ORLANDO COGEN
LIMITED, L. P.

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

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: **Orlando CoGen Limited, L.P.**	
2. Site Name: **Orlando CoGen Limited, L.P.**	
3. Facility Identification Number: **0950203**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **Orlando Cntrl Pk, 8275 Exch Dr** City: **Orlando** County: **Orange** Zip Code: **32809**	
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):	

Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Telephone (610) 481-4911

AIR PRODUCTS

June 12, 1996

Florida Department of Environmental Protection
Bureau of Air Regulation
Mail Stop 5505
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Orlando CoGen Limited, L.P.
Title V Permit Application

Dear Sirs,

Enclosed please find four copies of the Title V Operating Permit Application for Orlando CoGen Limited, L.P.

Due to FDEP's recall of ELSA Version 1.3 dated prior to June 7, 1996, this permit application will be submitted as hard copy and electronically. This permit application is being submitted as follows:

- Four hard copies of the complete application submittal (i.e., forms and attachments) for FDEP are enclosed.

- After June 15th, KBN Engineering and Applied Sciences, Inc. will submit four copies of the application (forms and certain attachments only) to FDEP electronically, using the approved ELSA Version 1.3. Signature pages and hard-copy attachments will not be resubmitted.

The application is signed by a responsible official (Facility's Acid Rain Designated Representative) in Sections I and Attachment OR-FI-E15. Orlando CoGen Limited, L.P., determined which requirements constitute applicable requirements through reasonable inquiry and consistent with Environmental Protection Agency's *July 10, 1995 White Paper on Part 70 Permit Applications*.

This information provided in this application was developed using appropriate Florida Department of Environmental Protection DARM guidance and the Environmental Protection Agency's *July 10, 1995 White Paper on Part 70 Permit Applications*, and *March 5, 1996 White Paper*

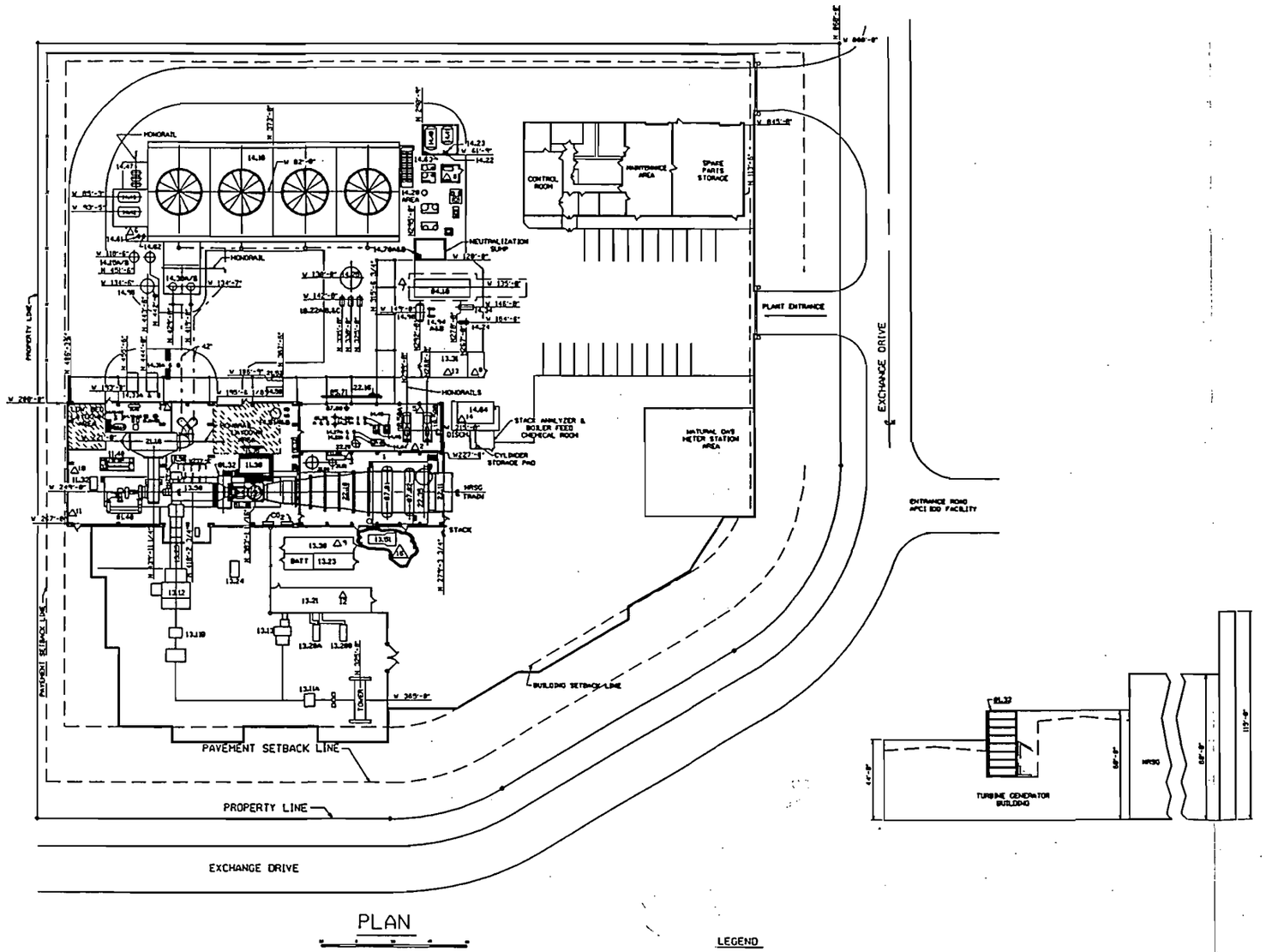
Number 2 for Improved Implementation of Part 70 Operating Permits Program.

If you have any questions about this submittal please contact me at (610) 481-5240.

Sincerely,

Karen S Winegardner

Karen S. Winegardner
Environmental Engineer



PLAN

LEGEND

△ - DCS & MD.

EQUIPMENT LIST

01.30	GAS TURBINE
01.32	GAS TURBINE AIR INLET FILTER
01.33A & B	FUEL GAS FILTERS
01.40	STEAM TURBINE
04.10	REFRIGERATION CHILLER
05.71	FUEL PREHEATER
07.06	NATURAL GAS KNOCK-OUT POT
07.81	H.P. BOILER STEAM DRUM
07.82	L.P. BOILER STEAM DRUM
10.21A & B	CONDENSATE PUMPS
10.22A,B, & C	CONDENSATE TRANSFER PUMPS
10.58A & B	BOILER FEEDWATER PUMPS
11.30	GAS TURBINE/GENERATOR L.O. SYSTEM SKID
11.32	HYDRAULIC UNIT
11.33	WATER WASH SKID
11.35	GAS TURBINE/GENERATOR L.O. COOLER
11.40	STEAM TURBINE L.O. SKID
11.42	GLAND STEAM CONDENSER
11.88	LUBE OIL CONDITIONING SKID
11.89	SUPPLEMENTAL FIRING SKID
13.10	SWITCHYARD EQUIPMENT
13.11A & B	69KV BREAKERS
13.12	GENERATOR STEP-UP TRANSFORMER
13.13	UNIT AUXILIARY TRANSFORMER
13.20A & B	480V TRANSFORMERS
13.21	SUBSTATION POWER DISTRIBUTION UNIT
13.23	GENERATOR STARTING MODULE "B-B" & "C-C"
13.24	GENERATOR STARTER TRANSFORMER
13.25	13.8KV BUS DUCT
13.30	T/G CONTROL MODULE "A-A"
13.31	UTILITY POWER DISTRIBUTION UNIT
13.98	GENERATOR
14.10	COOLING TOWER
14.15A & B	SIDESTREAM FILTERS
14.29	DEMINERALIZED WATER EQUIPMENT AREA
14.21	PHOSPHATE L.P. FEED PUMPS
14.22	ACID TRANSFER PUMP
14.23	CAUSTIC TRANSFER PUMP
14.24	ASU COOLING WATER BOOSTER PUMP
14.28	CONDENSATE STORAGE TANK
14.27A & B	PHOSPHATE H.P. FEED PUMPS
14.28A & B	OXYGEN SCAVENGER FEED PUMPS
14.29A & B	NEUTRALIZING AMINE FEED PUMPS
14.30A & B	COOLING WATER PUMPS
14.31A & B	COOLING WATER BOOSTER PUMPS
14.32A & B	VACUUM PUMPS
14.34	CHILLER COOLING WATER BOOSTER PUMP
14.40	ACID STORAGE TANK
14.41	CAUSTIC STORAGE TANK
14.42	DISPERSANT STORAGE TANK
14.43	INHIBITOR STORAGE TANK
14.44	PHOSPHATE SOLUTION TANK
14.45	OXYGEN SCAVENGER TANK
14.46	NEUTRALIZING AMINE TANK
14.47	CHLORINATOR SYSTEM
14.50	OIL/WATER SEPARATOR
14.51A & B	OIL/WATER SUMP PUMPS
14.61	INHIBITOR METERING PUMP
14.62	DISPERSANT METERING PUMP
14.63	COOLING TOWER ACID METERING PUMP
14.64	BOILER WATER SAMPLE PANEL
14.76A & B	NEUTRALIZATION SUMP PUMPS
14.98	CHILLER CONDENSATE RECEIVER TANK
14.91A & B	MISCELLANEOUS DRAIN TANK PUMPS
14.93A & B	SUMP PUMPS
14.94A & B	CONDENSATE PUMPS
14.95	SIDE-STREAM FILTER BACK-WASH SURGE TANK
21.18	SURFACE CONDENSER
21.68	H.P. VENT VALVE SILENCER
21.91	L.P. VENT VALVE SILENCER
21.92	HYDRAULIC SKID FOR PV-198 & PV-208
22.10	HEAT RECOVERY STEAM GENERATOR
22.11	STACK
22.15	BOILER BLOWDOWN TANK
22.16	BOILER BLOWDOWN FLASH TANK
22.17	MISCELLANEOUS DRAIN TANK
22.36	DEAERATOR

Attachment OR-FI-E2
Facility Plot Plan

Source: Orlando CoGen Limited, L.P., 1996.

KBN
A GOLDER ASSOCIATES COMPANY

TABLE OF CONTENTS
ORLANDO COGEN LIMITED, L.P.
(All Attachments appear at the end of the Unit)

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

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: **Orlando CoGen Limited, L.P.**	
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3. Facility Identification Number: **0950203**	[ ] Unknown
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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:

Larry J. Adkins, Plant Mgr, Designated Acid Rain Rep

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

Organization/Firm: **Orlando CoGen Limited, L.P.**
Street Address: **8275 Exchange Drive**
City: **Orlando** State: **FL** Zip Code: **32809**

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

Telephone: **(407) 851-1350** Fax: **(407) 851-1686**

4. Owner/Authorized Representative or Responsible Official Statement:

I, 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.*

Larry J Adk
Signature

6/8/96
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 (ABB 11N1-EV)	
2R	002	Duct Burner System Associated with HRSG	
3		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: $ _____ [X] 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 Eng and Applied Sciences, Inc.**
   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 (seal) Date: 6/9/96

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Karen Winegardner, Environmental Engineer

2. Application Contact Mailing Address:

   Organization/Firm: **Orlando CoGen Limited, L.P.**
   Street Address: **7201 Hamilton Blvd.**
   City: **Allentown** State: **PA** Zip Code: **18195-1501**

3. Application Contact Telephone Numbers:

   Telephone: **(610) 481-5240** Fax: **(610) 481-2393**

Application Comment

See Attached OR-AI-AC

ATTACHMENT OR-AI-AC

ATTACHMENT OR-AI-AC

This Title V application is for the Orlando CoGen Limited, L.P. Facility in Orlando, Florida.

The application's structure is as follows:

	Emission Units
General:	1 - Combustion Turbine (CT)
	1 - Heat Recovery Steam Generator (HRSG) with Duct Burner (DB)
Emissions Point:	1 - Stack for CT and DB-HRSG
Fuel Segments:	Natural gas only
Pollutants:	NO_x, CO, SO_2, PM/PM10, VOC
Visible Emission (VE):	VE limits applicable
Continuous Emission Monitoring (CEM):	NO_x only
PSD Review:	NO_x, CO, PM/PM10

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: **17** East (km): **459.5** North (km): **3146.1**

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): **28 / 26 / 23** Longitude: (DD/MM/SS): **81 / 24 / 28**

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	**A**	**49**	**4911** 4931

7. Facility Comment (limit to 500 characters):

The Orlando CoGen Limited Facility consists of a single Combustion Turbine (CT) that exhausts through a heat recovery steam generator (HRSG) and a single stack. The CT is natural gas fired. The natural gas fired duct burners (DB) are located inside the HRSG.

Facility Contact

1. Name and Title of Facility Contact:
   Tom Hess, Environmental Engineer

2. Facility Contact Mailing Address:
   Organization/Firm: **Orlando CoGen Limited, L.P.**
   Street Address: **7201 Hamilton Blvd.**
   City: **Allentown** State: **PA** Zip Code: **18195-1501**

3. Facility Contact Telephone Numbers:
   Telephone: **(610) 481-7620** Fax: **(610) 481-2393**

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):

The CT is subject to NSPS for stationary gas turbines (40 CFR 60 Subpart GG). The DBs are subject to NSPS for industrial, institutional, commercial steam generators (40 CFR 60 Subpart Db).

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-FI-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
VOC	Volatile Organic Compounds	B
SO2	Sulfur Dioxide	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-FI-E1
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [x] Attached, Document ID: OR-FI-E2
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [x] Attached, Document ID(s): OR-FI-E3
   [ ] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [x] Attached, Document ID: OR-FI-E4
   [ ] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [x] Attached, Document ID: OR-FI-E5
   [ ] 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:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [x] 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:
[ ] Attached, Document ID: _____
[x] Not Applicable

13. Risk Management Plan Verification:

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

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

[x] Not Applicable

14. Compliance Report and Plan
[x] Attached, Document ID: OR-FI-E14
[ ] Not Applicable

15. Compliance Statement (Hard-copy Required)
[x] Attached, Document ID: OR-FI-E15
[ ] Not Applicable

ATTACHMENT OR-FI-B

APPLICABLE REQUIREMENTS

ATTACHMENT OR-FI-B

APPLICABLE REQUIREMENTS

List of Facility-Wide Applicable Requirements
Orlando CoGen Limited, L.P.

Orange County Rules (State Only Enforceable):

15-34 Orange County Code	- Approval of Plans
15-35 OCC	- Operating Records
15-39 OCC	- Prohibited Deposits, Discharges
15-89 OCC	- Air Pollution Sources; Problems
15-90(a)(1) OCC	- FDEP Rules Adopted by Reference

FDEP Rules:

General Permits:

62-4.030	- General Prohibitions
62-4.040(1)(a)	- General Prohibitions (Exemptions from permitting)
62-4.040(1)(b)	- General Prohibitions (Exemptions from permitting)
62-4.050	- Procedure to obtian permits and fees
62-4.100	- Suspension and Revocation
62-4.130	- Plant Operation Problems

Stationary Sources-General:

62-210.300(2) except (b)	- All Permits

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 equipment
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)15.	- lab equipment
62-210.300(3)(a)16.	- brazing, soldering or welding
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/month
62-210.300(3)(a)24.	- surface coating <5% VOC
62-210.370(3)	- AOR Requirement

G.C. 62-210.900(5) -AOR Form Not exempt

Title V Permits: (9) (L)

G.C. 26 62-213.205(1)excluding (d)&(h) - Title V Permits
G.C 31 62-213.400 - Permits/Revisions
G.C. 33 62-213.410 X - Changes without permit revisions
62-213.420.(1)(b)2.+1 GC - Permits-allows continued operation
62-213.420.(1)(b)3.+4 GC - Permits-additional information
62-213.460 — GC: 52 - Permit Shield
GC — 53 62-213.900(5) - Emission Fee Form

62-213.420(1)(a)3.

1 ← typo ?

Stationary Sources-Emission Standards:

~~62-296.320(2)-(State-Only)~~ ~~Odor~~
~~62-296.320(4)(b)~~ - General VE
62-296.320(4)(c) G.C. 58 - Unconfined PM

} not yet federally enforceable

Stationary Sources-Emission Monitoring

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

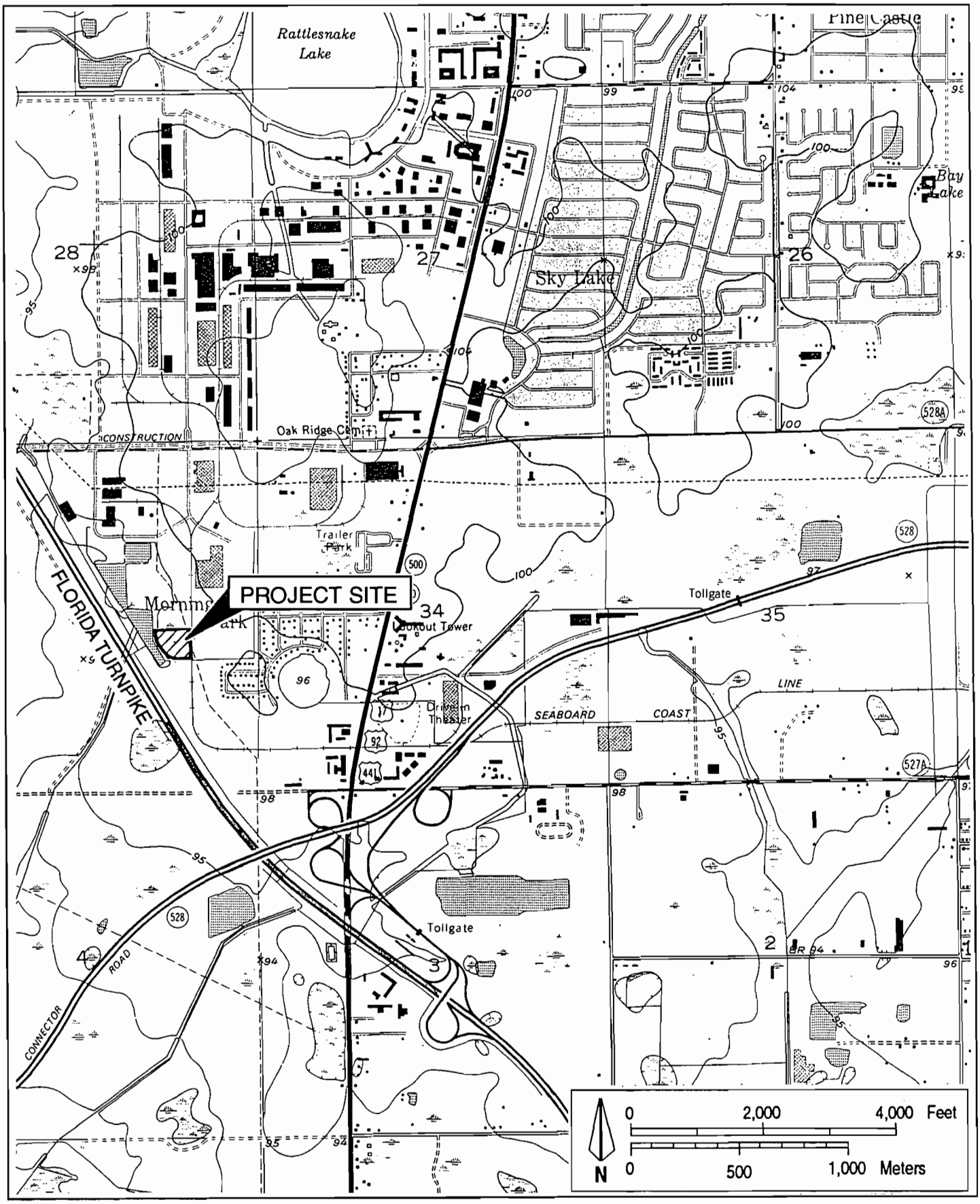
Federal Regulations:

G.C. 56
40 CFR 82.154 - Refrigerant Prohibitions
40 CFR 82.156 - Required Practices

No Acid Rain Part indicated

ATTACHMENT OR-FI-E1

AREA MAP



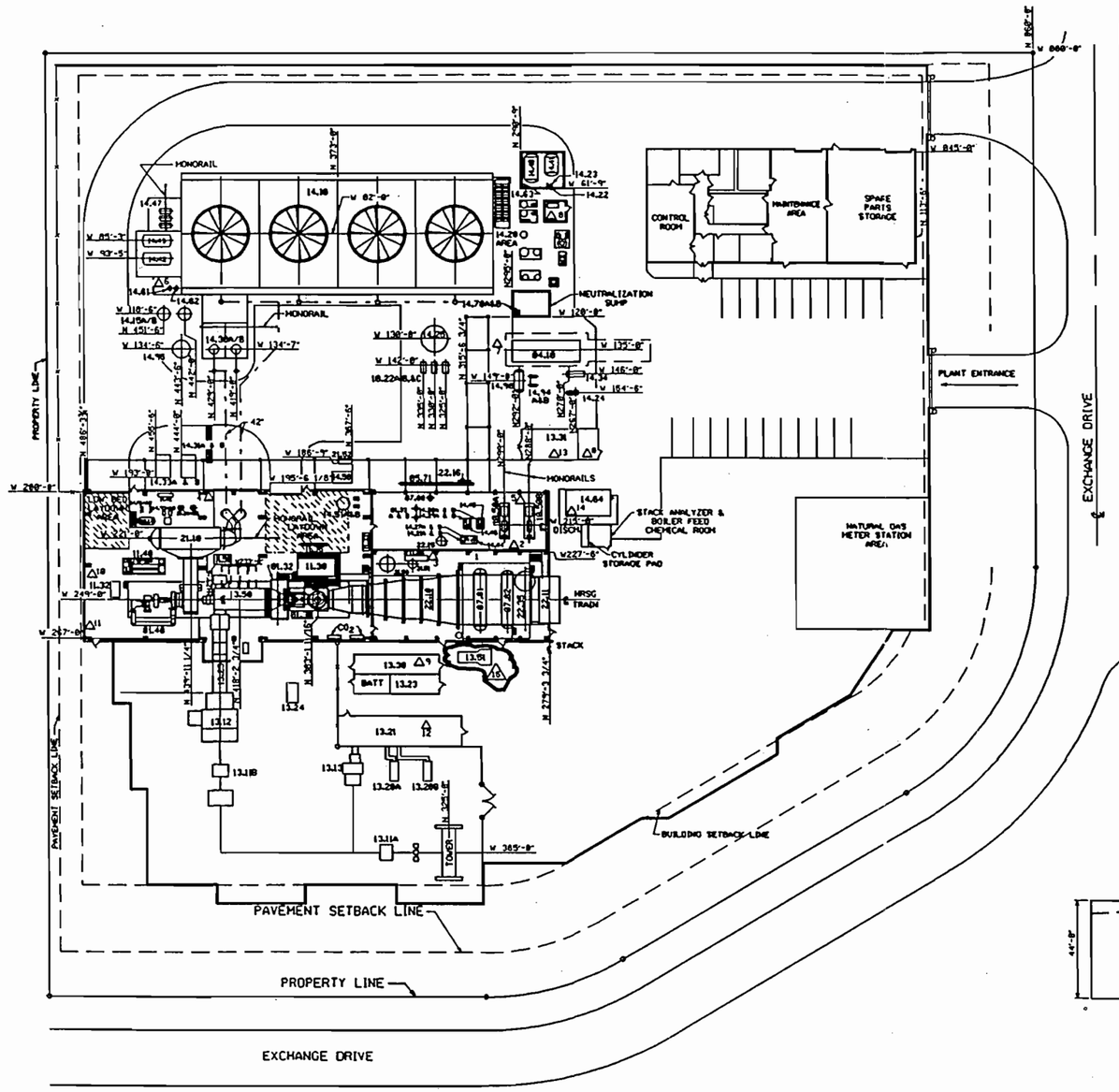
ATTACHMENT OR-FI-E1
SITE LOCATION MAP
ORLANDO COGEN LIMITED
ORLANDO, FLORIDA

SOURCES: USGS, 1980; KBN, 1996.

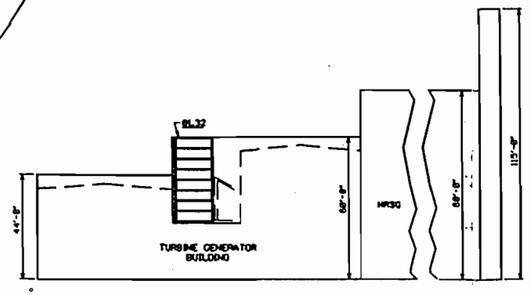
KBN

ATTACHMENT OR-FI-E2

FACILITY PLOT PLAN



PLAN



EQUIPMENT LIST

01.30	GAS TURBINE
01.32	GAS TURBINE AIR INLET FILTER
01.33A & B	FUEL GAS FILTERS
01.40	STEAM TURBINE
04.10	REFRIGERATION CHILLER
05.71	FUEL PREHEATER
07.00	NATURAL GAS KNOCK-OUT POT
07.81	H.P. BOILER STEAM DRUM
07.82	L.P. BOILER STEAM DRUM
18.21A & B	CONDENSATE PUMPS
18.22A,B, & C	CONDENSATE TRANSFER PUMPS
18.58A & B	BOILER FEEDWATER PUMPS
11.30	GAS TURBINE/GENERATOR L.O. SYSTEM SKID
11.32	HYDRAULIC UNIT
11.33	WATER WASH SKID
11.35	GAS TURBINE/GENERATOR L.O. COOLER
11.40	STEAM TURBINE L.O. SKID
11.42	GLAND STEAM CONDENSER
11.50	LUBE OIL CONDITIONING SKID
11.60	SUPPLEMENTAL FIRING SKID
13.10	SWITCHYARD EQUIPMENT
13.11A & B	69KV BREAKERS
13.12	GENERATOR STEP-UP TRANSFORMER
13.13	UNIT AUXILIARY TRANSFORMER
13.20A & B	480V TRANSFORMERS
13.21	SUBSTATION POWER DISTRIBUTION UNIT
13.23	GENERATOR STARTING MODULE "B-B" & "C-C"
13.24	GENERATOR STARTER TRANSFORMER
13.25	13.8KV BUS DUCT
13.30	T/G CONTROL MODULE "A-A"
13.31	UTILITY POWER DISTRIBUTION UNIT
13.50	GENERATOR
14.10	COOLING TOWER
14.15A & B	SIDESTREAM FILTERS
14.20	DEMINERALIZED WATER EQUIPMENT AREA
14.21	PHOSPHATE L.P. FEED PUMPS
14.22	ACID TRANSFER PUMP
14.23	CAUSTIC TRANSFER PUMP
14.24	HRSG COOLING WATER BOOSTER PUMP
14.25	CONDENSATE STORAGE TANK
14.27A & B	PHOSPHATE H.P. FEED PUMPS
14.28A & B	OXYGEN SCAVENGER FEED PUMPS
14.29A & B	NEUTRALIZING AMINE FEED PUMPS
14.30A & B	COOLING WATER PUMPS
14.31A & B	COOLING WATER BOOSTER PUMPS
14.33A & B	VACUUM PUMPS
14.34	CHILLER COOLING WATER BOOSTER PUMP
14.40	ACID STORAGE TANK
14.41	CAUSTIC STORAGE TANK
14.42	DISPERSANT STORAGE TANK
14.43	INHIBITOR STORAGE TANK
14.44	PHOSPHATE SOLUTION TANK
14.45	OXYGEN SCAVENGER TANK
14.46	NEUTRALIZING AMINE TANK
14.47	CHLORINATOR SYSTEM
14.50	OIL/WATER SEPARATOR
14.51A & B	OIL/WATER SUMP PUMPS
14.61	INHIBITOR METERING PUMP
14.62	DISPERSANT METERING PUMP
14.63	COOLING TOWER ACID METERING PUMP
14.64	BOILER WATER SAMPLE PANEL
14.76A & B	NEUTRALIZATION SUMP PUMPS
14.98	CHILLER CONDENSATE RECEIVER TANK
14.91A & B	MISCELLANEOUS DRAIN TANK PUMPS
14.93A & B	SUMP PUMPS
14.94A & B	CONDENSATE PUMPS
14.95	SIDE-STREAM FILTER BACK-WASH SURGE TANK
21.10	SURFACE CONDENSER
21.50	H.P. VENT VALVE SILENCER
21.51	L.P. VENT VALVE SILENCER
21.52	HYDRAULIC SKID FOR PV-150 & PV-200
22.10	HEAT RECOVERY STEAM GENERATOR
22.11	STACK
22.15	BOILER BLOWDOWN TANK
22.16	BOILER BLOWDOWN FLASH TANK
22.17	MISCELLANEOUS DRAIN TANK
22.36	DEAERATOR

LEGEND

△ - DCS & NO.

Attachment OR-FI-E2
Facility Plot Plan

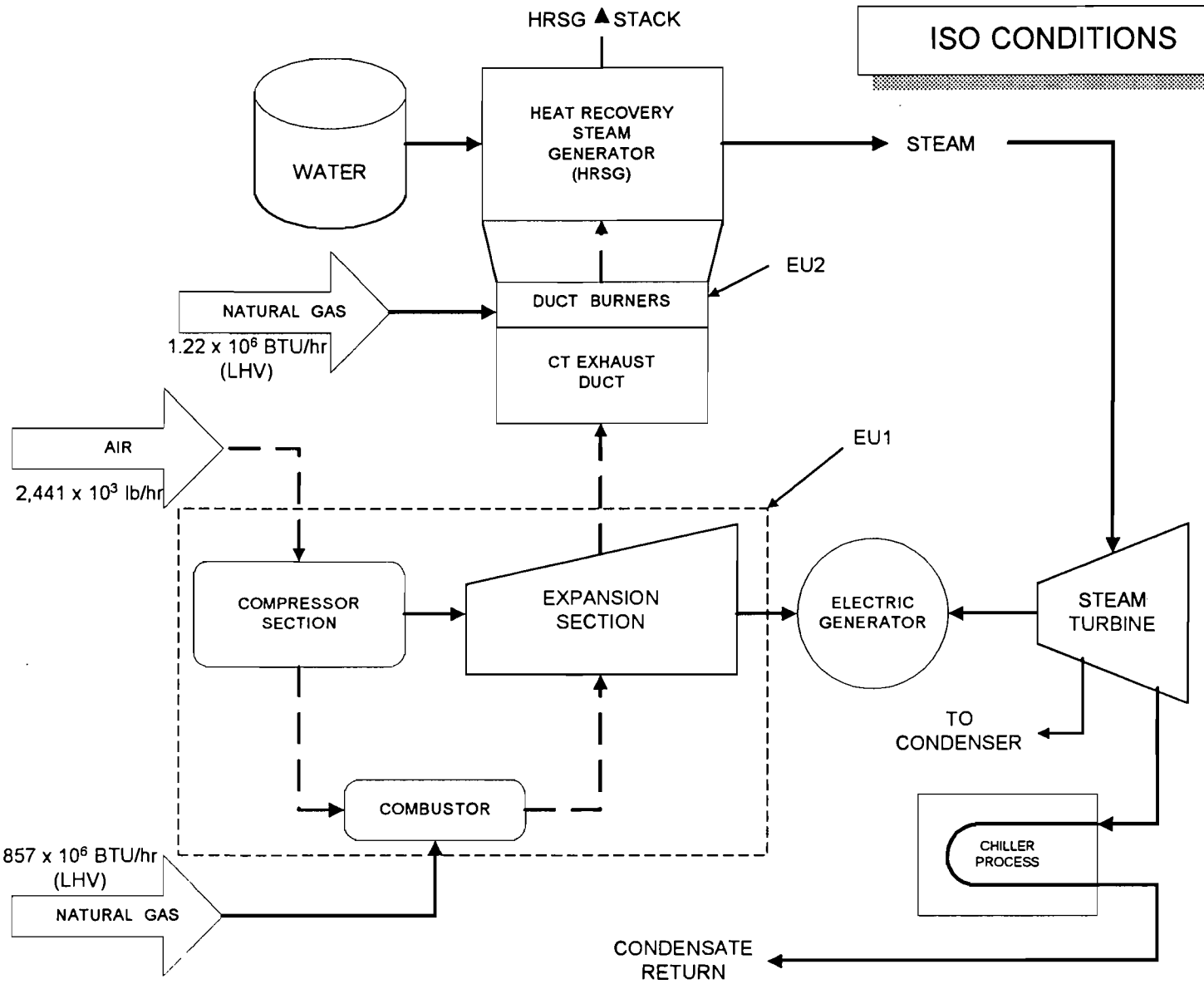
Source: Orlando CoGen Limited, L.P., 1996.

KBN
A GOLDER ASSOCIATES COMPANY

ATTACHMENT OR-FI-E3

PROCESS FLOW DIAGRAM

06-03-96



Attachment OR-FI-E3
Process Flow Diagram
Orlando CoGen Limited, L.P.
Orlando, Florida

KBN
A GOLDER ASSOCIATES COMPANY

ATTACHMENT OR-FI-E4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT OR-FI-E4

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 roads, and
- Fugitive particulates from small amounts of bagged chemical product usage.
- Fugitive particulates from stone laydown - very infrequent activity.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 62-296.310(3), F.A.C.:

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

ATTACHMENT OR-FI-E5

FUGITIVE EMISSIONS IDENTIFICATION

ATTACHMENT OR-FI-E5
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). 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 trivial at the facility are included as Emission Unit No. 3. This emission unit contains information on fugitive and other potential emission generating activities 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

Orlando Cogen Limited, L.P., 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:

- toluene (solvents)
- xylene (solvents)
- chlorine (water treatment)
- methyl ethyl ketone (solvents)

The facility maintains several containers of paint thinner and solvents (which may contain 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 Orlando Cogeneration facility:

- acetylene
- methane (natural gas)

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.

Chlorine - Present in two 750-lb containers. Used for water treatment at the facility.

ATTACHMENT OR-FI-E14

COMPLIANCE REPORT AND PLAN

Attachment OR-FI-E14

Compliance Report and Plan

The facility and emission 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 the date of this application is submitted to the Florida Department of Environmental Protections as required in Rule 62-213.420(1)(a) F.A.C. Emission units which comprise this Title V application will comply with future effective applicable requirements on a timely basis.

Proposed Schedule for the Submission of Periodic Compliance Statements

Orlando CoGen Limited, L.P. proposes to certify compliance with all applicable requirements annually, consistent with F.A.C. 62-213.440(3)(c), commencing after the issuance of the Title V operating permit.

ATTACHMENT OR-FI-E15

COMPLIANCE STATEMENT

ATTACHMENT OR-FI-E15

COMPLIANCE STATEMENT

I, the undersigned, am the responsible official as defined in Chapter 62-213, 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.

Larry J Adkins

Signature, Responsible Official
Larry J. Adkins, Plant Manager

6-8-96
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 (ABB 11N1-EV)

2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown
001

3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [**X**] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**

6. Emissions Unit Comment (limit to 500 characters):

The CT exhausts through a heat recovery steam generator (HRSG). Duct burners are located inside the HRSG & are addressed as separate emission unit (EU). The entire fac. is an acid rain unit with the CT as the primary EU. The CT nameplate rating = 78.9 MW at ISO. However, CT & Steam Turbine are on a common shaft serving 1 electric generator with a fac. capacity of 128.9 MW (Generator Nameplate Capacity: 144 MVA). Acid Rain Permit Applic. is not applicable until January 1, 1998. See Att. OR-E01-B6.

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Dry Low NOx Burner technology integral to CT

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:	5 Sep 1993
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Asea Brown Boveri (ABB) Model Number: 11N1-EV
4. Generator Nameplate Rating:	129 MW
5. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	857	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 0.9058 MMCF/hr and 946 Btu/CF as lower heating value (LHV), @ ISO Conditions (59 °F) and 60% relative humidity. Generator Nameplate Rating: 144 MVA.

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**	
2. Emission Point Type Code: [ ] 1 [x] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Two Emission Units in series discharge through this stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **001 EU1 - Combustion Turbine (CT); 002 EU2 - Duct Burner (DB) System with HRSG** ARM has only 1 emissions unit.	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W	
6. Stack Height:	**115** feet
7. Exit Diameter:	**15.7** feet
8. Exit Temperature:	**240** °F

9. Actual Volumetric Flow Rate:	**754,813** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Calculations based on ISO conditions (59°F). Acfm based on 240°F exhaust temp. Exit diameter based on a rectangular stack 21.5' wide & 9' deep. Values in this section are for CT operation without DB.**	

Max Hourly Rate = $\frac{857 \text{ mm BTU/hr}}{946 \text{ mm BTU/mm CF burned}} = .9059 \text{ mm CF/hr}$

max annual rate = $8760 \left(.9059\right) = 7935 \text{ mm CF burned/hr}$

.987 corresponds to using a LHV of 868 w/ 857 mm BTU/hr

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

Segment Description and Rate: Segment 1 of 1

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

Natural gas firing in combustion turbine unit. Periodically, the turbine is injected with a cleaner that consists of detergents and surfactant that cleans the inlet compressor sections of the turbine. This turbine wash does not affect emissions.

what kind of chemicals? what is the injection rate

2. Source Classification Code (SCC): **20200203**

3. SCC Units: **Million Cubic Feet Burned**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
~~0.987~~ .9059	~~8.646~~ 7.935

6. Estimated Annual Activity Factor:

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

9. Million Btu per SCC Unit: **1.046**

10. Segment Comment (limit to 200 characters): need to verify

This unit is fired on Natural Gas only. Max emission rates are calculated at 20°F ambient temp. Heat content (MMBtu/SCC) based on lower heating value (LHV). Max % Sulfur in fuel: 1 grain/100 cf gas.

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
NOX	024		EL
SO2			EL
CO			EL
PM			EL
VOC			EL
PM10			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:	**57.4** lb/hour **251.4** tons/year
4. Synthetically Limited?	[ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions:	[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor:	**15 ppmvd @15% O2**
Reference:	**AC 48-206720**
7. Emissions Method Code:	[**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters):	**57.4 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	**Potential Emissions based on 20°F ambient operation. Control effic. based on theoretical NOX reduction in advanced frame turbine without dry-low NOX control system. Emission factor corrected to 15%O2.**

Emissions Unit Information Section 1 of 3

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: **57.4 lb/hr**	
4. Equivalent Allowable Emissions:	**57.4** lb/hour **251.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 20/CEM**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions/Units=57.4 lb/hr;251.4 TPY;15 ppmvd @15% O2. Allowable emissions established as BACT in AC48-206720. CEM based on 24-avg for CT/DB.**	

B.

1. Basis for Allowable Emissions Code: **RULE**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **75 ppmvd**	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 20**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions and Units corrected to 15% O2. NSPS; 40CFR60.33(a)(1) with heat rate correction.**	

~~C ft~~ grams / hr · 100 ~~of~~ grams · lb S · lb SO_2

~~Make a copy~~
~~Give back to Steve~~

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: **2.82** lb/hour **12.4** 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 grain/100 cf**

   Reference: **Based on Natural Gas**

7. Emissions Method Code:

   [ ] 0 [ ] 1 [x] 2 [ ] 3 [ ] 4 [ ] 5

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

987,209 cf/hr x 1 grain S/100 cf x 1 lb/7,000 grains x 2 lb SO2/165 = 2.82 lb/hr; 2.82 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 12.4 tons/yr

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

Potential SO2 emissions are the same as presented in air construction application at 20 °F. SO2 is limited by 40CFR60.333.

Emissions Unit Information Section 1 **of** 3

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 sampling schedule**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40CFR60.333 limits SO2 to 0.015% volume @ 15% O2 or 0.8% by weight. Natural gas is 0.003% by weight or less.**		

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: 22.3 lb/hour 92.1 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: AC 48-206720
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters):
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor also = 22.3 lb/hr. Short-term emission rate (lb/hr) is based on 20 °F. Long-term emission rate (tons/hr) is based on ISO conditions.**

Emissions Unit Information Section 1 of 3
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:	**22.3** lb/hour **92.1** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 22.3 lb/hr;92.1 TPY. Allowable emissions established as BACT in FDEP Air Construction Permit AC48-206720 Specific Condition #4.**	

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: **9** lb/hour **39.4** tons/year

4. Synthetically Limited? [ ] Yes [**X**] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.01 lb/mmBtu**

   Reference: **AC 48-206720**

7. Emissions Method Code:

   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

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

   934 MMBtu/hr x 0.01 lb/MMBtu = 9 lb/hr; 9 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb

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

   Potential emissions based on 20 °F conditions.

Emissions Unit Information Section 1 of 3
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: **0.01 lb/MMBtu**	
4. Equivalent Allowable Emissions: **9** lb/hour	**39.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 or EPA Method 5/17**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 9 lb/hr; 39.4 TPY. Allowable emissions established as BACT in Permit (AC48-206720 Sp. Condition #4). No testing for compliance is required if VE is < or = 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: 3 lb/hour 13 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: 3 lb/hr Reference: AC 48-206720
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 3 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Emissions Unit Information Section 1 of 3

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: **3 lb/hr**	
4. Equivalent Allowable Emissions:	**3** lb/hour **13** tons/year
5. Method of Compliance (limit to 60 characters): **Method 25A (see comment)**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable also = 13 TPY. Allowable emissions est. as condition of AC48-206720, Sp Cond 4 & in AO48-248669, Sp Cond 9. VOC testing not required if CO emissions are met.**	

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: **9** lb/hour **39.4** tons/year

4. Synthetically Limited? [ ] Yes [**X**] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.01 lb/mmBtu**

   Reference: **AC 48-206720**

7. Emissions Method Code:

   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

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

   0.01 lb/MMBtu x 934 MMBtu/hr = 9 lb/hr; 9 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb

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

   Potential emissions based on 20 °F conditions.

Emissions Unit Information Section 1 of 3

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: **0.01 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**9** lb/hour **39.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 or EPA Method 5/17**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 9 lb/hr; 39.4 TPY. Allowable emissions established as BACT in Permit (AC48-206720 Sp Cond 4). No testing for compliance is required if VE < or = 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):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE10**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **10.** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **Annual Compliance Test**
5.	Visible Emissions Comment (limit to 200 characters): **See Attachment OR-E01-I5**

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 1

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Thermo Electron Corp. (TECO) Model Number: 42 Serial Number: 42d-50061-284	
5. Installation Date: 05 Sep 1993	
6. Performance Specification Test Date: 15 Oct 1993	
7. Continuous Monitor Comment (limit to 200 characters): CEM system installed in accordance with FDEP AC48-206720. CEM meets requirements of 40 CFR Part 75 for NOx reporting. Diluent gas is CO2.	

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 AC48-206720, PSD-FL-184, Orange County, 17-AUG-1992. PM and NO2 were above the PSD significant emission levels.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: OR-FI-E3	
	[ ] 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	
	[ ] Attached, Document ID: _____	
	[X] 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: 9 Aug 1994	
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

[ ] Attached, Document ID: _____ [X] 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-B6

EMISSIONS UNIT COMMENT

Facility ID No. 0950020

Environmental and Energy Systems
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501
Telephone (610) 481-4911

AIR PRODUCTS

December 21, 1995

Mr. John C. Brown (MS 5505)
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Acid Rain Phase II Permit Applications
Orlando CoGen Limited, L.P.

Dear Mr. Brown,

This letter is to clarify the Acid Rain Program Phase II permit application requirements for the Orlando CoGen Limited, L.P., facility (OCL). OCL received your November 30, 1995 letter requesting a permit application no later that January 1, 1996.

Under Chapter 62-214.200 (41) of the F.A.C. a new unit is defined as:

> "a fossil fuel-fired combustion device that commences commercial operation on or after November 15, 1990, including any such unit that serves a generator with a nameplate capacity, as defined at 40 CFR 72.2, hereby incorporated by reference, or 25 megawatts-electrical (MWe) or less or that is a simple combustion turbine."

OCL is a new unit under this definition. OCL commenced commercial operation on September 25, 1993.

Under Chapter 62-214.320 (1) (b) of the F.A.C. the Phase II permit application is due to the department "at least 24 months before the later of January 1, 2000, or the date on which the unit commences operation." Therefore the deadline for OCL is January 1, 1998.

Based on these sections of the F.A.C. OCL believes that the Phase II Acid Rain permit application is not due at this time. If you have any questions about this information please contact Mr. Tom Hess at (610) 481-7620 or the undersigned at (610) 481-5240.

Sincerely,

Karen S. Winegardner

Karen S. Winegardner
Environmental Engineer

cc: T. Hess
L. Adkins

ACIDLET.DOC

ATTACHMENT OR-E01-D

APPLICABLE REQUIREMENTS

ATTACHMENT OR-E01-D

APPLICABLE REQUIREMENTS
ORLANDO COGEN LIMITED, L.P. -- COMBUSTION TURBINE

Orange County (State Only Enforceable):

15-90(a)(1) OCC	- FDEP Rules Adopted by Reference

FDEP Rules:

Air Pollution Control-General Provisions:

62-204.800 (7)(d) (state only)	- NSPS Subpart A
62-204.800(7)(b)~~37~~38 (state only)	- NSPS Subpart GG
62-204.800(12) (state only)	- Acid Rain Program
62-204.800(13) (state only)	- Allowances
62-204.800(14) (state only)	- Acid Rain Program Monitoring

Stationary Sources-General:

62-210.650	- Circumvention
~~62-210.700(1)~~	- Excess Emissions
62-210.700(4)	- Excess Emissions
62-210.700(6)	- Excess Emissions

Acid Rain:

62-214.300	- Applicability
62-214.320(1)(b)	- Acid Rain Permit due Jan 1, 1998 for new unit
62-214.330(1)	- Acid Rain Compliance plan requirements
62-214.350	- Certification
62-214.430	- Compliance Options

Stationary Sources-Emission Monitoring

62-297.310(1)	- Test Runs-Mass Emission
62-297.310(3)	- Calculation of Emission
62-297.310(4)	- Applicable Test Procedures
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)[1]	- Work Platforms

[1]Orlando CoGen Limited, L.P. has permanent testing facilities at the unit stack but does not have permanent testing facilities, including permanent work platforms and access to work platforms, at the turbine exhaust prior to the duct burners. There are, however, permanent test ports at the turbine exhaust. These test ports are used for the annual compliance tests using Method 20. This is not a stack location. Temporary access is constructed in order to use these port locations. Orlando CoGen Limited, L.P., requests that the Florida Department of Environmental Protection (Department) approve the restatement of permit limitations as described in Attachment OR-E01-L12 (Specific Conditions 4 and 7). If the permit limits are combined as requested, testing at this location will not be required.

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.	- 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(b); (f)	- Notification and Recordkeeping
40 CFR 60.8(e)	- Performance Tests
40 CFR 60.11(a)	- Compliance with Stds. And Maintenance
40 CFR 60.11(d)	- Compliance with Stds. And Maintenance
40 CFR 60.11(f)	- Compliance with Stds. And Maintenance
40 CFR 60.12	- Circumvention

NSPS SubPart GG:

40 CFR 60.332(a)(1)	- NOx for Electric Utility CT
40 CFR 60.332(b)	- NOx for electric Utility CT
40 CFR 60.333	- SO2 limits
40 CFR 60.334(b)(2)	- Monitoring of Operations- Custom fuel sample plan
40 CFR 60.335	- Test Methods

Acid Rain Permits (Note: For the purposes of acid rain, units EU1 and EU2 are considered one unit.)

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO2 Allowances-hold allowances
40 CFR 72.9(c)(2)	- SO2 Allowances-violation
40 CFR 72.9(c)(3)(iv)	- SO2 Allowances- other utility units not listed
40 CFR 72.9(c)(4)	- SO2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	- SO2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(d)	- NOx Requirements
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; required
40 CFR 72.20(b)	- Designated Representative; legally binding
40 CFR 72.20(c)	- Designated Representative; certification requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing representatives; owners
40 CFR 72.30(a)	- Requirements to Apply (operate)
40 CFR 72.30(b)(2)	- New unit deadline
40 CFR 72.32	- Permit Application Shield

40 CFR 72.40(a)	- General; compliance plan
40 CFR 72.40(c)	- General; conditional approval
40 CFR 72.40(d)	- General; termination of compliance options
40 CFR 72.51	- Permit Shield
40 CFR 72.90	- Annual Compliance Certification

Allowances:

40 CFR 73.33(c)	- Notification of parties
40 CFR 73.35(c)(1)	- Compliance; ID of allowances by serial number

Monitoring Part 75:

40 CFR 75.5	- Prohibitions
40 CFR 75.10(a)(2)	- Primary Measurement; NOx; except 75.12&.17; Subpart E
40 CFR 75.10(a)(3)(ii)	- Primary Measurement; CO2;
40 CFR 75.10(b)	- Primary Measurement; Performance Requirements
40 CFR 75.10(c)	- Primary Measurement; Heat Input; Appendix F
40 CFR 75.10(d)(1) and(3)	- Primary Equipment hourly operating data
40 CFR 75.10(f)	- Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	- Primary Measurement; Minimum Recording
40 CFR 75.12(a)	- NOx Monitoring; Coal; Non-peaking oil/gas units
40 CFR 75.12(b)	- NOx Monitoring; Determ.of NOx emission rate; App. F
40 CFR 75.13(b)	- CO2 Monitoring; Appendix G
40 CFR 75.14(c)	- Gas fired units exempt from opacity measurement
40 CFR 75.20(a)(5)	- Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	- Recertification Procedures
40 CFR 75.20(c)	- Certification Procedures
40 CFR 75.20(d)	- Recertification Backup/portable monitor
40 CFR 75.20(g)	- Exceptions to CEMS; oil/gas/diesel; Appendix D & E
40 CFR 75.21(a)	- QA/QC; CEMS; Appendix B
40 CFR 75.21(c)	- QA/QC; Calibration Gases
40 CFR 75.21(d)	- Notification of periodic Rata
40 CFR 75.21(e)	- Consequences of Audit
40 CFR 75.21(f)	- CEMS
40 CFR 75.22	- Reference Methods
40 CFR 75.24	- Out-of-Control Periods; CEMS
40 CFR 75.30(a)(3)	- General Missing Data Procedures; NOx
40 CFR 75.32	- Monitoring Data Availability for Missing Data
40 CFR 75.33	- Standard Missing Data Procedures
40 CFR 75.51(c)	- SO2 Recordkeeping
40 CFR 75.53	- Monitoring Plan
40 CFR 75.54(a)	- Recordkeeping-general
40 CFR 75.54(b)	- Recordkeeping-operating parameter
40 CFR 75.54(d)	- Recordkeeping-NOx
40 CFR 75.54(e)(2)	- Recordkeeping-CO2
40 CFR 75.55(c)	- Record Keeping: Special Situations, Gas-Fired Units
40 CFR 75.56	- Certification; QA/QC Provisions
40 CFR 75.60	- Reporting Requirements-General
40 CFR 75.61	- Reporting Requirements-Notification cert/recertification
40 CFR 75.63	- Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	- Reporting Requirements-Quarterly reports; submission
40 CFR 75.64(b)	- Reporting Requirements-Quarterly reports; DR statement

40 CFR 75.64(c)	- Rep. Req.; Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Rep. Req.; Quarterly reports; Electronic format
Appendix A	-
Appendix B	- QA/QC Procedures
Appendix C-2.	- Missing Data; Load-Based Procedure; NOx & flow
Appendix D	- Opt SO2 emissions Data Protocol for gas- and oil-fired units
Appendix F	- Conversion Procedures
Appendix G-2.	- Determination of CO2; from combustion sources
Appendix H	- Traceability Protocol

ATTACHMENT OR-E01-I5

VISIBLE EMISSIONS COMMENT
VISIBLE EMISSIONS LIMITATION 1 OF 2

ATTACHMENT OR-E01-I5
VISIBLE EMISSIONS COMMENT

VE standard established as part of Construction Permit AC48-206720, Specific Condition #8 and FDEP Air Operating Permit AO48-248669, Specific Condition #10 for both the combustion turbine and duct burner operating together. Excess emissions allowed for startup and shutdown pursuant to FDEP Rule 62-210.700(1) for 2 hours/24 hours.

ATTACHMENT OR-E01-L2

TYPICAL FUEL ANALYSIS

SGS Commercial Testing & Engineering Co.

COPY

February 17, 1994

1212 N. 39th Street
Suite 323
Tampa, Florida 33605
Tel: (813) 248-6566
Fax: (813) 247-2562

AIR PRODUCTS & CHEMICALS, INC.
Orlando CoGen Limited Facility

CERTIFICATE OF ANALYSIS

RE:	SUBMITTED SAMPLES	
PRODUCT:	SAID TO BE NATURAL GAS	
SUBMITTED BY:	AIR PRODUCTS & CHEMICALS, INC.	
SAMPLE MARKED:	CUST. CYL. 2/09/94 23:00 HRS.	LAB # 046d80
	CYL. #10039 2/10/94 05:00 HRS.	LAB # 046d81
	CUST. CYL. 2/10/94 11:00 HRS.	LAB # 046d82
	CYL. #10196 2/10/94 17:00 HRS.	LAB # 046d87
SAMPLE RECEIVED:	FEBRUARY 14, 1994	
OUR REF:	08-1716	

Accordingly, we report the following results:

TEST	RESULTS			
	046d80	046d81	046d82	046d87
METHANE[1] CH_4	95.75	95.46	95.33	95.50
ETHANE	2.42	2.48	2.54	2.29
PROPANE	0.38	0.41	0.50	0.55
I-BUTANE	0.097	0.101	0.108	0.109
BUTANE	0.077	0.085	0.092	0.093
I-PENTANE	0.045	0.046	0.046	0.046
PENTANE	0.025	0.026	0.027	0.027
HEXANES	0.014	0.040	0.049	0.019
HEPTANES	0.012	0.022	0.040	0.020
NITROGEN	0.40	0.51	0.47	0.53
ARGON	0.0	0.0	0.0	0.0
OXYGEN	0.0	0.030	0.018	0.026
CARBON DIOXIDE	0.78	0.79	0.78	0.79
BTU GROSS SATD	1017.	1018.	1022.	1018.
BTU GROSS DRY	1034.	1035.	1039.	1035.
BTU NET, DRY	932.	933.	937.	933.
RELATIVE DENSITY	0.584	0.587	0.588	0.587
UTILIZATION FACTOR	1331	1329	1332	1329

NOTES: 1. Concentrations in mole percent.
2. Heating Value and Relative Density calculations by GPA method 2172-86, 14.73 psia, 60 degrees Fahrenheit.

COMMERCIAL TESTING & ENGINEERING CO.

Edward B. Linde

Edward B. Linde
Branch Manager

EBL/vl

SGS Commercial Testing & Engineering Co. COPY

February 17, 1994

1212 N. 39th Street
Suite 323
Tampa, Florida 33605
Tel: (813) 248-6566
Fax: (813) 247-2562

AIR PRODUCTS & CHEMICALS, INC.
Orlando CoGen Limited Facility

CERTIFICATE OF ANALYSIS

RE:	SUBMITTED SAMPLES			
PRODUCT:	SAID TO BE NATURAL GAS			
SUBMITTED BY:	AIR PRODUCTS & CHEMICALS, INC.			
SAMPLE MARKED:	BAG # 10118	2/08/94	23:00 HRS.	LAB # 046d80
	BAG # 10190	2/09/94	05:00 HRS.	LAB # 046d81
	BAG # 10002	2/10/94	11:00 HRS.	LAB # 046d82
	BAG # 10021	2/09/94	17:00 HRS.	LAB # 046d87
SAMPLE RECEIVED:	FEBRUARY 14, 1994			
OUR REF:	08-1716			

Accordingly, we report the following results:

TEST	RESULTS 046d80	046d81	046d82	046d87
HYDROGEN SULFIDE	<0.00001	<0.00001	<0.00001	<0.00001
CARBONYL SULFIDE	0.0001	0.00013	0.0001	0.00009
METHYL MERCAPTAN	<0.0001	<0.0001	<0.0001	<0.0001
CARBON DISULFIDE	<0.00001	<0.00001	<0.00001	<0.00001
ETHANETHIOL	<0.0001	<0.0001	<0.0001	<0.0001
DIMETHYL SULFIDE	0.00011	0.00016	0.00019	0.00022
T-BUTYL MERCAPTAN	0.00029	0.00046	0.00051	0.00063

NOTES:
1. Concentrations in mole percent.
2. Sulfur compounds by chromatography with FPD.
3. Concentrations corrected to an assumed sampling time of 12:00, 11/18/93.

COMMERCIAL TESTING & ENGINEERING CO.

Edward B. Linde

Edward B. Linde
Branch Manager

EBL/vl

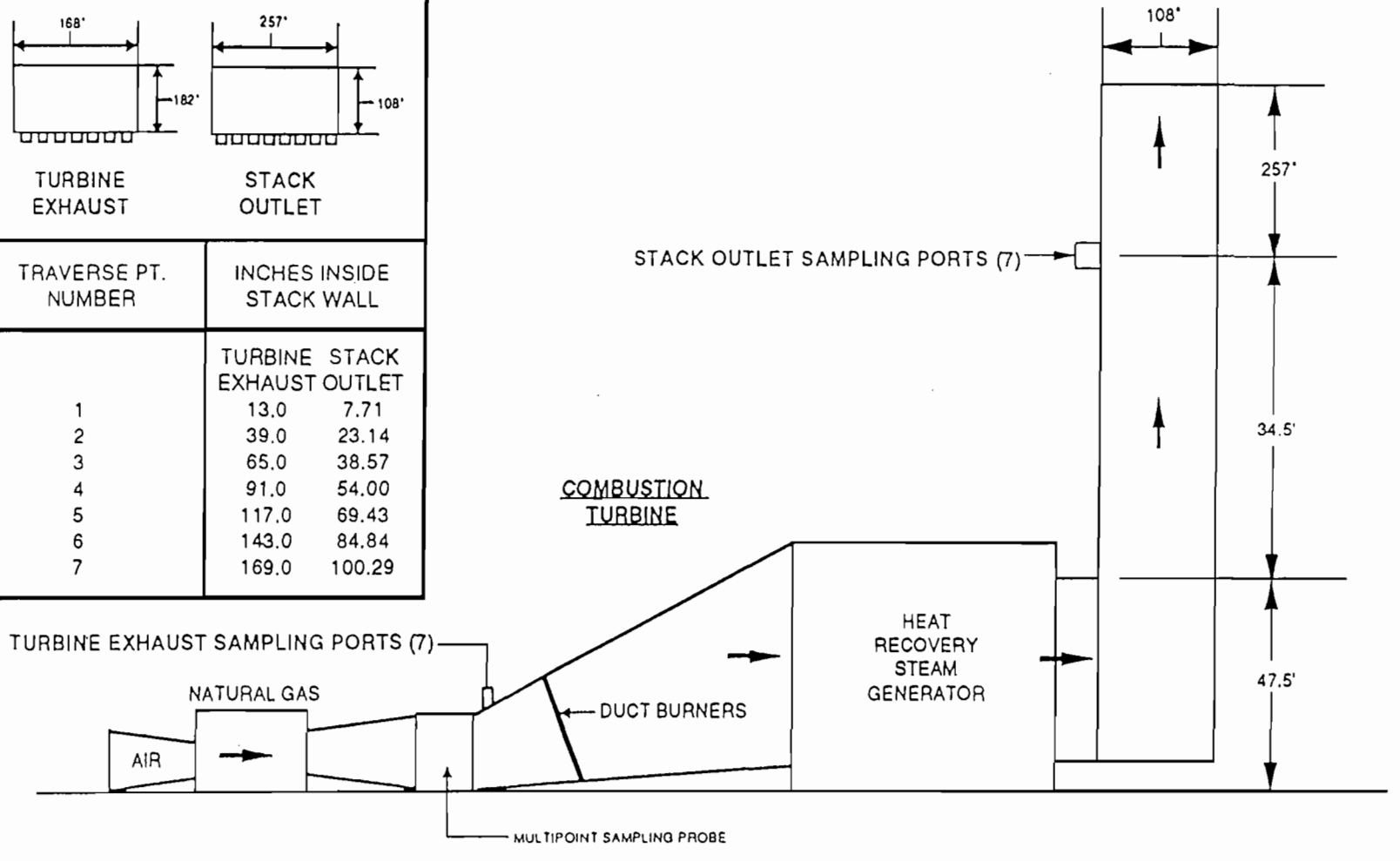
ATTACHMENT OR-E01-L4

DESCRIPTION OF STACK SAMPLING FACILITIES

ATTACHMENT OR-E01-L4
SAMPLING POINT LOCATION
COMBUSTION TURBINE AND STACK OUTLET EXHAUSTS
ORLANDO COGEN LIMITED
ORLANDO, FLORIDA

TURBINE EXHAUST | STACK OUTLET

TRAVERSE PT. NUMBER	INCHES INSIDE STACK WALL	
	TURBINE EXHAUST	STACK OUTLET
1	13.0	7.71
2	39.0	23.14
3	65.0	38.57
4	91.0	54.00
5	117.0	69.43
6	143.0	84.84
7	169.0	100.29



ATTACHMENT OR-E01-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT OR-E01-L6

PROCEDURES FOR STARTUP/SHUTDOWN
SITE SPECIFIC - ORLANDO COGEN LTD. L.P.

The startup of the natural gas fired combustion turbine (CT) is controlled by a 17 step, computer-based sequencer. The sequencer is given a Function Group ON command by an operator. The sequencer then controls the startup and synchronization of the CT while the operator monitors the startup of the CT and the other plant processes.

The typical amount of time from when the startup sequencer is given a Function Group ON command until the CT is synchronized is 20 minutes. It takes an additional 45 minutes to fully load up the CT. During this 45 minute time period other processes affected by the CT startup are also started up. The fore mentioned time periods are based on problem-free startups. If a problem does occur during a startup, these time periods may increase somewhat.

The CT utilizes dry-low NO_x combustors for NO_x control during startup, normal operation, and shutdown. Emissions are continuously monitored by a Continuous Emissions Monitoring System (CEMS). CEMS monitors the emissions for levels of NO_x and diluent CO_2 currently. Per 40CFR75 the CEMS also measures natural gas flow and determines NO_x rate using Method 19. Any excess emissions that may be encountered are recorded and explained in a daily alarm file detail report. The reason for the excess emissions and the corrective actions taken to rectify the excess emissions are included in this report. Typical corrective action may include the adjusting of the gas distribution valves or the adjusting of the CT's load. At all times the best operating practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

The CT is shutdown in a similar manner as it is started up. A computer controlled, 9 step shutdown sequencer is utilized to secure the CT. The shutdown sequencer is given a Function Group OFF command by an operator. The sequencer then unloads the CT, disconnects the CT from the power grid (generator breaker open), secures the fuel supply to the CT, and cools the CT in a controlled manner. Once the CT has cooled sufficiently, it is allowed to coast to a

standstill. When the rotor comes to a stop, a rotor barring device starts and rotates the CT's shaft. This constant rotating of the shaft is done in an effort to prevent it from warping or bending.

ATTACHMENT OR-E01-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT OR-E01-L10
ALTERNATIVE METHODS OF OPERATION

As provided by AC48-206720 (PSD-FL-184), the combustion turbine (CT) and duct burners (DBs) can be operated in manner that may affect emissions. The CT is operated only with natural gas and can be operated at various loads up to a maximum heat input of 856.9 MMBtu/hr at ISO conditions. The CT can be operated 8,760 hr/yr.

The DBs can be operated up to a maximum heat input of 122 MMBtu/hr(LHV) and for 450,000 MMBtu/yr(LHV). The DBs can be operated up to 8,760 hrs/yr as long as the cumulative heat input does not exceed 450,000 MMBtu/yr. For example, at 122 MMBtu/hr the DBs could be operated 3,688 hrs/hr. At an average heat input of 51.37 MMBtu/hr, the DBs can be operated for 8,760 hr/yr.

For the purpose of demonstrating ongoing compliance with the applicable NO_x emissions limitation, Specific Condition 13 of AC48-206720 provides for the use of the stack CEM and compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lb/hr when only the CT is operating and less than or equal to 69.6 lb/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

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

Calculated Emission Limitation =

[(57.4 lb/hr x 20 hours) + (69.6 lb/hr x 4 hours)]/24 hours =

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

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

ATTACHMENT OR-E01-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

ATTACHMENT OR-E01-L12

REQUEST TO CHANGE CONDITIONS OF THE AIR CONSTRUCTION/PSD PERMIT THAT ARE OBSOLETE OR OUTDATED

This request is to remove or revise from the Title V permit, several specific conditions of the FDEP- issued PSD/air construction permit (PSD-FL-184;AC48-206720) that are obsolete or outdated. This request is made pursuant to FDEP's Guidance on Implementation of Existing Permit Conditions Into Title V Permits (DARM-PER/V-14; February 8, 1996).

Specific Conditions 1, 3, and 4:

For clarification, it is requested that the basis of the heat input be included in the Title V permit. The application and subsequent construction permit utilized low heating value (LHV) for all heat inputs. Combustion turbines (CTs) commonly use this basis to define fuel input conditions as well as being used in the NSPS correction factor. Since the CT was the dominant source, the heat input for the duct burners was also stated in LHV. Therefore, it is requested to put "(LHV)" after each maximum heat input, i.e.,..Specific Condition 1...of 122.0 MMBtu/hr (LHV)... Specific Condition 3... not exceed 856.9 MMBtu/hr (LHV)... Specific Condition 4....856.9 MMBtu/hr (LHV)...;...122 MMBtu/hr (LHV) and 450,000 MMBtu/yr (LHV). Attached is an excerpt of Appendix A calculations from the original air construction application which shows the basis of the heat input.

Specific Condition 4:

Orlando CoGen Limited, L.P., requests that the permit emission limits be rewritten so that the duct burner emissions limits are combined with the combustion turbine emission limits when the duct burners are in operation. This request reflects the fact that the duct burners are in series with the combustion turbine and cannot be fired independently of the combustion turbine. Orlando CoGen Limited, L.P. proposes the following emission limitations and testing requirements.

Pollutant	Combustion Turbine Only Emission limits lbs/hr	Current Duct Burner Emission limits lbs/hr	Proposed Combined Combustion Turbine and Duct Burner Emission limits lbs/hr	Proposed Annual Sampling Requirements
NO_X	57.4	12.2	69.6 (57.4 +12.2)	Annual sampling required at stack
CO	22.3	12.2	34.5 (22.3+12.2)	Annual sampling required at stack
VOC	3.0	3.7	6.7 (3.0+3.7)	No test required if CO limit is met
PM/PM10	9.0	1.2	10.2 (9.0+1.2)	No test required if VE test is met.
VE	10%	N.A. (Duct Burners can not be fired independently)	10%	Annual sampling required

Compliance with the emission limits for NO_X, CO and VE would be demonstrated annually at or near the maximum operating conditions for two operating scenarios. The first operating scenario would consist of the combustion turbine only operating at greater than 95% of its maximum ISO heat input of 856.9 MMBtu(LHV)/hr. The second operating case is simultaneous operation of the combustion turbine at 95% or greater of its maximum ISO heat input of 856.0 MMBtu(LHV)/hr along with the duct burners at 90% or greater of their maximum rated heat input, 122 MMBtu(LHV)/hr.

Annual compliance testing for NO_X emissions would be conducted in accordance with the Florida Department of Environmental Protection guidance memo dated November 22, 1995, (DARM-EM-05) regarding test conditions for combustion turbines. "Testing of emission shall be conducted with the source at operating capacity. Capacity (for combustion turbines) is defined at 95-100% of manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test." The current operating permit (AO48-248669) requires a four load test annually for NO_X. Orlando CoGen Limited, L.P., requests that this requirement be removed, as four load tests are not required under DARM-EM-05, except for the initial performance test. Under this guidance, subsequent tests are conducted at maximum load as described in the proposed testing scenario above.

Specific Condition 7:

This condition is requested to be revised to exclude the requirement for initial compliance tests since these tests have been conducted and submitted to the Department. The phase: "Initial and subsequent" is requested to be deleted.

In accordance with the request in Special Condition #4, Orlando CoGen Limited, L.P. requests the use of EPA Method 20 for NO_X annual compliance at the combined stack emission point only; not at the exit of the combustion turbine prior to the duct burners.

Specific Condition 8:

It is requested that this condition to be revised to eliminate the reference to an initial compliance test, since this test has been performed and submitted to the Department. Alternative wording is suggested as follows:

> "Opacity emissions tests shall be conducted annually to demonstrate compliance with the PM/PM10 emission limits. If the opacity exceeds 10 percent during the annual compliance test, the Department may require a PM test. At the discretion of the source, EPA Method 5 or Method 17 may be used."

Specific Condition 10: (See attached FDEP letter of 2/9/95 for revised Specific Condition 10)
It is requested that if this condition is included in the Title V permit, the reference to ambient air in H_{obs} and T_{amb}, should be changed to "turbine inlet".

Specific Condition 12 (as amended):

It is requested that this condition not be included in the Title V permit, since compliance with the NO_x emission limit has been demonstrated and the HRSG was designed (past tense) to accommodate SCR. The purpose of this condition was to assure the Department that the NO_x emission limit of 15 ppmvd, corrected to 15 percent O_2, would be achieved. If compliance was not achieved, then the addition of SCR would not be excluded by design prohibitions. Since compliance has been demonstrated on a continuing basis, this condition should not be included in the Title V permit.

Specific Condition 14 (as amended):

It is requested that this condition not be included in the Title V permit, since compliance with the CO emission limit has been demonstrated and the facility was designed (past tense) to accommodate an oxidation catalyst. The purpose of this condition was to assure the Department that the CO emission limit of 10 ppmvd would be achieved. If compliance was achieved, then the condition provides for its elimination, i.e., an oxidation catalyst would not be required. Since compliance has been demonstrated on numerous annual stack tests, this condition should not be included in the Title V permit.

Table A-1. Design Information and Stack Parameters for Orlando CoGen Limited, L.P. Cogeneration Project

Data A	Gas Turbine Natural Gas 20°F - B	Gas Turbine Natural Gas 59°F - C	Gas Turbine Natural Gas 72°F - D	Gas Turbine Natural Gas 102°F - E	Duct Burner Natural Gas - F
General:					
Power (kW)	87,360.0	78,830.0	75,690.0	68,350.0	NA
Heat Rate (Btu/kwh)	10,690.0	10,870.0	10,960.0	11,270.0	NA
Heat Input (mmBtu/hr)	933.9	856.9	829.6	770.3	122.0
Natural Gas (lb/hr)	44,732.4	41,044.3	39,735.7	36,897.3	5,843.8
(cf/hr)	987,186.5	905,795.0	876,915.9	814,275.4	128,964.1
Fuel:					
Heat Content - (LHV)	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb
Sulfur	1 gr/100cf	1 gr/100cf	1 gr/100cf	1 gr/100cf	1 gr/100cf
CT Exhaust:	CT Only:	CT Only:	CT Only:	CT Only:	CT & DB Exhaust:
Volume Flow (acfm)	1,601,395	1,529,035	1,500,057	1,429,720	675,048
Volume Flow (scfm)	603,523	569,344	555,810	522,778	524,155
Mass Flow (lb/hr)	2,631,000	2,482,000	2,423,000	2,279,000	2,285,000
Temperature (°F)	941	958	965	984	220
Moisture (% Vol.)	6.10	6.70	7.10	9.30	9.20
Oxygen (% Vol.)	14.40	14.50	14.40	14.20	14.00
Molecular Weight	28.00	28.00	28.00	28.00	28.00
HRSG Stack:					
Volume Flow (acfm)	811,556	754,813	726,343		675,048
Temperature (°F)	250	240	230		220
Diameter (ft)	15.7	15.7	15.7		15.7
Velocity (ft/sec)	69.90	65.01	62.56		58.14

Note: CT and duct burner will fire natural gas only.
Duct burner maximum firing will be 450,000 MM Btu/year; i.e., 4,500 hours at 100 MM Btu/hr.
Duct burner operation is planned when ambient temperature is greater than 59°F.

AIR CONSTRUCTION PERMIT

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

February 9, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John P. Jones
President
Orlando CoGen (I), Inc.
Orlando CoGen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Dear Mr. Jones:

RE: Request for Construction Permit Amendments
AC 48-206720(A)/PSD-FL-184(A)

The Department has considered Mr. Kennard F. Kosky's request for amendments of the construction permit, referenced above, as outlined in the December 12, 1994 meeting with the Department. Each request will be addressed and the Department's response (R) and any changes will follow:

o Specific Condition 7.b.: Requested that EPA Method 17 be allowed for testing for particulate matter (PM).

R: The request is acceptable and the following will be changed:

FROM: EPA Method 5 for PM.

TO: EPA Method 5 **or 17** for PM **(initial only, unless opacity >10%)**.

o Specific Condition 8.: If EPA Method 17 is approved as a testing option in Specific Condition 7.b., then the request is that it also be included as a testing option in this condition.

R: The request is acceptable and the following will be changed:

FROM: EPA Method 5 must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

TO: EPA Method 5 **or 17** must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

o Specific Condition 10.: Requested that the word "proposed", referring to the NO_x standard, be changed to "NSPS".

R: The request is acceptable and the following will be changed:

FROM:

During performance tests, to determine compliance with the proposed NO_x standard, measured NO_x emission at 15 percent oxygen shall be adjusted to ISO ambient atmospheric conditions by the following equation in accordance with 40 CFR 60.335(c)(1):

$$NO_x = (NO_{xo})\ (P_r/P_o)^{0.5}\ e^{19(H_o - 0.00633)}\ (288°K/T_a)^{1.53}$$

where:
NO_x = Emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{xo} = Observed NO_x emission at 15 percent oxygen, ppmv.
P_r = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure, mm Hg.
P_o = Measured combustor inlet absolute pressure at test ambient pressure, mm Hg.
H_o = Observed humidity of ambient air at test, g H_2O/g air.
e = Transcendental constant (2.718).
T_a = Temperature of ambient air at test, °K.

TO:

During performance tests, to determine compliance with the **NSPS** NO_x standard, **the** measured NO_x emission at 15 percent oxygen shall be adjusted to ISO ambient atmospheric conditions by the following equation in accordance with 40 CFR 60.335(c)(1):

$$NO_x = (NO_{xo})\ (P_r/P_o)^{0.5}\ e^{19(H_o - 0.00633)}\ (288°K/T_a)^{1.53}$$

where:
NO_x = Emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{xo} = Observed NO_x emission at 15 percent oxygen, ppmv.
P_r = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure, mm Hg.
P_o = Measured combustor inlet absolute pressure at test ambient pressure, mm Hg.
H_o = Observed humidity of ambient air at test, g H_2O/g air.
e = Transcendental constant (2.718).
T_a = Temperature of ambient air at test, °K.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a

waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

A copy of this letter must be attached to the construction permit, No. AC 48-206720(A)/PSD-FL-184(A), and shall become a part of the permit.

Sincerely,

Howard L. Rhodes

Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/SA/bjb

cc: C. Collins, CD
D. Nester, OCEPD
J. Harper, EPA
J. Bunyak, NPS
T. Hess, Orlando CoGen (I), Inc.
K. Kosky, P.E., KBN

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this AMENDMENT and all copies were mailed by certified mail before the close of business on 2/9/95 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.

Charlotte J. Hayes 2/9/95

Clerk Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 48-206720
PSD-FL-184
Orange County

Mr. John P. Jones, President
Orlando CoGen (I), Inc.
Orlando CoGen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

_____/

Enclosed is Permit Number AC 48-206720 to construct a 128.9 megawatt cogeneration facility located in the Orlando Central Park, Orange County, Florida. This permit is issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the 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 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 17, 1992 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.

Charlotte J Hayes (Clerk) 8/17/92 (Date)

Copies furnished to:

C. Collins, CD
K. Kosky, P.E., KBN
J. Harper, EPA
C. Shaver, NPS
D. Nester, OCEPD
P. Cunningham, Esq. HBG&S

Final Determination

Orlando CoGen Limited, L.P.
Orange County, Florida

Construction Permit No.
AC 48-206720
(PSD-FL-184)

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

August 17, 1992

Final Determination

Orlando CoGen Limited, L.P.

AC 48-206720 (PSD-FL-184)

The construction permit application package and supplementary material have been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in The Orlando Sentinel on June 12, 1992. The Technical Evaluation and Preliminary Determination (TE&PD) was distributed on June 8, 1992, and was available for public inspection at the Department's Central District office and the Department's Bureau of Air Regulation office.

Comments were received from the applicant during the public notice period. The comments were received on July 7, 1992. The Department's response to the comments are as follows (note: each response is numbered to correspond to each comment):

1. The Department will change the permittee's name to read "Orlando CoGen Limited, L.P." instead of "Orlando Cogen Limited, L.P."

2. Since the requested change does not affect the potential emissions, a revised TE&PD will not be required. However, the comment is acknowledged.

3. Permit No. AC 48-206720 (PSD-FL-184)

a. The request is acceptable, but the specific language will be slightly different than what was requested:

SPECIFIC CONDITION No. 1:

From: The CT (combustion turbine) is allowed to operate continuously (8,760 hours per year). The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate 3688 hrs/yr at a maximum heat input of 122 x 10^6 Btu/hr.

To: The CT (combustion turbine) is allowed to operate continuously (8,760 hours per year). The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate 3688 hrs/yr at a maximum heat input of 122.0 x 10^6 Btu/hr for a maximum heat input of 450,000 x 10^6 Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

b. The request is acceptable to add a clarifier to the hours of operation.

SPECIFIC CONDITION No. 4: Table 1, Note 3b:

From: DB: 3688 hrs/yr

To: DB: 3688 hrs/yr (at a maximum heat input of 122 x 10^6 Btu/hr)

c. Except for minor particulate sources equipped with a baghouse control system, the Department does not have the authority, by rule, to substitute a visible emission standard for a mass emissions standard in accordance with Florida Administrative Code (F.A.C.) Rule 17-2.700(3)(d). However, the owner or operator of any source may request approval of alternate procedures and requirements in accordance with F.A.C. Rule 17-2.700(3)(a). Therefore, the request is not acceptable and SPECIFIC CONDITION No. 8 will not be altered.

d. The request is acceptable, which alters the original wording, but not the intent.

SPECIFIC CONDITION No. 12:

From: The permittee shall leave sufficient space suitable for future installation of SCR equipment.

To: The permittee shall design the facility to allow for future installation of SCR equipment.

e. The request is acceptable.

SPECIFIC CONDITION No. 13:

From: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from this source. ~~The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2, (July 1, 1991).~~

To: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxides (NOx) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2 (July 1, 1991 version).

For the purpose of demonstrating ongoing compliance with the applicable NOx emissions limitation in Table 1, using the stack CEM, compliance is considered to occur when the NOx emissions are less than or equal to 57.4 lbs/hr when only the CT is operating and less than or equal to 69.6 lbs/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

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

Calculated Emission Limitation =

[(57.4 lbs/hr x 20 hrs) + (69.6 lbs/hr x 4 hrs)]/24 hrs =

24-hour rolling average-compliance NOx level = 59.4 lbs/hr

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

f. The request is acceptable, which alters the original wording, but not the intent.

SPECIFIC CONDITION No. 14:

From: Combustion control shall be utilized for CO control. The permittee shall leave a sufficient space suitable for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

To: Combustion control shall be utilized to minimize CO emissions. The permittee shall design the facility to allow for the future installation of an oxidation catalyst. Once the performance test is completed and if the facility demonstrates compliance with the CO emission limits in Table 1, then an oxidation catalyst will not be required. Otherwise, the decision to require an oxidation catalyst will be based on a cost/ benefit analysis of using such control.

HRSG-D

4. BACT Determination to Permit No. AC 48-206720 (PSD-FL-184)

a. The request is acceptable and the BACT will be revised on page 1, 1st paragraph, to reflect the product output of the combustion turbine (CT) to be 78.8 MW and the steam turbine (ST) to be 50.1 MW. Originally, the CT's output was listed as 79 MW and the ST's output as 50 MW.

b. The request is acceptable and the sentence (i.e., page 3, 2nd paragraph under "Products of Incomplete Combustion", 2nd sentence) will be deleted. The rationale is that the applicant attests that the proposed unit is a proven operation and is being permitted for a CO level lower than other recently permitted sources. Data has been submitted to substantiate CO levels from currently operating and similar units.

c. The request is acceptable, but the proposed language will be slightly different than what was requested. Therefore, the 2nd sentence, 1st paragraph, page 8-"BACT Determination by DER": NOx Control, will be revised to read:

Duct firing will be used for supplying steam and limited to operate at a full load equivalent of 3688 hrs/yr at a maximum heat input of 122.0×10^6 Btu/hr for a maximum heat input of $450,000 \times 10^6$ Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

d. The request is acceptable, but the proposed language will be slightly different than what was requested. Therefore, the 2nd sentence, 2nd paragraph, page 8-"BACT Determination by DER": CO Control, will be revised to read:

The permittee shall design the facility to allow for the future installation of an oxidation catalyst. Once the performance test is completed and if the facility demonstrates compliance with the CO emission limits, then an oxidation catalyst will not be required. Otherwise, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

e. The "Note" associated with the table "Emission Standards/ Limitations", located on page 8 of the proposed BACT Determination, will be revised to read:

Note: Natural gas firing will be used only for supplemental firing the DB for a full load equivalent of 3688 hrs/yr at 122.0 x 10^6 Btu/hr maximum heat input for a maximum heat input of 450,000 x 10^6 Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

5. Attachment to be Incorporated:

o Mr. Gary D. Kinsey's letter with enclosure received July 7, 1992.

Therefore, it is recommended that the construction permit, No. AC 48-206720 (PSD-FL-184), and associated BACT Determination, be issued as drafted, with the above referenced revisions incorporated.

Orlando
CoGen
Limited, L.P.

7201 Hamilton Boulevard
Allentown, Pennsylvania 18195-150

6 July 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Written Comments on Preliminary Determination and Proposed PSD permit - Orlando CoGen Limited, L.P. Project, Orange County; DER File No. AC 48-206720; PSD-FL-184

Attention: Mr. Preston Lewis

Please find enclosed Orlando CoGen Limited's written comments to the Department Preliminary Determination and Proposed PSD Permit for the subject project. Please consider these comments when the Department finalizes the proposed permit.

As we discussed on Tuesday, 30 June, Orlando CoGen Limited will include provisions in the CEM data acquisition system which will allow for the comparison of actual NO_x emissions measured in the stack with an emissions limitation determined each hour taking into account duct burner firing status. Per conversation with our engineering group, this tracking can be done by obtaining an electrical signal from the duct burner system main natural gas control valve and integrating it into the logic of the CEM computer program. As noted in our requested changes to Special Condition #13, this provision will be incorporated into the permit.

Orlando CoGen Limited, L.P. greatly appreciated the opportunity to meet with the Department to discuss the proposed PSD permit. If you should have any questions or would need additional information, please call me.

Sincerely,

Gary D. Kinsey, P.E.
Environmental Engineer

cc: P. Cunningham, HBG&S
K. Kosky, KBN

ORLANDO COGEN LIMITED, L.P.
DER FILE NO. AC 48-206720; PSD-FL-184

WRITTEN COMMENTS ON PROPOSED PSD PERMIT
ISSUED BY FDER BUREAU OF AIR REGULATION ON JUNE 5, 1992

PREPARED BY: ORLANDO COGEN LIMITED, L.P.
6 JULY 1992

1. The permittee name shall be Orlando CoGen Limited, L.P. There is a capital "G" in CoGen. This change should be made throughout the documents.

2. Technical Evaluation and Preliminary Determination Document:

a. Section III.A, Table 1:

- Note 3b: Request to read: DB: 3688 hrs/yr (at full load equivalent of 122 MMBTU/hr)

3. Proposed Permit Draft Document:

a. Page 5 of 9, Specific Condition #1:

Please change second sentence to read: "The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate at 3688 hrs/yr at a full load equivalent of 122 MMBTU/hr for a maximum heat duty of 450,000 MMBTU/yr (e.g. 4500 hrs/yr at 100 MMBTU/hr).

b. Page 6 of 9, Specific Condition #4, Table 1:

- Note 3b: Request to read: DB: 3688 hrs/yr (at full load equivalent of 122 MMBTU/hr)

c. Page 7 of 9, Specific Condition #8: (Request to read)

EPA Method 5 must be used to determine the initial compliance status of this unit. During the initial compliance testing, compliance with the PM/PM-10 emissions limits will be assumed provided that the PM test of the CT and DB operating together shows emissions less than or equal to 10.2 lbs/hr. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

d. Page 8 of 9, Specific Condition #12: (Request to read)

The permittee shall design the facility to allow for future installation of SCR equipment.

e. Page 8 of 9, Specific Condition #13: (Please add the following to the existing paragraph)

For purpose of demonstrating ongoing compliance with the applicable NO_x emissions limitations in Table 1, using the stack CEM, compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lbs/hr when only the CT is operating and less than or equal to 69.6 lbs/hr when both the CT and DB are operating. The 24 hour rolling average compliance level is calculated based on the proportion of hours in any rolling 24 hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

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

Emissions Limitations =

[(57.4 lbs/hr x 20 hours) + (69.6 lbs/hr x 4 hours)]/24 hours =

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

Actual hourly NO_x emissions levels from the stack CEM will be averaged over the same 24 hour rolling period to determine the facility actual NO_x emissions level. At all times, the 24 hour rolling average - actual NO_x emissions level must be less than or equal to the 24 hour rolling average - compliance NO_x emissions level.

f. Page 8 of 9, Specific Condition #14: (Request to read)

Combustion control shall be utilized for CO control. The permittee shall design the facility to allow for the future installation of an oxidation catalyst. Once the performance test is completed and the facility demonstrates compliance with the CO emissions limits in Table 1, then an oxidation catalyst will not be required. Otherwise, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

4. BACT Determination Document:

a. Page 1, 1st paragraph: The combustion turbine should be listed as 78.8 MW and the steam turbine as 50.1 MW.

b. Page 3, Products of Incomplete Combustion: The sentence "the applicant has stated that the CT is a new design, and CO margins must be higher" should be deleted. The proposed unit is a proven operation and is being permitted for a CO level lower than other recently permitted sources.

c. Page 7, BACT Determination by DER, NO_x Control: Please change the last sentence in this section to read: Duct firing will be used for supplying steam and limited to a full load equivalent of 3,688 hrs/yr at 122 MMBTU/hr maximum heat input up to 450,000 MMBTU/yr (e.g., 4500 hrs/yr at 100 MMBTU/hr).

d. Page 8, BACT Determination by DER, CO Control: Please reword this section to match the language in the proposed PSD permit for CO control (i.e., proposed permit Specific Condition #14).

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Orlando CoGen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Permit Number: AC 48-206720
PSD-FL-184
Expiration Date: August 31, 1994
County: Orange
Latitude/Longitude: 28°26'23"N
81°24'28"W
Project: 128.9-MW Combined Cycle Gas Turbine

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4, and 40 CFR (July, 1991 version). 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 or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a 128.9 MW (megawatt) combined cycle gas turbine cogeneration facility to be located in the Orlando Central Park, Orange County, Florida, and will supply steam to the adjacent Air Products and Chemicals Plant. The UTM coordinates are Zone 17, 459.5 km East and 3,146.1 km North.

The Standard Industrial Code: 4931-Electric and Other Services Combined

The 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. Orlando Cogen Limited, L.P.'s application received December 30, 1991.
2. Mr. C. H. Fancy's letter dated January 28, 1992.
3. Mr. Kennard F. Kosky's letter with enclosures received March 2, 1992.
4. Mr. Wayne A. Hinman's letter received via FAX May 27, 1992.
5. Mr. Kennard F. Kosky's letter with enclosure received May 27, 1992 (hand delivered).
6. Document (Table 1) received June 1, 1992, from Mr. Peter Cunningham (hand delivered).
7. 40 CFR (July, 1991 version).
8. Technical Evaluation and Preliminary Determination dated June 5, 1992.
9. Mr. Gary D. Kinsey's letter with enclosure received July 7, 1992.

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 Florida Statutes 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 Florida Statutes 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 Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with F.A.C. Rules 17-4.120 and 17-30.300, 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:

1. The CT (combustion turbine) is allowed to operate continuously (8,760 hours per year). The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate 3688 hrs/yr at a maximum heat input of 122.0 x 10^6 Btu/hr for a maximum heat input of 450,000 x 10^6 Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

2. The CT and HRSG-DB are only allowed to use natural gas.

3. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follows:

- Maximum heat input to the CT shall not exceed 856.9 MMBtu/hr at ISO conditions. 288°K → 15°C 101.1 kPA
- Maximum heat input to the HRSG-DB shall not exceed 122.0 MMBtu/hr; 450,000 MMBtu/yr.

4. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1.

Table 1

Pollutant	Source	Allowable Emission Standard/Limitation
NOx	CT	15 ppmvd @ 15% O_2 (57.4 lbs/hr; 251.4 TPY)
	DB	0.1 lb/MMBtu (12.2 lbs/hr; 22.5 TPY)
	CT/DB	24-hr rolling average

SPECIFIC CONDITIONS:

Table 1 cont.:

CO	CT	10 ppmvd (22.3 lbs/hr; 92.1 TPY)
	DB	0.1 lb/MMBtu (12.2 lbs/hr; 22.5 TPY)
PM/PM_{10}	CT	0.01 lb/MMBtu (9.0 lbs/hr; 39.4 TPY)
	DB	0.01 lb/MMBtu (1.2 lbs/hr; 2.2 TPY)
VOC	CT	3.0 lbs/hr; 13.0 TPY
	DB	3.7 lbs/hr; 6.8 TPY
VE	CT/DB	≤ 10 % opacity

NOTE:
1. CT: combustion turbine
   DB: duct burner
2. Natural gas usage only in the CT and DB.
3. Hours of operation:
   a. CT: 8760 hrs/yr
   b. DB: 3688 hrs/yr (at a maximum heat input of 122.0 x 10^6 Btu/hr)
4. Maximum heat input:
   a. CT: 856.9 x 10^6 Btu/hr
   b. DB: 122.0 x 10^6 Btu/hr; 450,000 x 10^6 Btu/yr
5. DB operation planned when ambient temperature is greater than 59°F.

5. Any change in the method of operation, equipment or operating hours, pursuant to F.A.C. Rule 17-2.100, Definitions-Modification, shall be submitted to the Department's Bureau of Air Regulation and Central District offices.

6. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

7. Initial and subsequent annual compliance tests shall be performed within 10 percent of the maximum heat rate input for the tested operating temperature. Tests shall be conducted using EPA reference methods in accordance with the July 1, 1991 version of the 40 CFR 60, Appendix A.
a. EPA Method 5 for PM
b. EPA Method 10 for CO
c. EPA Method 9 for VE
d. EPA Method 20 for NOx

Note: Other test methods may be used for compliance testing only after prior Department written approval.

SPECIFIC CONDITIONS:

8. EPA Method 5 must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

9. Compliance with the total volatile organic compound emission limits will be assumed, provided the CO allowable emission rate is achieved. Specific VOC compliance testing is not required.

10. During performance tests, to determine compliance with the proposed NOx standard, measured NOx emission at 15 percent oxygen shall be adjusted to ISO ambient atmospheric conditions by the following equation in accordance with 40 CFR 60.335(c)(1):

$$NO_X = (NO_{XO})\ (P_r/P_o)^{0.5}\ e^{19(H_o-0.00633)}\ (288°K/T_a)^{1.53}$$

where:
NO_X = Emission rate of NOx at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{XO} = Observed NOx emission at 15 percent oxygen, ppmv.
P_r = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure, mm Hg.
P_o = Measured combustor inlet absolute pressure at test ambient pressure, mm Hg.
H_o = Observed humidity of ambient air at test, g H_2O/g air.
e = Transcendental constant (2.718).
T_a = Temperature of ambient air at test, °K.

11. Test results will be the average of 3 valid runs. The Department's Central District office shall be notified at least 30 days in advance of the compliance test in accordance with 40 CFR 60.8(c). The source shall operate between 90% and 100% of permitted capacity as adjusted for ambient temperature during the compliance test. Compliance test results shall be submitted to the Department's Central District office no later than 45 days after completion in accordance with F.A.C. Rule 17-2.700(8)(b).

12. The permittee shall design the facility to allow for future installation of SCR equipment.

13. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxides (NOx) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2, (July 1, 1991 version).

SPECIFIC CONDITIONS:

For the purpose of demonstrating ongoing compliance with the applicable NOx emissions limitation in Table 1, using the stack CEM, compliance is considered to occur when the NOx emissions are less than or equal to 57.4 lbs/hr when only the CT is operating and less than or equal to 69.6 lbs/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

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

Calculated Emission Limitation =

[(57.4 lbs/hr x 20 hrs) + (69.6 lbs/hr x 4 hrs)]/24 hrs =

24-hour rolling average-compliance NOx level = 59.4 lbs/hr

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

14. Combustion control shall be utilized for CO control. The permittee shall design the facility to allow for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

does not quite reflect the Amendments

15. This source shall be in compliance with all applicable provisions of Chapter 403, F.S., F.A.C. Chapters 17-2 and 17-4, and the 40 CFR (July, 1991 version).

16. This source shall be in compliance with all applicable requirements of 40 CFR 60, Subparts GG and Db, in accordance with F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines and Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

17. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

SPECIFIC CONDITIONS:

18. This source shall be in compliance with all applicable provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; 17-2.660: Standards of Performance for New Stationary Sources (NSPS); 17-2.700: Stationary Point Source Emission Test Procedures; and, 17-4.130: Plant Operation-Problems.

19. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, 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: fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office by March 1 of each year.

20. 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 (F.A.C. Rule 17-4.090).

21. An application for an operation permit must be submitted to the Department's Central 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 (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of August, 1992

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

Best Available Control Technology (BACT) Determination
Orlando CoGen Limited, L.P.
Orange County

The applicant proposes to install a combustion turbine generator at their facility in Orange County. The generator system will consist of one nominal 78.8 megawatt (MW) combustion turbine (CT), with exhaust through a heat recovery steam generator (HRSG), which will be used to power a nominal 50.1 MW steam turbine.

The combustion turbine will be capable of combined cycle operation. The applicant requested that the combustion turbine use only natural gas. The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired at ISO conditions to be as follows:

Pollutant	Emissions (TPY)	PSD Significant Emission Rate (TPY)
NO_x	273.9	40
SO_2	12.0	40
PM/PM_{10}	41.7	25/15
CO	114.6	100
VOC	19.8	40
H_2SO_4	0.9	7
Be	Neg.	0.0004
Hg	Neg.	0.1
Pb	Neg.	0.6

Florida Administrative Code (F.A.C.) Rule 17-2.500(2) (f) (3) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

December 30, 1991

BACT Determination Requested by the Applicant

Pollutant	Determination
NO_x	15 ppmvd @ 15% O_2 (natural gas burning)--CT 0.1 lb/10^6 Btu--duct burner
CO	Combustion Control
PM/PM_{10}	Combustion Control

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, 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, than 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 combined cycle power plants 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). Controlled generally by efficient 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.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject 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, fluorides, 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.

Combustion Products

The projected emissions of particulate matter and PM_{10} from the Orlando CoGen Limited, L.P. facility surpass the significant emission rates given in Florida Administrative Code Rule 17-2.500, Table 500-2.

A PM/PM_{10} emissions limitations of 0.01 lb/MMBtu from the CT when firing natural gas is reasonable as BACT for the Orlando CoGen Limited, L.P. facility. The duct burner PM/PM_{10} emission rate of 0.01 lb/MMBtu is reasonable as BACT.

Products of Incomplete Combustion

The projected emissions of carbon monoxide exceed the PSD significant emission rate of 100 TPY. The applicant has indicated that the carbon monoxide emissions from the proposed turbine is based on exhaust concentrations of 10 ppmvd for natural gas firing.

A review of the BACT/LAER clearinghouse indicates that several of the combustion turbines using dry low-NOx combustion technology to control NOx to 15 ppmvd (corrected to 15 percent O_2) have been permitted with CO limitations that are higher than those proposed by the applicant. The majority of BACT emissions limitations have been based on combustion controls for carbon monoxide and volatile organic compounds. Additional control is achievable through the use of catalytic oxidation. Catalytic oxidation is a postcombustion control that has been employed in CO nonattainment areas where regulations have required CO emission levels to be less than those associated with wet injection. These installations have been required to use LAER technology and typically have CO limits in the 10-ppm range (corrected to dry conditions).

In an oxidation catalyst control system, CO emissions are reduced by allowing unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts

at about 300°F, with efficiencies above 90 percent occurring at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than that of thermal oxidation, which reduces the amount of thermal energy required. For CT/HRSG combinations, the oxidation catalyst can be located directly after the CT or in the HRSG. Catalyst size depends upon the exhaust flow, temperature, and desired efficiency. The existing gas turbine applications have been limited to smaller cogeneration facilities burning natural gas.

Given the applicant's proposed BACT level for carbon monoxide of 10 ppm, a lower emission rate as BACT would not produce a significant reduction in emissions or impacts. Also, this CO concentration level is near the lowest established as BACT even with catalytic oxidation. For these reasons, it appears that the limit proposed by the applicant is reasonable as BACT.

Emission of volatile organic compounds are below the significant level and therefore do not require a BACT analysis.

Acid Gases

The applicant has stated that BACT for nitrogen oxides will be met by using dry low-NOx combustors to limit emissions to 15 ppmvd (corrected to 15% O_2) when burning natural gas.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NOx 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 selective catalytic reduction (SCR) system.

Selective catalytic reduction is a post-combustion method for control of NOx emissions. The SCR process combines vaporized ammonia with NOx in the presence of a catalyst to form nitrogen and water. Vaporized ammonia is injected into the exhaust gases prior to passage through a catalyst bed. The SCR process can achieve up to 90% reduction of NOx with a new catalyst. As the catalyst ages, the maximum NOx reduction will decrease to approximately 86 percent.

A review of the combined cycle facilities in which SCR has been established as a BACT requirement indicates that the majority of these facilities are also intended to operate at high capacity factors. As this is the case, the proposed project is similar to other facilities in which SCR has been established as BACT.

Given the applicant's proposed BACT level for nitrogen oxides control stated above, an evaluation can be made of the cost and associated benefit of using SCR as follows:

The applicant has indicated that the total levelized annual cost (operating plus amortized capital cost) to install SCR for natural gas firing at a 100 percent capacity factor is $1,903,000. Taking into consideration the total annual cost, a cost/benefit analysis of using SCR can be developed.

Based on the information supplied by the applicant, it is estimated that the maximum annual NOx emissions with dry low-NOx combustors from the Orlando CoGen Limited, L.P. facility will be 274 tons/year. Assuming that SCR would reduce the NOx emissions to a level of 9 ppmvd when firing natural gas, about 141 tons of NOx would be emitted annually. When this reduction is taken into consideration with the total levelized annual cost of $1,900,000, the cost per ton of controlling NOx is $14,308. This calculated cost is higher than has previously been approved as BACT.

Since SCR has been determined to be BACT for several combined cycle facilities, 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 recent 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."

For fuel oil firing, the cost associated with controlling NOx emissions must take into account the potential operating problems that can occur with using SCR in the oil firing mode.

A concern associated with the use of SCR on combined cycle projects 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 has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this the case, SCR has been judged to be technically infeasible for oil firing in some previous BACT determinations.

The latest information available indicates that SCR can be used for oil firing provided that adjustments are made in the ammonia to NOx injection ratio. For natural gas firing operation NOx emissions

can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater injection ratio. By lowering the injection ratio for oil firing, testing has indicated that NOx can be controlled with efficiencies ranging from 60 to 75 percent. 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 for oil fired combined cycle facilities with NOx emission limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

The Orlando CoGen Limited, L.P. facility has proposed not to utilize fuel oil; therefore, those consequences of SCR attributed to fuel oil firing will not likely occur. However, the small amount of sulfur in natural gas would likely form ammonium salts.

Environmental Impact Analysis

The predominant environmental impacts associated with this proposal are related to the use of SCR for NOx control. The use of SCR results in emissions of ammonia, which may increase with increasing levels of NOx control. In addition, some catalysts may contain substances which are listed as hazardous waste, thereby creating an additional environmental impact. Although the use of SCR does have some positive environmental benefits, the disadvantages may outweigh the benefits which would be provided by reducing nitrogen oxide emissions by 80 percent or greater. The benefit of NOx control by using SCR is substantiated by the fact that nearly one half of all BACT determinations have established SCR as the control measure for nitrogen oxides over the last five years.

From the evaluation of natural gas combustion, toxics are projected to be emitted in very small amounts, with the total combined emissions to be less than 0.1 tons per year. Although the emissions of toxic pollutants could be controlled by particulate control devices such as a baghouse or scrubber system, the amount of emission reductions would not warrent the added expense. Consequently, the Department does not believe that the BACT determination would be affected by the emissions of the toxic polutants associated with the firing of natural gas.

Potentially Sensitive Concerns

With regard to controlling NOx emissions with SCR, the applicant has identified the following technical limitations:

1. SCR would reduce the output of the combustion turbines by one-half percent.

2. SCR could result in the release of unreacted ammonia to the atmosphere.

3. SCR would require handling of ammonia by plant operators. Since it is a hazardous material, there is a concern about safety and productivity of operators.

4. SCR results in contaminated catalyst from flue gas trace elements which could be considered hazardous. Safety of operators and disposal of spent catalyst is a concern.

The combustion turbines proposed for the project (ABB 11N-EV) is a heavy-frame that is highly efficient and uses advanced dry low-NOx combustion technology. Information supplied by the applicant indicates that actual emissions will be 15 ppmvd (corrected to 15% O_2) or lower on a continuous basis.

BACT Determination by DER

NOx Control

A review of the permitting activities for combined cycle 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, capacity factors ranging from low to high). However, the cost and other concerns expressed by the applicant are valid, and advanced NOx combustion controls have been accepted as BACT on similar projects.

The information that the applicant presented and Department calculations indicates that the incremental cost of controlling NOx ($14,308/ton) is high compared to other BACT determinations which require SCR. Furthermore, actual NOx levels are expected to be less than the 15 ppmvd (corrected to 15% O_2), which would increase the cost of SCR. Based on the information presented by the applicant and the evaluation conducted, the Department believes that the use of SCR for NOx control is not justifiable as BACT. Therefore, the Department will accept dry low-NOx combustors as NOx control when firing natural gas for this project.

The emissions of NOx from the duct burner will be limited to 0.1 lb/MMBtu, which has been the BACT limit established for similar facilities. Duct firing will be used for supplying steam and limited to operate at a full load equivalent of 3,688 hours/year at a maximum heat input of 122.0 x 10^6 Btu/hr for a maximum heat input of 450,000 x 10^6 Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

CO Control

Combustion control will be considered as BACT for CO when firing natural gas. The permittee shall design the facility to allow for the future installation of an oxidation catalyst. Once the performance test is completed and if the facility demonstrates compliance with the CO emission limits, then an oxidation catalyst will not be required. Otherwise, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

Other Emissions Control

The emission limitations for PM and PM_{10} are based on previous BACT determinations for similar facilities.

The emission limits for the Orlando CoGen Limited, L.P. project are thereby established as follows:

	Emission Standards/Limitations	
Pollutant	CT (Natural Gas Firing)	DB (Natural Gas Firing)
NOx	15 ppmvd @ 15% O2	0.1 lb/MMBtu
CO	10 ppmvd	0.1 lb/MMBtu
PM & PM10	0.01 lb/MMBtu	0.01 lb/MMBtu

Note: Natural gas will be used only for supplemental firing the DB for a full load equivalent of 3688 hrs/yr at 122.0 x 10^6 Btu/hr maximum heat input for a maximum heat input of 450,000 x 10^6 Btu/yr (note: The unit may operate at lower rates for more hours within the annual heat input limit).

Details of the Analysis May be Obtained by Contacting:

Bruce Mitchell, Engineer IV
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

August 14 1992
Date

Approved by:

Carol M. Browner, Secretary
Dept. of Environmental Regulation

August 17 1992
Date

KBN

BEST AVAILABLE COPY

August 25, 1994

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection (FDEP)
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

SEP 1994
RECEIVED
DEP
Central District

RE: Request for Extension of Expiration Date
Orlando CoGen (I), Inc.; Orlando CoGen Limited, L.P.
AC 48-206720; PSD-FL-184

Attn: Syed Arif, Permitting Engineer

Dear Syed Arif:

On behalf of Orlando CoGen (I), Inc., an extension to the expiration date of the construction permit for the above referenced source is respectfully requested pursuant to Specific Condition 20 of the air construction permit. An extension until and including July 1, 1995 is requested.

The Orlando CoGen (I), Inc. facility is a Title V source according to FDEP Rule 17-213.100(19) and will be required to submit to the Department a Title V application by April 2, 1995, ([Rule 17-213.420(1)(a)1.a.; PSD source]. The extension of the expiration date of the permit is requested, due to the current time differences between the expiration of the construction permit and when the Title V permit application is due to the Department. This extension will allow representatives of the facility to focus on the preparation of the Title V permit application which is very comprehensive in nature. In addition, the extension will eliminate the Department's need to issue a separate operating permit in the next few months and then issue a Title V permit shortly thereafter. The extension request would also allow additional time to resolve any remaining issues surrounding testing methods for non-NSPS requirements, as discussed in the previous permit amendment request.

The Department's consideration in this matter is appreciated. Please call if you have any questions.

Sincerely,

Kennard F. Kosky, P.E.
President

RECEIVED
SEP 01 1994
BAR ASBESTOS

cc: Tom Hess, Orlando CoGen (I), Inc.
S. Arif
C. Collins, C [illegible]

1134A1/21

KBN ENGINEERING AND APPLIED SCIENCES, INC

1034 Northwest 57th Street
Gainesville, Florida 32605
904-331-9000
FAX 904-332-4189

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

6821 Southpoint Drive North, Suite 216
Jacksonville, Florida 32216
904-296-9663 FAX 904-296-0146

1818 "P" Street N.W., Suite 450
Washington, D.C. 20036
202-462-1100
FAX 202-462-2270

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

September 8, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John P. Jones
President
Orlando CoGen (I), Inc.
Orlando CoGen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Dear Mr. Jones:

The Department received your request to extend the expiration date of the construction permit referenced below. The permit is amended as shown:

Permit No. AC 48-206720, PSD-FL-184, Orlando CoGen (I), Inc., Orlando CoGen Limited, L.P.

Current Expiration Date : December 31, 1994

New Expiration Date : June 2, 1995

This letter shall become an Attachment to Construction Permit No. AC 48-206720.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the applicant of the amendment request/application and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other persons must be filed within 14 days of the amendment issuance or within 14 days of their receipt of this amendment, whichever occurs first. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

AIR OPERATING PERMIT

ADDITIONAL APPLICABLE REQUIREMENTS

Applicable Requirements as defined in Rule 62-210.200(29) not identified in Section D of this emission unit section are included in this attachment of the application. Any air operation permit issued by the Department (or local program designee) and included in this attachment is provided for information purposes. The specific conditions of the operating permit are not Applicable Requirements as defined in Rule 62-210.200(29) unless implementing a specific Applicable Requirement of the Department's rules (e.g., emission limitations).

Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited, L.P.
7201 Hamilton Blvd.
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
Combined Cycle Gas Turbine
Permit No. AO48-248669
Change of Permit Conditions

Dear Mr. Jones:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Condition

Specific Condition No. 15

From

..the Central District office of the Department of Environmental Regulation..

To

..the Orange County Environmental Protection Department..

Condition

Specific Condition No. 16

From

..the Department's Central District office..

To

..the Orange County Environmental Protection Department..

Condition

Specific Condition No. 20 - Delete

All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

L. T. Kozlov, P.E.
Acting Program Administrator
Air Resources Management

Issued: May 6, 1996

LTK/jt
cc: Dennis Nester
Kennard F. Kosky, P.E. ✓

Rcvd 2/28/95

155

Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL
P 248 041 670

Orlando Cogen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
128.9 MW Combined Cycle Gas Turbine

Dear Mr. Jones:

Enclosed is Permit Number AO48-248669 to operate the above referenced source, issued pursuant to Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding(hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period constitutes a waiver of any right such person may have to request an administrative determination(hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information: (a) the name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) a statement of how and when each petitioner received notice of the Department's action or proposed action; (c) a statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) a statement of the material facts disputed by petitioner, if any; (e) a statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) a statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action and (g) a statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application, have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above, and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S. , and to participate as a party

to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for extension of time, this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the 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 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

cmc for Charles M Collins

William M. Bostwick, Jr., P.E.
Acting District Director

DATE: 2-10-95

FILING AND ACKNOWLEDGMENT

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

A. Salvador 2/10/95

Clerk Date

WMB/lb

Copies furnished to:

Kennard F. Kosky, P.E.

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 2/14/95 to the listed persons by, Mayra M. Bello.

Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Permittee:
Orlando Cogen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Permit Number: AO48-248669
Date of Issue: 2-10-95
Expiration Date: January 31, 2000
County: Orange
Latitude/Longitude:
28° 26' 23"N / 81° 24' 28"W
UTM: 17-459.5 KmE; 3146.1 KmN
Project: 128.9 MW Combined Cycle Gas Turbine

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-2. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

The permittee can operate a 128.9 MW combined cycle gas turbine cogeneration facility. The cogeneration facility consists of a combustion turbine (CT) exhausting through a heat recovery steam generator (HRSG). The transition duct from the CT to the HRSG contains duct burners (DBs) with a maximum heat input of 122 MMBtu/hr.

This facility is located in the Orlando Central Park, Orange County, Florida, and will supply steam to the adjacent Air Products and Chemicals plant.

General Conditions are attached to be distributed to the permittee only.

NERAL CONDITIONS:

. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 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 this 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 ow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically thorized 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 and 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.

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

e 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.

RAL CONDITIONS:

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 Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, 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.

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

This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-30.300, 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.

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

This permit also constitutes:

(X) Determination of Best Available Control Technology (BACT)
(X) Determination of Prevention of Significant Deterioration (PSD)
( ) Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
(X) Compliance with New Source Performance Standards

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:
1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

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 the 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.

Permittee: Orlando Cogen Limited L.P.
Attention: John P. Jones, President

Permit Number: AO48-248669
Date of issue:
Expiration Date: January 31, 2000

ORLANDO COGEN

SPECIFIC CONDITIONS

OPERATING CONDITIONS

1. A C The CT (combustion turbine) is permitted to operate continuously (8,760 hours per year). [Pursuant to permit application]

2. A C The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate for 3688 hours per year at a maximum heat input rate of 122.0 MMBtu/hr for a maximum heat input of 450,000 MMBtu/yr (Note: the unit may operate at lower rates for more hours within the annual heat input limit). [Pursuant to permit application]

3. A C The CT and HRSG-DB are permitted to fire natural gas only. [Pursuant to permit application]

4. A C The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follow:

Maximum heat input to the CT shall not exceed 856.9 MMBtu/hr at ISO conditions.

Maximum heat input to the HRSG-DB shall not exceed 122.0 MMBtu/hr and 450,000 MMBtu/yr.

5. A C Any change in the method of operation, equipment or operating hours which affects air emissions shall be submitted to the Department's Bureau of Air Regulation and the Central Florida District office for prior approval.

6. A C Any other operating parameters established during compliance testing and/or inspections, that will ensure the proper operation of this facility, are considered part of this operating permit. Said operating parameters include, but are not limited to: Fuel flow rate and heat input rate.

Gen. Condition

7. Y The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. (Rule 62-296.320(2), F.A.C.)

Gen. Condition

8. G This source must be properly operated and maintained [Rule 62-210.300(2), F.A.C.]. No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly [Rule 62-210.650, F.A.C.].

EMISSION LIMITS

9. A C The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1 below

Table I

Pollutant	Source	Allowable Emission Standard/Limitation
NO_x	CT	15 ppmvd @ 15% O_2 (57.4 lb/hr; 251.4 tpy)
	DB	0.1 lb/MMBtu (12.2 lb/hr; 22.5 tpy)
	CT/DB	24-hour rolling average
CO	CT	10 ppmvd; (22.3 lb/hr; 92.1 tpy)
	DB	0.1 lb/MMBtu (12.2 lb/hr; 22.5 tpy)
PM/PM10	CT	0.01 lb/MMBtu (9.0 lb/hr; 39.4 tpy)
	DB	0.01 lb/MMBtu (1.2 lb/hr; 2.2 tpy)
VOC	CT	3.0 lb/hr; 13.0 tpy
	DB	3.7 lb/hr; 6.8 tpy
VE	CT/DB	Less than or equal to 10% opacity

NOTE: 1. CT - Combustion Turbine
DB - Duct Burner
2. Natural Gas usage only in the CT and DB.
3. Hours of operation:
a. CT - 8760 hrs/yr
b. DB - 3688 hrs/yr (at a maximum heat input of 122.0 MMBtu/hr)
4. Maximum heat input:
a. CT - 856.9MMBtu/hr
b. DB - 122.0 MMBtu/hr; 450,000 MMBtu/yr
5. DB operation planned when ambient temperature is greater than 59°F.

10. AC Visible emissions shall never exceed 10 percent opacity. [Pursuant to Construction Permit AC48-206720.] Redundant

COMPLIANCE DETERMINATION

11. Compliance with the NO_x, CO and visible emission standards shall be determined by the following reference methods as described in 40 CFR 60, Appendix A (July 1, 1990) and adopted by reference in Rule 62-297, F.A.C.

a. Method 1 - Sample and Velocity Traverses
b. Method 2 - Volumetric Flow Rate
c. AC Method 5 or 17 - Determination of Particulate Emissions from Stationary Sources
d. AC Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources
e. AC Method 10 - Determination of the Carbon Monoxide emissions from Stationary Sources
f. AC Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent emissions from Stationary Gas Turbines

Not covered explicitly from AC

Note: Other test methods may be used for compliance testing only after prior Department written approval.
Compliance with the total volatile organic compound emission limits will be assumed, provided that the CO allowable emission rate is achieved; specific VOC compliance testing is not required. Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for each parameter marked (A) in the following table:

PARAMETER	TEST METHOD
NO_x (A)	Method 20* with F factor for results in pounds per million Btu. Stack concentrations of NO_x will be corrected with the ISO correction equation in Specific Condition 14 of this permit.
VOC (A)	Method 25A. VOC will be tested simultaneously with NO_x, CO and VE at maximum load. Not required if CO limit is met.
CO (A)	Method 10. CO will be tested simultaneously with NO_x, VOC and VE at maximum load. Tests will be conducted for CT only, and CT plus DB. CO test will be three test runs, with each test run to be a minimum of one hour as required by 62-297.310(1) and 62-297.330(1)(a)
VE (A)	Method 9. two one-hour VE tests while firing gas at maximum load. One hour with DB on, one hour with DB off. VE readings will be taken simultaneously. with tests for NO_x, CO and VOC.

PARAMETER	METHOD OF DETERMINATION
Fuel Type	Natural Gas.
Btu Per Pound of Fuel (A)	Fuel Analysis both low and high. Btu input for CT calculated using lower heating value. Btu input for DB calculated using higher heating value.
CO_2 and O_2 (A)	Method 3A/20 to be used to measure oxygen for all test conditions.

Ambient temperature, pressure and humidity (A)	Temperature and humidity of the ambient air will be recorded by the stack test team. This is in addition to the data recorded by the computer. Pressure will be measured as ambient pressure.
30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load, as referenced in 40 CFR 60.335 (c)(2), Subpart GG	Peak load based on Btu input will be established and megawatts determined on the day of the test. Multiple load testing for NO_x will be performed in accordance with 40 CFR 60.335 (c)(2).

* The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O_2 concentrations or highest CO_2 concentrations were obtained - . If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist.

A one-hour visible emissions test at peak load is required to show compliance with the 10% opacity limit on the turbine.

12. An opacity test for the combustion turbine may be substituted for the annual particulate emissions test. If however opacity values exceed 10%, then a Method 5 or 17 particulate test must be conducted on the turbine to prove compliance with the particulate emissions standard. [Pursuant to Construction Permit AC48-206720]

13. The permittee shall calibrate, maintain and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxide (NO_x) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2, (July 1, 1991 version). For the purpose of demonstrating ongoing compliance with the applicable NO_x emissions limitation in Table I, using the stack CEM, compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lb/hr when only the CT is operating and less than or equal to 69.6 lb/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

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

Calculated Emission Limitation =

[(57.4 lb/hr x 20 hrs) + (69.6 lb/hr x 4 hrs)]/24 hrs =

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

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

14. During performance tests to determine compliance with the NSPS NO_x standard, the measured NO_x emission at 15% oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor, as found in 40 CFR 60.335(1) NSPS Subpart GG:

$$NO_x = (NO_{x\ obs})(P_{ref}/P_{obs})^{0.5}\ e^{19}(H_{obs} - 0.00633)(288^{o}K/T_{amb})^{1.53}$$

Where,

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions

$(NO_{x\ obs})$ = Measured NO_x emission at 15 percent oxygen, ppmv

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure

P_{obs} = Reference combustor inlet absolute pressure at test ambient pressure

H_{obs} = Specific humidity of ambient air at test

e = Transcendental constant (2.718)
T_{amb} = Temperature of ambient air at test

15. The permittee shall notify the Central District office of the Department of Environmental Protection, in writing, at least 15 days prior to the date on which each formal compliance test is to begin. Said notification shall include the date, time and place of each such test, as well as the name of the contact person who will be responsible for coordinating and having such tests conducted for the owner. The Department may waive the 15 day notice requirement on a case by case basis [Rule 62-297.340(1)(i), F.A.C.]. Further, the permittee shall also at that time, schedule a pre-test meeting with the Central District office to review the compliance test procedures required by this permit and 40 CFR 60, Code of Regulations.

16. A copy of the compliance test results shall be submitted to the Department's Central District office within 45 days after the last test run is complete. The test run should provide the actual heat input rate , and at least all of the information listed in Rule 62-297.570(3), F.A.C. Each test report should include a fuel oil analysis as required in 40 CFR 60.334(b). Failure to submit any of the above information may invalidate a test. [Rule 62-297.570 and 62-4.070(3), F.A.C.]

17. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the

permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the ~~minimum~~ permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days, for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

18. The stack sampling facility must comply with Rule 62-297.345, F.A.C., regarding minimum requirements that include but are not limited to: location of sampling ports, work platform area hand rails and toe boards, caged ladder, access and electrical power.

19 AC 14 Combustion control shall be utilized for CO control. The permittee shall design the facility to allow for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control. [Pursuant to permit application]

20. AC 18 Excess emissions resulting from startup or shutdown are to be permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized. Excess emissions resulting from malfunction are permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction, are prohibited. [Rule 62-210.700, F.A.C.]

In the event that the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department's Central District Office. Notification shall be conducted in accordance with General Condition (8) of this permit. In case of excess emissions resulting from malfunctions, a full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

The permittee shall submit, to the Department, a written report of emissions in excess of the emission limiting standard as set forth in Rule 62-296.405(1)(a), F.A.C. for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the permittee of the legal liability for violations. All recorded data shall be maintained on file for a period of at least two years. The information supplied in this report consistent with the reporting requirements of 40 CFR 60.7. The report shall be submitted within 30 days following the end of

the calendar quarter. [Rules 62-297.500(2) and 62-4.070(3), F.A.C.]

RULE REQUIREMENTS

21. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, and Chapter 62-4, Florida Administrative Code.

22. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Db, and Rule 62-296.800(a), F.A.C., Standards of Performance for Stationary Gas Turbines, and Standards of Performance for Industrial, Commercial and Institutional Steam Generating Units.

23. This source shall comply with Rule 62-297, F.A.C., Stationary Point Source Emission Test Procedures.

24. Pursuant to Rule 62-210.300, F.A.C., Air Operating Permits, 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: fuel usage, hours of operation and air emissions. Annual reports shall be sent to the Department's Central District office. Each calendar year, on or before March 1, an Annual Operations Report, DEP Form 62-210.900(5) must be submitted for the preceding calendar year.

25. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 62-297 or any other requirements under federal, state or local law. Additional regulations may impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective. [Rule 62-210.300, F.A.C.]

25. The application to renew this operating permit shall be submitted to the Central District office of the Department of Environmental Protection at least 60 days prior to the expiration date of this permit. [Rules 62-4.050(2) and 62-4.090(1), F.A.C.].

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Charles M Cullens
for William M. Bostwick, Jr., P.E.
Acting District Director

ISSUED: 2-10-95

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): **Duct Burner System Associated with HRSG** should be.		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown **002** but ARMS only shows 001		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This emission unit can not be operated independently from the combustion turbine. Emission unit included in the facility designation as an acid rain unit.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Low NOx Burners ~~need not report~~; seems to only improve combustion (unless control efficiency is known) what is the η (needed per Cindy 121896

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: **5 Sep 1993**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **COEN Company, Inc.**	Model Number: **N/A**
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:	**122**	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): **See Attachment OR-E02-C5**		

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-E02-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
2. Emission Point Type Code: [ ] 1 [x] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	Two emission units discharge in series through the stack.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	001 EU1 - Combustion Turbine (CT); 002 EU2 - Duct Burner (DB) system with HRSG
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W	
6. Stack Height:	115 feet
7. Exit Diameter:	15.7 feet
8. Exit Temperature:	220 °F

9. Actual Volumetric Flow Rate:	**675,048** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Actual volumetric flow rate (acfm) is given for Combustion Turbine and Duct Burners operation. Stack discharge temperature is 220°F.**	

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

Segment Description and Rate: Segment 1 of 1

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

Natural Gas Firing

2. Source Classification Code (SCC):

20200203

3. SCC Units:

Million Cubic Feet Burned

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.129	**475.687**

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):

Heat content (million Btu/SCC) based on lower heating value (LHV). Maximum percent sulfur: 1 grain/100 cf. Maximum annual rate based on heat input limit of 450,000 MMBtu/year (LHV).

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
NOX	024		EL
CO			EL
VOC			EL
PM			EL
PM10			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: **50** %

3. Potential Emissions: **12.2** lb/hour **22.5** tons/year

4. Synthetically Limited? [X] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.1 lb/MMBtu**

   Reference: **AC 48-206720**

7. Emissions Method Code:

   [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

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

0.1 lb/MMBtu x 122 MMBtu/hr = 12.2 lb/hr; 12.2 lb/hr x 3,688 hr/yr x 1 ton/2,000 lb = 22.5 TPY

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

This unit is limited to a maximum heat input of 450,000 MMBtu/yr (LHV) which is equivalent to operating at a maximum of 122 MMBtu/hr (LHV) for 3,688 hours.

The hours can be increased to 8760 as long as the max heat input remains @ 450,000 MMBTU/yr

Emissions Unit Information Section 2 **of** 3

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: **12.2 lb/hr**	
4. Equivalent Allowable Emissions: **12.2** lb/hour	**22.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 20; CEM**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 0.1 lb/MMBtu; 22.5 TPY. Allowable emissions established as BACT in Permit AC48-206720. CT/DB compliance using CEM; see Sp Cond 13 (revised).**	

B.

1. Basis for Allowable Emissions Code: **RULE**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu**	
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): **40CFR60.44b(a)(4)(i) limits NOx from duct burner systems when burning natural gas.** Verify	

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: 12.2 lb/hour 22.5 tons/year
4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: 0.1 lb/mmBtu Reference: AC 48-206720
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.1 lb/MMBtu x 122 MMBtu/hr = 12.2 lb/hr; 12.2 lb/hr x 3,688 hr/yr x 1 ton/2,000 lb = 22.5 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **This unit is limited to a maximum heat input of 450,000 MMBtu/yr (LHV) which is equivalent to operating at a maximum of 122 MMBtu/hr (LHV) for 3,688 hours.**

Emissions Unit Information Section 2 **of** 3

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:	**12.2** lb/hour **22.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 12.2 lb/hr; 22.5 TPY. Allowable emissions established as BACT in Permit AC48-206720 Sp Cond 4 & FDEP AOR AO48-248669, Sp Cond 9.**	

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: 3.7 lb/hour 6.8 tons/year

4. Synthetically Limited? [ ] Yes [X] No

why are the other pollutants synthetically limited and this one is not?

5. Range of Estimated Fugitive/Other Emissions:

[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **3.7 lb/hr**

Reference: **AC 48-206720**

7. Emissions Method Code:

[X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

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

3.7 lb/hr x 3,688 hr/yr x 1 ton/2,000 lb = 6.8 TPY

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

This unit is limited to a maximum heat input of 450,000 MMBtu/yr (LHV) which is equivalent to operating at a maximum of 122 MMBtu/hr (LHV) for 3,688 hours.

Emissions Unit Information Section 2 of 3
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: 3.7 lb/hr
4. Equivalent Allowable Emissions: 3.7 lb/hour 6.8 tons/year
5. Method of Compliance (limit to 60 characters): Method 25A
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Requested Allowable Emissions also = 6.8 TPY. Allowable emissions established as condition of Permit AC48-206720 Sp Cond 4. VOC testing is not required if CO emissions are met.

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:	1.2 lb/hour 2.2 tons/year
4. Synthetically Limited?	[ ] Yes [ ] No — nothing stated for synthetically limited?
5. Range of Estimated Fugitive/Other Emissions:	[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor:	0.01 lb/MMBtu Reference: AC 48-206720
7. Emissions Method Code:	[x] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters):	0.01 lb/MMBtu x 122 MMBtu/hr = 1.22 lb/hr; 1.22 lb/hr x 3,688 hr/yr x 1 ton/2,000 = 2.2 TPY
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	This unit is limited to a maximum heat input of 450,000 MMBtu/yr (LHV) which is equivalent to operating at a maximum of 122 MMBtu/hr (LHV) for 3,688 hours.

Emissions Unit Information Section 2 of 3
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: **0.01 lb/MMBtu**
4. Equivalent Allowable Emissions: **1.2** lb/hour **2.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 or EPA Method 5**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 1.2 lb/hr; 2.2 TPY. Allowable emissions established as Sp Cond 4 of AC 48-206720. PM test not required as long as opacity (VE) is < or = 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: **1.2** lb/hour **2.2** tons/year
4. Synthetically Limited? [ ] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.01 lb/MMBtu** Reference: **AC 48-206720**
7. Emissions Method Code: [**x**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.01 lb/MMBtu x 122 MMBtu/hr = 1.22 lb/hr; 1.22 lb/hr x 3,688 hr/yr x 1 ton/2,000 = 2.2 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **This unit is limited to a maximum heat input of 450,000 MMBtu/yr (LHV) which is equivalent to operating at a maximum of 122 MMBtu/hr (LHV) for 3,688 hours.**

Emissions Unit Information Section 2 **of** 3

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: **0.01 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**1.2** lb/hour **2.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9 or EPA Method 5**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions also = 1.2 lb/hr; 2.2 TPY. Allowable emissions established as Sp Cond 4 of AC 48-206720. PM test not required as long as opacity (VE) is < or = 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):	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE10**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **10.** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **Annual Compliance Test, EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **Established in AC 48-206720 for CT/DB. Excess emissions based on Rule 62-210.700(1); start-up, shutdown and malfunction 2-hr/24-hr.**

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters):

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 AC48-206720, PSD-FL-184, Orange County, 17-AUG-1992			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: OR-FI-E3	
	[ ] 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	
	[ ] Attached, Document ID: _____	
	[X] 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: 9 Aug 1994	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] 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 [ ] Attached, Document ID: _____ [X] 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-E02-C5

OPERATING CAPACITY COMMENT

ATTACHMENT OR-E02-C5
OPERATING CAPACITY COMMENT

This emission unit is restricted in the amount of natural gas fired, not in the number of hours of operation. While the basis of the heat input restriction was the maximum heat input of 122 x 10^6 Btu/hr (LHV) x 3,688 hours/year or 450,000 x 10^6 Btu/yr (LHV), the total actual hours of operation is not restricted. This emission unit must be operated when EU1 is operated and cannot operate independently.

Point well taken

ATTACHMENT OR-E02-D

APPLICABLE REQUIREMENTS

ATTACHMENT OR-E02-D

APPLICABLE REQUIREMENTS
ORLANDO COGEN LIMITED, L.P. -- DUCT BURNERS

Orange County (State Only Enforceable):

15-90(a)(1) OCC - FDEP Rules Adopted by Reference

FDEP Rules:

Air Pollution Control-General Provisions:
62-204.800(7)(b)3. - NSPS Subpart Db (Applicable to DBs Only; EU2)
62-204.800(7)(d) - NSPS General Provisions

Stationary Sources-General:
62-210.650 - Circumvention
62-210.700(1) - Excess Emissions
62-210.700(4) - Excess Emissions
62-210.700(6) - Excess Emissions

Stationary Sources-Emission Monitoring
62-297.310(1) - Test Runs-Mass Emission
62-297.310(2)(b) - Operating Rate; other than CTs
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)(d) - Calibration
62-297.310(4)(e) - EPA Method 5-only
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. - 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(b); (f) - Notification and Recordkeeping
40 CFR 60.8(e) - Performance Tests
40 CFR 60.11(a) - Compliance (Ref. S. 60.8)
40 CFR 60.11(d); (f) - Compliance (maintain air pollution control equipment)

NSPS Subpart Db:

40 CFR 60.44b(a)(4)(i) - NOx; gas (0.2 lb/MMBtu)
40 CFR 60.44b(h) - NOx NSPS Std applies at all times
40 CFR 60.44b(i) - Compliance with std is determined on 30-day rolling avg.
40 CFR 60.46b(a) - Compliance and Performance Methods; comply at all times
40 CFR 60.46b(c) - Performance tests for NOx
40 CFR 60.46b(f) - NOx for DB systems
40 CFR 60.48b(h) - Monitoring for NOx not required for DB

Orlando CoGen Limited, L.P., does not consider 40 CFR 60.49b(d) an applicable recordkeeping requirement. The rule requires that the annual capacity factor be calculated for each individual fuel on a 12-month rolling average basis. Orlando CoGen Limited, L.P. can only burn natural gas in the duct burners pursuant to the PSD construction permit. Also, there is no applicable requirement that depends on the annual capacity factor being above or below a number. Records of fuel combusted are maintained.

The Acid Rain Program Rules are identified in Attachment OR-E01-D and are applicable to the combustion turbine and duct burners as a single unit.

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): **Fugitive Emissions**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [X] 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): **Trivial activities and those activities exempt by Rule 62-210.300(a) are listed in Attachment OR-E03-B6. These activities are listed for completeness and will not trigger the FDEP reporting thresholds in 62-213.**		

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.

   [ ] 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.

   [X] 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.

[ ] 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.

[X] 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	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] 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):			
	The trivial and unregulated activities identified in this section do not consume increment.			

ATTACHMENT OR-E03-B6

TRIVIAL/EXEMPT AND DE MINIMIS

ACTIVITIES LIST

TRIVIAL ACTIVITIES

The trivial activities identified in this application are provided for information only and are identified as examples of, but not limited to, the trivial activities identified by the Division of Air Resources Management's (DARM's) guidance. It is understood that such activities do not have to be included in with the Title V Application. The trivial activities identified herein are consistent, in terms of amounts of emissions and types, with those activities listed in DARM's guidance.

NOTIFICATION OF TEMPORARY EXEMPTIONS

Pursuant to Rule 62-210.300(3)(b)1., notice is herein provide that the emissions units listed below are not subject to a permit issued by the Department of Environmental Protection and are exempt from permitting until a final determination is made under the Title V permitting requirements (Rule 62-213 F.A.C.). These units would not have triggered review under Rules 62-212.400 or 62-212.500 or any new source performance standard listed in Rule 62-204.800 F.A.C.

Attachment OR-E03-B6
Trivial (TR) / Exempt by Rule (ER) Facility-Wide Fugitive and De Minimis (FD) Activities List

Title V Project - Insignificant Activities List, Orlando Cogen Limited, L.P. Cogeneration Facility

Area	Emission Unit Description	Type
CT/ST BUILDING AREA	CT Lube Oil Vents (Two Blowers)	TR
	ST Lube Oil Vent	TR
	CO2 Fire System (26 cylinders)	TR ER
	Generator Cooling Air	TR
	Nitrogen Lines	ER
	Various Pumps (Sump, condensate, etc.)	TR
	Miscellaneous Drains Tank	TR
	Oil water separator	TR
	Hydraulic Equipment	TR
HRSG	Natural Gas Relief Valves	TR
	Various Steam Vents & Pressure Relief Valves	TR
	High Pressure Steam Breather Vent	TR
	Nitrogen Lines	ER
HRSG AREA	Blowdown Quench Tank	TR
	Blowdown Flash Tank	TR
	Various Pumps (feedwater, and chemical feed)	TR
	CEM Equipment & Calibration Gas Venting	TR
WATER TREATMENT	Chemical Feed Tanks (2 @ 50 gal.; 1 @ 100 gal.)	TR
	Condensate Storage Tank	TR
	Cooling Water Backwash Filter Holding Tank	TR
	Chlorine Cylinders 2 @ 750 lb	TR
	Sulfuric Acid Tank 1 @ 2,000 gal	TR
	Phosphate Tank (Nalco 7399) 1 @ 400 gal	TR

Attachment OR-E03-B6
Trivial (TR) / Exempt by Rule (ER) Facility-Wide Fugitive and De Minimis (FD) Activities List
Unregulated (UR)
Title V Project - Insignificant Activities List, Orlando Cogen Limited, L.P. Cogeneration Facility

Area	Emission Unit Description	Type
	Nalco 1371D Tank 1 @ 2,000 gal	TR
	Nalco 1360 Tank 1 @ 2,000 gal	TR
	Sodium Hydroxide (NaOH) 1 @ 1,500 gal	TR
	Sulfuric Acid Dry Tank 1 @ 50 gal	TR
	NaOH Day Tanks 1 @ 50 gal	TR
	Brine Feed Tank	TR
	Decarbonator/Degasifier Removes CO2 from raw water	TR
	Neutralization Basin and Pumps	TR
COOLING TOWER	Fresh Water Cooling Tower	ER
	Cooling Water Pumps	TR
CHILLER AREA	Refrigeration Chiller	TR
	Chiller Condensate Tank	TR
	Various pumps (Booster, condensate)	TR
GENERAL SITE	Surface Coating < 6.0 gal/day	ER
	Repairing Surfaces Brazing, Soldering or Welding	ER
	Plant Grounds Maintenance	~~ER~~ TR
	Routine Maintenance	TR
	Non-halogenerated Solvent	TR
	Backup Generator 150 kW Natural Gas Fired	UR
	Natural Gas Meter Station	TR
OFFICE SHOP AREA	Office Equipment Operation	TR
	Routine Repairs	TR

Attachment OR-E03-B6
Trivial (TR) / Exempt by Rule (ER) Facility-Wide Fugitive and De Minimis (FD) Activities List

Title V Project - Insignificant Activities List, Orlando Cogen Limited, L.P. Cogeneration Facility

Area	Emission Unit Description	Type
	Nalco 1371D Tank 1 @ 2,000 gal	TR
	Nalco 1360 Tank 1 @ 2,000 gal	TR
	Sodium Hydroxide (NaOH) 1 @ 1,500 gal	TR
	Sulfuric Acid Dry Tank 1 @ 50 gal	TR
	NaOH Day Tanks 1 @ 50 gal	TR
	Brine Feed Tank	TR
	Decarbonator/Degasifier Removes CO2 from raw water	TR
	Neutralization Basin and Pumps	TR
COOLING TOWER	Fresh Water Cooling Tower	TR
	Cooling Water Pumps	TR
CHILLER AREA	Refrigeration Chiller	TR
	Chiller Condensate Tank	TR
	Various pumps (Booster, condensate)	TR
GENERAL SITE	Surface Coating < 6.0 gal/day	ER
	Repairing Surfaces Brazing, Soldering or Welding	ER
	Plant Grounds Maintenance	~~ER~~ TR
	Routine Maintenance	TR
	Non-halogenerated Solvent	TR
	Backup Generator 100 kW Natural Gas Fired	ER ? w 4mmf UR
	Natural Gas Meter Station	TR
OFFICE SHOP AREA	Office Equipment Operation	TR
	Routine Repairs	TR

Attachment OR-E03-B6
Trivial (TR) / Exempt by Rule (ER) Facility-Wide Fugitive and De Minimis (FD) Activities List

Title V Project - Insignificant Activities List, Orlando Cogen Limited, L.P. Cogeneration Facility

Area	Emission Unit Description	Type
	Indoor Fugitives (grinder, drill press, etc.)	TR
	Degreaser Non-Halogenerated Solvent	TR
	Propane Grill	ER TR
	Storage Area	ER TR
	Propane Forklift	ER TR
	Air Compressor	TR
SWITCHYARD/ SUBSTATION AREA	Transformers and Associated Equipment (5 transformers)	TR
	T/G Control - Halon Fire Control System	ER Fire system
	Transformer Nitrogen Blanket	ER ?
	Battery Room	TR ?
	Breakers-SF6	ER
PARKING LOT	Vehicles	ER TR

Department of
Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

CERTIFIED
P 248 041 680

John P. Jones, President
Orlando Cogen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

OCD-AP-95-096

Orange County - AP
128.9 MW Combined Cycle Gas Turbine
Permit No. AO48-248669
Emergency Generator

Dear Mr. Jones:

This is in response to your letter of April 27, 1995 to inform the Department that you have changed the design of your emergency generator from diesel power to natural gas.

Pursuant to Rule 62-296.300(3)(u), F.A.C., this unit is exempt from permitting if its usage is less than 400 hours per year. Should the hours of yearly operation be increased, Department approval is needed. Records are to be kept in-house of the generator's operating hours and it shall be included in your inventory and Title V listings.

Please contact Mr. Hal Hanna at 407/894-7555, or write to the above address if you have any questions.

Sincerely,

Charles M. Collins, P.E.
Program Administrator
Air Resources Management

Date: 5-5-95

CMC/hhj

ATTACHMENT A

LIST OF ACTIVITIES THAT MAY BE TREATED AS "TRIVIAL"

The following types of activities and emissions units may be presumptively omitted from part 70 permit applications. Certain of these listed activities include qualifying statements intended to exclude many similar activities.

Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.

Air-conditioning units used for human comfort that do not have applicable requirements under title VI of the Act.

Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

Non-commercial food preparation.

Consumer use of office equipment and products, not including printers or businesses primarily involved in photographic reproduction.

Janitorial services and consumer use of janitorial products.

Internal combustion engines used for landscaping purposes.

Laundry activities, except for dry-cleaning and steam boilers.

Bathroom/toilet vent emissions.

Emergency (backup) electrical generators at residential locations.

Tobacco smoking rooms and areas.

Blacksmith forges.

Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not

otherwise triggering a permit modification.[1]

Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.

Portable electrical generators that can be moved by hand from one location to another[2].

Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.

Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that do not result in emission of HAP metals.[3]

Air compressors and pneumatically operated equipment, including hand tools.

Batteries and battery charging stations, except at battery manufacturing plants.

Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP.[4]

---

[1]Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise required.

[2]"Moved by hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.

[3]Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production level thresholds. Brazing, soldering, welding and cutting torches directly related to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

[4]Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.

Equipment used to mix and package, soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.

Drop hammers or hydraulic presses for forging or metalworking.

Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

Vents from continuous emissions monitors and other analyzers.

Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.

Equipment used for surface coating, painting, dipping or spraying operations, except those that will emit VOC or HAP.

CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.

Consumer use of paper trimmers/binders.

Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.

Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants.

Laser trimmers using dust collection to prevent fugitive emissions.

Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents.[5]

---

[5]Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.

Routine calibration and maintenance of laboratory equipment or other analytical instruments.

Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

Hydraulic and hydrostatic testing equipment.

Environmental chambers not using hazardous air pollutant (HAP) gasses.

Shock chambers.

Humidity chambers.

Solar simulators.

Fugitive emission related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

Process water filtration systems and demineralizes.

Demineralized water tanks and demineralizer vents.

Boiler water treatment operations, not including cooling towers.

Oxygen scavenging (de-aeration) of water.

Ozone generators.

Fire suppression systems.

Emergency road flares.

Steam vents and safety relief valves.

Steam leaks.

Steam cleaning operations.

Steam sterilizers.

Table 1-1. Air Pollutant Standards and Terms

Facility ID: 0950203
Permittee: APORCOG1

DRAFT Permit No.:

			Allowable Emissions	Equivalent Allowable Emissions	
E.U. ID#	**Description**	**Pollutant Name**	**Standard(s)**	**lbs/hour**	**tons/year**
001	Combustion Turbine (ABB 11N1-EV)	NOX	57.400000 lb/hr	57.40	251.40
			75.000000 ppmvd		
		CO	10.000000 ppmvd	22.30	92.10
		PM	0.010000 lb/MMBtu	9.00	39.40
		VOC	3.000000 lb/hr	3.00	13.00
		PM10	0.010000 lb/MMBtu	9.00	39.40
002	Duct Burner System Associated with HRSG	NOX	12.200000 lb/hr	12.20	22.50
			0.200000 lb/MMBtu		
		CO	0.100000 lb/MMBtu	12.20	22.50
		VOC	3.700000 lb/hr	3.70	6.80
		PM	0.010000 lb/MMBtu	1.20	2.20
		PM10		1.20	2.20

Table 2-1. Compliance Requirements

Facility ID: 0950203
Permittee: APORCOG1

DRAFT Permit No.:

E.U. ID#	Description		Name/Type	Compliance Method
001	Combustion Turbine (ABB 11N1-EV)	Poll. Information:	NOX	EPA Method 20/CEM
				EPA Method 20
			SO2	Custom fuel sampling schedule
			CO	EPA Method 10
			PM	EPA Method 9 or EPA Method 5/17
			VOC	Method 25A (see comment)
			PM10	EPA Method 9 or EPA Method 5/17
		VE Information:	10.	Annual Compliance Test
002	Duct Burner System Associated with HRSG	Poll. Information:	NOX	EPA Method 20; CEM
			CO	EPA Method 10
			VOC	Method 25A
			PM	EPA Method 9 or EPA Method 5
			PM10	
		VE Information:	10.	Annual Compliance Test, EPA Method 9
Unknown	Fugitive Emissions			