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories: Subparts A, B, C, D, E, F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, VVV, XXX, AAAA, CCCC, GGGG, HHHH, JJJJ, NNNN, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, and QQQQ		X		None of the listed NESHAPS contain requirements that are applicable to the Orlando CoGen Facility.
40 CFR Part 72 - Acid Rain Program Permits				
<i>Subpart A - Acid Rain Program General Provisions</i>				
Standard Requirements	§72.9 excluding §72.9(c)(3)(i), (ii), and (iii), and §72.9(d)		CT HRSG/DB	General Acid Rain Program requirements. SO ₂ allowance program requirements started January 1, 2000.
<i>Subpart B - Designated Representative</i>				

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 4 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Designated Representative	§72.20 - §72.24		CT HRSG/DB	General requirements pertaining to the Designated Representative.
<i>Subpart C - Acid Rain Application</i>				
Requirements to Apply	§72.30(a), (b)(2)(ii), (c), and (d)		CT HRSG/DB	Requirement to submit a complete Phase II Acid Rain permit application to the permitting authority at least 24 months before the later of January 1, 2000 or the date on which the unit commences operation. Requirement to submit a complete Acid Rain permit application for each source with an affected unit at least 6 months prior to the expiration of an existing Acid Rain permit governing the unit during Phase II or such longer time as may be approved under part 70 of this chapter that ensures that the term of the existing permit will not expire before the effective date of the permit for which the application is submitted. (future requirement) .
Permit Application Shield	§72.32		CT HRSG/DB	Acid Rain Program permit shield for units filing a timely and complete application. Application is binding pending issuance of Acid Rain Permit.
<i>Subpart D - Acid Rain Compliance Plan and Compliance Options</i>				
General	§72.40(a)(1)		CT HRSG/DB	General SO ₂ compliance plan requirements.
General	§72.40(a)(2)	X		General NO _x compliance plan requirements are not applicable to the Orlando CoGen Facility.
<i>Subpart E - Acid Rain Permit Contents</i>				

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 5 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Permit Shield	§72.51		CT HRSG/DB	Units operating in compliance with an Acid Rain Permit are deemed to be operating in compliance with the Acid Rain Program.
<i>Subpart H - Permit Revisions</i>				
Fast-Track Modifications	§72.82(a) and (c)		CT HRSG/DB	Procedures for fast-track modifications to Acid Rain Permits. (potential future requirement)
<i>Subpart I - Compliance Certification</i>				
Annual Compliance Certification Report	§72.90		CT HRSG/DB	Requirement to submit an annual compliance report. (future requirement)
40 CFR Part 75 - Continuous Emission Monitoring				
<i>Subpart A - General</i>				
Prohibitions	§75.5		CT HRSG/DB	General monitoring prohibitions.
<i>Subpart B - Monitoring Provisions</i>				
General Operating Requirements	§75.10		CT HRSG/DB	General monitoring requirements.
Specific Provisions for Monitoring SO ₂ Emissions	§75.11(d)(2)		CT HRSG/DB	SO ₂ continuous monitoring requirements for gas- and oil-fired units. Appendix D election was made.
Specific Provisions for Monitoring NO _x Emissions	§75.12(a) and (b)		CT HRSG/DB	NO _x continuous monitoring requirements for coal-fired units, gas-fired nonpeaking units, or oil-fired nonpeaking units
Specific Provisions for Monitoring CO ₂ Emissions	§75.13(b)		CT HRSG/DB	CO ₂ continuous monitoring requirements.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 6 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
<i>Subpart B - Monitoring Provisions</i>				
Specific Provisions for Monitoring Opacity	§75.14(d)	X		Opacity continuous monitoring exemption for diesel-fired units.
<i>Subpart C - Operation and Maintenance Requirements</i>				
Certification and Recertification Procedures	§75.20(b)		CT HRSG/DB	Recertification procedures (potential future requirement)
Certification and Recertification Procedures	§75.20(c)		CT HRSG/DB	Recertification procedure requirements. (potential future requirement)
Quality Assurance and Quality Control Requirements	§75.21 except §75.21(b)		CT HRSG/DB	General QA/QC requirements (excluding opacity).
Reference Test Methods	§75.22		CT HRSG/DB	Specifies required test methods to be used for recertification testing (potential future requirement).
Out-Of-Control Periods	§75.24 except §75.24(e)		CT HRSG/DB	Specifies out-of-control periods and required actions to be taken when out-of-control periods occur (excluding opacity).
<i>Subpart D - Missing Data Substitution Procedures</i>				
General Provisions	§75.30(a)(3), (b), (c)		CT HRSG/DB	General missing data requirements.
Determination of Monitor Data Availability for Standard Missing Data Procedures	§75.32		CT HRSG/DB	Monitor data availability procedure requirements.
Standard Missing Data Procedures	§75.33(a) and (c)		CT HRSG/DB	Missing data substitution procedure requirements.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 7 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
<i>Subpart F - Recordkeeping Requirements</i>				
General Recordkeeping Provisions	§75.50(a), (b), (d), and (e)(2)		CT HRSG/DB	General recordkeeping requirements for NO _x and CO ₂ monitoring.
Monitoring Plan	§75.53(a), (b), (c), and (d)(1)		CT HRSG/DB	Requirement to prepare and maintain a Monitoring Plan.
General Recordkeeping Provisions	§75.54(a), (b), (d), and (e)(2)		CT HRSG/DB	Requirements pertaining to general recordkeeping.
General Recordkeeping Provisions for Specific Situations	§75.55(c)		CT HRSG/DB	Specific recordkeeping requirements for Appendix D SO ₂ monitoring.
General Recordkeeping Provisions	§75.56(a)(1), (3), (5), (6), and (7)		CT HRSG/DB	Requirements pertaining to general recordkeeping.
General Recordkeeping Provisions	§75.56(b)(1)		CT HRSG/DB	Requirements pertaining to general recordkeeping for Appendix D SO ₂ monitoring.
<i>Subpart G - Reporting Requirements</i>				
General Provisions	§75.60		CT HRSG/DB	General reporting requirements.
Notification of Certification and Recertification Test Dates	§75.61(a)(1) and (5), (b), and (c)		CT HRSG/DB	Requires written submittal of recertification tests and revised test dates for CEMS. Notice of certification testing shall be submitted at least 45 days prior to the first day of recertification testing. Notification of any proposed adjustment to certification testing dates must be provided at least 7 business days prior to the proposed date change.
<i>Subpart G - Reporting Requirements</i>				

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 8 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Recertification Application	§75.63		CT HRSG/DB	Requires submittal of a recertification application within 30 days after completing the recertification test. (potential future requirement)
Quarterly Reports	§75.64(a)(1) - (5), (b), (c), and (d)		CT HRSG/DB	Quarterly data report requirements.
Specific provisions for monitoring NOx and heat input for the purposes of calculating NOx mass emissions	§75.71		CT HRSG/DB	Specifies methods to determine NOx emissions, which must not exceed the annual emission cap of 133 tons per year.
Determination of NOx mass emissions	§75.72	X		Specifies methods to determine NOx mass emissions.
40 CFR Part 76 - Acid Rain Nitrogen Oxides Emission Reduction Program		X		The Acid Rain Nitrogen Oxides Emission Reduction Program only applies to coal-fired utility units that are subject to an Acid Rain emissions limitation or reduction requirement for SO ₂ under Phase I or Phase II.
40 CFR Part 77 - Excess Emissions				
Offset Plans for Excess Emissions of Sulfur Dioxide	§77.3		CT HRSG/DB	Requirement to submit offset plans for excess SO ₂ emissions not later than 60 days after the end of any calendar year during which an affected unit has excess SO ₂ emissions. Required contents of offset plans are specified (potential future requirement) .

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 9 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Deduction of Allowances to Offset Excess Emissions of Sulfur Dioxide	§77.5(b)		CT HRSG/DB	Requirement for the Designated Representative to hold enough allowances in the appropriate compliance subaccount to cover deductions to be made by EPA if a timely and complete offset plan is not submitted or if EPA disapproves a proposed offset plan (potential future requirement).
Penalties for Excess Emissions of Sulfur Dioxide	§77.6		CT HRSG/DB	Requirement to pay a penalty if excess emissions of SO ₂ occur at any affected unit during any year (potential future requirement).
40 CFR Part 82 - Protection of Stratospheric Ozone				
Production and Consumption Controls	Subpart A	X		The Orlando CoGen Facility does not produce or consume ozone depleting substances.
Servicing of Motor Vehicle Air Conditioners	Subpart B	X		Servicing of motor vehicles which involves refrigerant in the motor vehicle air conditioner is not conducted at the Orlando CoGen Facility.
Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Subpart C	X		The Orlando CoGen Facility does not sell or distribute any banned nonessential substances.
The Labeling of Products Using Ozone-Depleting Substances	Subpart E	X		The Orlando CoGen Facility will not produce any products containing ozone-depleting substances.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 10 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
<i>Subpart F - Recycling and Emissions Reduction</i>				
Prohibitions	§82.154	X		Contractors maintain, service, repair, or dispose of any appliances in compliance with §82.154 prohibitions. Appliances are defined by §82.152 - any device which contains and uses a Class I or II substance as a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.
Required Practices	§82.156 except §82.156(i)(5), (6), (9), (10), and (11)	X		Contractors maintain, service, repair, and dispose of any appliances in compliance with §82.156 required practices.
<i>Subpart F - Recycling and Emissions Reduction</i>				
Required Practices	§82.156(i)(5), (6), (9), (10), and (11)		Appliances as defined by §82.152	Owner/operator requirements pertaining to repair of leaks.
Technician Certification	§82.161	X		Contractors <input type="checkbox"/> technicians meet the certification requirements.
Certification By Owners of Recovery and Recycling Equipment	§82.162	X		Contractors maintain, service, repair, or dispose of any appliances and therefore do not use recovery and recycling equipment.
Reporting and Recordkeeping Requirements	§82.166(k), (m), and (n)		Appliances as defined by §82.152	Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added.

Table A-1. Summary of Federal EPA Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 11 of 11)

Regulation	Citation	Not Applicable	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
40 CFR Part 50 - National Primary and Secondary Ambient Air Quality Standards		X		State agency requirements - not applicable to individual emission sources.
40 CFR Part 51 - Requirements for Preparation, Adoption, and Submittal of Implementation Plans		X		State agency requirements - not applicable to individual emission sources.
40 CFR Part 52 - Approval and Promulgation of Implementation Plans		X		State agency requirements - not applicable to individual emission sources.
40 CFR Part 62 - Approval and Promulgation of State Plans for Designated Facilities and Pollutants		X		State agency requirements - not applicable to individual emission sources.
40 CFR Part 64 - Compliance Assurance Monitoring		X		Program only applies to emission units that are equipped with control devices, excluding inherent process equipment.
40 CFR Part 70 - State Operating Permit Programs		X		State agency requirements - not applicable to individual emission sources.
40 CFR Parts 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 65, 66, 67, 68, 69, 71, 74, 76, 79, 80, 81, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 600, 610, 1048, 1051, 1065, and 1068.		X		The listed regulations do not contain any requirements that are applicable to the Orlando CoGen Facility.

Source: ECT, 2003.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 1 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Chapter 62-4, F.A.C.—Permits: Part I General					
Scope of Part I	62-4.001, F.A.C.	X			Contains no applicable requirements.
Definitions	62-4.020, .021, F.A.C.	X			Contains no applicable requirements.
General Prohibition	62-4.030, F.A.C		X		All stationary air pollution sources must be permitted, unless otherwise exempted.
Exemptions	62-4.040(1)(a), and (b), F.A.C		X		Certain structural changes exempt from permitting. Other stationary sources exempt from permitting upon FDEP insignificance determination.
Permit Processing	62-4.055, F.A.C.	X			Contains no applicable requirements.
Consultation	62-4.060, F.A.C.	X			Consultation is encouraged, not required.
Standards for Issuing or Denying Permits; Issuance; Denial	62-4.070, F.A.C	X			Establishes standard procedures for FDEP. Requirement is not applicable to the facility.
Modification of Permit Conditions	62-4.080, F.A.C	X			A Title V permit condition modification is not requested.
Renewals	62-4.090, F.A.C.		X		Establishes permit renewal criteria. Additional criteria are cited at 62-213.430(3), F.A.C.
Suspension and Revocation	62-4.100, F.A.C.		X		Establishes permit suspension and revocation criteria.
Transfer of Permits	62-4.120, F.A.C.	X			A sale or legal transfer of a permitted facility is not being requested.
Plant Operation—Problems	62-4.130, F.A.C.		X		Immediate notification is required whenever the permittee is temporarily unable to comply with any permit condition. Notification content is specified. (potential future requirement)
Permit Review	62-4.150, F.A.C.	X			Failure to request a hearing within 14 days of proposed or final Agency action on a permit application shall be deemed a waiver to the right to an administrative hearing.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 2 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Permit Conditions	62-4.160(2), (8), and (14), F.A.C.		X		Lists general conditions that must be contained in permits. Specifically, 62-4.160(2) states that deviations from original specifications or conditions of the permit are not allowed. Under 62-4.160(8) applicants must report the cause and duration of non-compliance, and 62-4.160(14) requires permit and monitoring records must be maintained at the facility and supplied to FDEP upon request.
Chapter 62-4, F.A.C.—Part II Specific Permits; Requirements					
Construction Permits	62-4.210, F.A.C.	X			General requirements for construction permits.
Operation Permits for New Sources	62-4.220, F.A.C.	X			General requirements for initial new source operation permits.
Chapter 62-204, F.A.C.—Air Pollution Control—General Provisions					
State Implementation Plan	62-204.100, .200, .220(1)-(3), .240, .260, .320, .340, .360, .400, and .500, F.A.C.	X			Contains no applicable requirements.
Ambient Air Quality Protection	62-204.220(4), F.A.C.	X			Assessments of ambient air pollutant impacts must be made using applicable air quality models, data bases, and other requirements approved by FDEP and specified in 40 CFR Part 51, Appendix W. Air quality modeling is not required for Title V permit applications.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 3 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Federal Regulations Adopted by Reference	62-204.800(8), F.A.C.			CT HRSG/DB	All Federal Regulations cited in the rules by the Department are adopted and incorporated by reference. The New Source Performance Standard contained in 40 CFR 60 Subpart GG for Stationary Gas Turbines applies to the combustion turbine (CT). The New Source Performance Standard contained in 40 CFR 60 Subpart Db for Industrial-Commercial-Institutional Steam Boilers applies to the heat recovery steam generator (HRSG) duct burners (DBs)
Federal Regulations Adopted by Reference	62-204.800(10) and (11), F.A.C.	X			National Emissions Standards for Hazardous Air Pollutants; see Table A-1 for detailed federal regulatory citations.
Federal Regulations Adopted by Reference	62-204.800(16), (17), and (18), (20, and (21), F.A.C.			CT HRSG/DB	Acid Rain Program; see Table A-1 for detailed federal regulatory citations.
Federal Regulations Adopted by Reference	62-204.800(23), F.A.C.		X		Protection of Stratospheric Ozone; see Table A-1 for detailed federal regulatory citations.
Chapter 62-210, F.A.C.— Stationary Sources—General Requirements					
Purpose and Scope	62-210.100, F.A.C.	X			Contains no applicable requirements.
Definitions	62-210.200, F.A.C.	X			Contains no applicable requirements.
Permits Required	62-210.300, F.A.C., except 62-210.300(1) and (4), F.A.C.		X		Air operation permit required, with the exception of certain facilities and sources. Startup notification required if a permitted source has been shut down for more than 1 year.
Air Construction Permits	62-210.300(1), F.A.C.	X			Application is for Title V operating permit renewal. A construction permit is not requested in this application.
Emission Unit Reclassification	62-210.300(6), F.A.C.		X		Emission unit reclassification (potential future requirement).

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 4 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Public Notice and Comment	62-210.350(1), F.A.C.		X		All permit applicants, including those for renewals and revisions, are required to publish notice of proposed agency action (future requirement).
Additional Notice Requirements for Sources Subject to Prevention of Significant Deterioration or Nonattainment Area New Source Review	62-210.350(2), F.A.C.	X			PSD and nonattainment area NSR application not required for permit renewal application.
Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources	62-210.350(3), F.A.C.		X		Notice requirements for Title V operating permits, renewals, and revisions (future requirement).
Administrative Permit Corrections	62-210.360, F.A.C.	X			Application is for initial Title V operating permit. An administrative permit correction is not requested in this application.
Reports	62-210.370, F.A.C.		X		Title V sources are required to submit an annual operating report.
Notification of Intent to Relocate Air Pollutant Emitting Facility	62-210.370(1), F.A.C.	X			Facility does not have any relocatable emission units.
Annual Operating Report for Air Pollutant Emitting Facility	62-210.370(2), F.A.C.		X		Specifies annual reporting requirements
Stack Height Policy	62-210.550, F.A.C.		X		Limits credit in air dispersion studies to good engineering practice (GEP) stack heights.
Circumvention	62-210.650, F.A.C.		X		An applicable air pollution control device cannot be circumvented and must be operated whenever the emission unit is operating.
Excess Emissions	62-210.700, F.A.C.			CT HRSG/DB	Excess emissions due to startup, shut down, and malfunction are permitted. Excess emissions due to malfunction must be reported. Excess emissions during soot blowing and load change are permitted with restrictions. (potential future requirement)

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 5 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Forms and Instructions	62-210.900, F.A.C.		X		List required FDEP forms for stationary sources.
Notification Forms for Air General Permits	62-210.920, F.A.C.	X			Contains no applicable requirements.
Chapter 62-212, F.A.C.— Stationary Sources— Preconstruction Review					
Purpose and Scope	62-212.100, F.A.C.	X			Contains no applicable requirements.
General Preconstruction Review Requirements	62-212.300, F.A.C.	X			Air construction permit requirements, not applicable to Title V operating permit renewal applications.
Prevention of Significant Deterioration	62-212.400(7)(b), F.A.C.	X			The operation permit shall contain all operating conditions and provisions required under 62-212.400 and set forth in the original or amended construction permit.
New Source Review for Nonattainment Areas	62-212.500, F.A.C.	X			Facility not located in any nonattainment area or nonattainment area of influence.
Sulfur Storage and Handling Facilities	62-212.600, F.A.C.	X			Applicable only to sulfur storage and handling facilities.
Chapter 62-213, F.A.C.— Operation Permits for Major Sources of Air Pollution					
Purpose and Scope	62-213.100, F.A.C.	X			Contains no applicable requirements.
Responsible Official	62-213.202, F.A.C.		X		Title V sources must designate a responsible official.
Annual Emissions Fee	62-213.205, F.A.C.		X		Title V sources must pay an annual emissions fee.
Title V Air General Permits	62-213.300, F.A.C.	X			Not an eligible facility.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 6 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Permits and Permit Revisions Required	62-213.400, F.A.C.		X		Title V operation permit required. Lists changes for which a permit revision is required (potential future requirement).
Concurrent Processing of Permit Applications	62-213.405, F.A.C.	X			No construction permit is being sought at this time.
Changes Without Permit Revision	62-213.410, F.A.C.		X		Certain changes may be made if specific notice and recordkeeping requirements are met.
Immediate Implementation Pending Revision Process	62-213.412, F.A.C.		X		Certain modifications can be implemented pending permit revision if specific criteria are met (potential future requirement).
Fast-Track Revisions of Acid Rain Parts	62-213.413, F.A.C.			CT HRSG/DB	Optional provisions for Acid Rain permit revisions (potential future requirement).
Trading of Emissions within a Source	62-213.415, F.A.C.		X		Defines the conditions under which emissions trading is allowable.
Permit Applications	62-213.420(1)(b)1., and 420(3), F.A.C.		X		Title V operating permit renewal application must contain all the information specified by 62-213.420(3), F.A.C. and be certified by the responsible official.
Permit Issuance, Renewal, and Revision	62-213.430(3), F.A.C.		X		Permits being renewed are subject to the same requirements that apply to permit issuance. Permit renewals shall contain the information specified in 62-210.900(1) and 62-213.420(3), F.A.C.
Permit Content	62-213.440(1), and (2), F.A.C.		X		Any recording, monitoring, or reporting requirements that are time specific shall be in accordance with the effective date of the permit which defines day one. Defines schedule for submitting certification forms or compliance schedules.
Permit Review by EPA and Affected States	62-213.450, F.A.C.	X			Contains no applicable requirements.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 7 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Permit Shield	62-213.460, F.A.C.		X		Provides permit shield for facilities in compliance with permit terms and conditions.
Forms and Instructions	62-213.900(1), (7), and (8), F.A.C.		X		Lists applicable forms such as "Major Air Pollution Source Annual Emissions Fee," Statement of Compliance," and "Responsible Official Notification."
Chapter 62-214 F.A.C.— Requirements for Sources Subject to the Federal Acid Rain Program					
Purpose and Scope	62-214.100, F.A.C.	X			Contains no applicable requirements.
Applicability	62-214.300, F.A.C.		X	CT HRSG/DB	Facility includes Acid Rain units; therefore facility compliance with 62-213 and 62-214, F.A.C., is required.
Applications	62-214.320, F.A.C.		X	CT HRSG/DB	Requires Title V sources having Acid Rain unit(s) to submit an Acid Rain Application to FDEP.
Acid Rain Compliance Plan and Compliance Options	62-214.330, F.A.C.			CT HRSG/DB	Acid rain compliance plan must be submitted to the Department.
Exemptions	62-214.340, F.A.C.		X		An application may be submitted for certain exemptions (potential future requirement).
Certification	62-214.350, F.A.C.		X	CT HRSG/DB	The designated representative must certify all Acid Rain submissions.
Department Action on Applications	62-214.360, F.A.C.	X			Contains no applicable requirements.
Revisions and Administrative Corrections	62-214.370, F.A.C.		X		Defines revision procedures and automatic amendments (potential future requirement).
Acid Rain Part Content	62-214.370, F.A.C.			CT HRSG/DB	Defines content of Acid Rain Part.
Implementation and Termination of Compliance Options	62-214.430, F.A.C.		X		Defines permit activation and termination procedures (potential future requirement).

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 8 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Chapter 62-252—Gasoline Vapor Control					
Rules for gasoline vapor control equipment	62-252, F.A.C.	X			Facility not located in an ozone nonattainment area or an air quality maintenance area for ozone.
Chapter 62-256, F.A.C.—Open Burning and Frost Protection Fires					
Declaration and Intent	62-256.100, F.A.C.	X			Contains no applicable requirements.
Definitions	62-256.200, F.A.C.	X			Contains no applicable requirements.
Prohibitions	62-256.300, F.A.C.*		X		Prohibits open burning.
Agricultural and Silvicultural Fires	62-256.400, F.A.C.	X			Contains no applicable requirements.
Burning for Cold and Frost Protection	62-256.450, F.A.C.	X			Limited to agricultural protection.
Land Clearing	62-256.500, F.A.C.*		X		Defines allowed open burning for non-rural land clearing and structure demolition.
Industrial, Commercial, Municipal, and Research Open Burning	62-256.600, F.A.C.*		X		Prohibits industrial open burning
Open Burning allowed	62-256.700, F.A.C.	X			Contains no applicable requirements.
Effective Date	62-256.800, F.A.C.	X			Contains no applicable requirements.
Chapter 62-257—Asbestos Program					
Controls release of asbestos to the atmosphere and establishes fees.	62-257.301, .400, and .900, F.A.C.*	X			Requires notice and payment of fee for asbestos removal projects.
Chapter 62-281—Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling					
Establishes installation and proper use of motor vehicle refrigerant recycling equipment.	62-281.100, F.A.C.	X			Servicing of motor vehicle air conditioners and vehicle maintenance that may release refrigerants is not conducted.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 9 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Chapter 62-296—Stationary Sources—Emission Standards					
Purpose and Scope	62-296.100, F.A.C.	X			Contains no applicable requirements
General Pollutant Emission Limiting Standard, Volatile Organic Compounds Emissions	62-296.320(1), F.A.C.		X		Known and existing vapor control devices must be applied as required by the Department. No such devices have been required at the Orlando CoGen Facility.
General Pollutant Emission Limiting Standard, Objectionable Odor Prohibited	62-296.320(2), F.A.C.*		X		Objectionable odor release is prohibited.
General Pollutant Emission Limiting Standard, Industrial, Commercial, and Municipal Open Burning Prohibited	62-296.320(3), F.A.C.*		X		Open burning in connection with industrial, commercial, or municipal operations is prohibited.
General Particulate Emission Limiting Standard, Process Weight Table	62-296.320(4)(a), F.A.C.	X			Facility does not have any applicable emission units. Combustion emission units are exempt per 62-296.320(4)(a)1a.
General Particulate Emission Limiting Standard, General Visible Emission Standard	62-296.320(4)(b), F.A.C.		X		Opacity limited to 20 percent, unless otherwise permitted. Test methods specified.
General Particulate Emission Limiting Standard, Unconfined Emission of Particulate Matter	62-296.320(4)(c), F.A.C.		X		Reasonable precautions must be taken to prevent unconfined particulate matter emission.
Existing Fossil Fuel Fired Steam Generators with More Than 250 MMBtu/hr Heat Input	62-296.405(1)(a), (b), (c)1.j. and (c)3., (e)1, 2 and 3, and (f)1.b., and g., F.A.C.	X			No applicable unit at facility.
New and Existing Fossil Fuel Fired Steam Generators with Less Than 250 MMBtu/hr Heat Input	62-296.406(1), F.A.C.	X		HRSG/DB	Opacity limit of 20 percent, except for either one six-minute period per hour during which opacity shall not exceed 27 percent, or one two-minute period per hour during which opacity shall not exceed 40 percent.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 10 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
New and Existing Fossil Fuel Fired Steam Generators with Less Than 250 MMBtu/hr Heat Input	62-296.406(2) and (3), F.A.C.	X		HRSR/DB	Requires BACT for PM and SO ₂ .
Specific Emission Limiting and Performance Standards	62-296.401 through 62-296.404 and 62-296.407 through 62-296.417, F.A.C.	X			No applicable unit at facility.
Reasonably Available Control Technology (RACT) Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO _x) Emitting Facilities	62-296.500 through 62-296.516, F.A.C.	X			Facility was subject to PSD (40 C.F.R. 52.21) review and therefore is exempt from RACT requirements.
Reasonably Available Control Technology (RACT)—Requirements for Major VOC- and NO _x -Emitting Facilities	62-296.570, F.A.C.	X			Facility is not located in a specified ozone non-attainment area or a specified ozone air quality maintenance area (Broward, Dade and Palm Beach Counties).
Reasonably Available Control Technology (RACT)—Lead	62-296.600 through 62-296.605, F.A.C.	X			Facility not located in a lead nonattainment area or a lead air quality maintenance area.
Reasonably Available Control Technology (RACT)—Particulate Matter	62-296.700 through 62-296.712, F.A.C.	X			Facility not located in a PM nonattainment area or a PM air quality maintenance area.
Chapter 62-297, Stationary Sources—Emissions Monitoring					
Purpose and Scope	62-297.100, F.A.C.	X			Contains no applicable requirements.
General Test Requirements	62-297.310, F.A.C.			CT HRSR/DB	Specifies general compliance test requirements including the number of runs, operating rates, emission rate calculation, applicable test procedures, determination of process variables, required stack sampling facilities, frequency of tests, and content of test reports.
Compliance Test Methods	62-297.401, F.A.C.	X			List methods to be used for compliance testing.

Table A-2. Summary of FDEP Regulatory Applicability and Corresponding Requirements—Orlando CoGen Facility (Page 11 of 11)

Regulation	Citation	Not Applicable	Applicable: Facility-Wide	Applicable Emission Units	Applicable Requirement or Non-Applicability Rationale
Supplementary Test Procedures	62-297.440, F.A.C.	X			Contains other test procedures adopted by reference.
EPA VOC Capture Efficiency Test Procedures	62-297.450, F.A.C.	X			Contains no applicable requirements.
CEMS Performance Specifications	62-297.520, F.A.C.	X			Contains performance specifications for continuous emissions monitoring.
Exceptions and Approval of Alternate Procedures and Requirements	62-297.620, F.A.C.	X			Exceptions or alternate procedures have not been requested.

*State requirement only; not federally enforceable.

Source: ECT, 2003.

APPENDIX B

PROPOSED TITLE V PERMIT

Orlando CoGen Limited, L.P.
Facility ID No.: 0950203
Orange County

Initial Title V Air Operation Permit
FINAL Permit No.: 0950203-001-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: 850/488-1344
Fax: 850/922-6979

Compliance Authority:
Orange County Environmental Protection Department
800 Mercy Drive~~2002 East Michigan Street~~
Orlando, Florida 328086
Telephone: 407/836-17400
Fax: 407/836-17499

November 19, 1998

Initial Title V Air Operation Permit
FINAL Permit No.: 0950203-001-AV

Table of Contents

<u>Section</u>	<u>Page Number</u>
Placard Page	1
I. Facility Information	2
A. Facility Description.	
B. Summary of Emissions Unit ID Nos. and Brief Descriptions.	
C. Relevant Documents.	
II. Facility-wide Conditions	4
III. Emissions Units and Conditions	
A. Combustion Turbine	6
B. HRSG-DB System	11
C. Common Conditions	14
IV. Acid Rain Part	
A. Acid Rain, Phase II	25

Permittee:
Orlando CoGen Limited, L.P.

FINAL Permit No.: 0950203-001-AV
Facility ID No.: 0950203
SIC Nos.: 49, 4931
Project: Initial Title V Air Operation Permit

This permit is for the operation of the Orlando CoGen Limited, L.P. This facility is located at 8275 Exchange Drive, Orlando, Orange County; UTM Coordinates: Zone 17, 459.5 km East and 3146.1 km North; Latitude: 28° 26' 23" North and Longitude: 81° 24' 28" West.

STATEMENT OF BASIS: This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix I-1, List of Insignificant Emissions Units and/or Activities

Appendix DB, NSPS Subpart DB Requirements for Duct Burners

Appendix GG, NSPS Subpart GG Requirements for Gas Turbines

APPENDIX TV-41, TITLE V CONDITIONS (version dated 02/12/02~~12/02/97~~)

APPENDIX SS-1, STACK SAMPLING FACILITIES (10/01/96)

TABLE 297.310-1, CALIBRATION SCHEDULE (version dated 10/07/96)

FIGURE 1- SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE REPORT (7/96)

Phase II Permit Application received December 24, 1997.

Effective Date: January 1, 2004~~1999~~

Renewal Application Due Date: July 5, 2008~~2003~~

Expiration Date: December 31, 2008~~2003~~

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sms/la

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of one combustion turbine, one heat recovery steam generator (HRSG) and one duct burner system associated with the HRSG. The facility's nominal output is 128.9 megawatts (MW). This facility utilizes natural gas as its only fuel.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 13, 1996, this facility is not a major source of hazardous air pollutants (HAPs).

The New Source Performance Standards in 40 CFR 60 apply to the combustion turbine (Subpart GG) and the heat recovery steam generator with duct burner system (Subpart Db). The applicable Subpart Db and Subpart GG requirements are included in Appendix DB and Appendix GG of this permit.

Subsection B. Summary of Emissions Unit ID No. and Brief Description.

E.U.

ID No.

Brief Description

-001

Combustion Turbine (CT)

-002

Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

These documents are on file with the permitting authority:

Initial Title V Permit Application received June 13, 1996

Additional Information Request dated January 14, 1997

Additional Information Response received April 11, 1997

Waiver of 90 Day time Limit received July 1, 1997

Waiver of 90 Day time Limit received December 31, 1997

Waiver of 90 Day time Limit received January 28, 1998

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-41, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-41, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.
Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1. & 4, F.A.C.]
4. Prevention of Accidental Releases (Section 112(r) of CAA). If required by 40 CFR 68, the permittee shall submit to the implementing agency:
 - a. a risk management plan (RMP) when, and if, such requirement becomes applicable;
 - b. certification forms and/or RMPs according to the promulgated rule schedule.[40 CFR 68]
5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]
6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]
{Permitting note: The Department has not ordered any control devices or systems under Rule 62-296.320(1)(a), F.A.C.}

7. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

8. The permittee shall submit all compliance related notifications and reports required of this permit to:

Orange County Environmental Protection Department.

800 Mercy Drive~~2002 East Michigan Street~~

Orlando, Florida 328086

Telephone: 407/836-17400

Fax: 407/836-17499

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See condition 512, APPENDIX TV-41, TITLE V CONDITIONS}

[Rule 62-214.420(11), F.A.C.]

10. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency

Region 4

Air, Pesticides & Toxics Management Division

Air & EPCRA Enforcement Branch

61 Forsyth Street

Atlanta, Georgia 30303

Telephone: 404/562-9099

Fax: 404/562-9095

Section III. Emissions Units and Conditions.

Subsection A. This section addresses the following emissions unit.

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-001	Combustion Turbine (CT)

The combined cycle combustion turbine (CT) is an Asea Brown Boveri 11N1-EV model with a nameplate rating of 78.9 MW at ISO. The emissions from the CT are controlled by using dry low NOx burner technology. The CT is allowed to burn only natural gas. It began commercial operation on September 25, 1993.

{Permitting notes: The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(87), F.A.C.; Rule 212.400(6), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 17, 1992. For the purposes of Rule 62-204.800(87), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The operation rate based on the low heating value (LHV) of the fuel shall not exceed 856.9 MMBtu/hr at ISO conditions.
[Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.2 NSPS Requirements. The combustion turbine (Emissions Unit -001) shall comply with the applicable provisions of 40CFR60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(8)(b), F.A.C. The Department determines that compliance with the emission limitations of Conditions A.3 and A.7. and the monitoring requirements of Subsection C. also demonstrates compliance

with the New Source Performance Standards for gas turbines in 40 CFR 60, Subpart GG. For completeness, the applicable Subpart GG requirements are included in Appendix GG of this permit.

The combustion turbine shall also comply with the applicable requirements of 40 CFR 60, Subpart A, General Provisions including:

- 40CFR60.7, Notification and Recordkeeping
- 40CFR60.8, Performance Tests
- 40CFR60.11, Compliance with Standards and Maintenance Requirements
- 40CFR60.12, Circumvention
- 40CFR60.13, Monitoring Requirements
- 40CFR60.19, General Notification and Reporting requirements
[Rule 62-4.070(3), F.A.C.].

A.32. Nitrogen Oxides. Nitrogen oxides emissions, expressed as NO_x, shall not exceed 15 ppmvd @ 15% O₂ (57.4 lbs/hr, 24-hr rolling average; 251.4 TPY, 12-month rolling average).

[AC48-206720 and BACT Determination, dated August 17, 1992]

A.43. Carbon Monoxide. Carbon monoxide emissions, expressed as CO, shall not exceed 10 ppmvd (22.3 lbs/hr; ~~92.1~~97.7 TPY, 12-month rolling average)

[AC48-206720 and BACT Determination, dated August 17, 1992]

[Rationale for suggested change: correction of math error in annual emission rate. Limit of 22.3 lb/hr and continuous operation (8,760 hr/yr) is equivalent to 97.7 tpy.]

A.54. Particulate Matter. Particulate matter emissions, expressed as PM/PM₁₀, shall not exceed 0.01 lb/MMBtu (9.0 lbs/hr; 39.4 TPY, 12-month rolling average)

[AC48-206720 and BACT Determination, dated August 17, 1992]

A.65. Volatile Organic Compounds. Volatile organic compound emissions, expressed as VOC, shall not exceed 3.0 lbs/hr; 13.0 TPY, 12-month rolling average.

[AC48-206720]

A.76. Sulfur Dioxide. No fuels shall be burned at this source which contain sulfur in excess of 0.8 percent by weight.

[40 CFR 60.333(b)]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. Applicable test methods and procedures for the

combustion turbine are addressed in Section C., Common Conditions, and Appendix GG, NSPS Subpart GG Requirements for Gas Turbines.

~~A.7. Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.~~

~~[40 CFR 60.8(e)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Condition A.2.]

~~A.8. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.~~

~~[40 CFR 60.335(a)]~~

[Rational for Suggested Change: This permit condition, excerpted from 40 CFR 60 Subpart GG, is addressed in Appendix GG of the permit]

~~A.9. In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR 60 or other methods and procedures as specified in this permit, except as provided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 40 CFR 60.335(f).~~

~~[40 CFR 60.335(b)]~~

[Rational for Suggested Change: This permit condition, excerpted from 40 CFR 60 Subpart GG, is addressed in Appendix GG of the permit]

~~A.10. Testing of emissions shall be conducted with the source operating at capacity. As defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. Capacity is defined as 95-~~

~~100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test.~~

~~[Rule 62-4.070(3), F.A.C. and AO48-248669]~~

[Rational for Suggested Change: This permit condition, regarding testing requirements, is addressed in Section C. of the permit]

~~A.11. Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for Specific Conditions A.12. and A.13.~~

~~[AC48-206720]~~

[Rational for Suggested Change: This permit condition, regarding testing requirements, is addressed in Section C. of the permit]

~~A.12. Nitrogen Dioxide. The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states— Select the eight sampling points at which the lowest O₂ concentrations were obtained. If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist. More than eight points may be used, if desired, providing that the points described above are included.~~

~~[AC48-206720]~~

[Rational for Suggested Change: This permit condition, concerning test procedures, is addressed in Section C. and Appendix GG of the permit]

~~A.13. Sulfur Dioxide. The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 1072-90(94)E 1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.~~

~~[40 CFR 60.335(d)]~~

[Rational for Suggested Change: This permit condition, excerpted from 40 CFR 60 Subpart GG, is addressed in Appendix GG of this permit]

~~A.14. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be~~

~~performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.~~

~~[40 CFR 60.335(e)]~~

[Rational for Suggested Change: This permit condition, excerpted from 40 CFR 60 Subpart GG, is addressed in Appendix GG of the permit]

Monitoring of Operations

{Permitting Note: Applicable monitoring requirements for the combustion turbine are addressed in Section C., Common Conditions, and Appendix GG, NSPS Subpart GG Requirements for Gas Turbines}.

~~A.15. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:~~

~~(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.~~

~~(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b):~~

~~[40 CFR 60.334(b)(1) and (2)]~~

~~A.16. The permittee shall monitor sulfur content and nitrogen content of natural gas fired in the turbine as follows:~~

Custom Fuel Monitoring Schedule for Natural Gas

~~1. Monitoring of fuel nitrogen content shall not be required when firing natural gas.~~

~~2. Sulfur Monitoring:~~

~~a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are ASTM D1072-90(94)E-1; ASTM D3031-81(86); ASTM D3246-92; and~~

~~ASTM D4084-94, or the latest edition of the above ASTM methods as referenced in 40 CFR 60.335(d).~~

~~b. This custom fuel monitoring schedule became effective on September 17, 1993. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.~~

~~c. If after the monitoring required in item 2.b. above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarter of each calendar year.~~

~~d. Should any sulfur analysis as required in items 2.b. or 2.c. above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.~~

~~3. If there is a change in fuel supply, the owner or operator must notify the Department of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.~~

~~4. Records of samples analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.~~

~~[Rule 62-4.070(3), F.A.C. and EPA's September 17, 1993 approval letter]~~

[Rational for Suggested Change: This permit condition, pertaining to 40 CFR 60 Subpart GG monitoring requirements, is addressed in Appendix GG of this permit]

~~A.17. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be report is as follows:-~~

~~Sulfur Dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent by weight.
[40 CFR 60.334(e)(2)]~~

[Rational for Suggested Change: This permit condition, excerpted from 40 CFR 60 Subpart GG, is addressed in Appendix GG of this permit]

Miscellaneous Condition

A.18. This emissions unit is also subject to conditions contained in Subsection C. Common Conditions.

Subsection B. This section addresses the following emissions unit.

E.U.

ID No. Brief Description

-002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

The heat recovery steam generator (HRSG), which accepts exhaust from the CT, is used to drive a 50 MW steam turbine. The transition duct from the CT to the HRSG contains duct burners (DBs), manufactured by COEN Company Incorporated. The DB system is allowed to burn only natural gas. The HRSG-DB System began commercial operation on September 25, 1993.

{Permitting notes: The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted and incorporated by reference in Rule 62-204.800(87), F.A.C.; Rule 212.400(6), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 17, 1992. For the purposes of Rule 62-204.800(87), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.}

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The operation rate based on the low heating value (LHV) of the fuel shall not exceed 122.0 MMBtu/hr for a maximum heat input of 450,000 MMBtu/yr. [Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.2 NSPS Requirements. The heat recovery steam generator and duct burner system (Emissions Unit -002) shall comply with the applicable provisions of 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted by reference in Rule 62-204.800(8)(b), F.A.C. The Department determines that compliance with the emission limitation of Condition B.3 and the monitoring requirements of Subsection C. also demonstrates compliance

with the New Source Performance Standards for heat recovery steam generator duct burners in 40 CFR 60, Subpart Db. For completeness, the applicable Subpart Db requirements are included in Appendix DB of this permit.

The heat recovery steam generator and duct burner system shall also comply with the applicable requirements of 40 CFR 60, Subpart A, General Provisions including:

- 40CFR60.7, Notification and Recordkeeping
- 40CFR60.8, Performance Tests
- 40CFR60.11, Compliance with Standards and Maintenance Requirements
- 40CFR60.12, Circumvention
- 40CFR60.13, Monitoring Requirements
- 40CFR60.19, General Notification and Reporting requirements
[Rule 62-4.070(3), F.A.C.]

B.32. Nitrogen Oxides. Nitrogen oxides emissions, expressed as NO_x , shall not exceed 0.1 lb/MMBtu (12.2 lb/hr, 24-hr rolling average; 22.5 TPY, 12-month rolling average).
[AC48-206720 and BACT Determination, dated August 17, 1992]

B.43. Carbon Monoxide. Carbon monoxide emissions, expressed as CO, shall not exceed 0.1 lb/MMBtu (12.2 lb/hr; 22.5 TPY, 12-month rolling average)
[AC48-206720 and BACT Determination, dated August 17, 1992]

B.54. Particulate Matter. Particulate matter emissions, expressed as PM/PM₁₀, shall not exceed 0.01 lb/MMBtu (1.2 lb/hr; 2.2 TPY, 12-month rolling average)
[AC48-206720 and BACT Determination, dated August 17, 1992]

B.65. Volatile Organic Compounds. Volatile organic compound emissions, expressed as VOC, shall not exceed 3.7 lb/hr; 6.8 TPY, 12-month rolling average.
[AC48-206720]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. Applicable test methods and procedures for the heat recovery steam generator and duct burner system are addressed in Section C., Common Conditions, and Appendix DB, NSPS Subpart Db Requirements for Duct Burners.}

~~B.6.~~ Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for ~~Specific Condition B.7.~~

[Rational for Suggested Change: This permit condition, regarding testing requirements, is addressed in Section C. of the permit]

~~B.7.~~ To determine compliance with the emission limit for nitrogen oxides for duct burners used in combined cycle systems, the owner or operator of an affected facility shall conduct the performance tests required under 40 CFR 60.8 using the nitrogen oxides and oxygen measurement procedures in 40 CFR part 60 appendix A, Method 20. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine, as provided by section 6.1.1 of Method 20. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.
[AC48-206720 and 40 CFR 60.46b(f)]

[Rational for Suggested Change: This permit condition, regarding testing requirements, is addressed in Appendix DB and Section C. of the permit]

~~B.8.~~ Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity as defined below. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance to regain the authority to operate at the permitted capacity. **Permitted capacity** is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.
[Rule 62-297.310(2), F.A.C.]

[Rational for Suggested Change: This permit condition, regarding testing requirements, is addressed in Section C. of the permit]

Miscellaneous Condition

B.79. This emissions unit is also subject to conditions contained in **Subsection C. Common Conditions.**

Subsection C. Common Conditions.

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-001	Combustion Turbine (CT)
-002	Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

{Permitting Note: For the purposes of Rule 62-204.800(87), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Methods of Operation - Fuels. The only fuel allowed to be burned is natural gas.
[Rule 62-213.410, F.A.C.]

C.2. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year. ~~The hours of operation for the DB shall not exceed 3,688 hours/year at maximum heat input (Note: The DB, however, may operate at lower heat input rates for more hours, up to 8,760, within the annual heat input limit).~~ DB operations shall not result in an annual heat input greater than 450,000 MMBtu/yr.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

[Rationale for suggested change: simplify permit condition language with respect to DB operations.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.3. Visible Emissions. Visible emissions from CT only or CT and DB shall not exceed 10% opacity.
[AC48-206720]

Excess Emissions

C.4. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours

in any 24 hour period due to warm startups, shutdowns, or unavoidable malfunctions, and no more than four hours in any 24 hour period due to cold startups. The duration of excess emissions for all such episodes shall not exceed a total of four hours in any 24 hour period. A "warm startup" is defined as a startup after the combustion turbine has been shutdown for less than 24 hours. A "cold startup" is defined as a startup after the combustion turbine has been shutdown for 24 hours or more, unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

[Rational for Suggested Change: Duration of allowable excess emissions during warm and cold startups is requested consistent with current Department policy. Unit becomes cold after 24 hours.]

C.5. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.6. Testing of emissions shall be conducted with the source operating at capacity as defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. Capacity for the CT is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. Capacity for the DB is defined as 90 to 10 percent of the maximum operation rate allowed by the permit.

~~**C.6.** Compliance with standards in 40 CFR 60, other than opacity, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.~~

~~[40 CFR 60.11(a)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2]

~~C.7. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source.~~

~~[40 CFR 60.11(d)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2]

~~C.8. Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.~~

~~[40 CFR 60.11(f)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2]

~~C.9. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.~~

~~[40 CFR 60.12]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2]

C.710. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day

period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

C.811. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

C.912. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling

nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

C.103. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process-weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

C.114. The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

C.125. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or
b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;
b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; SIP approved]

C.136. Compliance tests shall be conducted for NOx, CO, VOC, and visible emissions on an annual basis on or within 90 days prior to April 1 for determining compliance with Specific Conditions A.3, A.4, A.6, B.3, B.4, B.6, and C.3C.17. through C.20. Tests shall be conducted at the heat recovery steam generator outlet stack with and without duct burner firing for the CT only, and the CT plus the DB. Compliance tests for VOC are not required if the CO emission limits are met.

[AC48-206720]

[Rational for Suggested Change: The combustion turbine and heat recovery steam generator duct burner system emission units each have separate NOx, CO, PM, and VOC emission limits established by Conditions A.3 through A.6 (combustion turbine) and Conditions B.3 through B.6 (duct burners). Compliance with each of these emission

limits, as well as the applicable NSPS emission limits, was demonstrated initially (i.e., following initial commencement of operation). Compliance with the separate NO_x, CO, and visible emission standards has also been consistently demonstrated by annual stack testing at the outlets of the combustion turbine (CT) and the heat recovery steam generator (HRSG).

Removal of the current permit requirement to conduct separate annual stack testing (i.e., at both the CT and HRSG outlets) is requested. As stated in the proposed revisions to NSPS Subpart GG (reference Page 17994 of the Federal Register dated April 14, 2003), it is difficult to conduct stack testing at the outlet of a combustion turbine due to the high temperature and pressure of the turbine exhaust. Testing only at the HRSG outlet stack with and without duct burner firing will allow for a determination of compliance for each emission unit by evaluating the differences in test results. This approach is functionally equivalent to the current testing requirement which also determines compliance for each emission unit by evaluating the difference in test results.]

C.14. Nitrogen Oxides: The test method for nitrogen oxides shall be EPA Method 20 or 7E. Annual compliance with the applicable NO_x emission standards may also be demonstrated using data collected during the annual NO_x CEMS RATA tests.

C.157. Carbon Monoxide: The test method for carbon monoxide shall be EPA Method 10. CO shall be tested simultaneously with NO_x, volatile organic compounds (VOC) and VE at maximum load.

[AC48-206720 and AO48-248669]

C.168. Particulate Matter. The test method for particulate matter shall be EPA Method 5 or 17. An opacity test at maximum load for the CT (in accordance with Condition C.18.) may be substituted for the annual particulate matter emissions test. If, however, opacity values exceed 10%, then an EPA Method 5 or 17 particulate matter emissions test must be conducted on the CT (with and without duct burner firing) at maximum load to demonstrate compliance with the particulate matter emissions standard.

[AC48-206720 and AO48-248669]

C.179. Volatile Organic Compounds. The test method for VOC shall be EPA Method 25A. VOC shall be tested simultaneously with NO_x, CO and VE at maximum load. ~~No testing for VOC is required if the CO limit is met.~~

[AC48-206720]

C.1820. Visible Emissions. The test method for visible emissions shall be EPA Method 9. There shall be two one-hour VE tests while firing gas at maximum load, one hour with the DB on and one hour with the DB off. VE readings shall be taken simultaneously with tests for NO_x, CO and VOC.[AC48-206720 and AO48-248669]

Continuous Monitoring Requirements

~~C.21. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case by case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:~~

- ~~-(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.~~
- ~~-(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.~~
- ~~-(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.~~
- ~~-(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.~~

~~[40 CFR 60.7(c)(1), (2), (3), and (4)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2. Applicable NSPS Subpart Db and Subpart GG requirements are contained in Appendix DB and Appendix GG of the permit.]

~~C.22. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.~~

- ~~(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.~~

~~(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.
[40 CFR 60.7(d)(1) and (2)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.1. and B.1. Applicable NSPS Subpart Db and Subpart GG requirements are contained in Appendix DB and Appendix GG of the permit.]

C.1923. The permittee shall calibrate, maintain and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxide (NO_x) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2. For the purpose of demonstrating ongoing compliance with the applicable NO_x emission limitation in **Specific Conditions A.32. and B.32.** using the stack CEM, compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lb/hr when only the CT is operating and less than or equal to 69.6 lb/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or the CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

For example, in a given contiguous 24-hour period with 20 hours of CT operation only and 4 hours of CT/DB operation:

Calculated Emission Limitation =

$$[(57.4 \text{ lb/hr} \times 20 \text{ hrs}) + (69.6 \text{ lb/hr} \times 4 \text{ hrs})] / 24 \text{ hrs}$$

24 hour rolling average-compliance NO_x level = 59.4 lb/hr

Compliance with the permitted NO_x emission limitation is considered satisfied as long as the NO_x emissions from the stack CEM are less than or equal to the calculated NO_x emissions, averaged over the same 24-hour period.

[AC 48-206720 and AO48-248669]

Recordkeeping and Reporting Requirements

C.2024. The owner or operator shall notify the Orange County Environmental Protection Department, in writing, at least 15 days prior to the date ~~on which~~of each test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

[Rule 62-297.310(7)(a)9., F.A.C.]

C.215. In case of excess emissions resulting from malfunctions, Orlando CoGen Limited shall notify the Orange County Environmental Protection Department in accordance with 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

[Rule 62-210.700(6), F.A.C.]

C.226. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Orange County Environmental Protection Department on the results of each such test.

(b) The required test report shall be filed with the Orange County Environmental Protection Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information, if required by the test method:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.

9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

~~C.27. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.~~

~~[40 CFR 60.7(b)]~~

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2.]

~~C.28. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(e), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:~~

~~— (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;~~

~~— (ii) The owner or operator continues to comply with all Recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard;~~

~~— (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).~~

~~(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required Recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.~~

~~(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the non-complying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).~~

[40 CFR 60.7(e)]

[Rational for Suggested Change: This permit condition, excerpted from the 40 CFR 60 Subpart A General Provisions, is adopted by reference in Conditions A.2. and B.2.]

C.239. The permittee shall maintain a file of all measurements, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.
[40 CFR 60.7(f); Rule 62-213.440(1)(b)2.b., F.A.C.]

C.2430. The permittee shall maintain records on the following:

- a. the specific cleaner used to clean the turbine compressors, including the MSDS
- b. dilution ratio
- c. the total quantity of undiluted material consumed during each calendar year

[Rule 62-4.070(3), F.A.C.]

Section IV. This section is the Acid Rain Part.

Operated by: Orlando CoGen Limited, L.P.
ORIS code: 54466

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are new units regulated under Acid Rain, Phase II.

E.U.

ID No. Brief Description

- 001 Combustion Turbine
- 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

A.1. The Phase II permit application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:

- a. DEP Form No. 62-210.900(1)(a), effective 07/01/95; dated 12/02/97.
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO₂) allowance allocations for each Acid Rain unit is as follows:

<u>E.U. ID</u> <u>No.</u>	<u>EPA ID</u>	<u>Year</u>	2000	2001	2002	2003
-001	1	SO₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*
-002	1	SO₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*

*The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 of 40 CFR 73.

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c), F.A.C.]

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62-214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, Fast-Track Revisions of Acid Rain Parts.

[Rule 62-213.413, F.A.C.]

A.5. Comments, notes, and justifications: none

APPENDIX DB

NSPS Subpart Db Requirements for Duct Burners

The heat recovery steam generator and duct burner system (Emission Unit -002) is subject to the applicable requirements of Subpart A (General Provisions) and Subpart Db (Industrial-Commercial-Institutional Steam Generating Units) established as New Source Performance Standards in 40 CFR 60 and adopted by reference in Rule 62-204.800(8)(b), F.A.C.

NSPS GENERAL PROVISIONS

{Permitting Note: The heat recovery steam generator and duct burner system emission unit is subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.}

NSPS Subpart Db Requirements

*{Permitting Note: The heat recovery steam generator and duct burner system emission unit shall comply with all applicable requirements of 40 CFR 60, Subpart Db adopted by reference in Rule 62-204.800(8)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference to the original rules. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Any Department notes and requirements related to the Subpart Db requirements are shown in **bold** immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.}*

§ 60.40b Applicability and Delegation of Authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the following authorities shall be retained by the Administrator and not transferred to a State.

- (1) Section 60.44b(f).
- (2) Section 60.44b(g).
- (3) Section 60.49b(a)(4).

(i) Unless and until subpart GG of this part is revised to extend the applicability of subpart GG of this part to steam generator units subject to this subpart, this subpart will continue to apply to combined cycle gas turbines that are capable of combusting more than 29 MW (100 million Btu/hour) heat input of fossil fuel in the steam generator. Only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, Sec. 60.40).

§ 60.41b Definitions.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a heat recovery steam generating unit.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

APPENDIX DB

NSPS Subpart Db Requirements for Duct Burners

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835-82, 86, 87, 91, or 97 "Standard Specification for Liquid Petroleum Gases" (IBR--see § 60.17).

Steam generating unit means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

§ 60.44b Standard for nitrogen oxides.

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO₂ in excess of the following emission limits:

Fuel/Steam generating unit type	Nitrogen oxide emission limits ng/J (lb/million Btu) (expressed as NO ₂) heat input
(4) Duct burner used in a combined cycle system:	
(i) Natural gas and distillate oil.....	86 (0.20)

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

§ 60.46b Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides

(a) The particulate matter emission standards and opacity limits under § 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under § 60.44b apply at all times.

(c) Compliance with the nitrogen oxides emission standards under § 60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

APPENDIX DB

NSPS Subpart Db Requirements for Duct Burners

(f) To determine compliance with the emission limit for NO_x required by § 60.44b(a)(4) or § 60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under § 60.8 as follows:

(i) The emissions rate (E) of NO_x shall be computed using Equation of 1 this section:

$$E = E_{sg} + (H_g / H_b)(E_{sg} - E_g) \quad (\text{Eq. 1})$$

Where:

E = emissions rate of NO_x from the duct burner, ng/J (lb/million Btu) heat input

E_{sg} = combined effluent emissions rate, in ng/J (lb/million Btu) heat input using appropriate F-Factor as described in Method 19

H_g = heat input rate to the combustion turbine, in Joules/hour (million Btu/hour)

H_b = heat input rate to the duct burner, in Joules/hour (million Btu/hour)

E_g = emissions rate from the combustion turbine, in ng/J (lb/million Btu) heat input calculated using appropriate F-Factor as described in Method 19

(ii) Method 7E of appendix A of this part shall be used to determine the NO_x concentrations. Method 3A or 3B of appendix A of this part shall be used to determine oxygen concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under Sec. 60.44b (a)(4) or Sec. 60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the continuous emission monitoring system specified under Sec. 60.48b for measuring NO_x and oxygen and meet the requirements of Sec. 60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_x emissions rate at the outlet from the steam generating unit shall constitute the NO_x emissions rate from the duct burner of the combined cycle system.

§ 60.48b Emission Monitoring for Particulate Matter and Nitrogen Oxides.

(h) The owner or operator of a duct burner, as described in § 60.41b, which is subject to the NO_x standards of §60.44b(a)(4) or § 60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_x emissions.

§ 60.49b Reporting Requirements.

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the recording period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

Department requirement: This provision is not applicable to affected facilities that have an annual capacity factor greater than 10 percent; i.e., affected facilities that are not claiming eligibility of § 60.44b(j) .

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO_x) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

APPENDIX DB

NSPS Subpart Db Requirements for Duct Burners

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

Department requirement: This provision is not applicable to duct burners since continuous emission monitoring for NOx is not required as specified by § 60.48b(h).

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions which occurred during the reporting period.

(2) Any affected facility that is subject to the nitrogen oxides standard of § 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under § 60.48b(g)(1) or steam generating unit operating conditions under § 60.48b(g)(2).

(4) For purposes of § 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under § 60.46b(e), which exceeds the applicable emission limits in § 60.44b.

Department requirement: This provision is not applicable to duct burners since continuous emission monitoring for NOx is not required as specified by § 60.48b(h).

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

APPENDIX GG

NSPS Subpart GG Requirements for Gas Turbines

The combustion turbine (Emission Unit -001) is subject to the applicable requirements of Subpart A (General Provisions) and Subpart GG (Stationary Gas Turbines) established as New Source Performance Standards in 40 CFR 60 and adopted by reference in Rule 62-204.800(8)(b), F.A.C.

NSPS GENERAL PROVISIONS

{Permitting Note: The combustion turbine is subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.}

NSPS Subpart GG Requirements

{Permitting Note: The combustion turbine shall comply with all applicable requirements of 40 CFR 60, Subpart GG adopted by reference in Rule 62-204.800(8)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference to the original rules. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes and requirements related to the Subpart GG requirements are shown in bold immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.}

§ 40 CFR 60.332 Standard for Nitrogen Oxides.

(a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraph (b) section shall comply with:

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
N ≤ 0.015	0
0.015 < N ≤ 0.1	0.04(N)
0.1 < N ≤ 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

Department requirement: For natural gas firing, the "F" value shall be assumed to be 0.

{Note: This is required by EPA's March 12, 1993 determination regarding the use of NOx CEMS. The NSPS Subpart GG NOx emission standard (without adjustment for combustion turbine efficiency) is 75 ppmvd corrected to 15% oxygen. The emissions standards in Subsection A, Condition A.3. of this permit are more stringent than this requirement.}

APPENDIX GG

NSPS Subpart GG Requirements for Gas Turbines

- (b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

§ 40 CFR 60.333 Standard for Sulfur Dioxide.

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with:

- (b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

§ 40 CFR 60.334 Monitoring of Operations.

- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

- (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

Department requirement: The requirement to monitor the nitrogen content of pipeline quality natural gas fired is waived. A NO_x CEMS shall be used to demonstrate compliance with the NO_x limits of this permit. For purposes of complying with the sulfur content monitoring requirements of this rule, the permittee shall obtain a monthly vendor analysis indicating the sulfur content of the natural gas being supplied from the pipeline for each month of operation.

{Note: This is consistent with the custom fuel monitoring policy and guidance from EPA Region 4.}

- (c) For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:

- (1) *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).

Department requirement: The continuous compliance demonstration by NO_x CEM system data shall substitute for the requirements of paragraph (c)(1). NO_x CEM system data shall be used to determine "excess emissions" for purposes of 40 CFR 60.7 subject to the conditions of the permit.

- (2) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

§ 40 CFR 60.335 Test Methods and Procedures.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

APPENDIX GG

NSPS Subpart GG Requirements for Gas Turbines

- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 and 60.333(a) as follows:

- (1) The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$$\text{NO}_x = (\text{NO}_{x0}) (\text{Pr}/\text{Po})^{0.5} e^{19(\text{Ho}-0.00633)} (288^\circ\text{K}/\text{Ta})^{1.53}$$

where:

- NO_x = emission rate of NO_x at 15 percent O₂ and ISO standard ambient conditions, volume percent.
NO_{x0} = observed NO_x concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H₂O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

Department requirement: The permittee is not required to have the NO_x monitor continuously correct NO_x emissions concentrations to ISO conditions. However, the permittee shall keep records of the data needed to make the correction, and shall make the correction when required by the Department or Administrator.

- (2) The monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with 40 CFR 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

Department requirement: The permittee is allowed to conduct future performance tests, if required by the Department or Administrator, at a single load because the permit requires demonstration of continuous compliance with the NO_x BACT standards.

- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

Department requirement: The permittee is allowed to make future Subpart GG compliance demonstrations, if required by the Department or Administrator, for NO_x emissions using data collected during relative accuracy test audits (RATAs) performed on the NO_x monitor. The span value specified in 40 CFR Part 75 shall be used instead of that specified in paragraph (c)(3) above.

- (d) The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference – see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

Department requirement: The requirements of 40 CFR 75 Appendix D may be used to determine the fuel sulfur content.

{Note: This requirement establishes different methods than provided by paragraph (d) above, but the requirements are equally stringent and will ensure compliance with this rule.}

- (e) To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

{Note: The fuel analysis requirements of the permit meet or exceed the requirements of this rule and will ensure compliance with this rule.}