ORANGE COGENERATION FACILITY

TITLE V
AIR OPERATING
PERMIT APPLICATION

Submitted to:

Florida Department of Environmental Protection

Prepared by:

KBN Engineering and Applied Sciences, Inc.
Gainesville, Florida

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

D.E.R.

JUN 17 1996

SOUTHWEST DISTRICT
TAMPA

APPLICATION FOR AIR PERMIT - LONG FORM

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

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name:	Orange Cogeneration Limited Partnership
2. Site Name:	Orange Cogeneration Facility
3. Facility Identification Number:	1050231 [ ] Unknown
4. Facility Location Information: Street Address or Other Locator:	1901 Clear Springs Road
City: Bartow	County: Polk Zip Code: 33830
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Allan Wade Smith, General Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:

   Organization/Firm: Orange Cogeneration, G.P., Inc.
   Street Address: 1125 US 98 South, Suite 100
   City: Lakeland State: FL Zip Code: 33801

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

   Telephone: (941) 682-C338 Fax: (941) 683-8257

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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.*

Allan W. Smith — Signature

6/14/96 — Date

* Attach letter of authorization if not currently on file.

Application Processing Fee

Check one:

[ ] Attached - Amount: $ _____ [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Not Applicable

2. Projected or Actual Date of Commencement of Construction :

3. Projected Date of Completion of Construction :

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky
   Registration Number: 14996

2. Professional Engineer Mailing Address:
   Organization/Firm: KBN Engineering and Applied Science
   Street Address: 6241 NW 23rd Street, Suite 500
   City: Gainesville State: FL Zip Code: 32653-1500

3. Professional Engineer Telephone Numbers:
   Telephone: (352) 336-5600 Fax: (352) 336-6603

fib original

KBN
A GOLDER ASSOCIATES COMPANY

Letter of Transmittal

RECEIVED
JUL 10 1996
BUREAU OF AIR REGULATION
D.E.R.

JUN 17 1996
SOUTHWEST DISTRICT
TAMPA

Date: 06/15/96

Project No.: 14423-1200

To: Jerry Kissel
Florida Dept. of Environmental Prot.
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Orange Cogeneration Facility
Polk Power Partners, L.P.

The following items are being sent to you: ☒ *with this letter* ☐ *under separate cover*

Copies	*Description*
4	Title V Air Operating Permit Application (Hard Copy)

These are transmitted:

☐ *As requested*
☐ *For approval*
☐ *For review*
☐ *For your information*
☐ *For review and comment*
☒ *See Below*

Remarks: As indicated on the enclosed bulletin, we will be submitting the above referenced application electronically after June 15, 1996

RECEIVED BY: _____

DATE: _____ *TIME:* _____

14422Y/F1/WP/ALL-LOT-1 (06/15/96)

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 352-336-5600 FAX 352-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910 FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street NW, Suite 350, Washington, DC 20036, 202-462-1100 FAX 202-462-2270

The original

KBN
A GOLDER ASSOCIATES COMPANY

Letter of Transmittal

Date: 06/25/96

Project No.: 15301-0200

To: Jerry Kissel
Florida Dept. of Environmental Prot.
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33401
(813) 744-6100

Re: Orange Cogeneration Limited Partnership
Title V: Orange Congeneration Facility

The following items are being sent to you: ☒ *with this letter* ☐ *under separate cover*

Copies	*Description*
1	Page 1 of Form hardcopy for verification
4	Air Operating Permit Application (Electronic Submittal ELSA 1.3b)

These are transmitted:

☐ *As requested*
☐ *For approval*
☐ *For review*
☐ *For your information*
☐ *For review and comment*
☒ *For Electronic Submittal*

Remarks: This is an electronic submittal of the permit application represented by page 1 of the form (attached). As indicated by the bulletin accompanying the previously submitted hard copy, original signature pages are not enclosed. They were provided with the hardcopy submittal. These disks were created using the submittal program included in ELSA 1.3b. If you have any questions, please contact Teresa Franklin or Jane Burnette.

Sender: Teresa Franklin for Bob McCann

cc: Alan Wade Smith, File(2)

15301Y/F1/WP/3.LOT (06/25/96)

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 352-336-5600 FAX 352-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910 FAX 407-994-9393
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1616 'P' Street NW, Suite 350, Washington, DC 20036, 202-462-1100 FAX 202-462-2270

Scott

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 12, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Allen Wade Smith
General Manager
Orange Cogeneration, G.P., Inc.
1125 US 98 South, Suite 100
Lakeland, Florida 33801

Re: Title V Air Operation Permit Application
Facility ID No.: 1050231, Orange Cogeneration Facility

Dear Mr. Smith:

On June 17, 1996, the Southwest District Office received your Title V Air Operation Permit Application for the subject facility.

This letter is to inform you that this office is the correct permitting authority for your facility. All future Title V permit applications and correspondence should be sent to this office. Our address is:

Bureau of Air Regulation
Mail Station # 5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Failure to submit your application to the correct permitting authority does not affect the date your application was received.

If you should have any questions please contact Bruce Mitchell or Scott Sheplak at (904)488-1344.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Title V Section

JCB/ss/bb

copy to:
Kennard F. Kosky, P.E., KBN
Jerry Kissel, Southwest District Office

the original

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

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

I. APPLICATION INFORMATION

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1. Facility Owner/Company Name:	**Orange Cogeneration Limited Partnership**
2. Site Name:	**Orange Cogeneration Facility**
3. Facility Identification Number: **1050231**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **1901 Clear Springs Road** City: **Bartow** County: **Polk** Zip Code: **33830**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

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

for original

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

D.E.R.

APPLICATION FOR AIR PERMIT - LONG FORM

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

JUN 17 1996

SOUTHWEST DISTRICT
TAMPA

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

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5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Allan Wade Smith, General Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Orange Cogeneration, G.P., Inc.**
Street Address: **1125 US 98 South, Suite 100**
City: **Lakeland** State: **FL** Zip Code: **33801**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: **(941) 682-6338** Fax: **(941) 683-8257**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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.*

Allan W. Smith — Signature

6/14/96 — Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	001	Combustion Turbine (CT) with HRSG, Unit 1	
2R	002	Combustion Turbine (CT) with HRSG, Unit 2	
3R	003	Auxiliary Boiler	
4		Facility-wide Fugitive Emissions	

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

[x] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., 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: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be renewed: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

_____

[ ] Air operation permit revision for a Title V source 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 to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction Permit Applications Subject to Processing Under Rule 62-210.300(2)(b),F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

_____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units.

This Application for Air Permit is submitted to obtain:

[ ] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: _____

_____

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

_____

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

[ ] Attached - Amount: $ _____ [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations: **Not Applicable**
2. Projected or Actual Date of Commencement of Construction :
3. Projected Date of Completion of Construction :

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky** Registration Number: **14996**
2. Professional Engineer Mailing Address: Organization/Firm: **KBN Engineering and Applied Science** Street Address: **6241 NW 23rd Street, Suite 500** City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers: Telephone: **(352) 336-5600** Fax: **(352) 336-6603**

4. Professional Engineer's 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 [X] 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.

Signature

6/12/96
Date

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:
   Allan Wade Smith, General Manager

2. Application Contact Mailing Address:

   Organization/Firm: **Polk Power G.P., Inc.**
   Street Address: **1125 US 98 South, Suite 100**
   City: **Lakeland** State: **FL** Zip Code: **33801**

3. Application Contact Telephone Numbers:

   Telephone: **(941) 682-6338** Fax: **(941) 683-8257**

Application Comment

See Attachment OR-AI-AC

ATTACHMENT OR-AI-AC

ATTACHMENT OR-AI-AC

This Title V application is for the Orange Cogeneration Facility in Polk County, Bartow, Florida.

The applicant's structure is as follows:

Emission Units

General:	2 - Combustion Turbine (CT) 2 - Heat Recovery Steam Generator (HRSG) 1 - Auxiliary Boiler
Emissions Points (4):	2 - Stacks for CT/HRSG Units 1 & 2 1 - Stack for Auxiliary Boiler 1 - Facility-wide Fugitive Emissions
Fuel Segments:	Natural Gas and Biogas only
Pollutants:	
CT/HRSG	NO_x, CO, PM/PM10, VOC
Auxiliary Boiler	NO_x, CO, SO_2, PM/PM10, VOC
VE Emissions:	
CT/HRSG	VE limits applicable
Auxiliary Boiler	VE limits applicable
CEM:	
CT/HRSG	NO_x, O_2, Fuel consumption
PSD:	
CT/HRSG	NO_x
Auxiliary Boiler	NO_x

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: **17** East (km): **418.7** North (km): **3083.0**

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): **27 / 52 / 15** Longitude: (DD/MM/SS): **81 / 49 / 31**

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	**A**	**49**	

7. Facility Comment (limit to 500 characters):

The Orange Cogeneration Facility consists of two combustion turbines (CT) that exhaust through Heat Recovery Steam Generator (HRSG) stacks. The CTs are natural gas and biogas fired. There is an auxiliary boiler with a separate stack.

Facility Contact

1. Name and Title of Facility Contact:
   John Paul Jones, Manager of Cogeneration

2. Facility Contact Mailing Address:
   Organization/Firm: **PO Box 782**
   Street Address: **1901 Clear Springs Road**
   City: **Bartow** State: **FL** Zip Code: **33830**

3. Facility Contact Telephone Numbers:
   Telephone: **(941) 534-1141** Fax: **(941) 533-4152**

Facility Regulatory Classifications

1. Small Business Stationary Source?	[ ] Yes [x] No [ ] Unknown
2. Title V Source?	[x] Yes [ ] No
3. Synthetic Non-Title V Source?	[ ] Yes, [x] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	[x] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs?	[ ] Yes [x] No
6. Major Source of Hazardous Air Pollutants (HAPs)?	[ ] Yes [x] No
7. Synthetic Minor Source of HAPs?	[ ] Yes [x] No
8. One or More Emissions Units Subject to NSPS?	[x] Yes [ ] No
9. One or More Emissions Units Subject to NESHAP?	[ ] Yes [x] No
10. Title V Source by EPA Designation?	[ ] Yes [x] No
11. Facility Regulatory Classifications Comment (limit to 200 characters): **CT - NSPS for stationary CTs, (40 CFR 60 Subpart GG). Auxiliary Boiler - NSPS for indust., institutional, commer. stm gens with heat input less than or equal to 100 MMBtu/hr (40 CFR 60, Subpart Dc).**	

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment OR-FE-B

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted		2. Pollutant Classification
NOX	Nitrogen Oxides	A
CO	Carbon Monoxide	A
PM	Particulate Matter - Total	B
PM10	Particulate Matter - PM10	B
SO2	Sulfur Dioxide	B
VOC	Volatile Organic Compounds	B

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: OR-FE-1
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: OR-FE-2
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [X] Attached, Document ID(s): OR-FE-3
   [ ] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [X] Attached, Document ID: OR-FE-4
   [ ] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [X] Attached, Document ID: OR-FE-5
   [ ] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [X] Attached, Document ID: OR-FE-8
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____
    [X] Not Applicable

11. Identification of Additional Applicable Requirements:
[ ] Attached, Document ID: _____
[x] Not Applicable

12. Compliance Assurance Monitoring Plan:
[x] Attached, Document ID: OR-FE-12
[ ] Not Applicable

13. Risk Management Plan Verification:

[ ] Plan Submitted to Implementing Agency - Verification Attached
Document ID: _____

[x] Plan to be Submitted to Implementing Agency by Required Date

[ ] Not Applicable

14. Compliance Report and Plan
[x] Attached, Document ID: OR-FE-14
[ ] Not Applicable

15. Compliance Statement (Hard-copy Required)
[x] Attached, Document ID: OR-FE-15
[ ] Not Applicable

ATTACHMENT OR-FE-B

FACILITY REGULATIONS

ATTACHMENT OR-FE-B

APPLICABLE REQUIREMENTS LISTING - POWER PLANTS FACILITY

FACILITY ID: Orange Cogeneration Facility

FDEP Rules:

General Permits:	
62-4.030	- General Prohibitions
62-4.040(1)(a)	- Exemptions from permitting
62-4.040(1)(b)	- Exemptions from permitting
62-4.100	- Suspension and Revocation
62-4.130	- Plant Operations - Problems
62-204.800(19) (State Only)	- Part 82 (CFCs)
Stationary Sources-General:	
62-210.300(2)[except (b)]	- Permits Required
Exemptions - Plant Specific:	
62-210.300(3)(a)4.	- comfort heating < 1 mmBtu/hr
62-210.300(3)(a)5.	- mobile sources
62-210.300(3)(a)7.	- non-industrial vacuum cleaning
62-210.300(3)(a)8.	- refrigeration units
62-210.300(3)(a)9.	- vacuum pumps for labs
62-210.300(3)(a)10.	- steam cleaning equipment
62-210.300(3)(a)11.	- sanders < 5 ft2
62-210.300(3)(a)12.	- space heating equip.; (non-boilers)
62-210.300(3)(a)14.	- bakery ovens
62-210.300(3)(a)15.	- lab equipment
62-210.300(3)(a)16.	- brazing, soldering or welding
62-210.300(3)(a)17.	- laundry dryers
62-210.300(3)(a)20.	- emergency generators < 32,000 gal/yr
62-210.300(3)(a)21.	- general purpose engines < 32,000 gal.yr
62-210.300(3)(a)22.	- fire and safety equipment
62-210.300(3)(a)23.	- surface coating >5% VOC; 6 gal. or less/month (avg.)
62-210.300(3)(a)24.	- surface coating <5% VOC
62-210.300(3)(b)	- Tempory Exemptions
62-210.370(3)	- AOR's
62-210.900(5)	- AOR Form
Title V Permits:	
62-213.205(1)(a)	- Annual Emission Fee
62-213.205(1)(b)	- Annual Emission Fee
62-213.205(1)(c)	- Annual Emission Fee
62-213.205(1)(e)	- Annual Emission Fee
62-213.205(1)(f)	- Annual Emission Fee
62-213.205(1)(g)	- Annual Emission Fee
62-213.205(1)(i)	- Annual Emission Fee

62-213.205(1)(j)	- Annual Emission Fee
62-213.400	- Permits/Revisions
62-213.410	- Changes without permit revisions
62-213.420.(1)(b)2.	- Permits-allows continued operation
62-213.420.(1)(b)3.	- Permits-additional information
62-213.460	- Permit Shield
62-213.900(1)	- Fee Form

Stationary Sources-Emission Standards:

62-296.320(2) (State Only)	- Odor
62-296.320(3)(b)(State Only)	- Emergency Open Burning
62-296.320(4)(b)	- General VE
62-296.320(4)(c)	- Unconfined PM

Stationary Sources-Emission Monitoring

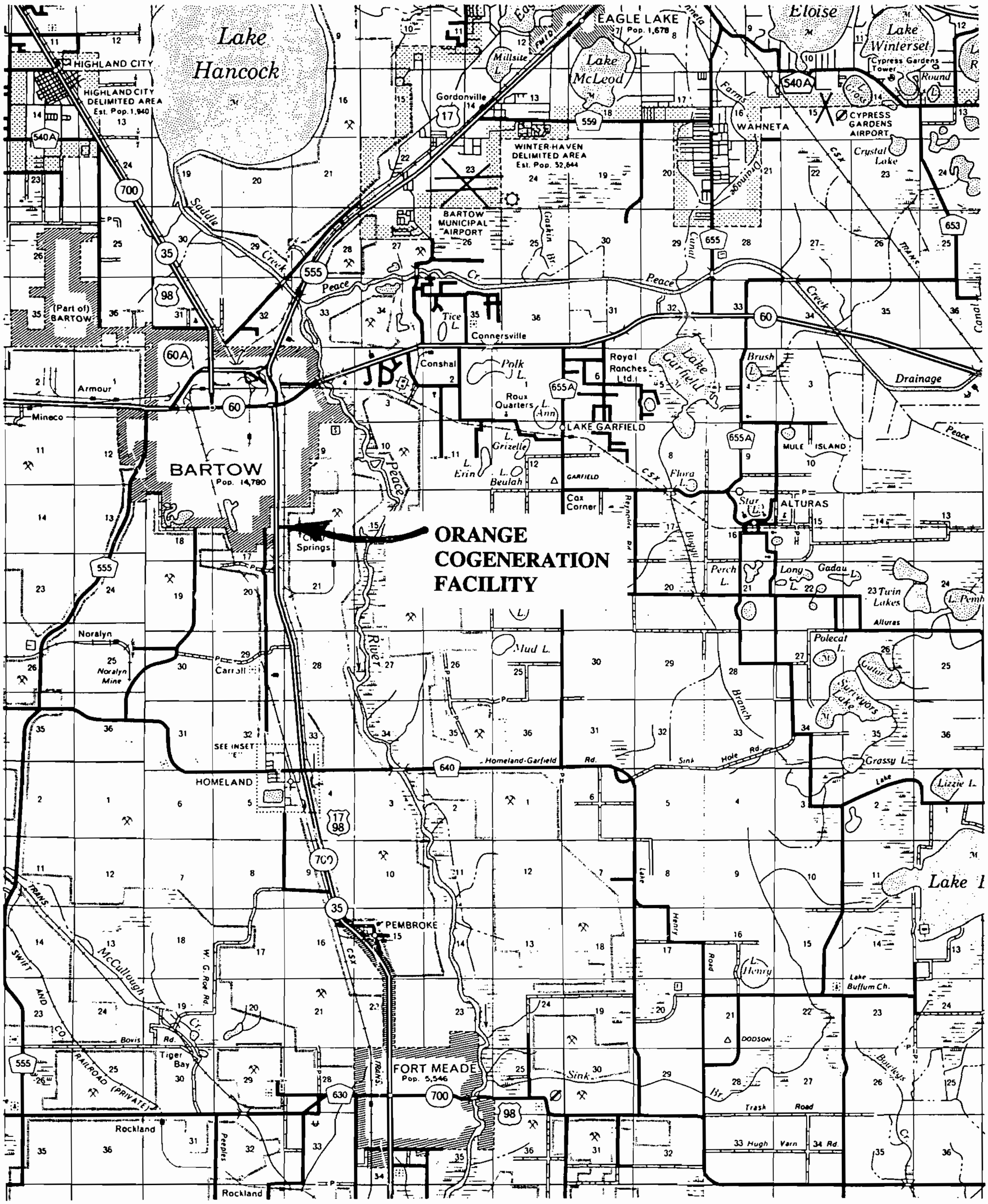
62-297.310(7)(a)10.	- Exemption of annual VE for 210.300(3)(a) sources/Gen. Per.

Federal Regulations:
CFCs > 50lb:

40 CFR 82.166(k)	- Service Documentation/Certification
40 CFR 82.166(m)	- Recordkeeping

ATTACHMENT OR-FE-1

AREA MAP

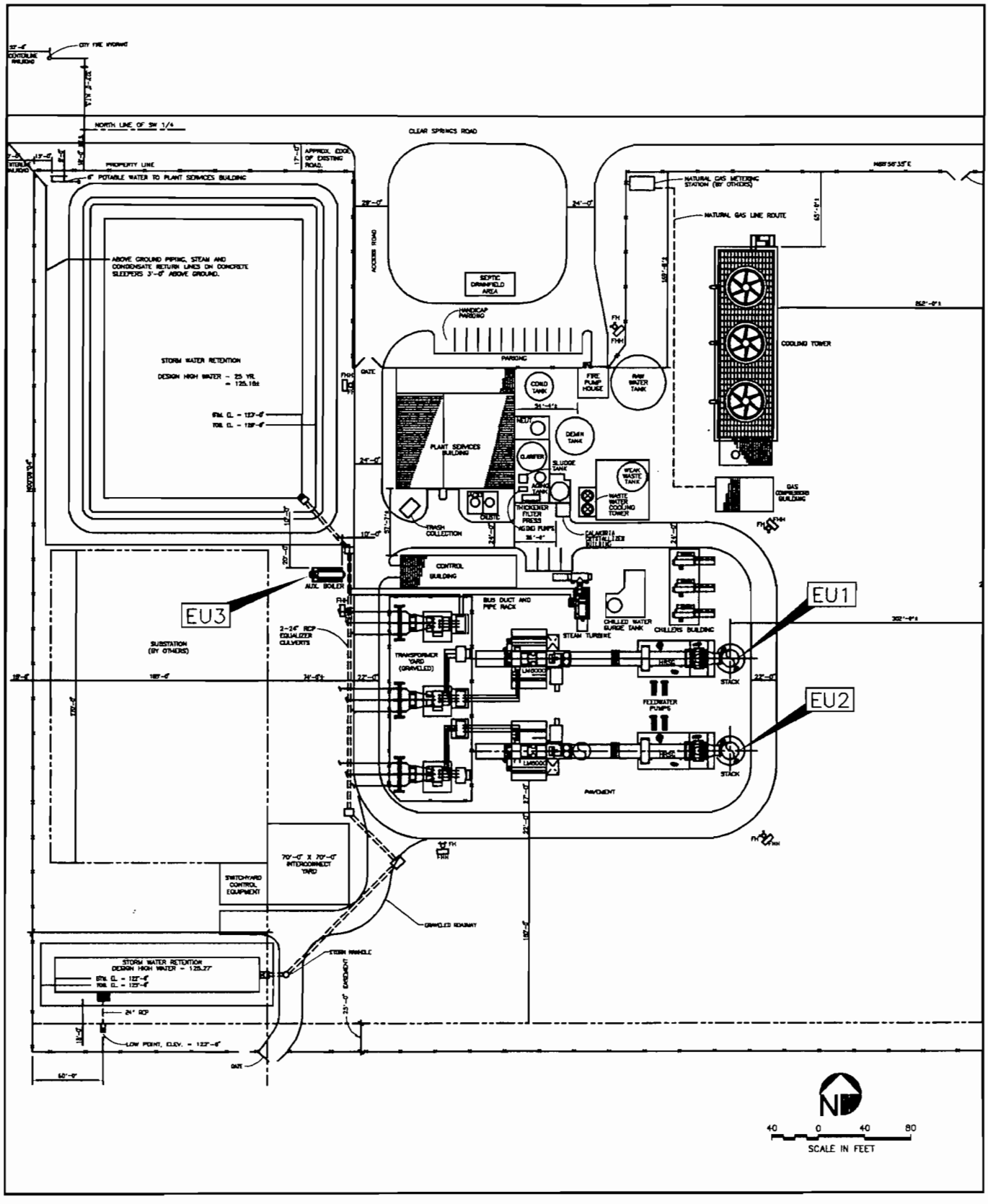


ATTACHMENT OR-FE-1
LOCATION MAP
ORANGE COGENERATION FACILITY

ATTACHMENT OR-FE-2

FACILITY PLOT PLAN

C:\KBN\15301-0100\PLOT.DWG
4/17/96

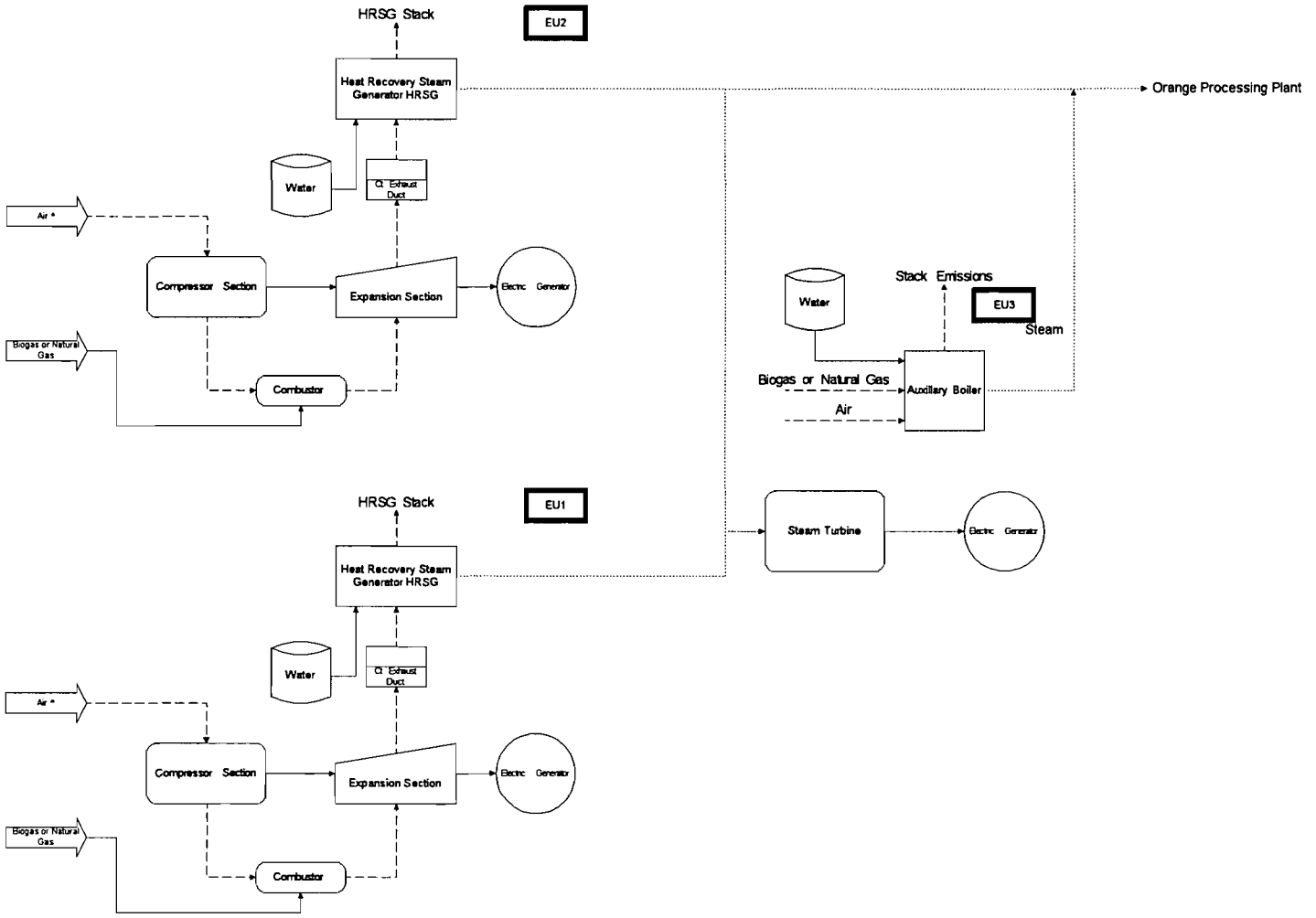


ATTACHMENT OR-FE-2
FACILITY PLOT PLAN
ORANGE COGENERATION FACILITY

KBN

ATTACHMENT OR-FE-3

PROCESS FLOW DIAGRAM



Note: See Table OR-EU1-H8 for fuel consumption and exhaust gas flow rates.
EU = Emission Unit

Process Flow Legend				
Steam Flow Gas Flow Solid / Liquid Flow	Orange Cogeneration Facility Process Flow Diagram	*Emission Unit:*	Overall Plant	
		Process Area:	Overall Plant	
		Filename:	ORANGE.VSD	
		Latest Revision Date:	5/2/96	4:53 PM

KBN Engineering and Applied Sciences, Inc.

ATTACHMENT OR-FE-4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT OR-FE-4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:

- Fugitive dust from paved and unpaved roads, and
- Fugitive particulates from the use of bagged chemical products.
- Fugitive particulates from stone areas.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 62-296.320(4)(c), F.A.C.:

- Maintenance of paved areas as needed,
- Regular mowing of grass and care of vegetation, and
- Limiting access to plant property by unnecessary vehicles.

ATTACHMENT OR-FE-5

FUGITIVE EMISSIONS IDENTIFICATION

ATTACHMENT OR-FE-5
FUGITIVE EMISSIONS IDENTIFICATION

Many fugitive emissions at the plant site have been classified as "trivial activities" (as presented in EPA's memorandum, "White Paper for Streamlined Development of Part 70 Permit Applications," July 10, 1995). As a result, these activities are not included as part of this permit application. For example, emissions from general plant maintenance and upkeep activities at the facility would be considered fugitive emissions, but have been judged to be trivial since these activities are not conducted as part of a manufacturing process, not related to the source's primary business activity, and do not otherwise trigger a permit modification.

Fugitive emissions that may result from the operation or activities that are not trivial at the facility are addressed in Emission Unit No. 4. This emission unit contains information on fugitive emissions that occur on a facility-wide basis. A summary of potential fugitive emission sources at the facility is presented in the following sections.

Criteria and Precursor Air Pollutants

Orange Cogeneration has not identified fugitive emission of sulfur dioxide, nitrogen oxides, carbon monoxide, or lead compounds which would exceed the thresholds defined in the permit application instructions.

Volatile Organic Compounds (VOCs)

Fugitive emissions of VOCs include those resulting from the use of cleaners and solvents for maintenance and operation.

Fugitive HAPs Emissions

The following hazardous air pollutants are present on the facility property and are potential sources of fugitive HAPs emissions:

- chlorine
- methyl ethyl ketone
- toluene
- xylene

Chlorine - Present in three 1-ton containers. Used for water treatment at the facility.

Methyl Ethyl Ketone, Toluene, Xylene - The facility maintains several containers of paint thinner and solvents (which may contain MEK, toluene, or xylene) for use in plant maintenance activities. These containers are kept closed and are stored in weather-tight buildings. These emissions as a whole are addressed in the VOC section (preceding page).

Regulated Toxic or Flammable Substances

The following regulated toxic or flammable substances are present at the Orange Cogeneration facility:

- chlorine
- acetylene
- methane (natural gas)

Chlorine, Hydrazine, Hydrochloric Acid - Considered on the preceding page.

Acetylene - Present on the facility property in 100-lb cylinders which are used for plant maintenance (welding and cutting).

Methane - Is a primary component of natural gas. The facility has a natural gas pipeline which delivers fuel to the generating units. This fuel delivery system is normally airtight, but does have safety valves which may open if an overpressure condition develops in the gas line.

ATTACHMENT OR-FE-8

LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

ATTACHMENT OR-FE-8

LIST OF EQUIPMENT/ACTIVITIES - TITLE VI

The Orange Cogeneration Facility currently has 14 refrigeration and air condition units on the plant facility. Of these, 3 air cooling units meet the 50-pound threshold established by the Department. All of the units are listed below:

Unit List	Refrigerant (lb - oz)	Type
Chiller Unit(3 units)	2200 - 0	R - 123

ATTACHMENT OR-FE-12

COMPLIANCE ASSURANCE MONITORING PLAN

ATTACHMENT OR-FE-12

Compliance Assurance Monitoring Plan will be submitted to the implementing agency by required date.

ATTACHMENT OR-FE-14

COMPLIANCE REPORT AND PLAN

ATTACHMENT OR-FE-14a
COMPLIANCE REPORT AND PLAN

The facility and emissions units identified in this application are in compliance with the Applicable Requirements identified in Sections B and D of the application form and attachments referenced in Section E. 11. and L. 12. (if included). Compliance is certified as of the date this application is submitted to the Florida Department of Environmental Regulation as required in Rule 62-213.420(1)(a) F.A.C. Compliance statements will be submitted to the Department no less frequently than annually. Any exceptions to this certification are noted below. The information provided in the following attachments provide a summary of emission limitations and schedules for determining compliance for each regulated emission unit.

CUSTOM FUEL MONITORING SCHEDULE:

The combustion turbines only fire natural gas and the only limitation on sulfur dioxide emissions is 40 CFR 60.333. This NSPS limits fuel sulfur to 0.8 percent by weight; the maximum sulfur content of natural gas is 0.003 percent by weight. As an artifact of 40 CFR 60.334, daily monitoring of sulfur and nitrogen is required for fuel sources that have no intermediate storage (i.e., a storage tank). Since natural gas is supplied by pipeline this requirement, albeit unnecessary from a compliance standpoint, applies to the combustion turbines. Therefore, a custom fuel monitoring schedule presented below is requested. Similar provisions have been added recently to other natural gas fired combustion turbines.

Natural Gas

Pursuant to 40 CFR 60.334(b)(2), a custom fuel monitoring schedule shall be followed for the natural gas fired at this facility and shall be as follows:

Custom Fuel Monitoring Schedule for Natural Gas (NG)

1. Monitoring of fuel nitrogen content shall not be required when NG is the only fuel being fired in the turbines.
2. Sulfur Monitoring
    a. Analysis for fuel sulfur content of the NG fired at this facility 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 D1072-80, ASTM D3031-81, ASTM D3246-81, and ASTM D4084-82, as referenced in 40 CFR 60.335(b)(2).

b. This custom fuel monitoring schedule shall become effective on the date this permit is amended. Effective the date of this custom schedule, sulfur monitoring of NG fired at the facility 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 NG fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333 and in this permit, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters 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 or this permit, 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 sample analysis and fuel supply pertinent to this custom fuel monitoring schedule for NG 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.

Attachment OR-FE-14b
Compliance Report and Plan

Orange Cogeneration Limited Partnership
Orange Cogeneration Facility

In accordance with Chapter 62-213, F.A.C. and FDEP Permit No. AC53-233851B (PSD-FL-206B), expiration 4/1/98, the Orange Cogeneration Combustion Turbine Unit 1 and 2 are in compliance with the following tests and reports as follows:

Table 1. Compliance Report and Plan, Combustion Turbine Units 1 and 2.

Parameter	Value	Compliance Schedule
Hours of operation	8,760	Annual report
Maximum Heat Input Rate	368.3 MMBtu/hr, maximum at 47 °F, when using dry low-NOx combustion technology	Annual test
Fuel	Natural gas or biogas shall be burned.	Annual report
NOx Emission Limit (1-hour average)	25 ppmvd @ 15 % O2; 37 lb/hr, 161.9 TPY 15 ppmvd @ 15 % O2 by 1/1/98; 22.1 lb/hr, 97 TPY	Initial and subsequent annual tests; annual report
CO Emission Limit	30 ppmvd; 27.8 lb/hr, 127 TPY	Initial annual test; annual report
VOC Emission Limit	10 ppmvd; 3.98 lb/hr, 17.4 TPY	Initial annual test; annual report
PM/PM10 Emission Limit	5 lb/hr; 21.9 TPY	Initial annual test; annual report
Visible Emissions	VE shall not be equal to or exceed 10 % opacity; 6-minute average	Initial and subsequent annual tests; annual report

Note: Allowable emissions, lb/hr, at different inlet temperatures, shall not exceed rates given in manufacturer's data

Annual Compliance Test

Annual compliance tests must be performed at 12 month intervals for visible emissions (VE) and nitrogen oxides (NOx).
Initial compliance testing required for NOx, CO, PM/PM10, VOC, and VE.
Tests shall be conducted on both natural gas and biogas. If initial tests or fuel analyses show air pollutant emissions are independent of fuel, then annual tests can be conducted with either fuel.
Currently, biogas is not available.

Annual Report

An annual operation report must be submitted on the form supplied by FDEP on or before March 1 of each year.

Monitoring

A system to continuously monitor, fuel consumption, NOx, and O2 levels is required on each CT. NOx and O2 monitoring must meet requirements of 40 CFR 60, Appendix B using a CEM system.
The requirements of 40 CFR 75, Appendix A and B can be substituted for those of 40 CFR 60 provided minimum requirements of 40 CFR 60 are met.

NSPS

CTs shall comply with all requirements of 40 CFR 60, Subpart GG (adopted by reference in Rule 62-296.800(2)(a), F.A.C.

Attachment OR-FE-14b
Compliance Report and Plan

Orange Cogeneration Limited Partnership
Orange Cogeneration Facility

In accordance with Chapter 62-213, F.A.C. and FDEP Permit No. AC53-233852A (PSD-FL-206B), expiration 4/1/96, the Orange Cogeneration Facility - Auxiliary Boiler is in compliance with the following tests and reports as follows:

Table 2. Compliance Report and Plan, Orange Cogeneration Facility - Auxiliary Boiler

Parameter	Value	Compliance Schedule
Hours of operation	8,760	Annual report
Maximum Heat Input Rate	100 MMBtu/hr, maximum (HHV).	Annual test
Fuel	Natural gas or Biogas shall be burned; maximum sulfur content not exceed 1 grain/100 cubic ft	Annual fuel test
NOx Emission Limits	0.13 lb/MMBtu; 13 lb/hr, 56.9 TPY	Initial annual test; annual report
CO Emission Limits	0.10 lb/MMBtu; 10 lb/hr, 43.8 TPY	Initial annual test; annual report
VOC Emission Limits	0.04 lb/MMBtu; 4.3 lb/hr, 18.8 TPY	Initial annual test; annual report
SO2 Emission Limit	0.003 lb/MMBtu; 0.30 lb/hr; 1.3 TPY	Annual fuel test; annual report
PM/PM10 Emission Limit	0.01 lb/MMBtu; 1.0 lb/hr; 4.4 TPY	Annual test; annual report. No PM/PM10 testing is required if VE is less than 15 % opacity.
Visible Emissions	VE shall not exceed 15 % opacity.	Initial annual test

Annual Compliance Test

Annual compliance tests must be performed at 12 month intervals for visible emissions (VE) and nitrogen oxides (NOx).
Initial compliance testing required for NOx, CO, VOC, PM/PM10 (except as noted), and VE.
Currently, biogas is not available.

Annual Report

An annual operation report must be submitted on the form supplied by FDEP on or before March 1 of each year.

NSPS

The auxiliary boiler shall comply with all applicable requirements of 40 CFR 60, Subpart Dc.

ATTACHMENT OR-FE-15

COMPLIANCE STATEMENT

ATTACHMENT OR-FE-15

COMPLIANCE STATEMENT

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this 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.

Orange Cogeneration Limited Partnership, proposes that an annual statement of compliance shall be submitted with the annual operating report by March 1 of each year.

Signature, Responsible Official

6/14/96

Date

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[x] 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.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Combustion Turbine (CT) with HRSG, Unit 1**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **001**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **CT gases exhaust through a Heat Recovery Steam Generator (HRSG). HRSG services steam generator rated at 37 MW and furnishes steam to juice processing. The nameplate rating of the combustion turbine is 41.4 MW at 47° F. This is exempt from acid rain rule as per 40CFR72.6(a)(3)(vi) and 72.6(b)(6) (See Attachment OR-E01-L12).**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Stage Combustion Technology - Dry Low NOx Burners

2. Control Device or Method Code: **24**

B.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **16 Jun 1995**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **General Electric**	Model Number: **LM 6000 DLE**
4. Generator Nameplate Rating: **41** MW	
5. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	**368**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **Maximum heat input based on 387,684 MMcf/hr and 950 Btu/cf as low heating value (LHV) @ 47°F when firing natural gas or biogas. The initial startup date is the commercial date.**		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day	**7**	days/week
52	weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment OR-E01-D

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Stack (EU 1)**	
2. Emission Point Type Code: [X] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **One Emission Unit discharges through this stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**100** feet
7. Exit Diameter:	**11** feet
8. Exit Temperature:	**230** °F

9. Actual Volumetric Flow Rate:	**298,651** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **418.7** North (km): **3083.0**	
14. Emission Point Comment (limit to 200 characters): **Emission Point calculations are based on baseload conditions at 47°F for natural gas firing. See Attachment OR-E01-H8.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Internal Combustion Engines Electric Generation Natural Gas Turbine**	
2. Source Classification Code (SCC): **2-01-002-01**	
3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.389**	5. Maximum Annual Rate: **3,410**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **946**	
10. Segment Comment (limit to 200 characters): **Max rate at 47°F with heat content (MMBtu/SCC) based on lower heating value (LHV). Max percent sulfur: 1 grain/100 cf.**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Biogas**	
2. Source Classification Code (SCC): **2-01-999-99**	
3. SCC Units: **Million Cubic Feet Burned (all gaseous fuels)**	
4. Maximum Hourly Rate: **0.389**	5. Maximum Annual Rate: **3,410**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **946**	
10. Segment Comment (limit to 200 characters): **This unit is capable of firing biogas when available. Maximum rate at 47 °F with heat content (MMBtu/SCC) based on lower heating value (LHV). Maximum percent sulfur: 1 grain/100 cf.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	024		EL
CO			EL
PM			EL
VOC			EL
PM10			EL
SO2			EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **NOX**
2. Total Percent Efficiency of Control: **90** %
3. Potential Emissions: **37** lb/hour **162** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **25 ppmvd @ 15% O2** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential Emissions based on base load operating conditions at 47 °F.**

Emissions Unit Information Section 1 of 4
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **25 ppmvd @ 15% O2**	
4. Equivalent Allowable Emissions:	**37** lb/hour **162** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 20**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The CT Unit will be operated with dry low NOx burners designed to produce 25 ppmvd @ 15% O2. Allowable emissions established as BACT in Air Const. Permit (AC53-233851B, specific condition No.10.)**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions: **1 Jan 1998**	
3. Requested Allowable Emissions and Units: **15 ppmvd @ 15% O2**	
4. Equivalent Allowable Emissions:	**22.2** lb/hour **97.2** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 20**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **After 12/31/97, dry low NOx burners designed to produce 15 ppmvd @ 15% O2. Allowable emission established as BACT in Air Const. Permit (AC53-233851B, specific condition No. 11).**	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **27.8** lb/hour **121.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **30 ppmvd** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on base load operating conditions at 47 °F.**

Emissions Unit Information Section 1 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **30 ppmvd**	
4. Equivalent Allowable Emissions:	**27.8** lb/hour **121.9** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233851B, specific condition No.12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **21.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **5 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on base load operating conditions at 47 °F.**

Emissions Unit Information Section 1 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **5 lb/hr**	
4. Equivalent Allowable Emissions:	**5** lb/hour **21.9** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Tests EPA Method 5**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233851B; specific condition No.12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **VOC**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **4** lb/hour **17.4** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **10 ppmvd** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on base load operating conditions at 47 °F.**

Emissions Unit Information Section 1 of 4
Allowable Emissions (Pollutant identified on front page)

A.

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: **4** lb/hour	**17.4** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Method 18 or 25A**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emission established as BACT in Air Construction Permit (AC53-233851B, specific condition No.12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **21.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **5 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on base load operating conditions at 47 °F.**

Emissions Unit Information Section 1 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **5 lb/hr**	
4. Equivalent Allowable Emissions:	**5** lb/hour **21.9** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Tests EPA Method 5**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233851B; specific condition No.12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **1.11** lb/hour **4.87** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **1 grain/100 cu ft** Reference: **See Comment**
7. Emissions Method Code: [ ] 0 [ ] 1 [**X**] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit included in FDEP permit AC53-233851B/PSD-FL-206B. For inventory and PSD tracking purposes (not as an emission limit).**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential SO2 emissions are based on natural gas firing with a maximum sulfur content of 1 grain per 100 cu ft of gas.**

Emissions Unit Information Section 1 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**		
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): **Custom fuel monitoring**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60.333 limits SO2 emissions by limiting sulfur content to 0.8 percent; much higher than natural gas.**		

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE10**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **10.** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **VE limit established in Air Construction Permit (AC53-233851B; specific condition No.13).**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **Best operating practice**
5.	Visible Emissions Comment (limit to 200 characters): **Excess VE allowed for startup and shutdown pursuant to FDEP Rule 62-210.700(1); 2 hrs/24 hour period.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 2

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Rosemount Model Number: 951C Serial Number: 1000148	
5. Installation Date: 15 Apr 1995	
6. Performance Specification Test Date: 23 May 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required by NSPS (40 CFR60 Subpart GG). System installed in accordance with Air Construction Permit (AC53-233851B, specific condition NO.18); require 40CFR75, Appen. A,B can be substituted.	

Continuous Monitoring System Continuous Monitor 2 of 2

1. Parameter Code: EM	2. Pollutant(s): O2
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Servomex Model Number: 1400 B Serial Number: 01420/B409	
5. Installation Date: 15 Apr 1995	
6. Performance Specification Test Date: 23 May 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required by NSPS (40 CFR60 Subpart GG). System installed in accordance with Air Construction Permit (AC53-233851B), specific condition NO. 18); require 40CFR75, Appen A, B can be substituted.	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [x] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[X] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[X] C	[ ] E	[ ] Unknown
	NO_2	[X] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	PSD review was performed as part of FDEP Air Construction Permit AC53-233851B, PSD-FL-206B, March 7, 1995.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: OR-E01-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: OR-E01-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: OR-E01-L3	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: OR-E01-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 23 May 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: OR-E01-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[X] Attached, Document ID: OR-E01-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[X] Attached, Document ID: OR-E01-L12 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan

[X] Attached, Document ID: OR-E01-L13 [ ] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] 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: _____

[X] Not Applicable

ATTACHMENT OR-E01-D

EMISSION UNIT REGULATIONS

ATTACHMENT OR-E01-D
Applicable Requirements Listing - Power Plants

EMISSION UNIT: Orange Cogeneration Facility - Combustion Turbines

FDEP Rules:

Air Pollution Control-General Provisions:
62-204.800(7)(b)37.(State Only) - NSPS Subpart GG
62-204.800(7)(d) (State Only) - NSPS General Provisions

Stationary Sources-General:
62-210.700(1) - Excess Emissions; Startup/shutdown/malfunction
62-210.700(4) - Excess Emissions; poor maintenance
62-210.700(6) - Excess Emissions; reporting

Stationary Sources-Emission Monitoring (where stack test is required):
62-297.310(1) - Test Runs-Mass Emission
62-297.310(2)(b) - Operating Rate
62-297.310(3) - Calculation of Emission
62-297.310(4)(a) - Applicable Test Procedures;Sampling time
62-297.310(4)(b) - Sample Volume
62-297.310(4)(c) - Required Flow Rate Range-PM/H2SO4/F
62-297.310(4)(d) - Calibration
62-297.310(4)(e) - EPA Method 5
62-297.310(5) - Determination of Process Variables
62-297.310(6)(a) - Permanent Test Facilities-general
62-297.310(6)(c) - Sampling Ports
62-297.310(6)(d) - Work Platforms
62-297.310(6)(e) - Access
62-297.310(6)(f) - Electrical Power
62-297.310(6)(g) - Equipment Support
62-297.310(7)(a)3. - Permit Renewal Test Required
62-297.310(7)(a)4.b. - Annual Test
62-297.310(7)(a)9. - FDEP Notification - 15 days
62-297.310(8) - Test Reports

Federal Rules:

NSPS General Requirements:
40 CFR 60.7(b) - Notification/Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(f) - Notification/Recordkeeping (maintain records-2 years)
40 CFR 60.8(c) - Performance Tests (representative conditions)
40 CFR 60.8(e) - Performance Tests (Provide stack sampling facilities)
40 CFR 60.8(f) - Test Runs
40 CFR 60.11(a) - Compliance (ref. S. 60.8)
40 CFR 60.11(d) - Compliance (maintain air pollution control equipment)
40 CFR 60.12 - Circumvention

NSPS Subpart GG:

40 CFR 60.332(a)(1)	- NOx for Electric Utility Cts
40 CFR 60.333	- SO2 limits (0.8% sulfur)
40 CFR 60.334	- Monitoring of Operations (Custom monitoring plan)
40 CFR 60.335	- Test Methods

ATTACHMENT OR-E01-H8

CALCULATION OF EMISSIONS

ATTACHMENT OR-E01-H8. Calculation of Emissions

Table 1. Design Information and Stack Parameters, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility
Combustion Turbines, GE LM6000

Data	Unit 1	Unit 2
General		
Power (MW)	41.4	41.4
Heat Input (MMBtu/hr, HHV)	409	409
Heat Input (MMBtu/hr, LHV)	368.3	368.3
Estimated Heat Rate (Btu/kwh, LHV)	8,887	8,887
Hours of operation	8,760	8,760
CT Exhaust Flow		
Mass Flow (lb/hr)	1,013,700	1,013,700
Temperature (oF)	883	883
Moisture (% Vol.)	6.88	6.88
Oxygen (% Vol.)	14.13	14.13
Molecular Weight	28.49	28.49
Fuel Consumption (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu ÷ Fuel Heat Content, LHV (Btu/lb)		
Heat Input (MMBtu/hr, LHV)	368.3	368.3
Heat Content (Btu/lb, LHV)	19,000	19,000
Heat Content (Btu/cf;LHV)	946	946
Fuel Usage(lb/hr)	19,384	19,384
Fuel Usage(cf/hr)	389,323	389,323
(MMcf/yr)	3,410	3,410
Volume Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] ÷ [Molecular weight x 2116.8] ÷ 60 min/hr		
Mass Flow (lb/hr)	1,013,700	1,013,700
Temperature (°F)	883	883
Molecular Weight	28.49	28.49
Volume Flow (acfm)	581,287	581,287
Turbine Volume Flow (dscfm)= [(Mass Flow (lb/hr) x 1,545 x (68°F + 460°F)] ÷ [Molecular weight x 2116.8] ÷ 60 min/hr x [(1 - % Moisture)/100]		
Mass Flow (lb/hr)	1,013,700	1,013,700
Temperature (°F)	883	883
Molecular Weight	28.49	28.49
Moisture (% Vol.)	6.88	6.88
Volume Flow (dscfm)	541,294	541,294
HRSG Stack Data		
Stack Height (ft)	100	100
Diameter (ft)	11.0	11.0
Volume Flow (acfm) from HRSG = [Volume flow (acfm) x (HRSG temp.(°F) + 460°F)] ÷ [CT temp.(°F)+ 460°F]		
Volume Flow (acfm) from CT	581,287	581,287
CT Temperature (°F)	883	883
HRSG Temperature (°F)	230	230
Volume Flow (acfm) from HRSG	298,651	298,651
Velocity (ft/sec) = Volume flow (acfm) from HRSG ÷ [((diameter)²÷ 4) x 3.14159] ÷ 60 sec/min		
Volume Flow (acfm) from HRSG	298,651	298,651
Diameter (ft)	11.0	11.0
Velocity (ft/sec)	52.4	52.4

Note: Universal gas constant = 1,545 ft-lb(force)/°R;
Atmospheric pressure = 2,116.8 lb(force)/ft²

Source: Design Information, Combine Cycle Operation, GE LM6000, Application to Construct, Table A-9, dated 10/25/93.

ATTACHMENT OR-E01-H8. Calculation of Emissions

Table 2. Maximum Emissions for Emissions Limited Pollutants, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility Combustion Turbines, GE LM6000

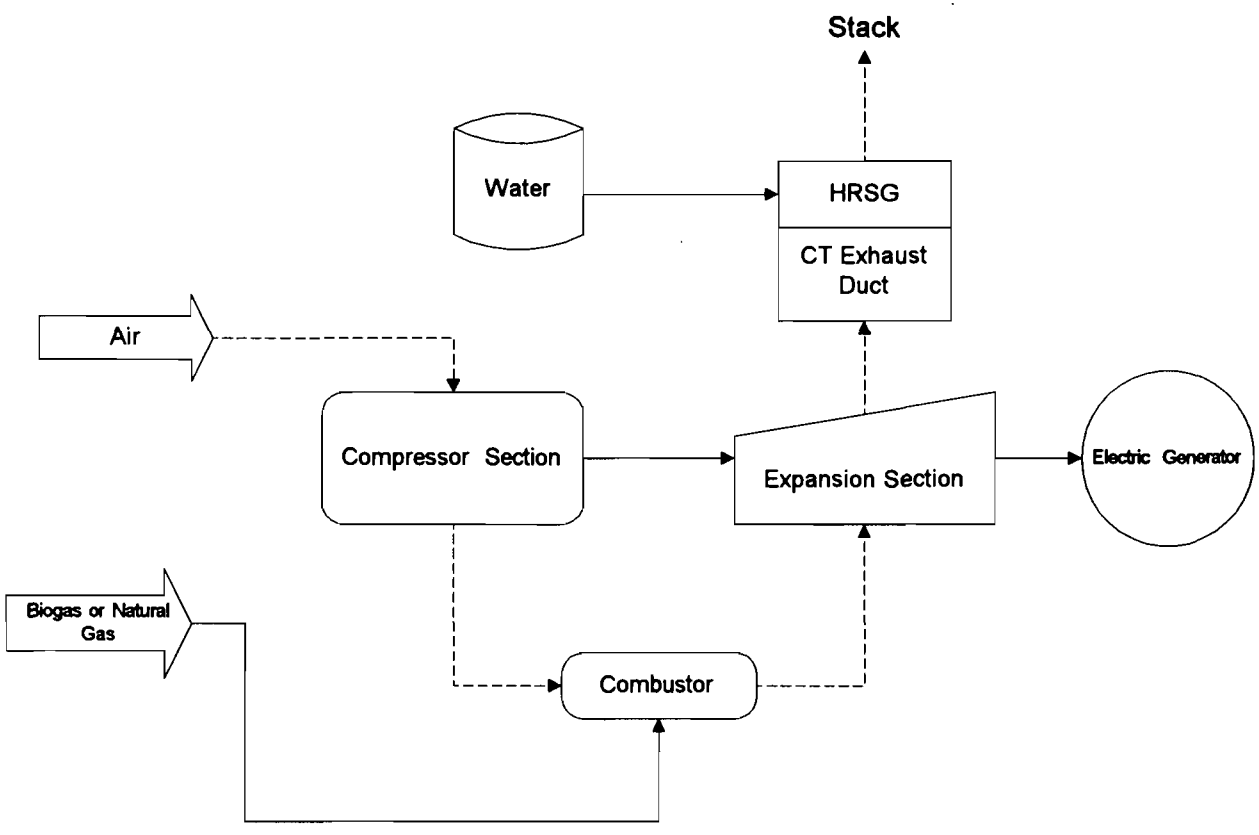
Pollutant/Units	Unit 1	Unit 2
Hours of Operation	8,760	8,760
Heat Input (MMBtu/hr)	409	409
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer		
Basis (1)	BACT	BACT
Emission Factor (lb/MMBtu)	0.012	0.012
Emission Rate (lb/hr)	5.0	5.0
(TPY)	21.9	21.9
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen (%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr ÷ [1545 x (CT temp. (°F) + 460°F) x 1,000,000 (adj. for ppm)]		
Basis (1)	BACT	BACT
Emission Factor (ppmvd @15% O2)	25	25
Moisture (%)	6.88	6.88
Oxygen (%)	14.13	14.13
Volume Flow (acfm)	581,287	581,287
Temperature (°F)	883	883
Emission Rate (lb/hr)	37.0	37.0
(TPY)	162.0	162.0
CO (lb/hr)= CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr ÷ [1545 x (CT temp. (°F) + 460°F) x 1,000,000 (adj. for ppm)]		
Basis (1)	BACT	BACT
Emission Factor (ppmvd)	30.0	30.0
Moisture (%)	6.88	6.88
Volume Flow (acfm)	581,287	581,287
Temperature (°F)	883	883
Emission Rate (lb/hr)	27.8	27.8
(TPY)	121.9	121.9
VOCs (lb/hr)= VOC(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 12 (mole. wgt as carbon) x 60 min/hr ÷ [1545 x (CT temp. (°F) + 460°F) x 1,000,000 (adj. for ppm)]		
Basis (1)	BACT	BACT
Emission Factor (ppmvd)	10.0	10.0
Moisture (%)	6.88	6.88
Volume Flow (acfm)	581,287	581,287
Temperature (°F)	883	883
Emission Rate (lb/hr)	3.98	3.98
(TPY)	17.4	17.4

Note: ppmvd = parts per million, volume dry; O2 = oxygen.

Sources: (1) Emission limit established as BACT; Permit AC53-233851B;

ATTACHMENT OR-E01-L1

PROCESS FLOW DIAGRAM



Process Flow Legend	Orange Cogeneration Facility Process Flow Diagram	*Emission Unit:* Combustion Turbine Unit 1, 2	KBN Engineering and Applied Sciences, Inc.
Gas Flow		*Process Area:* Overall Plant	
Solid / Liquid Flow		*Filename:* ORANGE.VSD	
		Latest Revision Date: 5/2/96 05:15 PM	

ATTACHMENT OR-E01-L2

FUEL ANALYSIS OR SPECIFICATION

Attachment OR-E01-L2

Fuel Analysis

Fuel	Density (lb/gal)[a]	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas (biogas)	0.045[b]	—	1[c]	0.42[d]	—	20,750 BTU/lb 950 Btu/ft^3

[a] At 60 degrees F.
[b] Represented as lb/ft^3. Based on heat capacities presented.
[c] Represented as grains/100 ft^3.
[d] Atmospheric nitrogen.

Source: Orange Cogeneration L.P., Fuel Analysis Samples, 1995

ATTACHMENT OR-E01-L3

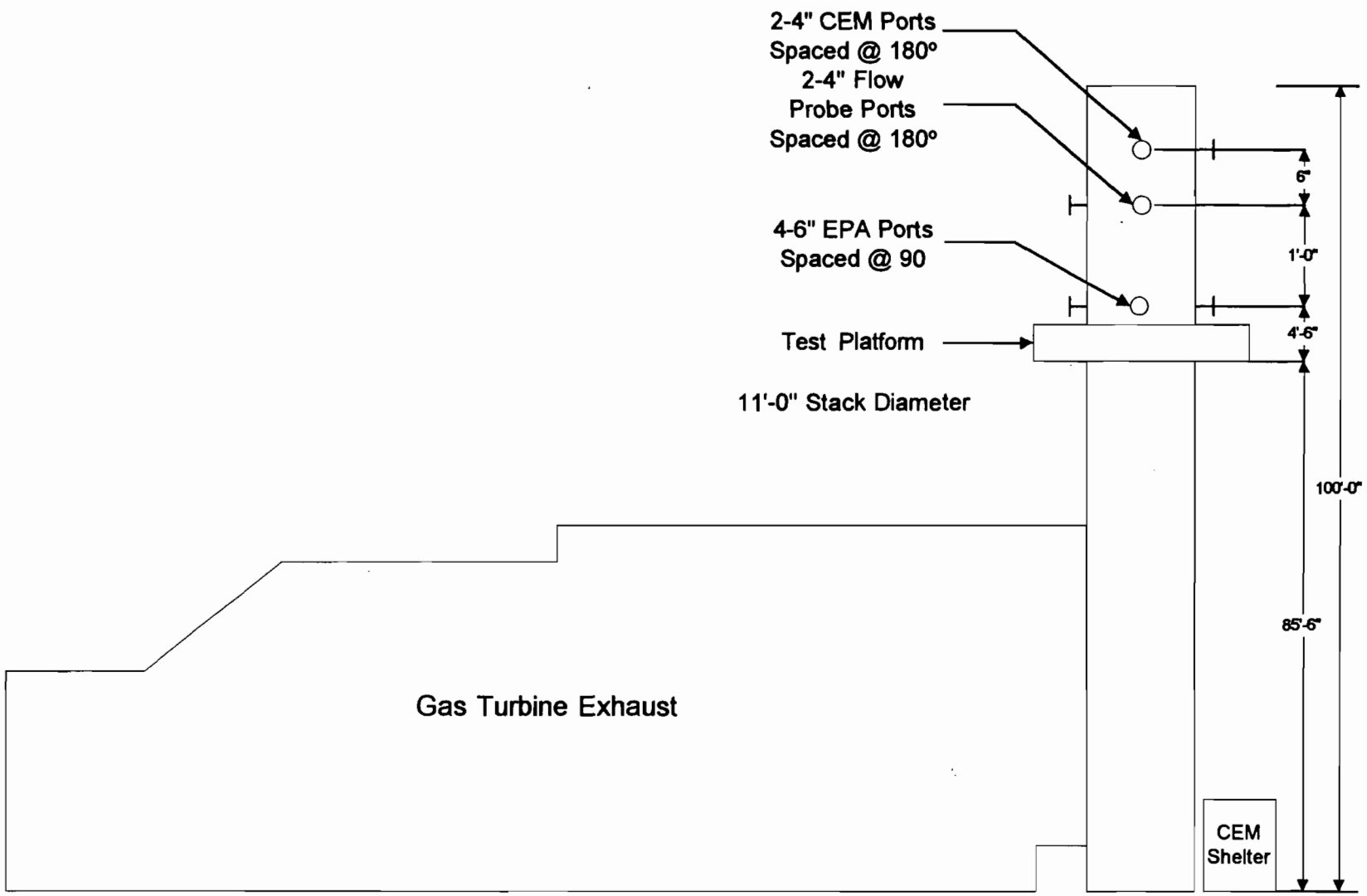
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT OR-EU1-L3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The combustion turbine uses dry low-NOx combustion to control NOx emissions resulting from the combustion of natural gas. The control of NOx is accomplished by reducing the flame temperatures through the use of staged combustion techniques. At lower loads, the combustors operates in a diffusion mode with lean mixtures of air and gas. At higher loads, the combustors operate in a premix mode where gas and air are mixed prior to combustion. The control systems for the machine when firing natural gas are internal to the digital control systems (DCS).

ATTACHMENT OR-E01-L4

DESCRIPTION OF STACK SAMPLING FACILITIES



Attachment OR-EU1-I4 Description of Stack Sampling Facilities Orange Cogeneration Project	*Emission Unit:* CT UNIT 1, 2 *Attachment:* OR-EU1-I4 *Filename:* ORANGE.VSD *Latest Revision Date:* 5/2/96 05:22 PM	KBN Engineering and Applied Sciences, Inc.

ATTACHMENT OR-E01-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT OR-E01-L6
PROCEDURES FOR STARTUP/SHUTDOWN

Startup for the combustion turbines begins with "lighting off" of the machines on natural gas or biogas. A period of from two to several hours is required to allow metal temperatures in the heat recovery steam generator (HRSG) and in the steam turbine to equilibrate without undue metal stress, during this time the unit is placed "on the line" and begins sending electrical power to the grid at reduced loads to allow equipment to come up to pressures and temperatures.

The combustion turbines (CTs) utilize dry-low-NO_x combustors for NO_x control during startup and shutdown. Emissions are continuously monitored by Continuous Emission Monitors (CEMs) for O_2 and NO_x. If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective actions taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control. Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop.

ATTACHMENT OR-E01-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT OR-E01-L10
ALTERNATIVE METHODS OF OPERATION

The combustion turbine can fire natural gas and biogas.

ATTACHMENT OR-E01-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

March 19, 1996

Mr. Jerry Kissel
District Air Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Title V Facility (Automatic Extension of Air Permits)
Permit No. AC53-233852A, PSD-FL-206B

Dear Mr. Kissel:

The Orange Cogeneration, L.P. facility is subject to the New Source Performance Standards under Title 40 CFR 60 and 62-296.800 FAC is classified as a Title V Facility. Pursuant to 62-213.420(1)(a)(4), the aforementioned air permit is to expire on April 1, 1996. On behalf of Orange Cogeneration, L.P., KBN's understanding of the rule is that the expiration date is extended to November 1, 1996, or until the Title V operating permit for this facility is issued.

Should you have any questions or concerns, please contact me at (813) 287-1717.

Sincerely,

Albert W. Morneault, P.E.
Staff Engineer
KBN, Tampa

AWM/vdp.1(2)

xc: Mr. Wade Smith, Orange Cogeneration, L.P.
9652010-1000(2.1)

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street
Suite 500
Gainesville, Florida 32653-1500
352-336-5600 FAX 352-336-6603

5405 West Cypress Street
Suite 215
Tampa, Florida 33607
813-287-1717 FAX 813-287-1716

1801 Clint Moore Road, Suite 105
Boca Raton, Florida 33487
407-994-9910
FAX 407-994-9393

7785 Baymeadows Way
Suite 105
Jacksonville, Florida 32256
904-739-5600 FAX 904-739-7777

1616 'P' Street NW, Suite 350
Washington, DC 20036
202-462-1100
FAX 202-462-2270

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF REVISED PERMITS

In the matter of an Application for Revised Permits by:

DEP File Nos. AC 53-233852A
AC 53-233851B
PSD-FL-206A&B
Polk County

Mr. William R. Malenius
Director of Project Development
Orange Cogeneration Limited Partnership
23046 Avendia De La Carlota
Laguna Hills, CA 92653

Enclosed are revised permits, Nos. AC 53-233852A & AC 53-233851B and PSD-FL-206B, and the revised Best Available Control Technology (BACT) determination for two gas combustion turbines and one auxiliary boiler to be located in Bartow, Polk County, Florida. These revised permits and BACT determination change the nitrogen oxides emission standard concentration from 15 parts per million by volume dry corrected to 15 percent oxygen and ISO ambient standard conditions (15 ppmvd @ 15% O_2 @ ISO) to the observed concentration of 15 ppmvd @ 15% O_2. These revised permits and BACT determination are issued pursuant to Section 403, Florida Statutes.

Any party to this Order (revised permits) has the right to seek judicial review of the revised permits pursuant to Section 120.68, Florida Statutes, by filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 14 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF REVISED PERMITS and all copies were mailed by certified mail before the close of business on 3-7-95 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 3-7-95
Date

Copies furnished to:

B. Thomas, SWD
J. Harper, EPA
J. Bunyak, NPS
L. Novak, PCESD
K. Kosky, P.E., KBN
T. Donovan, OCLP

FINAL DETERMINATION

Orange Cogeneration L.P.

AC 53-233852A & AC 53-233851B
PSD-FL-206B

An Intent to Issue Revised Permits for Orange Cogeneration Limited Partnership proposed combustion turbines and auxiliary boiler to be located in Bartow, Polk County, Florida, was distributed on December 29, 1994. The Notice of Intent to Issue Revised Permits was published in the Polk County Democrat on January 5, 1995.

Orange Cogeneration Limited Partnership submitted a comment in a letter dated January 26, 1995. It was noted that the nitrogen oxides emission standard in Specific Condition No. 19 had the ISO condition listed and not been revised, which was the purpose of the request. The Department agrees with this comment and has corrected the condition.

The final action of the Department will be to issue the revised permits and BACT as proposed in the Intent to Issue Revised Permits, except for the change noted above.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

PERMITTEE:
Orange Cogeneration Limited Partnership
23046 Avenida De La Carlota
Suite 400
Laguna Hills, CA 92653

Permit Number: AC53-233851B
PSD-FL-206B
Expiration Date: April 1, 1998
County: Polk
Latitude/Longitude: 27°52'15"N
81°49'31"W
Project: Two Combustion Turbines

This revised permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto and specifically described as follows:

Installation of two natural gas/biogas fired GE LM 6000 (or equivalent) combustion turbines (CT), two heat recovery steam generators and one steam turbine. An auxiliary boiler (AC53-233852) is being permitted separately. The CTs will be equipped with **a staged combustion technology** dry low-NO_x system to control nitrogen oxides (NO_x) emissions. Each CT will be equipped with a 100 ft. high, 11 ft. diameter stack that will handle approximately 300,000 actual cubic feet per minute of flue gas at 230°F. The cogeneration facility will be located on Clear Springs Road, Bartow, Polk County, Florida.

The UTM coordinates of this facility are Zone 17, 418.75 km East and 3083.0 km North.

The emissions unit(s)/sources shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:
1. Application received July 1, 1993.
2. Department's July 22, 1993 letter.
3. KBN's August 5, 1993 letter.
4. KBN's August 29, 1993 letter.
5. Tables 1 and 2, Allowable Emission Rates.
6. KBN's October 28, 1993 letter.
7. KBN's October 29, 1993 letter.
8. Department's February 18, 1994 letter.
9. KBN's March 11, 1994 letter.
10. Department's March 29, 1994 letter.
11. KBN's June 22, 1994 letter.
12. KBN's October 10, 1994 letter.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and,

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(x) Determination of Best Available Control Technology (BACT)
(x) Determination of Prevention of Significant Deterioration (PSD)
(x) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and,
- the results of such analyses.

GENERAL CONDITIONS:

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

This permit replaces permit No. AC53-233851/PSD-FL-206 and amended construction permit No. AC53-233851A/PSD-FL-206A.

Construction Requirements

1. Dry low-NO_X **combustion technology** systems shall be installed and operated on each combustion turbine (CT).

2. A system to continuously monitor the fuel consumption, nitrogen oxides emissions, and oxygen content of the flue gas shall be installed on each CT.

3. The heat recovery steam generator (HRSG) installed on each CT shall not be equipped with an auxiliary/duct burner.

4. Each CT stack shall be equipped with stack sampling facilities (sample ports, work platforms, access, and electrical power) that meet the specifications given in Rule 62-297.345, F.A.C.

Operation Limitations

5. The CTs shall comply with all requirements of 40 CFR 60, Subpart GG (July, 1993), Standard of Performance for Stationary Gas Turbines, which is adopted by reference in Rule 62-296.800(2)(a), F.A.C.

6. The facility is allowed to operate continuously, 8760 hours per year.

7. Only natural gas/biogas fuel shall be used for fuel at this facility.

8. Each CT shall have a maximum heat input of 368.3 MMBtu/hr, when using dry low NO_X technology to control NO_X emissions.

9. The operation of this facility shall not create a nuisance or discharge air pollutants that cause or contribute to objectionable odors **pursuant to Rule 62-296.320(2), F.A.C.**

SPECIFIC CONDITIONS:

Emission Limitation

10. Prior to January 1, 1998, the maximum NO_x concentration, 1-hour average, from each CT/HRSG unit, shall not exceed 25 parts per million by volume dry corrected to 15 percent oxygen (25 ppmvd @ 15% O_2), as determined by the procedures in Specific Conditions Nos. 16, 17 and 18.

11. After December 31, 1997, the maximum NO_x concentration, 1-hour average, from each CT/HRSG unit, shall not exceed 15 ppmvd @ 15% O_2, as determined by the procedures in Specific Conditions Nos. 16, 17 and 18. Should the NO_x standard of 15 ppmvd @ 15% O_2 not be achieved during the initial compliance tests, the permittee will provide the Department with a plan and schedule to meet this standard. The permittee shall obtain prior approval from the Department for any air pollution control equipment not addressed in this permit that is needed to meet the NO_x emission standard.

12. The maximum emission rates for particulate matter (PM/PM_{10}), volatile organic compounds (VOC), NO_x, and carbon monoxide (CO) shall not exceed any of the rates listed in Table 1, Allowable Emission Rates.

13. Visible emissions shall not exceed 10 percent opacity, 6 minute average.

14. The emission rates for sulfur dioxide (SO_2) and sulfuric acid (H_2SO_4) mist, listed in the following table, shall be used for inventory purposes only.

Maximum Emission Rates for Each Combustion Turbine
For Inventory and PSD Tracking Purposes Only

Pollutant	Combustion Turbine Dry Low NO_x Combustion	
	lb/hr	TPY
SO_2	1.11	4.87
H_2SO_4 mist	0.085	0.37

15. Manufacturer's curves for the emission rate correction to other temperatures at different loads shall be provided to DEP for review **by January 1, 1998.** Until new curves are approved by the Department or the combustion turbines meet the NO_x emission standard of 15 ppmvd @ 15% (whichever occurs first), the stack, operator, and emission data for the proposed combustion turbines in

ORANGE COGENERATION LIMITED PARTNERSHIP
AC53-233851B (PSD-FL-206B)
42 MW COMBINED CYCLE GAS TURBINES

Table 1 - Allowable Emission Rates[b] for each Combustion Turbine

Pollutant[a]	Control[e]	Allowable Emissions Standards/Limitations Concentration	Compl. Date	Maximum Corrected[c] lbs/hr	TPY	Basis for Limit
NO_x	DLN	25 ppmvd at 15% O_2[d]	initial	37.0	161.9	BACT
	DLN	15 ppmvd at 15% O_2[d]	1/1/98	22.1	97.0	BACT
CO	GC[f]	30 ppmvd		27.8	127.0	BACT
PM/PM_{10}	GC[f]			5	21.9	BACT
VOC	GC[f]	10 ppmvd		3.98	17.4	BACT

[a] Pollutant emissions are based on 8,760 hours per year operation firing natural gas or biogas.

[b] Allowable emissions, lbs/hr, at different inlet temperatures shall not exceed the rates given in the manufacturer's data required by specific condition No. 15.

[c] Maximum emission rates not to be exceeded.

[d] The NO_x maximum concentration will be lowered to 15 ppmvd at 15% O_2 by 1/1/98 using appropriate combustion technology improvements. Should this level of control not be achieved when the initial compliance demonstration stack tests are performed, the permittee must provide the Department with a plan and schedule to meet this standard. NO_x emission concentrations are to be corrected to 15 percent oxygen to demonstrate compliance with the NO_x emissions standard.

[e] Dry Low-NO_x (DLN) combustors.

[f] Good Combustion.

SPECIFIC CONDITIONS:

Table 2-4 **(October 28, 1993)** will be used. The data will be used to determine compliance with the maximum allowable emission rates of the regulated air pollutants at different air inlet temperatures for these turbines.

Compliance Determination

16. Testing of emissions shall be conducted at **95-100%** of the manufacturer's rated heat input based on the **average air inlet temperature** for the CT during the test. **Compliance for NO_x emission limits shall be determined by calculating the concentration of NO_x (ppmvd at 15% O_2) and using the turbine manufacturer's thermal throughput rating for the average air inlet temperature by multiplying the permitted emission limit by the ratio of the tested heat input to the maximum heat input (MMBtu/hr) at this temperature.** Compliance with the visible emissions, NO_x, SO_2, CO, PM/PM_{10}, and VOC emission standards shall be determined within 60 days of achieving maximum production but not later than 180 days after initial firing of each CT (40 CFR 60.8). Compliance with the visible emissions **limitation and the** NO_x and SO_2 **emission** standards shall be determined annually thereafter. **Tests shall be conducted on both natural gas and biogas fuels. If the initial tests or fuel analyses show the emissions of air pollutants from the combustion turbines are independent of the fuel (natural gas or biogas fuel), then annual compliance tests can be conducted while the combustion turbines are burning either fuel.**

17. Compliance shall be determined by the following test methods listed in 40 CFR 60, Appendix A (July, 1993).

Pollutant	EPA Method
PM/PM_{10}*	5 or 17**
NO_x	20
CO	10
VOC	18 or 25A
Visible Emissions	9

NOTE: **No** other test methods may be used for compliance testing **unless** prior Department **written** approval **has been received.**
* **Assumption is that all PM is PM_{10}.**
** Stack flue gas temperature must be less than 320°F to use Method 17.

SPECIFIC CONDITIONS:

Monitoring

18. **NO_x and oxygen monitoring to meet the requirements of 40 CFR 60, Subpart GG, shall be accomplished using a continuous emission monitoring (CEM) system. The CEM system shall meet the requirements of 40 CFR 60, Appendix B. The requirements of 40 CFR 75, Appendices A and B, can be substituted for those of 40 CFR 60 provided the minimum criteria of 40 CFR 60 are met. NO_x monitoring to indicate compliance with the BACT limit shall be based on one hour average emissions determined on ppmvd @ 15% O_2.**

Administrative Requirement

19. Prior to January 1, 1998, the permittee shall provide a report showing how the allowable NO_x emissions of 15 ppmvd @ 15% O_2 is achieved by the CTs.

20. The permittee shall provide the Southwest District office with the following notifications required by 40 CFR 60.7:

- When construction commenced within 30 days of commencement of construction
- Anticipated date of initial starting 30 to 60 days prior to startup
- Actual date of startup up within 15 days after the starting
- Notification of the date of the compliance tests not less than 30 days prior to the test

21. Pursuant to Rule 62-210.370(2), F.A.C., Air Operating **Reports**, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur content and the lower heating value of the fuel being fired, fuel usage, hours of operation, and air emissions. Annual reports shall be sent to the Department's Southwest District office by March 1 of each calendar year.

22. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the **Department's** Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

23. An application for an operation permit must be submitted to the **Department's** Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the

construction permit, and compliance test reports as required by this permit (Rules 62-4.055 and 62-4.220, F.A.C.).

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell, Secretary

ATTACHMENT OR-E01-L13

COMPLIANCE ASSURANCE MONITORING PLAN

ATTACHMENT OR-E01-L13

COMPLIANCE ASSURANCE MONITORING PLAN

Compliance Assurance Monitoring Plan will be submitted to the implementing agency by required date.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[x] 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.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Combustion Turbine (CT) with HRSG, Unit 2**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **002**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **The CT gases exhaust through a Heat Recovery Steam Generator (HRSG). The HRSG services a steam generator rated at 37 MW and furnishes steam to juice processing. The nameplate rating of the combustion turbine is 41.4 MW at 47° F. This unit is exempt from acid rain rule as per 40CFR72.6(a)(3)(vi) and 72.6(b)(6).**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Stage Combustion Technology - Dry Low NOx Burners

2. Control Device or Method Code: **24**

B.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **16 Jun 1995**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **General Electric**	Model Number: **LM 6000 DLE**
4. Generator Nameplate Rating: **41** MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	**368**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **Maximum heat input based on 387,684 MMcf/hr and 950 Btu/cf as low heating value (LHV) @ 47°F when firing natural gas or biogas. The initial start-up date is the commercial date.**		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
	24 hours/day	**7** days/week	
	52 weeks/yr	**8,760** hours/yr	

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment OR-E01-D

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Stack (EU 2)**
2. Emission Point Type Code: [**X**] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Gases from one emission unit discharge through stack.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [**X**] V [ ] W
6. Stack Height: **100** feet
7. Exit Diameter: **11** feet
8. Exit Temperature: **230** °F

9. Actual Volumetric Flow Rate:	**298,651** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **418.7** North (km): **3083.0**

14. Emission Point Comment (limit to 200 characters):

Emission Point calculations are based on baseload conditions at 47°F for natural gas firing. See Attachment OR-E01-H8.

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Internal Combustion Engines Electric Generation Natural Gas Turbine**	
2. Source Classification Code (SCC): **2-01-002-01**	
3. SCC Units: **Million Cubic Feet Burned (all gaseous fuels)**	
4. Maximum Hourly Rate: **0.389**	5. Maximum Annual Rate: **3,410**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **946**	
10. Segment Comment (limit to 200 characters): **Maximum rate at 47°F with heat content (MMBtu/SCC) based on lower heating value (LHV). Maximum percent sulfur: 1 grain/100 cf.**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Biogas**	
2. Source Classification Code (SCC): **2-01-999-99**	
3. SCC Units: **Million Cubic Feet Burned (all gaseous fuels)**	
4. Maximum Hourly Rate: **0.389**	5. Maximum Annual Rate: **3,410**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **946**	
10. Segment Comment (limit to 200 characters): **This unit is capable of firing biogas when available. Maximum rate at 47 °F with heat content (MMBtu/SCC) based on lower heating value (LHV). Maximum percent Sulfur: 1grain/1000 cf.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	024		EL
CO			EL
PM10			EL
VOC			EL
PM			EL
SO2			EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **NOX**
2. Total Percent Efficiency of Control: **90** %
3. Potential Emissions: **37** lb/hour **162** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **25 ppmvd @ 15% O2** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential Emissions based on 47°F operating conditions at base load and natural gas firing.**

Emissions Unit Information Section 2 of 4
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **25 ppmvd @ 15% O2**	
4. Equivalent Allowable Emissions:	**37** lb/hour **162** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 20**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Low NOx burners designed to produce 25 ppmvd @ 15% O2. Allowable emissions established as BACT in Const. Permit (refer to FDEP Air Const. Permit AC53-233851B, specific condition No. 10).**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions: **1 Jan 1998**	
3. Requested Allowable Emissions and Units: **15 ppmvd @ 15% O2**	
4. Equivalent Allowable Emissions:	**22.2** lb/hour **97.2** tons/year
5. Method of Compliance (limit to 60 characters): **Compliance test, EPA Method 20**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **After 12/31/97, low - NOx burners designed to produce 15 ppmvd @ 15% O2. Allowable emissions established as BACT in FDEP Air Construction Permit AC53-233851B, specific condition No. 11).**	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **27.8** lb/hour **121.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **30 ppmvd** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on natural gas firing only. Hourly and annual emission rate (tons/hr) is based on 47°F at base load.**

Emissions Unit Information Section 2 of 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **30 ppmvd**	
4. Equivalent Allowable Emissions:	**27.8** lb/hour **121.9** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test; EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Natural Gas firing; allowable emissions established as BACT in Construction Permit (FDEP AC53-233851B, specific condition #12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **21.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **5 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on natural gas firing only at 47°F and base load conditions.**

Emissions Unit Information Section 2 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **5 lb/hr**	
4. Equivalent Allowable Emissions:	**5** lb/hour **21.9** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions for natural gas firing established as BACT in Construction Permit (FDEP AC53-233851B; specific condition #12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **VOC**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **4** lb/hour **17.4** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **10 ppmvd** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on natural gas firing only at 47°F and base load conditions.**

Emissions Unit Information Section 2 of 4
Allowable Emissions (Pollutant identified on front page)

A.

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:	**4** lb/hour **17.4** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test; EPA Method 18 or 25A**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emission for natural gas firing established as a condition of Construction Permit (FDEP AC53-233851B, specific condition #12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **21.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **5 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on natural gas firing only at 47°F and base load conditions.**

Emissions Unit Information Section 2 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **5 lb/hr**	
4. Equivalent Allowable Emissions:	**5** lb/hour **21.9** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions for natural gas firing established as BACT in Construction Permit (FDEP AC53-233851B; specific condition #12).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted:	**SO2**
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	**1.11** lb/hour **4.87** tons/year
4. Synthetically Limited?	[ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions:	[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor:	**1 grain/100 cu ft**
Reference:	**See Comment**
7. Emissions Method Code:	[ ] 0 [ ] 1 [**X**] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

Potential-to-emit included in FDEP permit AC53-233851B/PSD-FL-206B. For inventory and PSD tracking purposes (not as an emission limit).

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Potential SO2 emissions are based on natural gas firing with a maximum sulfur content of 1 grain per 100 cu ft of gas.

Emissions Unit Information Section 2 of 4
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**		
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): **Custom fuel monitoring**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60.333 limits SO2 emissions by limiting sulfur content to 0.8 percent; much higher than natural gas.**		

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE10**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **10.** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **VE limit established in Air Construction Permit (AC53-233851B; specific condition No.13).**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **Best operating practice**
5.	Visible Emissions Comment (limit to 200 characters): **Excess VE allowed for startup and shutdown pursuant to FDEP Rule 62-210.700(1); 2 hrs/24 hour period.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement: [**X**] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: **Rosemount** Model Number: **951C** Serial Number: **1000149**	
5. Installation Date: **15 Apr 1995**	
6. Performance Specification Test Date: **23 May 1995**	
7. Continuous Monitor Comment (limit to 200 characters): **CEM required by NSPS (40 CFR60 Subpart GG). System installed in accordance with Air Construction Permit (AC53-233851B, specific condition NO.18); required 40 CFR75, Appen. A, B can be substituted.**	

Continuous Monitoring System Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **O2**
3. CMS Requirement: [**X**] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: **Servomex** Model Number: **1400 B** Serial Number: **01420/B407**	
5. Installation Date: **15 Apr 1995**	
6. Performance Specification Test Date: **23 May 1995**	
7. Continuous Monitor Comment (limit to 200 characters): **CEM required by NSPS (40 CFR60 Subpart GG). System installed in accordance with Air Construction Permit (AC53-233851B, specific condition NO.18); required 40 CFR75, Appen. A, B can be substituted.**	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [x] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[x] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[x] C	[ ] E	[ ] Unknown
	SO_2	[x] C	[ ] E	[ ] Unknown
	NO_2	[x] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	PSD review was performed as part of FDEP Air Construction Permit AC53-233851B, PSD-FL-206B, March 7, 1995.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: OR-E01-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: OR-E01-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: OR-E01-L3	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: OR-E01-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 23 May 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: OR-E01-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[X] Attached, Document ID: OR-E01-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[X] Attached, Document ID: OR-E01-L12 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan

[X] Attached, Document ID: OR-E01-L13 [ ] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] 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: _____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[X] 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.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Auxiliary Boiler**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **003**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **Emiss. unit provides steam to processing plant when CTs not running. Based on FDEP rule making, expir. dates of const. permits extended for Title V sources with permits that expired betw. 9/01/95 - 11/01/96 to later of 11/01/96 or 240 days after comm. oper. Because current const. permit expired 4/01/96 and oper. commenced 6/16/95, the const. permit has been extended to 11/01/96. Unit is exempt from acid rain rule (40CFR72.6(a)(3)(vi); 72.6(b)(6)).**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Low NOx Burners

2. Control Device or Method Code: 24

B.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	**16 Jun 1995**
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Zurn Nepco**	Model Number: **2 Drum Bent Tube Blr**
4. Generator Nameplate Rating:	MW
5. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	**100**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	**See Comment**	
5. Operating Capacity Comment (limit to 200 characters): **Maximum Production Rate: 83,000 lb/hr steam @ 205 psi**		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day	**7**	days/week
52	weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment OR-E03-D

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Stack (EU 3)**
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Gases from one emission unit discharge through stack.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **65** feet
7. Exit Diameter: **3.7** feet
8. Exit Temperature: **305** °F

9. Actual Volumetric Flow Rate:	**29,731** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **418.7** North (km): **3083.0**	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Ext. Comb. Boiler - Industrial Natural Gas Boiler

2. Source Classification Code (SCC):

   1-02-006-02

3. SCC Units:

   Million Cubic Feet Burned (all gaseous fuels)

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.106	**926**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:

9. Million Btu per SCC Unit:

   946

10. Segment Comment (limit to 200 characters):

    Maximum Hourly Rate: 0.1057. Maximum sulfur content - 1 grain/100 cf.

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Biogas**	
2. Source Classification Code (SCC): **1-02-999-99**	
3. SCC Units: **Million Cubic Feet Burned (all gaseous fuels)**	
4. Maximum Hourly Rate: **0.106**	5. Maximum Annual Rate: **926**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **946**	
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate: 0.1057. Maximum sulfur content - 1 grain/100 cf.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
NOX	024		EL
CO			EL
VOC			EL
PM10			EL
SO2			EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **1** lb/hour **4.4** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **1 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 of 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **1 lb/hr**	
4. Equivalent Allowable Emissions: **1** lb/hour	**4.4** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Methods 5 or 17**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **1. Allowable emissions established as BACT in Air Construction Permit (AC53-233852A, Specific Condition No. 12). No annual test required if VE limitation is less than 15% opacity.**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **NOX**
2. Total Percent Efficiency of Control: **90** %
3. Potential Emissions: **13** lb/hour **56.9** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.13 lb/MMBtu** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 of 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.13 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**13** lb/hour **56.9** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 7E**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **1. The auxiliary boiler will operate with low NOx burners. 2. Allowable emissions established as BACT in Air Construction Permit (AC53-233852A, specific condition No.10).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **10** lb/hour **43.8** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.1 lb/MMBtu** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

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:	**10** lb/hour **43.8** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233852A, specific condition No.10).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **VOC**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **4** lb/hour **17.52** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.04 lb/MMBtu** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 of 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.04 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**4** lb/hour **17.52** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Method 18 or 25A**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233852A, specific condition No. 10).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **1** lb/hour **4.4** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **1 lb/hr** Reference: **Permit Limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 of 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **1 lb/hr**	
4. Equivalent Allowable Emissions:	**1** lb/hour **4.4** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Methods 5 or 17**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **1. Allowable emissions established as BACT in Air construction permit (AC53-233852A, Specific Condition No. 12). No annual test required if VE limitation is less than 15% opacity.**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **0.3** lb/hour **1.3** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.003 lb/MMBtu** Reference: **Permit limit (BACT)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment OR-E03-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions based on full load operating conditions.**

Emissions Unit Information Section 3 **of** 4

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.003 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**0.3** lb/hour **1.3** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis for sulfur content**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions established as BACT in Air Construction Permit (AC53-233852A, specific condition No. 11).**	

B.

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE15**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **15** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **VE limit established in Air Construction Permit (AC53-233852A; specific condition No.9).**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters): **1. Rule 62-210.700(1). 2. Not to exceed 2 hr in 24hr.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[X] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[X] C	[ ] E	[ ] Unknown
	NO_2	[X] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	PSD review was performed as part of FDEP Air Construction Permit AC53-233852A, PSD-FL-206B, March 7, 1995.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: OR-E03-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: OR-E02-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: OR-E03-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 14 Mar 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: OR-E03-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [X] Attached, Document ID: OR-E03-L10 [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [X] Not Applicable
12.	Identification of Additional Applicable Requirements [X] Attached, Document ID: OR-E03-L12 [ ] Not Applicable
13.	Compliance Assurance Monitoring Plan [X] Attached, Document ID: OR-E03-L13 [ ] Not Applicable
14.	Acid Rain Permit Application (Hard Copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] 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: _____ [X] Not Applicable

ATTACHMENT OR-E03-D

EMISSION UNIT REGULATIONS

ATTACHMENT OR-EU3-D
APPLICABLE REQUIREMENTS LISTING: EU=Auxiliary Boiler

FDEP Rules:

Air Pollution Control-General Provisions:
62-204.800(7)(b)4. (State Only) - NSPS Subpart Dc
62-204.800(7)(d) (State Only) - General Provisions

Stationary Sources-General:
62-210.650 - Circumvention
62-210.700(1) - Excess Emissions; malfunction; 2hrs/24hrs
62-210.700(4) - Excess Emissions; Excludes poor maintenance
62-210.700(6) - Excess Emissions; reporting

Stationary Sources-Emission Monitoring:
62-297.310(1) - Test Runs-Mass Emission
62-297.310(2)(b) - Operating Rate
62-297.310(3) - Calculation of Emission
62-297.310(4)(a)1. - Applicable Test Procedures;Sampling time
62-297.310(4)(b) - Sample Volume
62-297.310(4)(c) - Required Flow Rate Range-PM
62-297.310(4)(d) - Calibration
62-297.310(4)(e) - EPA Method 5
62-297.310(5) - Determination of Process Variables
62-297.310(6)(a) - Permanent Test Facilities-general
62-297.310(6)(c) - Sampling Ports
62-297.310(6)(d) - Work Platforms
62-297.310(6)(e) - Access
62-297.310(6)(f) - Electrical Power
62-297.310(6)(g) - Equipment Support
62-297.310(7)(a)1. - Renewal
62-297.310(7)(a)3. - Permit Renewal Test Required
62-297.310(7)(a)4.b. - Annual Test
62-297.310(7)(a)9. - FDEP Notification - 15 days
62-297.310(8) - Test Reports

Federal Rules:
NSPS General:
40 CFR 60.7(f) - Notification and Recordkeeping (maintain records)

NSPS Subpart Dc:
40 CFR 60.48c(g) - Reporting and Recordkeeping (fuel usage)

Note: There are no standards of performance for Subpart Dc units using natural gas. Therefore, it is not an affected facility as defined in 40 CFR 60.2, since to be an "affected facility" under any subpart there must be an " apparatus to which a standard is applicable". Since there are no "standards", as defined in 40 CFR 60.2, applicable to natural gas firing in Subpart Dc, it is not an applicable requirement. It was listed here, since it was listed in the air construction permit.

ATTACHMENT OR-E03-H8

CALCULATION OF EMISSIONS

ATTACHMENT OR-E03-H8. Calculation of Emissions

Table 1. Design Information and Stack Parameters, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility Auxiliary Boiler

Data	Natural Gas
General	
Steam Output (lb/hr)	82,993
Heat Input Rate (MMBtu/hr)	100.0
Annual Operating Factor (Percent)	100
Hours of Operation	8,760
Fuel Data	
Heat Content, LHV (Btu/lb)	22,000
Heat Content, LHV (Btu/scf)	946
Sulfur Content (Percent, weight), Maximum	0.0031
Sulfur Content (gr/100 scf), Maximum	1
Stack Data	
Stack Height (ft)	65
Diameter (ft)	3.67
Exit Gas Conditions	
Volume Flow rate (acfm)	29,731
Temperature (oF)	305

Fuel Consumption (lb/hr)= Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu ÷ Fuel Heat Content, LHV (Btu/lb)
(Mcf/hr; gal/hr)= Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu ÷ Fuel Heat Content (LHV) [(Btu/cf)/1,000 or Btu/ga

Heat Input (MMBtu/hr)	100.0
Heat Content, LHV (Btu/lb)	22,000
Heat Content, LHV (Btu/cf)	946
Fuel Consumption (lb/hr)	4,545
Fuel Consumption (Mcf/hr)	105.7
Fuel Consumption (MMcf/yr)	926.0

Exit Gas Velocity (ft/sec)= Volume Flow (acfm) ÷ [((diameter)^2÷ 4) x 3.14159] ÷ 60 sec/min

Volume Flow (acfm)	29,731
Diameter (ft)	3.7
Velocity (ft/sec)	46.8

Source: Orange Cogeneration Facility - Auxiliary Boiler Application to Construct Air Pollution Source, Table A-13, Dated 6/18/93.

ATTACHMENT OR-E03-H8. Calculation of Emissions

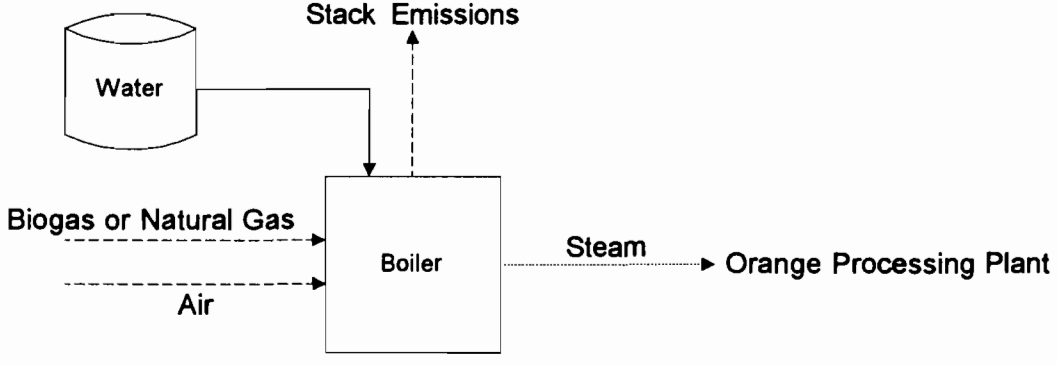
Table 2. Maximum Emissions for Emissions Limited Pollutants, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility Auxiliary Boiler

Pollutant	Natural Gas
Hours of Operation	8,760
Sulfur Dioxide (lb/hr) (Gas)= EF(lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.003
HIR (MMBtu/hr)	100.0
Emission Rate (lb/hr)	0.3
(TPY)	1.3
Particulate Matter (lb/hr) (Gas)= EF (lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.01
HIR (MMBtu/hr)	100
Emission Rate (lb/hr)	1.0
(TPY)	4.4
Particulate Matter-PM10 (lb/hr) (Gas)= EF (lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.01
HIR (MMBtu/hr)	100
Emission Rate (lb/hr)	1.0
(TPY)	4.4
Nitrogen Oxides (lb/hr)= EF (lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.13
HIR (MMBtu/hr)	100.00
Emission Rate (lb/hr)	13.0
(TPY)	56.9
Carbon Monoxide (lb/hr)= EF (lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.10
HIR (MMBtu/hr)	100.00
Emission Rate (lb/hr)	10.0
(TPY)	43.8
Volatile Organic Compounds (lb/hr)= EF (lb/MMBtu) x Heat Input Rate (MMBtu)	
Basis (1)	BACT
Emission Factor (lb/MMBtu)	0.04
HIR (MMBtu/hr)	100.00
Emission Rate (lb/hr)	4.30
(TPY)	18.8

Notes: (1) BACT in FDEP Air Construction Permit AC53-233852A (PSD-FL-206A&B), dated 3/7/95.

ATTACHMENT OR-E03-L1

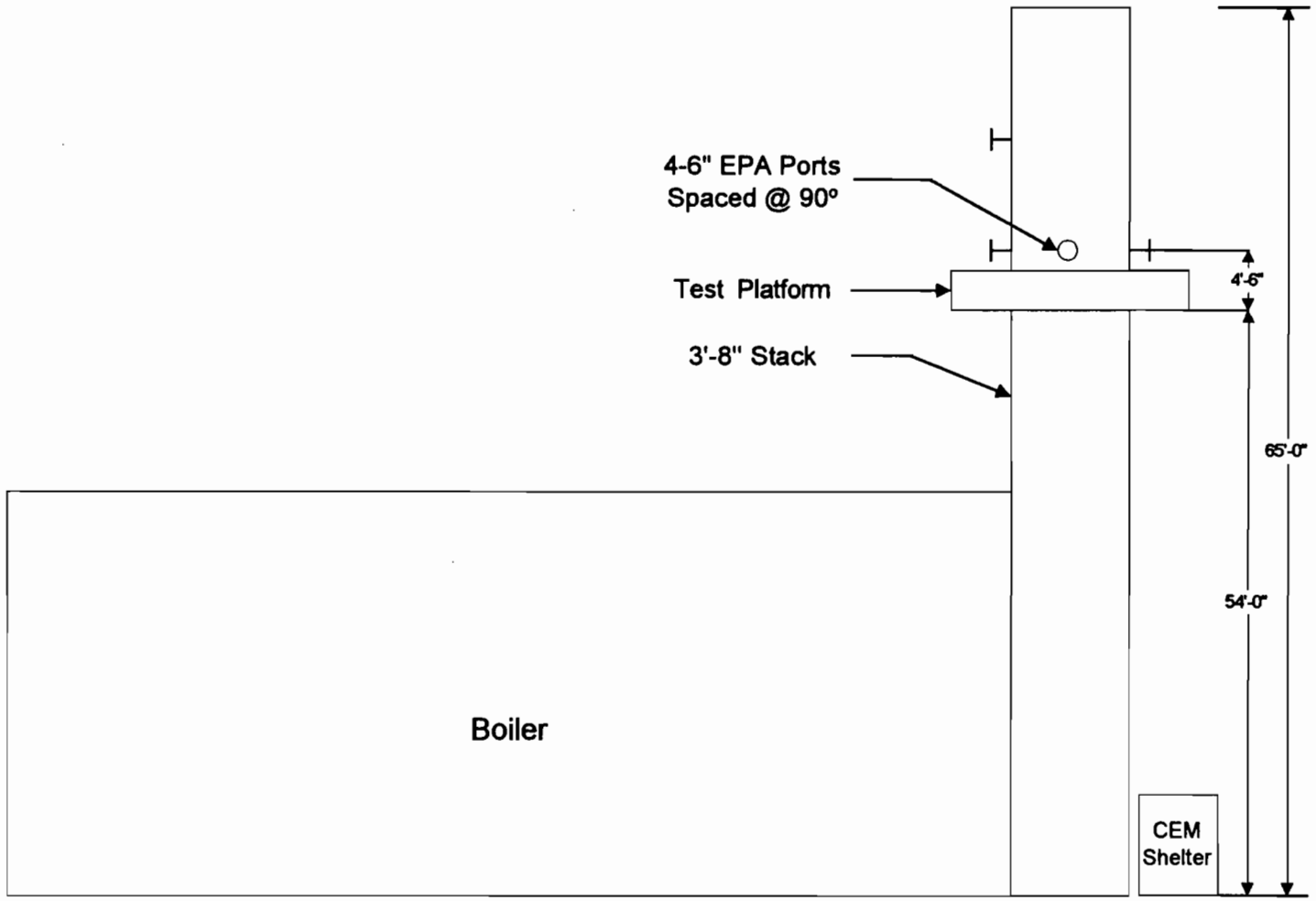
PROCESS FLOW DIAGRAM



Process Flow Legend			
Steam Flow Gas Flow Solid / Liquid Flow	Orange Cogeneration Facility Process Flow Diagram	*Emission Unit:* Auxillary Boiler *Process Area:* Overall Plant *Filename:* ORANGE.VSD *Latest Revision Date:* 5/2/96 05:18 PM	KBN Engineering and Applied Sciences, Inc.

ATTACHMENT OR-E03-L4

DESCRIPTION OF STACK SAMPLING FACILITIES



Attachment OR-EU3-I4 Description of Stack Sampling Facilities Orange Cogeneration Project	*Emission Unit:* AUXILLARY HEATING BOILER *Attachment:* OR-EU3-I4 *Filename:* ORANGE.VSD *Latest Revision Date:* 5/2/96 05:30 PM	KBN Engineering and Applied Sciences, Inc.

ATTACHMENT OR-E03-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT OR-E03-L6

PROCEDURES FOR STARTUP AND SHUTDOWN MINIMIZING EXCESS EMISSIONS

Startup of the auxiliary boiler begins when fuel (biogas or natural gas) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the steam load is stable and above 10 percent load.

Shutdown of the heater boiler begins when unit steam load is decreased to below 10 percent of maximum and continues until the final burner gun is removed from service.

Countermeasures which may be taken in the event of excess emissions include, but are not limited to:

- proper excess air adjustments
- recognizing and removal of faulty gas burners
- reduction of unit steam load

Knowledge of the appropriate countermeasures to take when excess emissions occur is a part of the routine operator training for those who operate the boiler. Topics include current permit limits, maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, and fuels and combustion training.

ATTACHMENT OR-E03-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT OR-E03-L10
ALTERNATIVE METHODS OF OPERATION

The auxiliary boiler can burn natural gas and biogas.

ATTACHMENT OR-E03-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

PERMITTEE:
Orange Cogeneration Limited Partnership
23046 Avenida De La Carlota
Suite 400
Laguna Hills, CA 92653

Permit Number: AC53-233852A
PSD-FL-206B
Expiration Date: April 1, 1996
Latitude/Longitude: 27°52'15"N
81°49'31"W
Project: Auxiliary Boiler
County: Polk

This revised permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto and specifically described as follows:

Installation of a 100 million British thermal unit per hour (MMBtu/hr) natural gas/equivalent biogas fired tube boiler equipped with a 65 foot high, 3.67 foot diameter stack designed to produce approximately 83,000 pounds per hour of saturated steam at 205 pounds per square inch gauge (psig) pressure. The heat input is based on the High Heating Value (HHV) of the fuel. The auxiliary boiler will be located on Clear Springs Road, Bartow, Polk County, Florida 33830.

The UTM coordinates of this facility are Zone 17, 418.75 kmE and 3083.0 kmN.

The emission unit/source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:
1. Application received July 1, 1993.
2. Department's July 22, 1993 letter.
3. KBN's August 5, 1993 letter.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. A description of and cause of non-compliance; and,

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(X) Determination of Best Available Control Technology (BACT)
(X) Determination of Prevention of Significant Deterioration (PSD)
(X) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and,
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The auxiliary boiler shall be equipped with low-NO_x burners.

2. The boiler stack shall be equipped with stack sampling facilities (sample ports, work platforms, access, electrical power) that meet the specifications given in Rule 62-297.345, F.A.C.

Operation Limitations

3. The auxiliary boiler shall comply with all applicable requirements of 40 CFR 60, Subpart Dc.

4. The boiler is allowed to operate continuously, 8760 hours per year.

5. Only natural gas/equivalent biogas fuel shall be burned in this boiler.

6. The maximum heat input to the boiler, which is based on the high heating value (HHV) of the fuel, shall not exceed 100 MMBtu/hr.

7. The maximum allowable sulfur content (total) of the natural gas/biogas burned in the boiler shall not exceed 1 grain per 100 cubic feet (1 gr/100 CF) of gas.

SPECIFIC CONDITIONS:

8. The operation of this boiler shall not emit air pollutants that cause or contribute to objectionable odors.

9. Visible emissions shall not exceed 15 percent opacity.

10. Emissions from the boiler shall not exceed any of the following limits:

Pollutant	lb/MMBtu	lbs/hr	TPY
NO_X	0.13	13.0	56.9
CO	0.10	10.0	43.8
VOC	0.04	4.3	18.8

11. Sulfur dioxide (SO_2) emissions from the boiler shall not exceed 0.003 lb/MMBtu, 0.30 lb/hr, and 1.3 TPY. An analysis of the fuel showing the sulfur content does not exceed 1 grain of total sulfur per 100 cubic feet of gas will be accepted as proof of compliance with the sulfur dioxide emission limit. Total sulfur content of the gas shall be determined by test method ASTM D 1072-80 (40 CFR 60.17 (July, 1993)).

12. Particulate matter (PM/PM_{10}) emissions from the boiler shall not exceed 0.01 lb/MMBtu, 1.0 lb/hr, and 4.4 TPY. No PM/PM_{10} stack test is required if the visible emissions **limitation is** less than 15 percent opacity.

Testing Requirements

13. Testing of emissions shall be conducted with the source operating at **permitted** capacity. Capacity is defined as 90-100% of **the maximum operating rate allowed by the permit.** If it is impracticable to test at **permitted** capacity, then sources may be tested at less than **90% of the maximum operating rate allowed by the permit.** In this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. Compliance with the visible emissions **limitation and the** NO_X, CO, and VOC emission standards shall be determined within 60 days of achieving maximum production, but not later than 180 days after initial firing of the boiler. Compliance with the visible emissions **limitation** and **the** NO_X **emission** standards shall be determined annually thereafter.

SPECIFIC CONDITIONS:

14. Compliance shall be determined by the following test methods listed in 40 CFR 60, Appendix A (July, 1993).

Pollutant	EPA Method
PM/PM_{10}*	5 or 17**
NO_x	7E
CO	10
VOC	18 or 25A
Visible Emissions	9

NOTE: No other test methods may be used for compliance testing **unless** prior Department **written** approval **has been received.**
*** Assumption is that all PM is PM_{10}.**
**** Stack flue gas temperature must be less than 320°F for Method 17.**

15. The permittee shall provide the Department's Southwest District office with the following notifications required by 40 CFR 60.7:

- When construction commenced within 30 days of commencement of construction.
- Anticipated date of initial startup, 30 to 60 days prior to startup.
- Actual date of startup within 15 days after the startup.
- Notification of the date of the compliance tests not less than 30 days prior to the tests.

16. Pursuant to Rule 62-210.370(2), F.A.C., Air Operating **Reports**, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur content and the lower heating value of the fuel being fired, fuel usage, hours of operation, air emission limits, etc. Annual reports shall be sent to the Department's Southwest District office by March 1 of each calendar year.

17. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

18. An application for an operation permit must be submitted to the Department's Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the

SPECIFIC CONDITIONS:

appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (Rules 62-4.055 and 62-4.220, F.A.C.).

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell

Virginia B. Wetherell, Secretary

Revised Best Available Control Technology (BACT) Determination
Orange Cogeneration Limited Partnership
Polk County
AC53-233852A and AC53-233851B (PSD-FL-206B)

The applicant proposes to construct a 103 gross megawatt (MW) natural gas/biogas fired cogeneration facility in Bartow, Polk County, Florida. Major components of the cogeneration facility are: two combustion turbines (CT), each with a heat recovery steam generator (HRSG), an auxiliary boiler, steam turbine generator, and associated equipment. Both CTs will consume up to 776 million British thermal units per hour (MMBtu/hr) of gas fuel based on the lower heating value (LHV) of the fuel and produce 78 MW of electricity. The HRSGs, which do not use supplemental fuel, produce approximately 100,000 lbs/hr of steam and generate 25 MW of electricity. The fire-tube auxiliary boiler will consume 100 MMBtu/hr of gaseous fuel and produce approximately 83,000 lbs/hr of steam.

The following table lists the estimated maximum emissions from the cogeneration facility.

	Two CTs		Auxiliary Boiler	
Pollutant	lbs/hr	TPY	lbs/hr	TPY
Sulfur dioxide (SO_2)	2.34	10.3	0.3	1.3
Particulate Matter (PM/PM_{10})	10	43.8	1.0	4.4
Nitrogen Oxide (NO_X)	77.0	336.9	13.0	56.9
Carbon Monoxide (CO)	55.6	243.9	10.0	43.8
Volatile Organic Compounds (VOC)	7.96	34.9	4.3	18.8
Sulfuric Acid Mist	0.18	0.79	0.023	0.1

The cogeneration facility requires a BACT determination for NO_X, CO, PM, and VOC. In addition, the auxiliary boiler requires a BACT determination for **PM and** SO_2.

Date of Receipt of a BACT Application

July 1, 1993

BACT Requested by the Applicant

Pollutant	Proposed Limit	Air Pollution Control
Combustion Turbine		
PM	0.01 gr/scf*	Clean Fuel (gas) and Dry Low-NOx Combustors
NO_X	25 ppmvd @ 15%**	
	15 ppmvd @ 15%**	

CO	30 ppmvd	Combustion Controls
VOC	10 ppmvd	Combustion Controls

Auxiliary Boiler

PM	0.01 lbs/MMBtu	Clean Fuel (gas)
NO_x	0.13 lbs/MMBtu	Low-NO_x burners
SO_2	1 grain/100 CF natural gas	Clean Fuel (natural gas)
CO	0.10 lbs/MMBtu	Combustion Control
VOC	0.043 lbs/MMBtu	Combustion Control

*grains per standard cubic foot
**parts per million by volume dry at 15 percent oxygen
Applicant is committed to meeting 15 ppmvd @ 15% O_2 with dry low-NO_x combustors after December 31, 1997.

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 62-212, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly

evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from cogeneration facilities can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- Combustion Products (e.g., particulates matter). Controlled generally by good combustion of clean fuels.
- Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- Acid Gases (e.g., NO_X). Controlled generally by gaseous control devices.

Although all of the pollutants addressed in the BACT analysis may be subjected to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, sulfuric acid mist, etc.), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

<u>BACT Pollutant Analysis for the Combustion Turbines (CTs)</u>

Nitrogen Oxides (NO_X)

The emissions of nitrogen oxides represent a significant proportion of the total emissions generated by this project, and need to be controlled if deemed appropriate. As such, the applicant presented an extensive analysis of the different available technologies for NO_X control. The control technologies evaluated were selective catalytic reduction (SCR), wet injection (WI), dry low-NO_X combustor, NO_XOUT process, thermal DeNO_X, and selective noncatalytic reduction (SNCR).

NO_XOUT (urea with catalyst), thermal DeNO_X (ammonia with catalyst), and selective noncatalytic reduction system (ammonia without catalyst) to reduce NO_X emissions from the CT were not feasible because of process constraints (flue gas temperature too low and oxygen content too high).

SCR, dry low-NO_X combustor technology, and wet injection controls were considered feasible.

The applicant has stated that BACT for nitrogen oxides will be met

by using advanced combustor design to limit emissions to 25 ppmvd @ 15% O_2, when burning natural gas/biogas. After December 31, 1997, a limit of 15 ppmvd @ 15% O_2 will be met. Should 15 ppmvd NO_X @ 15% O_2 not be achieved during the initial compliance tests, the permittee will provide the Department with a plan and schedule to meet this standard.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NO_X emission limit established to date for a combustion turbine is 4.5 ppmvd at 15% oxygen. This level of control was accomplished through the use of water injection and a SCR system.

SCR is a post-combustion method for control of NO_X emissions. The SCR process combines vaporized ammonia with NO_X in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage though the catalyst bed. With a new catalyst, the SCR process can achieve up to 90% reduction of NO_X. As the catalyst ages, the maximum NO_X reduction will decrease.

The effect of exhaust gas temperature on NO_X reduction depends on the specific catalyst formulation and reactor design. Generally, SCR units can be designed to achieve effective NO_X control over a 100-300°F operating window within the bounds of 450-800°F, although recently developed zeolite-based catalysts are claimed to be capable of operating at temperatures as high as 950°F.

Most commercial SCR systems operate over a temperature range of about 600-750°F. At levels above and below this window, the specific catalyst formulation will not be effective and NO_X reduction will decrease. Operating at high temperatures can permanently damage the catalyst through sintering of surfaces.

Increased water vapor content in the exhaust gas (as would result from water or steam injection in the gas turbine combustor) can shift the operating temperature window of the SCR reactor to slightly higher levels.

Although technically feasible, the applicant has rejected using SCR on the combined cycle because of economic, energy, and environmental impacts. The applicant has identified the following limitations:

a) Reduced power output.
b) Emissions of unreacted ammonia (slip).
c) Disposal of hazardous waste generated (spent catalyst).
d) Ammonium bisulfate and ammonium sulfate particulate emissions (ammonium salts) due to the reaction of NH_3 with SO_3 present in the exhaust gases.
e) The energy impacts of SCR will reduce potential electrical power generation by 0.8 percent.

f) Incremental cost effectiveness for the application of SCR technology to the Orange Cogeneration L.P. project was considered to be $7,970 when emissions are at 25 ppm and $23,510 when emissions are at 15 ppm. Since SCR has been determined to be BACT for gas turbines, the EPA has clearly stated that there must be unique circumstances to consider the rejection of such control on the basis of economics.

In a letter from EPA Region IV to the Department regarding the permitting of a combined cycle facility (Tropicana Products, Inc.), the following statement was made:

> "In order to reject a control option on the basis of economic considerations, the applicant must show why the costs associated with the control are significantly higher for this specific project than for other similar projects that have installed this control system or in general for controlling the pollutant."

The cost associated with controlling NO_X emissions must take into account the potential operating problems that can occur with using SCR.

A concern associated with the use of SCR on combustion turbines is the formation of ammonium bisulfate. For the SCR process, ammonium bisulfate can be formed due to the reaction of sulfur in the fuel and the ammonia injected. The ammonium bisulfate formed has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this is the case, SCR has been judged to be technically infeasible in some previous BACT determinations. This salt also increases particulate matter (PM/PM_{10}) emissions.

For natural gas/equivalent biogas firing operation, NO_X emissions can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater ammonia injection ratio. When the injection ratio is lowered, there is not a problem with ammonium bisulfate formation since essentially all of the ammonia is able to react with the nitrogen oxides present in the combustion gases. Based on this strategy, SCR has been both proposed and established as BACT with NO_X emission limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

The applicant has indicated that the total levelized annual operating cost to install SCR on two CTs for this project at 100 percent capacity factor and burning natural gas/equivalent biogas is $1,648,000. A SCR would reduce the NO_X emissions by 207 TPY during the first 2 years of operation when the CTs emit 25 ppmvd @ 15% O_2. Thereafter, when dry-low NO_X controls are used, a SCR would reduce NO_X emissions by 120 TPY. When these reductions are taken into consideration, the total cost with SCR is $21,900 per

ton of NO_X removed. This calculated cost is higher than has previously been approved as BACT.

A review of the latest Department BACT determinations show limits of 15 ppmvd (natural gas) using **dry** low-NO_X **combustor** technology for gas turbines. Most combustion turbine manufacturers are currently developing programs using both steam/water injection and dry low-NO_X combustor **technology** to achieve **a** NO_X emission control level of 9 ppm when firing natural gas. Therefore, this technology will likely be available by 1998.

BACT Determination for NO_X for the CTs by the Department

NO_X Control

The information that the applicant presented and Department calculation indicate that the cost per ton of controlling NO_X for this turbine [$21,900 per ton] is high compared to other BACT determinations which require SCR. Based on the information presented by the applicant, the Department believes that the use of SCR for NO_X control is not justifiable as BACT at this time.

A review of the permitting activities for combustion turbine proposals across the nation indicates that SCR has been required and most recently proposed for installations with a variety of operating conditions (i.e., natural gas, fuel oil, and various capacity factors). Although, the cost and other concerns expressed by the applicant are valid, the Department, in this case, is willing to accept water/steam injection and **dry** low-NO_X **combustor technology** design as BACT for this project for a limited time (up to 12/31/97).

It is the Department's understanding that combustion turbine manufacturers are developing programs using either steam/water injection or dry low NO_X combustor technology to achieve a NO_X emission control level of 9 ppm when firing natural gas.

Based on this, the Department has determined to revise and lower the allowable BACT limit for this project to 15 ppmvd at 15% O_2 **and is to be achieved** no later than 1/1/98.

Carbon Monoxide (CO)

CO emissions are caused by incomplete combustion of the fossil fuel. The applicant investigated the use of combustion control and catalytic oxidation to control CO emission. With combustion control, CO emissions would be 30 ppmvd (236 TPY). With catalytic oxidation, CO emissions would be 10 ppmvd (78 TPY). The annualized cost of the catalyst system is $834,700 or $5,280 per ton of CO removed.

BACT Determination for CO for the CTs by the Department

Because catalytic oxidation would increase operation cost by $5,280 per ton of CO removed, and have no significant reduction in ambient air quality, the Department accepts an emission limit for CO of 30 ppmvd obtained through combustion control as BACT for these CTs.

Volatile Organic Compounds (VOC)

VOC emissions are caused by incomplete combustion of fossil fuel. The applicant proposes to meet an emission limit of 10 ppmvd through the use of clean fuel (natural gas) and combustion controls. This is similar to the BACT applied to other similar sources.

BACT Determinations for VOC for the CTs by the Department

The Department accepts an emission limit for VOC of 10 ppmvd obtained through the use of clean fuel (natural gas) and combustion control as BACT for these CTs.

Particulate Matter (PM/PM_{10})

PM/PM_{10} emissions are caused by incomplete combustion and traces of solids in the fuel. Proper combustion of clean fuel will emit only trace amounts of PM/PM_{10}. Each proposed CT will emit 5 lbs/hr of PM/PM_{10} or about 0.01 grains per standard cubic foot (gr/dscf). This is similar to the PM/PM_{10} emissions that can be met with the best air pollution control device, a baghouse.

BACT Determination for PM/PM_{10} for the CTs by the Department

The Department accepts an emission limit for PM/PM_{10} of 5 lbs/hr and **a visible emissions limit of** 10 percent opacity as BACT for each CT.

BACT Pollutant Analysis for the Auxiliary Boiler

Nitrogen Oxides (NO_x)

Nitrogen oxide emissions from boilers can be controlled by selective catalytic reduction (SCR), flue gas recirculation (FGR), and low-NO_x combustors.

The applicant proposes to meet a NO_x emission limit of 0.13 lbs/MMBtu through the use of low-NO_x combustors. This emission limit is below the new source performance standard for large boilers. The cost of using SCR or FGR would exceed $5,000 per ton NO_x removed.

BACT Determination for NO_x for the Auxiliary Boiler by the Department

The Department accepts an emission limit for NO_x of 0.13 lbs/MMBtu as BACT for this **auxiliary** boiler.

Particulate Matter (PM/PM_{10}), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC)

PM/PM_{10}, CO and VOC are the products of incomplete combustion of fossil fuel. The applicant proposes to meet emission limits of 0.01 lbs PM/MMBtu, 0.10 lbs CO/MMBtu, 0.04 lbs VOC/MMBtu through the use of clean fuel (natural gas/biogas) and **good** combustion control. Visible emissions shall not exceed 15 percent opacity.

BACT Determination for PM/PM_{10}, CO, and VOC for the Auxiliary Boiler by the Department

The Department accepts the use of clean fuel (natural gas/biogas) and **good** combustion controls to meet the proposed emission limits for PM/PM_{10}, CO, and VOC as BACT for this **auxiliary** boiler.

Sulfur Dioxide (SO_2)

Sulfur dioxide emissions are caused by the oxidation of sulfur in the fuel. Natural gas/biogas contains only trace amounts of sulfur - 1 grain per 100 cubic feet (gr/100 CF). This will result in an estimated sulfur dioxide emission of 0.30 lbs/hr. Cleaner fuel is not available and add on controls for SO_2 are not justified at this low emission rate.

BACT Determination for SO_2 for the Auxiliary Boiler by the Department

Natural gas/equivalent biogas fuel containing a maximum of 1 gr/100 CF is accepted as BACT for SO_2 control for this **auxiliary** boiler.

Summary of the **Revised** BACT Determination by Department

Pollutant	Emission Limits	EPA Test Methods
COMBUSTION TURBINE		
NOx	25 ppmvd @ 15% O_2 until Dec. 31, 1997	20
	15 ppmvd @ 15% O_2 after Dec. 31, 1997	**20**
CO	30 ppmvd	10
VOC	10 ppmvd	18 or 25A

PM/PM_{10}*	5 lbs/hr	5 or 17**
Visible Emissions	**10% Opacity**	9
AUXILIARY BOILER		
NO_x	0.13 lbs/MMBtu	7E
PM/PM_{10}*	0.01 lbs/MMBtu	5 or 17**
CO	0.10 lbs/MMBtu	10
VOC	0.04 lbs/MMBtu	18 or 25A
SO_2	1 gr sulfur/100 CF gas	fuel **sulfur** analysis
Visible Emissions	15% Opacity	9

* **Assumption is that all PM is PM_{10}.**
** Stack flue gas temperature must be less than 320°F.

Details of the Analysis May be Obtained by Contacting:
Martin Costello, P.E., BACT Coordinator
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

2/24/95
Date

Approved by:

Virginia B. Wetherell

Virginia B. Wetherell, Secretary
Dept. of Environmental Protection

B-7-95
Date

ATTACHMENT OR-E03-L13

COMPLIANCE ASSURANCE MONITORING PLAN

ATTACHMENT OR-E03-L13

COMPLIANCE ASSURANCE MONITORING PLAN

Compliance Assurance Monitoring Plan will be submitted to the implementing agency by required date.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

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

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Facility-wide Fugitive Emissions**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **See Attachment OR-E04-B6**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (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 Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (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 Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[x] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[ ] C	[ ] E	[x] Unknown
	SO_2	[ ] C	[ ] E	[x] Unknown
	NO_2	[ ] C	[ ] E	[x] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

ATTACHMENT OR-E04-B6

EMISSIONS UNIT COMMENT

Attachment OR-E04-B6
General Emissions Unit Information for Unregulated Emissions Unit

Table 1. Unregulated Emission Unit, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility

Area	Activity/ Operation Description	Status
Plant Service Building		
Plant Maint. Shop Area		
	Indoor Fugitives (grinder, drill presses, etc.)	TR
	Sand Blasting/ Grit Blasting	ER/TR
	Flamible Storage Locker (chemicals, solvents, and oils)	TR
I/C Shop		
	Chemical Storage RO Antiscalant- 50 gal Chlorine Oxygen Scavenger - 75 gal Clarifier Coagulant - 400 gal Clarifier Flocculant - 100 gal	TR
Soda Ash Room		
	Soda Ash (dry powder injection)	TR
Water Treatment Outside Area		
Cooling Towers		
	Sulfuric Acid Tank (6,000 gal)	TR
	Chlorine Storage (3 - 1 ton cylinders)	TR
	Raw Water Chlorine Tank	TR
	Primary Water Cooling Tower	UR
	Secondary Water Cooling Tower	UR
	Waste Water Cooling Tower	UR
	Cooling Tower Chemicals Dispersant Tank (400 gal) Corrosion Inhib. Tank (400 gal) Bromine Tank	TR
Gas Compressor Building		
	New Lube Oil Storage (drums)	UR
Outside Gas Compressor Building		
Waste Oil Storage	Waste Oil Storage (1 - 200 gal tank)	UR
Fire Pumphouse		
	165 Hp Detroit Diesel Engine	ER/TR

Attachment OR-E04-B6
General Emissions Unit Information for Unregulated Emissions Unit

Table 1. Unregulated Emission Unit, Orange Cogeneration Limited Partnership, Orange Cogeneration Facility

Area	Activity/ Operation Description	Status
	Diesel fuel tank (250 gal or less)	UR
CT/HRSG & Steam Turbine Area		
CTs	Lube Oil Vapor Extractor (Mist Elimination System)	UR
	Lube Oil Air/Oil Separator	UR
	STG Drain Flash Tank	UR
	Various Pumps (sumps, condensate, etc.)	TR
	Miscellaneous Drains Tank	TR
	Lube Oil Drain Tank (50 gal)	TR
	Lube Oil Tank Storage Tank (500 gal)	UR
	Condenser Pumps (2)	TR
	Condenser Vents (3)	TR
	Glan Seal Exhauster	TR
	HRSG Boiler Chemical Injection Amine Tank (400 gal) Phosphate Tank (400 gal) Calandria Anti-Foam Tank (400 gal)	TR
Auxillary Boiler		
	Boiler Chemical Injection Amine Tank (75 gal) Phosphate Tank (75 gal)	TR
General Plant Site		
	Halogenated Solvent Cleaners/Degreasers	TR
	Sewage Waste System	UR
	Substation Transformers and Associated Equipment (2 transformers)	TR

Note: ER= Exempt by Rule 62-210.300(3)(a); TR= Trivial; UR= Unregulated.