ACCOMEDIA™ DISKETTE NO.

*Revised June 5, 1997
ELSA Disks

Facility: Tiger Bay Limited Partnership
ID: AIRS-1050223

DISK 1 of 1
Date: June 5, 1997

KBN Engineering and Applied Sciences, Inc.

Virus V.2 OK EP 6/16/97

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ACCOMEDIA™ DISKETTE NO.

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: **Tiger Bay Limited Partnership**	
2. Site Name: **Tiger Bay Limited Partnership**	
3. Facility Identification Number: **AIRS-1050223**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **3219 State Road 630 East** City: **Ft. Meade** County: **Polk** Zip Code: **33841**	
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:

Ken Nash, President

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

Organization/Firm: **Central Florida DGE, Inc.**
Street Address: **2500 City West Blvd Suite 150**
City: **Houston** State: **TX** Zip Code: **77042**

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

Telephone: **(713) 735-4124** Fax: **(713) 735-4169**

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.*

Signature

6/13/96
Date

* Attach letter of authorization if not currently on file.

Scope of Application

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

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	001	Combustion Turbine (CT) GE7	
2R	002	Zero Liquid Discharge System	
3R	003	Facility-wide Fugitives	

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

Purpose of Application and Category

Check one (except as otherwise indicated):

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

This Application for Air Permit is submitted to obtain:

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

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

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

Operation permit to be renewed: _____

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

Current construction permit number: _____

Operation permit to be renewed: _____

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

Operation permit to be revised/corrected: _____

_____

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

Operation permit to be revised: _____

Reason for revision: _____

_____

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

This Application for Air Permit is submitted to obtain:

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

Current operation/construction permit number(s): _____

_____

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

Operation permit to be renewed: _____

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

Operation permit to be revised: _____

Reason for revision: _____

_____

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

This Application for Air Permit is submitted to obtain:

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

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

_____

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

Current operation permit number(s): _____

_____

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

Application Processing Fee

Check one:

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

Construction/Modification Information

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

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky** Registration Number: **14996**
2. Professional Engineer Mailing Address: Organization/Firm: **KBN 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 — Date: 6/5/96

(seal)

Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:
   Jean Benedetti, Sr. Environmental Engineer

2. Application Contact Mailing Address:

   Organization/Firm: **Destec Energy Inc.**
   Street Address: **2500 City West Blvd Suite 150**
   City: **Houston** State: **TX** Zip Code: **77042**

3. Application Contact Telephone Numbers:

   Telephone: **(713) 735-4568** Fax: **(713) 735-4571**

Application Comment

See Attachment TB-AI-AC

ATTACHMENT TB-AI-AC

APPLICATION COMMENT

ATTACHMENT TB-AI-AC

This Title V application is for Tiger Bay Limited Partnership's cogeneration facility located in Polk County, Ft. Meade, Florida.

The applicant's structure is as follows:

General:	1 - Combustion Turbine (CT)
	1 - Zero Liquid Discharge (ZLD) System
Emission Points (2);	1 - Stack for CT/Heat Recovery Steam Generator (HRSG)
	1 - Stack for ZLD System
Fuel Segments:	Natural Gas only
	No. 2 Fuel Oil (Backup)
Pollutants:	
CT	NO_x, CO, SO_2, PM/PM10, VOC, SAM
ZLD System	PM10
VE Emissions:	VE limits applicable
CEM:	
CT-HRSG	NO_x, O_2
Zero Liquid Discharge System	Not Required
PSD:	
CT-HRSG	NO_x only

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: **17** East (km): **416.2** North (km): **3069.22**

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): **24 / 44 / 47** Longitude: (DD/MM/SS): **81 / 51 / 0**

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

7. Facility Comment (limit to 500 characters):
   See Attachment TB-FI-A7

Facility Contact

1. Name and Title of Facility Contact:
   J.D. Sellers, Plant Manager

2. Facility Contact Mailing Address:
   Organization/Firm: **Destec Operating Company**
   Street Address: **3219 State Road 630 East**
   City: **Ft. Meade** State: **FL** Zip Code: **33841**

3. Facility Contact Telephone Numbers:
   Telephone: **(941) 285-1200** Fax: **(941) 285-1206**

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).**

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 Attached TB-FI-B

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification

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: TB-FE-1
   [ ] Not Applicable [ ] Waiver Requested

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

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

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

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

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

Additional Supplemental Requirements for Category I Applications Only

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

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

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

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

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

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

13. Risk Management Plan Verification:

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

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

[ ] Not Applicable

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

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

ATTACHMENT TB-FI-A7

FACILITY COMMENT

ATTACHMENT TB-FI-A7

FACILITY COMMENT

The Tiger Bay cogeneration facility consists of a single combustion turbine (CT) that exhausts through a Heat Recovery Steam Generator (HRSG). The duct burner system originally permitted and installed has been eliminated. The facility is permitted to consume natural gas as the primary fuel with distillate fuel oil as backup. Fuel oil capability has yet to be installed. A compliance schedule for such installation is provided within this application.

The zero liquid discharge (ZLD) system provides treatment of process wastewater and exhausts through a baghouse for the control of particulate matter.

ATTACHMENT TB-FI-B

LIST OF APPLICABLE REGULATIONS

Attachment TB-FI-B
Facility Applicable Requirements List - Tiger Bay Limited Partnership - Page 1

Chapter 4 Permits	
62-4.030	General Prohibition.
62-4.100	Suspensions and Revocation.
62-4.130	Plant Operations - Problems.

Chapter 210 Stationary Sources – General Requirements	
62-210.300	Permits Required.
	(2) Air Operation Permits; (a)
	(3) Exemptions; (a) Full Exemptions: 5., 7., 9., 10., 11., 12., 15., 16., 20., 21., 22., 23., 24.
62-210.370	Reports.
	(3) Annual Operating Report for Air Pollutant Emitting Facility.
62-210.400	Emission Estimates.
	(2) General Provisions. (a)2., 3.
62-210.900	Forms and Instructions; (5).

Chapter 213 Operation Permits for Major Sources of Air Pollution	
62-213.205	Annual Operation Licensing Fee; (1)(a), (b), (c), (e), (f), (g), (j), (4), (6).
62-213.400	Permits and Permit Revisions Required.
62-213.410	Changes Without Permit Revision.
62-213.460	Permit Shield.

Facility Applicable Requirements List -Tiger Bay Limited Partnership - Page 2

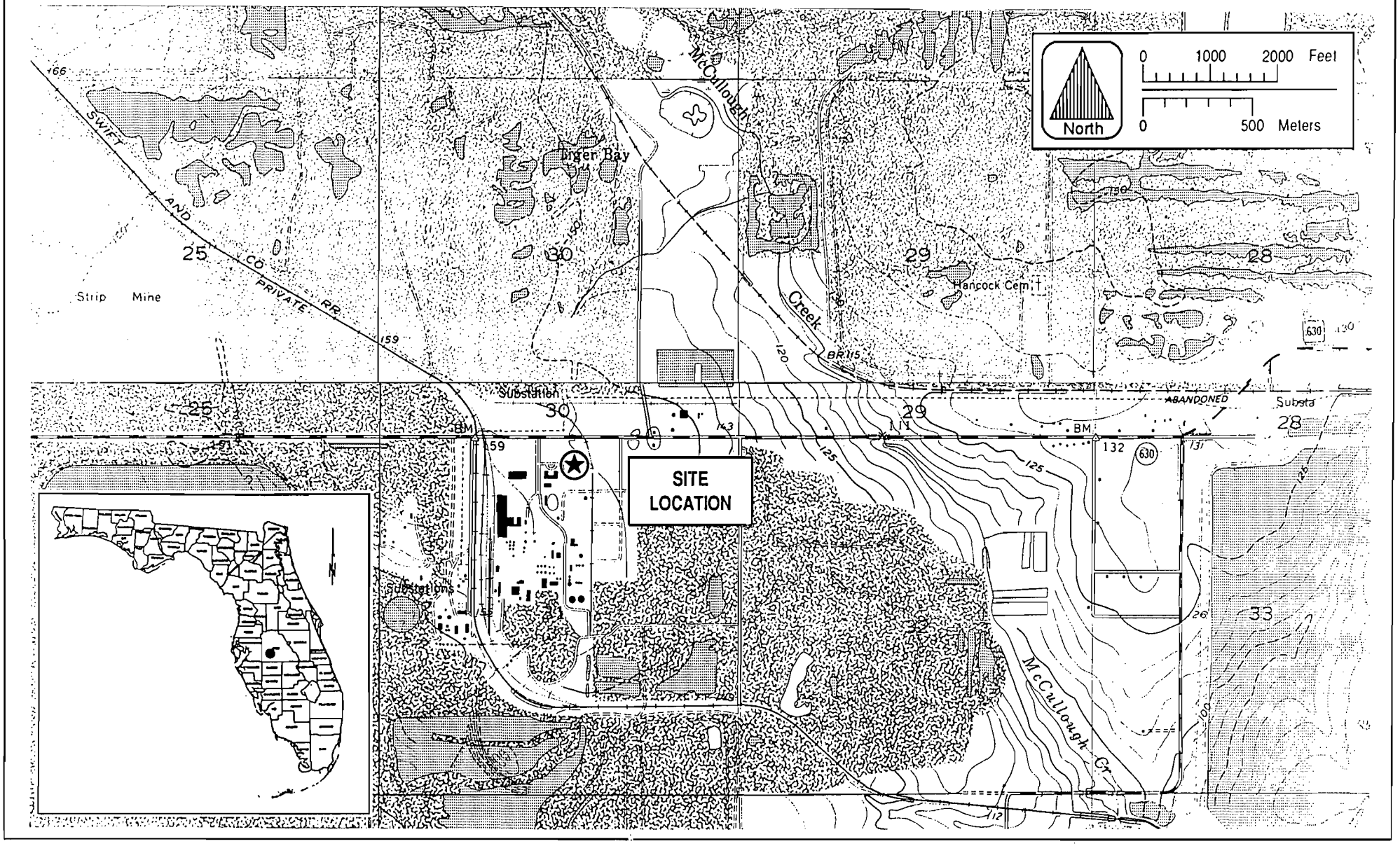
Chapter 296 Stationary Sources -- Emission Standards	
62-296.320	General Pollutant Emission Limiting Standards.
	(2) Objectionable Odor Prohibited (state only)
	(4) General Particulate Emission Limiting Standards.
	(c) Unconfined Emissions of Particulate Matter.

EPA Part 82 - Protection Of Stratospheric Ozone	
Subpart F - Recycling and Emissions Reduction	
82.166	Reporting and record keeping requirements; (k) and (m).

ATTACHMENT TB-FE-1

AREA MAP

05-09-96



Attachment TB-FE-1
Tiger Bay Project Location Map

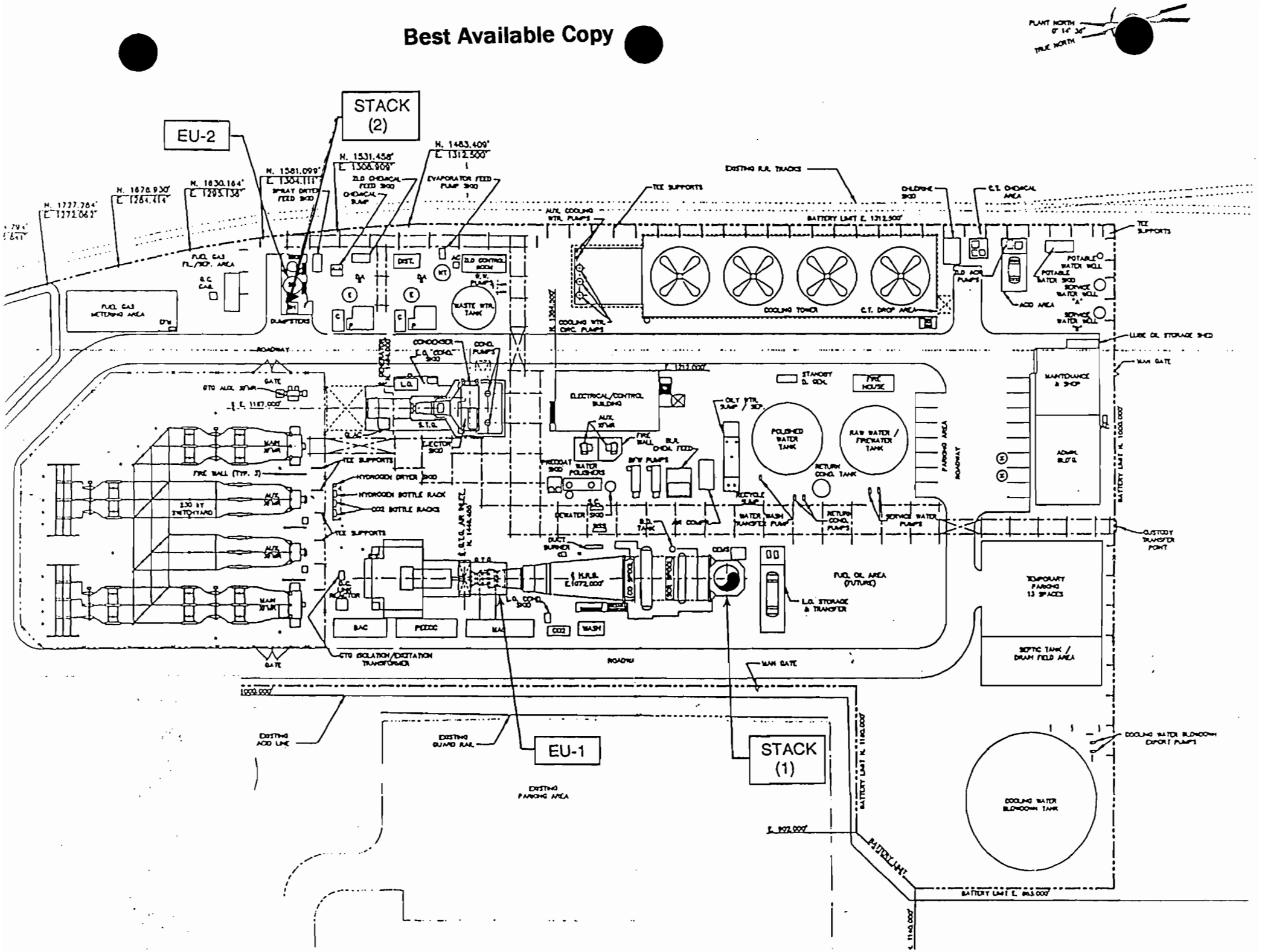
Sources: USGS, 1986, 1987; KBN, 1995.

KBN
A GOLDER ASSOCIATES COMPANY

ATTACHMENT TB-FE-2

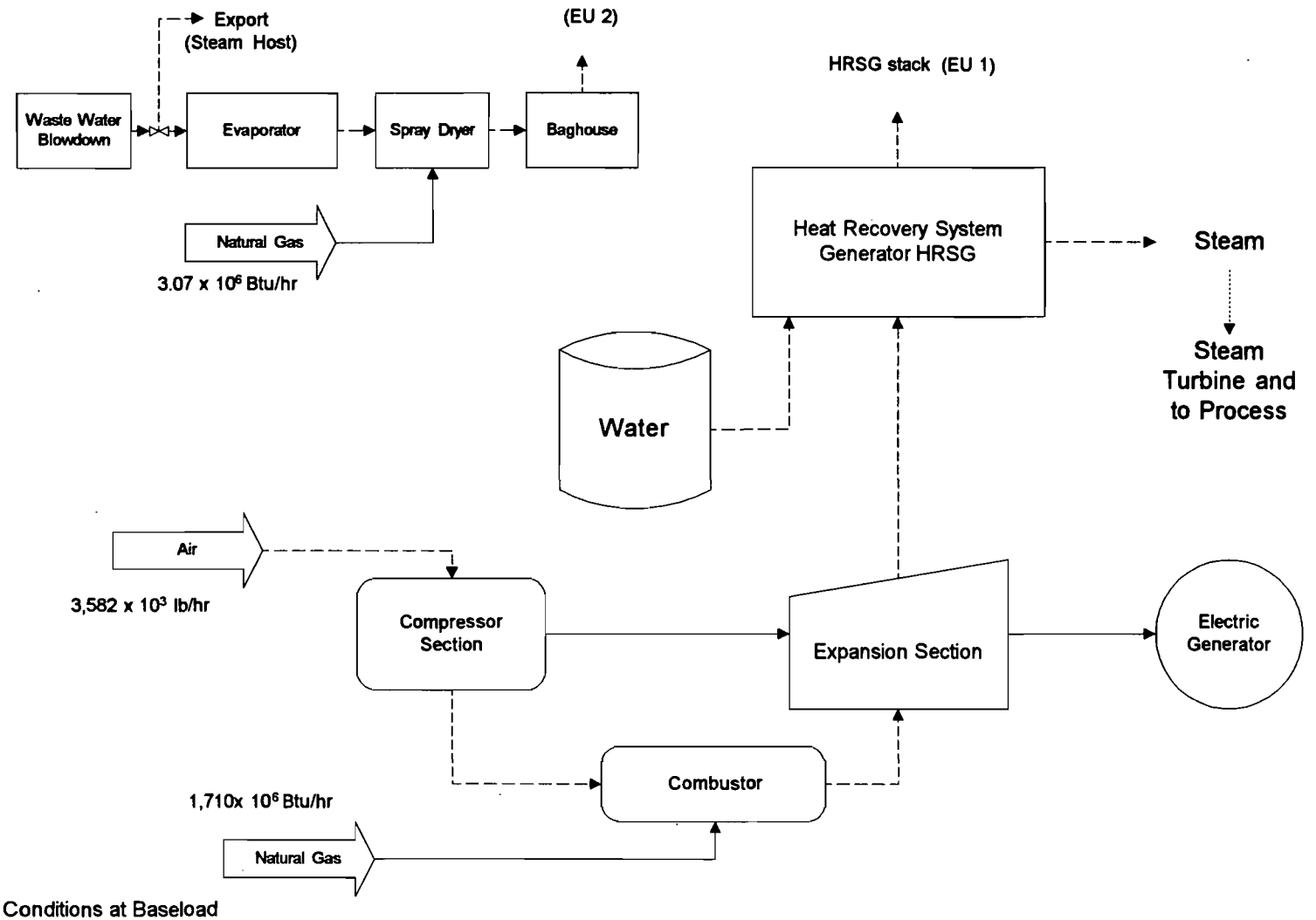
FACILITY PLOT PLAN

Best Available Copy



ATTACHMENT TB-FE-3

PROCESS FLOW DIAGRAM



Note: Conditions at Baseload

ATTACHMENT: TB-FE-3

Flow Diagram of Facility
Process Area: Tiger Bay

Process Flow Legend
Solid/Liquid
Gas
Steam

Emission Unit:

Filename: TBCOGEN.VSD

Date: 06/10/96

KBN Engineering and Applied Sciences, Inc.

ATTACHMENT TB-FE-4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT TB-FE-4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

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

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

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

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

ATTACHMENT TB-FE-5

FUGITIVE EMISSIONS IDENTIFICATION

ATTACHMENT TB-FE-5
FUGITIVE EMISSIONS IDENTIFICATION

It should be noted that many fugitive emissions at Tiger Bay's cogeneration facility have been classified as "trivial activities," and as such are discussed here for identification purposes only.

Criteria and Precursor Air Pollutants

Fugitive particulate emissions are addressed in Attachment TB-FE-4. Tiger Bay is not aware of fugitive emission of sulfur dioxide, nitrogen oxides, carbon monoxide, or lead compounds which would exceed the thresholds defined in the permit application instructions.

U.R.E.U.

Volatile Organic Compounds (VOCs)

Fugitive emissions of VOCs include those resulting from the use of cleaners and solvents for maintenance and operation. VOCs are also emitted by the combined-cycle combustion turbines. VOC emissions for each of these emission units are covered in the respective ***Emission Unit*** sections of this permit application.

Fugitive HAPs Emissions

The following hazardous air pollutants may be present at the facility during intermittent cleaning/painting (in solvents, paints, thinners, etc.) and would be potential sources of fugitive HAPs emissions:

- chlorine
- methyl ethyl ketone
- toluene
- xylene

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

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

Regulated Toxic or Flammable Substances

The following regulated toxic or flammable substances may be present at the facility:

- chlorine
- acetylene
- methane (natural gas)

Chlorine - Considered on the preceding page.

Acetylene - Present on the facility property in 250-lb cylinders which are used for plant maintenance (i.e., welding, cutting). Such maintenance activities are exempt.

Methane - Is a primary component of natural gas. The facility has a natural gas pipeline which delivers fuel to the CT and ZLD system. This fuel delivery system is normally airtight, but does have safety pressure relief valves which are designed to "relieve open" when an overpressure condition develops in the gas line.

ATTACHMENT TB-FE-8

LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

Covered in TV-1 AP.

ATTACHMENT TB-FE-8

LIST OF EQUIPMENT/ACTIVITIES - TITLE VI

Tiger Bay currently has four (4) refrigeration and air condition units installed at the facility. Of these, all air-conditioning units on the attached list currently meet the 50-pound threshold established by FDEP.

ATTACHMENT TB-FE-14

COMPLIANCE REPORT AND PLAN

ATTACHMENT TB-FE-14
COMPLIANCE PLAN
Tiger Bay Limited Partnership

This attachment presents information on the emission units in this application that provide certification that the emission units are in compliance with the applicable requirements as of the date of the application.

COMBUSTION TURBINE:

In accordance with Chapter 62 - 213, F.A.C., and Tiger Bay's FDEP Permit No. AC53-214903/ PSD-FL-190 (as amended) compliance status and requirements are presented herein and listed in the table on the following page.

Initial Compliance Test

The initial compliance test was performed on October 19-23, 1994 to verify that the unit was in compliance. The results of the test is summarized in the submittal of the certificate of completion of construction and was submitted to FDEP in December 1994.

Initial compliance testing for oil-firing has not yet been performed. Such compliance tests will be performed in accordance with Specific Conditions 8, 9, and 10 of AC53-214903 and summarized in the attached table.

Annual Compliance Test

An annual compliance test must be performed to verify compliance with the NO_x and CO requirements while the CT is fired on natural gas.

ZERO LIQUID DISCHARGE (ZLD) SYSTEM:

In accordance with Chapter 62-213 and Tiger Bay's FDEP Permit AC53-230744, the following is the compliance status of the ZLD system.

Initial Compliance Test

The initial compliance test for VE using EPA Method 9 was performed on 8/24/94. The results found zero visible emissions compared with the permitted limit of 5 percent opacity.

Annual Compliance Test

The ZLD is required to perform an annual VE test. In 1995 and during the period through June 15, 1996, the ZLD did not operate. In accordance with Rule 62-297.310(7)(a)3.a., an annual test was not required. A VE test will be performed within 30 days of continued operation of the ZLD.

Combustion Turbine Compliance Values, Reporting, and Test Methods

Compliance Parameter	Compliance Values[a]	Compliance Reporting	Compliance Test Method (EPA)
Run Hours	8760	Annual Operating Report (AOR)	None
Heat Input	1,710 MMBtu/hr	Quarterly and AOR	Fuel Analysis
NO_x	15 ppmvd @ 15% O_2; 97.2 lb/hr[b]; 425.7 TPY (gas)	Annual Compliance Test[c]; Quarterly and AOR	20
	25 ppmvd @ 15% O_2; 161.9 lb/hr; 709.1 TPY (gas)	Annual Compliance Test[c]; Quarterly and AOR	20
	42 ppmvd @ 15% O_2; 326 lb/hr; 48.9 TPY (oil)	Initial Compliance Test[c] and AOR	20
CO	15 ppmvd; 48.8 lb/hr; 213.7 TPY (gas)	Annual Compliance Test[c] and AOR	10
	30 ppmvd; 98.4 lb/hr; 14.8 TPY (oil)	Initial Compliance Test[c]	10
VOC	2.8 lb/hr; 12.3 TPY (gas)	Annual Compliance Test[c] and AOR	18/25A
	7.5 lb/hr; 1.1 TPY (oil)	Initial Compliance Test[c]	18/25A
Visible Emissions (VE)	10% (gas)	Annual Compliance Test[c] and AOR	
	20% (oil)		
PM10	9 lb/hr; 39.4 TPY (gas)	Only Initial Compliance Test required/AOR	5 or 17
	17 lb/hr; 2.6 TPY (oil)	Initial Compliance Test[c] and AOR	201A or 202
SO_2	4.86 lb/hr; 21.3 TPY (gas)	Annual Compliance Test[c]	Fuel Analysis
	99.7 lb/hr; 15 TPY (oil)	Initial Compliance Test[c]	Fuel Analysis
H_2SO_4	5.95×10^{-1} lb/hr; 26 TPY (gas)	Annual Compliance Test[c]	Fuel Analysis
	1.22 lb/hr; 0.183 TPY (oil)	Initial Compliance Test[c]	Fuel Analysis

Note: Initial testing for Hg, and Be when oil is fired is requested to be deleted from permit per FDEP May 19, 1995 guidance (DARM-PER/GEN-18)

[a] The above emission limits are based on baseload conditions.
[b] The NO_x maximum limit will be lowered to 15 ppmv @ 15 % O_2 on 12/31/97.
[c] Baseload conditions.

February 13, 1995

Mr. Harry Kerns, P.E.
District Air Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Polk County--AC 53-21903/PSD-FL-190
Tiger Bay Cogeneration Facility
Tiger Bay Limited Partnership

Dear Harry:

This correspondence and the attached Certificate of Completion of Construction are submitted on behalf of Tiger Bay Limited Partnership. Based on my site visit to this facility, the Tiger Bay Cogeneration Facility has been constructed in accordance with the original permit application. There have been only minor changes to the site plan submitted in the original application; none of these changes affects the emission units at this facility.

The emissions from the facility fully comply with the permit limits and indeed are below the permitted limits for all of the parameters. This conclusion is based on the initial compliance tests performed in October 1994 and subsequently submitted to the Department. The results of the tests when firing natural gas are summarized below:

	Actual	Permitted
NO_x Emissions	16 ppmvd @ 15% O_2 98.5 lb/hr	25 ppmvd @ 15% O_2 161.9 lb/hr
CO Emissions	1 ppmvd 3 lb/hr	15 ppmvd 48.8 lb/hr
VOCs	0.0 lb/hr	2.8 lb/hr
PM/PM10	8.29 lb/hr	9 lb/hr
Opacity	0% Opacity	10% Opacity

The facility has been constructed with the capability to operate duct burners and fire distillate oil in the combustion turbine. The duct burner system has been installed but is not operating due to malfunctions. It is expected that the malfunctions will be corrected during an outage scheduled for March and April

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600, FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717, FAX 813-287-1716
1801 Clint Moore Road, Suite 135, Boca Raton, Florida 33487, 407-994-9010, FAX 407-994-9203
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-730-5600, FAX 904-730-7721
1616 P Street N.W., Suite 450, Washington, D.C. 20036, 202-462-[illegible], FAX 202-462-[illegible]

1995. Based on the operational results of corrections performed, a compliance test will be scheduled in accordance with notification requirements in the permit. Although the combustion turbine has been constructed with the capability to fire distillate oil, some of the associated facilities such as the fuel oil tank have not been installed. The combustion turbine will be tested on distillate oil when the required associated facilities are installed. Again, proper notice will be given to the Department.

In addition, please note that the actual "as-built" stack diameter is 19 feet in contrast to the 18 feet in the original application. This change does not affect emissions or the underlining assumptions concerning the air quality impacts of the facility.

This facility is a Title V source, as defined in Chapter 62-213, Florida Administrative Code (F.A.C.) and has obtained approval under Chapter 62-212 for Prevention of Significant Deterioration (PSD). A Title V application is currently required to be submitted by April 2, 1995. (Note: recent decisions by the FDEP Division of Air will push back the required date to August 1995.) Since the expiration of the construction permit for this source (i.e., January 1, 1996) will overlap with the Title V requirements, an operation permit is not required to be issued by FDEP rules and the facility can operate under the provisions of the construction permit as long as a complete Title V permit application is submitted [see FDEP Rule 62-213.420(b)2.]. It is the intent of Tiger Bay Limited Partnership to submit a timely and complete Title V application as required under the Department's rules.

Please call if you have any questions.

Sincerely,

Kennard F. Kosky /VJP

Kennard F. Kosky, P.E.
President

Enclosure

KFK/vjp

cc: Robert Chatham, DESTEC
J.D. Sellers, DESTEC
Charles Cook, DESTEC
File (2)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR POLLUTION SOURCES
CERTIFICATE OF COMPLETION OF CONSTRUCTION*

PERMIT NO. AC53-214903/PSD-FL-190 DATE: 02/13/95

Company Name: Tiger Bay Limited Partnership County: Polk

Source Identification(s): Tiger Bay Cogeneration Facility

Actual costs of serving pollution control purpose: $ 1,000,000

Operating Rates: up to 1,614.8 x 10^6 Btu/hr (LHV) at 27°F Design Capacity: 1,614.8 x 10^6 Btu/hr (LHV)

Expected Normal 1,450 x 10^6 Btu/hr (LHV) at 72°F During Compliance Test 1,425x10^6 Btu/hr (LHV) at 75.2°F

Date of Compliance Test October 19-22, 1995 (Attach detailed test report)*

* Previously submitted.

Test Results:	Pollutant	Actual Discharge	Allowed Discharge
	NO_x	16 ppmvd @ 15% O_2/98.5 lb/hr	25 ppmvd @ 15% O_2/161.9 lb/hr
	CO	1 ppmvd / 3 lb/hr	15 ppmvd / 48.8 lb/hr
	VOC	0.0 ppmvd / 0 lb/hr	2.8 lb/hr

Date plant placed in operation: 1/1/95

This is to certify that, with the exception of deviations noted**, the construction of the project has been completed in accordance with the application to construct and Construction Permit No. AC53-214903/PSD-FL-190 dated 05/17/93.

A. Applicant:

J.D. Sellers, Plant Manager
Name of Person Signing (Type)

Signature of Owner or Authorized Representative and Title

Date: 02/13/95 Telephone: (813) 285-1200

B: Professional Engineer:

Kennard F. Kosky
Name of Person Signing (Type)

Kennard F. Kosky
Signature of Professional Engineer

KBN Engineering and Applied Sciences, Inc.
Company Name

Florida Registration No. 14996

Date: 02/13/95

6241 NW 23rd St. Gainesville, FL 32653-1500
Mailing Address

(Seal)

(904) 336-5600
Telephone Number

*This form, satisfactorily completed, submitted in conjunction with an existing application to construct permit and payment of application processing fee will be accepted in lieu of an application to operate.

**As-built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.

ATTACHMENT TB-FE-15

COMPLIANCE CERTIFICATION STATEMENT

ATTACHMENT TB-FE-15

COMPLIANCE CERTIFICATION STATEMENT

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

Signature, Responsible Official

6/13/96

Date

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

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

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

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

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

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

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

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Combustion Turbine (CT) General Electric - MS70001FA

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

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

6. Emissions Unit Comment (limit to 500 characters):
The CT exhausts through a HRSG. The nominal rating of the CT is 184MW. The steam turbine serves a separate generator with a nominal rating of 74MW. The unit was permitted (AC53-214903/PSD-FL-190; as amended) and is capable of accommodating fuel oil. Associated facilities (e.g., fuel oil tank) have not been installed and unit has not operated on distillate oil. This unit is NOT an 'Affected Unit' under EPA's Acid Rain Program, pursuant to 40CFR72.6(b)(5).

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Dry Low NOx Burners -- Natural gas firing

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

B.

1. Description (limit to 200 characters):

Water Injection -- Oil firing

2. Control Device or Method Code: **28**

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: **20 Jul 1994**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **General Electric**	Model Number: **PG7221FA**
4. Generator Nameplate Rating: **184** MW	
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	**1,710**	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):		

Gen. nameplate is normal. Max heat input based on firing natural gas at baseload. Max heat input for Distillate fuel-oil firing is 1,849.9 MMBtu/hr (LHV) at baseload (27°F).

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 TB-EU1-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: **HRSG Stack (1)**	
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **The CT exhausts through the HRSG stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **001 EU1 - Combustion Turbine (CT), 001**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W	
6. Stack Height:	**180** feet
7. Exit Diameter:	**19** feet
8. Exit Temperature:	**205** °F

9. Actual Volumetric Flow Rate:	**1,017,973** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **416.2** North (km): **3069.22**	
14. Emission Point Comment (limit to 200 characters): **Temp. and flow data for natural gas firing. Exit temp and actual volumetric flow rate for distillate fuel oil firing is 205°F and 1,072,001 acfm, respectively. Actual East UTM Coord. = 416.22km**	

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

Segment Description and Rate: Segment 1 of 2

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

Electric Utility Internal Combustion Engine - Natural Gas - Turbine

2. Source Classification Code (SCC):

2-01-002-01

3. SCC Units:

Million cubic feet burned

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
1.82	**15,902**

6. Estimated Annual Activity Factor:

100

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

9. Million Btu per SCC Unit:

942

10. Segment Comment (limit to 200 characters):

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Distillate Fuel Oil**	
2. Source Classification Code (SCC): **2-01-001-01**	
3. SCC Units: **1000 gallons**	
4. Maximum Hourly Rate: **14.044**	5. Maximum Annual Rate: **4,213**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.05**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **132**	
10. Segment Comment (limit to 200 characters): **Distillate oil firing. Maximum annual rate based on 300 hours/year operation.**	

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
PM10			EL
VOC			EL
SAM			NS

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: **161.9** lb/hour **709.1** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **25 ppmvd @ 15% O2** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit authorized by FDEP permit AC53-214903/PSD-FL-190, as amended.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Ref.: AC53-214903/PSD-FL-190 as amended. Potential Emissions based on baseload and natural gas firing. Maximum lb/hr when firing fuel oil is 326 lb/hr and 48.9 TPY.**

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: **25 ppmvd @ 15% O2***	
4. Equivalent Allowable Emissions: **161.9** lb/hour	**709.1** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 20 Annual Fuel Usage- AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): ***/161.9 lb/hr/709.1 TPY. Natural gas firing (refer to FDEP Air Construction Permit AC53-214903, specific condition #1.)**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **42 ppmvd @ 15% O2***	
4. Equivalent Allowable Emissions: **326** lb/hour	**48.9** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): ***/326 lb/hr/48.9 TPY Distillate Fuel-Oil firing which the EU is capable of accommodating. Annual tons/year based on 300 hours/year operation.**	

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): **Quarterly Report**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Excess Emissions allowed by Rule 62-210.700(1) for startup, shutdown and malfunction up to 2 hrs/24 hrs.** does not apply to NSPS. only SIP Limits		

B.

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

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

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **4.86** lb/hour **21.3** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **1 grain/100 cu ft** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit authorized by FDEP permit AC53-214903/PSD-FL-190, as amended.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential SO2 emissions are based on natural gas firing. Distillate fuel-oil potential emissions are 99.7 lb/hr and 15 TPY. Emission factor reference: AC53-214903/PSD-FL-190, as amended.**

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: **4.86 lb/hr/21.3 TPY**	
4. Equivalent Allowable Emissions:	**4.86** lb/hour **21.3** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis; AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions for natural gas firing.**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.05 % sulfur fuel***	
4. Equivalent Allowable Emissions:	**99.7** lb/hour **15** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): *** 99.7 lbs/hr/15 TPY. This emission unit is capable of accommodating distillate oil firing. Annual tons/year based on 300 hours/year operation.**	

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: **48.8** lb/hour **213.7** 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**

Reference: **See Comment**

7. Emissions Method Code:

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

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

Potential-to-emit as authorized by FDEP permit AC53-241903/PSD-FL-190, as amended.

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

Emission Factor Reference: AC53-214903/PSD-FL-190, as amended. Potential emissions based on natural gas firing. Distillate oil rates are 98.4 lbs/hr and 14.8 TPY.

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: **48.8 lb/hr/213.7 TPY**	
4. Equivalent Allowable Emissions:	**48.8** lb/hour **213.7** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test; EPA Method 10; AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Natural Gas firing.**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **30 ppmvd***	
4. Equivalent Allowable Emissions:	**98.4** lb/hour **14.8** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test; EPA Method 10**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): ***98.4 lbs/hr/14.8TPY. Distillate fuel-oil firing which this unit is capable of accommodating. Annual emissions based on 300 hr/yr operation.**	

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: **9 lb/hr** Reference: **See Comment**
7. Emissions Method Code: [**X**]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit as authorized by FDEP permit AC53-214903/PSD-FL-190; as amended.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: AC53-214903/PSD-FL-190. Potential emissions based on natural gas firing. Distillate fuel oil potential emissions are 17 lbs/hr and 2.6 TPY.**

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: **39.4 TPY**	
4. Equivalent Allowable Emissions: **9** lb/hour	**39** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 9, AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emissions for natural gas firing. Initial compliance test performed. Inlet PM10 can be subtracted from HRSG stack emissions.**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **17 lb/hr/2.6 TPY**	
4. Equivalent Allowable Emissions: **17** lb/hour	**2.6** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test, EPA Methods 5/17/201A/202**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **This unit is capable of accommodating distillate oil firing. Annual emissions based on 300 hours/year operation.**	

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: **2.8** lb/hour **12.3** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **2.8 lb/hr** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit, as authorized by AC53-214903/PSD-FL-190, as amended.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: AC53-214903/PSD-FL-190, as amended. Potential emissions based on natural gas firing. Distillate fuel oil potential emissions are 7.5 lbs/hr and 1.1 TPY.**

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: **2.8 lb/hr/12.3 TPY**	
4. Equivalent Allowable Emissions:	**2.8** lb/hour **12.3** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test; EPA Method 18 or 25A; AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable emission for natural gas firing (AC53-214903).**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **1.1 TPY**	
4. Equivalent Allowable Emissions:	**7.5** lb/hour **1.1** tons/year
5. Method of Compliance (limit to 60 characters): **Initial Compliance Test, EPA Method 18 or 25A; AFU**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **This unit is capable of accommodating distillate oil firing. Annual emissions based on 300 hours/year operation.**	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 3

1.	Visible Emissions Subtype: **VE10**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9; Annual Compliance**
5.	Visible Emissions Comment (limit to 200 characters): **VE Standard for natural gas firing established as Construction Permit Limit (FDEP AC53-214903; Specific Condition #2).**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 3

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9; Initial Compliance**
5.	Visible Emissions Comment (limit to 200 characters): **VE standard for distillate fuel oil firing established as Construction Permit Limit (FDEP AC53-214903/PSD-FL-190; as amended; Specific Condition #2).**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 3 of 3

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

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 2

1. Parameter Code: **EM**	2. Pollutant(s): **NOX**
3. CMS Requirement: [**X**] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: **Advanced Pollution Instrumentation, Inc.** Model Number: **200** Serial Number:	
5. Installation Date: **28 Jul 1994**	
6. Performance Specification Test Date: **24 Oct 1995**	
7. Continuous Monitor Comment (limit to 200 characters): **CEM required by NSPS (40 CFR60.334) and FDEP Air Construction Permit AC53-214903/PSD-FL-190 (as amended), specific condition #16. RATA last performed 24-Oct-1995.**	

Continuous Monitoring System Continuous Monitor 2 of 2

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement: [**X**] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: **Servomex** Model Number: **1400B4** Serial Number:	
5. Installation Date: **28 Jul 1994**	
6. Performance Specification Test Date: **24 Oct 1994**	
7. Continuous Monitor Comment (limit to 200 characters): **Required pursuant to 40CFR60.334 and AC53-214903/PSD-FL-190 (as amended).**	

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

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

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

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

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

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

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

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

2. Increment Consuming for Nitrogen Dioxide?

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

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

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

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

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

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

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[X] C	[ ] E	[ ] Unknown
	NO_2	[X] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	PSD review was performed as part of FDEP Air Construction Permit AC53-214903, PSD-FL-190, Polk County, (final determination dated 5/6/93).			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: TB-EU1-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: TB-EU1-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: TB-EU1-L3	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: TB-EU1-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 1 Nov 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: TB-EU1-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: TB-EU1-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: TB-EU1-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 TB-EU1-D

LIST OF APPLICABLE REGULATIONS

ATTACHMENT TB-EU1-D

Chapter 210 Stationary Sources – General Requirements	
62-210.650	Circumvention.
62-210.700	Excess Emissions; (1).

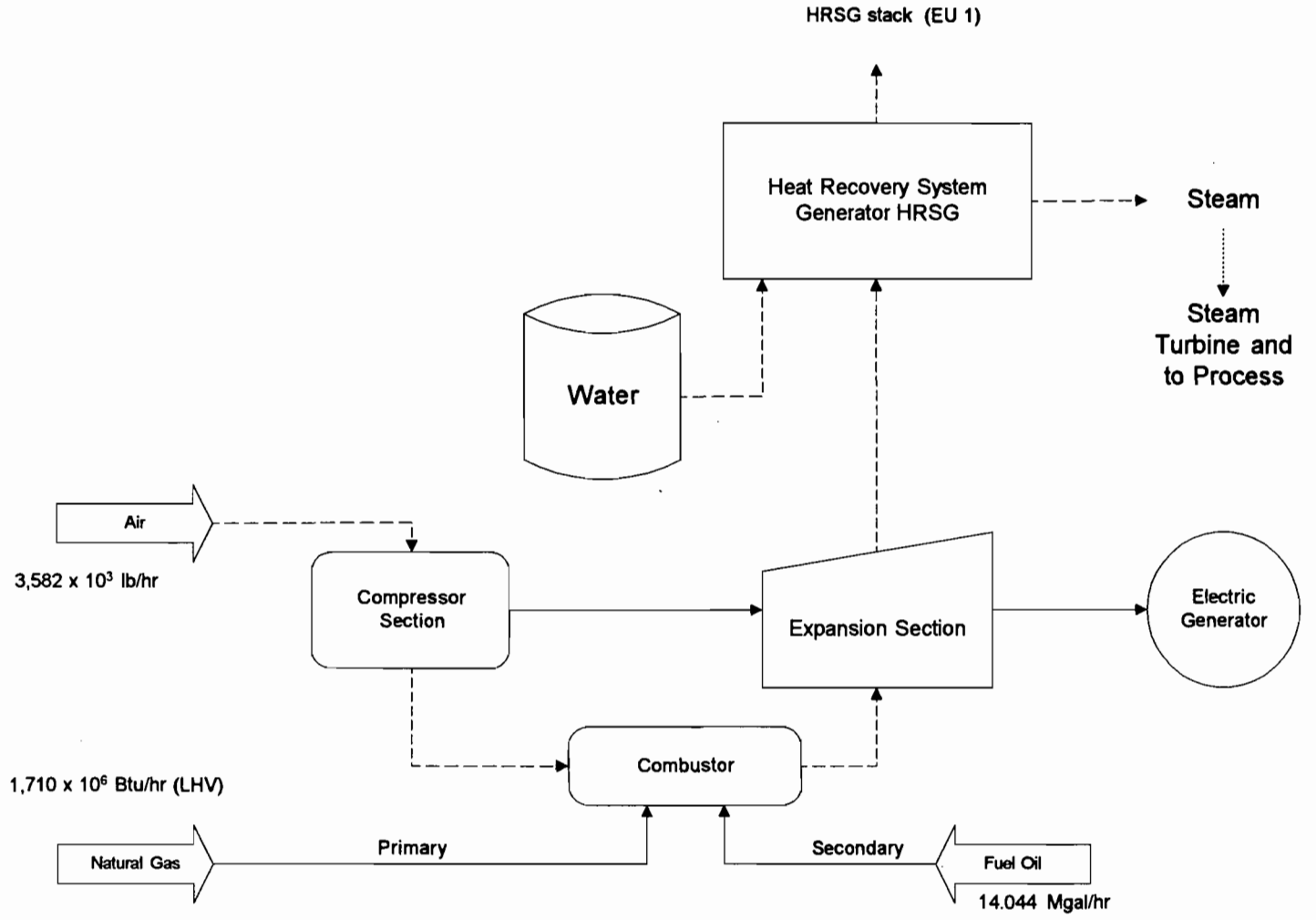
Chapter 296 Stationary Sources – Emission Standards	
62-204.800	Standards of Performance for New Stationary Sources (NSPS) (state only).
	(7) General Provisions Adopted.
	(b) The following Standards of Performance for New Stationary Sources contained in 40 CFR 60, revised as of July 1, 1993, or later as specifically indicated.
	37. 40 CFR 60.330 Subpart GG, Stationary Gas Turbines.
	(8) Appendices Adopted. The following appendices of 40 CFR Part 60, revised as of July 1, 1993 or later as specifically indicated, are adopted and incorporated by reference.
	(a) 40 CFR 60 Appendix A, Test Methods, are adopted by reference.
	(b) 40 CFR 60 Appendix B, Performance Specifications.
	(e) 40 CFR 60 Appendix F, Quality Assurance Procedures.

Chapter 297 Stationary Sources – Emission Monitoring	
62-297.310	General Test Requirements.
	(1) Required Number of Test Runs.
	(2) Operating Rate During Testing (b)
	(4) Applicable Test Procedures.
	(5) Determination of Process Variables.
	(6) Required Stack Sampling Facilities.
	(7) Frequency of Compliance Tests (a).
	(8) Test Reports.
62-297.330	Applicable Test Procedures.
62-297.350	Determination of Process Variables.

Part 60 - EPA Regulations on Standards of Performance for New Stationary Sources	
Subpart A — General Provisions	
60.7	Notification and record keeping (b); (f).
60.8	Performance tests (e).
60.11	Compliance with standards and maintenance requirements; (a); (b); (c); (d); (e).
60.12	Circumvention.
60.13	Monitoring requirements; (a); (b); (d).
Subpart GG — Standards of Performance for Stationary Gas Turbines	
60.332	Standard for nitrogen oxides (a)(1).
60.333	Standard for sulfur dioxide.
60.334	Monitoring of operations.
60.335	Test methods and procedures.

ATTACHMENT TB-EU1-L1

PROCESS FLOW DIAGRAM



Note: Conditions at Baseload

ATTACHMENT: TB-EU1-L1 **Flow Diagram of Emission Unit** **Process Area: Tiger Bay**	**Process Flow Legend** Solid/Liquid → Gas - - - → Steam ····· →	Emission Unit: Combustion Turbine Filename: **TBCOGEN.VSD** Date: **05/30/96**	KBN **Engineering and Applied Sciences, Inc.**

ATTACHMENT TB-EU1-L2

FUEL ANALYSIS OR SPECIFICATION

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(Perry Chromatograph)

DATE: April 29, 1996
TIME: 08:26 TIME: 08:22

Stream No. 1 Component Name	Mole %	Stream No. 2 Component Name	Mole %
Hexane	0.070	Hexane	0.084
Propane	0.754	Propane	0.345
Isobutane	0.194	Isobutane	0.092
n-Butane	0.149	n-Butane	0.076
Isopentane	0.055	Isopentane	0.038
n-Pentane	0.027	n-Pentane	0.025
Nitrogen	0.312	Nitrogen	0.435
Methane	94.477	Methane	95.608
CO_2	1.078	CO_2	0.797
Ethane	2.884	Ethane	2.500
Totals	100.000	Totals	100.000
Dry Btu/cf 1/	1047.1	Dry Btu/cf 1/	1035.6
RRD 2/	0.5965	RRD 2/	0.5859
Total Sulfur	8.32 PPM	Total Sulfur	1.3 PPM
H^2S	2.08 PPM	H^2S	0.8 PPM
H^2O	3.0 lb/MMcf	H^2O	2.3 lb/MMcf

1/ @ 14.730 psia & 60°F
2/ Real Relative Density

1 gal H_2O = 8.337 lb

8.337 (0.5965) = 4.97 lb

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(Brooker Chromatograph)

DATE: April 30, 1996
TIME: 12:56

Component Name	Mole %
Hexane	0.073
Propane	0.549
Isobutane	0.140
n-Butane	0.116
Isopentane	0.045
n-Pentane	0.027
Nitrogen	0.364
Methane	95.100
CO_2	0.921
Ethane	2.666
Totals	100.000

Dry Btu/cf @ 14.730 psia and 60°F = 1041.1
Real Relative Density = 0.5906

Total Sulfur	6.3 PPM
H^2S	1.3 PPM
H^2O	2.1 lb/MMcf

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(West Palm Beach Chromatograph)

DATE: April 25, 1996
TIME: 16:03

Component Name	Mole %
Hexane	0.074
Propane	0.584
Isobutane	0.140
n-Butane	0.106
Isopentane	0.043
n-Pentane	0.024
Nitrogen	0.389
Methane	94.879
CO_2	0.934
Ethane	2.827
Totals	100.000

Dry Btu/cf @ 14.730 psia and 60°F = 1042.3
Real Relative Density = 0.5919

Total Sulfur	11.36 PPM
H^2S	1.6 PPM
H^2O	4.39 lb/MMcf

ATTACHMENT TB-EU1-L3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT TB-EU1-L3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The General Electric (GE) PG 7221 FA uses dry low-NOx combustion to control NOx emissions resulting from the combustion of natural gas. The control of NOx is accomplished by reducing the flame temperatures through the use of staged combustion techniques. At lower loads, the combustors operates in a diffusion mode with lean mixtures of air and gas. At higher loads, the combustors operate in a premix mode where gas and air are mixed prior to combustion. When fuel oil is fired, NOx emissions are controlled by water injection. Although not yet operated with oil firing, the water to fuel ratio for this machine is 1.2 at 72oF, based on data provided in the original air construction application. The control systems for the machine when firing natural gas and oil are internal to GE's digital control systems (DCS).

ATTACHMENT TB-EU1-L4

DESCRIPTION OF STACK SAMPLING FACILITIES

ATTACHMENT TB-EU1-L4
DESCRIPTION OF STACK SAMPLING FACILITIES

Tiger Bay Facility is required by Permit AC53-214903 to perform annual stack testing for emissions from the combustion turbine in accordance with standard EPA reference methods. Pursuant to FAC 62-297.310(6), the annual stack test required is performed with the required stack sampling facilities. As specified by rule, the permanent test facilities meet the following:

- The exhaust stack is circular with an outside diameter of 19 feet.
- The sampling ports have a minimum effective diameter of 3 inches.
- The location of the sampling ports meet FAC 62-297.310(6) requirements (i.e., 2 stack diameters downstream and 0.5 stack diameters upstream of flow disturbances).
- There are four 4-inch sampling ports, 90 degrees apart have been installed on the circular stack.
- The working platform is at least 24 square feet in area, at least 3 feet wide, extends 180 degrees around the stack, has safety rails, toeboards, and a hinged floor opening attached to it. There are no obstructions 14 inches below the port and 6 inches on either side of the port.
- The platform access ladder is equipped with a safety apparatus.

ATTACHMENT TB-EU1-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT TB-EU1-L6
PROCEDURES FOR STARTUP/SHUTDOWN

Startup and shutdown of the CT will occur on a scheduled basis for routine inspection and maintenance or unscheduled shutdowns as turbine operation dictates. Startup operations commence with the first ignition of fuel within the CT. The unit is then ramp-loaded over a period of time to safely bring the CT, HRSG, and steam turbine to baseload conditions in a manner required by the equipment manufacturers warranties and recommendations. Shutdown is performed by reducing the unit load to a minimum level, opening the breaker (which disconnects the unit from the electrical system grid), shutting off the fuel and coasting down to stop. The CT is then put "on turning gear" to prevent possible distortion of the turbine components.

During baseload operations, CT NO_x emissions are controlled through the utilization of dry-low NO_x combustors. The G.E. combustor technology is not effective at CT load rates of less than 50 percent of baseload. Therefore, during startup and shutdown operations, emission limitations on a ppmvd and/or hourly mass emission rate may be exceeded.

In addition, cold and warm startups of the CT will result in incomplete combustion, producing higher concentrations and hourly mass emission rates of CO and VOC than at baseload and steady-state operation.

The duration of the "heating" process is dependent upon whether the startup is a cold, warm, or hot and takes place generally in less than 2 hours. During the heating process the NO_x, CO, and VOC concentrations (ppmvd) and mass emissions (lb/hr) in the exhaust stack gas will most likely be higher than the potential-to-emit limitations. Emissions limits set on a lb/hr and/or ppmvd basis for any pollutant can not be guaranteed during periods of startup or shutdown

ATTACHMENT TB-EU1-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT TB-EU1-L10
ALTERNATIVE METHODS OF OPERATION

Natural Gas

This emission unit is authorized and currently operating up to 8,760 hr/yr with natural gas. The NO_x emission limits are 25 ppmvd @ 15% O_2 when firing natural gas through December 31, 1997. After that date, the NO_x emission limits are reduced to 15 ppmvd @ 15% O_2.

Fuel Oil

This emission unit is also authorized to accommodate distillate fuel oil firing up to 300 hr/yr. When the fuel oil related equipment installation is completed, an initial compliance test will be performed as required by AC53-214903/PSD-FL-190 (as amended).

ATTACHMENT TB-EU1-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

REQUEST TO CHANGE CONDITIONS THAT ARE OBSOLETE AND OUTDATED

This request is to remove from the Title V permit, several conditions of the FDEP issued PSD/air construction permit (AC53-214903;PSD-FL-190) that are obsolete and 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 Condition 1:

Delete Emissions Limits for Sulfuric Acid Mist, Beryllium, Lead and Mercury as Applicable Requirements. The limits for beryllium, lead and mercury are requested to be deleted based on FDEP guidance dated May 19, 1995 (DARM-PER/GEN-18). The guidance states that mass emission limitations for metals should not be included in the permit. The only compliance requirement for this unit in the construction permit was to determine the concentrations of Be and Hg in the distillate fuel during the initial compliance test. Since oil is secondary fuel and metal concentrations are expected to be non-detectable, the emission limits for Be, Pb and Hg should be omitted from the Title V permit. It should be noted that only the emissions for beryllium would trigger PSD. Therefore, the BACT requirement can be listed as distillate fuel oil as provided by DARM-PER/GEN-18. The production limit on the amount of distillate fuel and the current knowledge of information on trace parameters in that fuel, indicate that emissions limits for these parameters are no longer necessary. The emission limits for sulfuric acid mist should not be included in the Title V permit, since emissions of this pollutant did not trigger PSD review and there is a requirement to use very low sulfur fuel oil (i.e., 0.05 percent). There is also no requirement for testing this pollutant and the requirement for fuel analyses would provide assurance that the sulfur limit would be met. Therefore the emission limit for sulfuric acid mist is requested not to be included in the Title V permit. If this condition is deleted than the reference to this pollutant in Specific Condition 10 should be deleted as well.

Specific Conditions 11 and 12:

These conditions should not be included in the Title V permit, since compliance with Be and Hg would not be required by DARM-PER/GEN-18.

Florida Department of

M[illegible] orandum

Environmental Protection

DARM-PER/GEN-18
REVISED

TO: District Air Program Administrators
County Air Program Administrators
BAR Air Permitting Staff

FROM: Howard L. Rhodes, Director
Division of Air Resources Management

DATE: May 19, 1995

SUBJECT: Guidance on Testing Requirements in Permit Conditions for the Determination of Metal Concentrations in Fuels.

This guidance replaces "Guidance on Testing Requirements in Permit Conditions for the Determination of Metal Concentrations in Fuels" (DARM-PER/GEN-18) dated April 6, 1995.

Rule 62-297.340(1)(a), F.A.C., requires the owner or operator of a new or modified emissions unit that is subject to an emission limiting standard to conduct a compliance test that demonstrates compliance with the applicable emission limiting standards prior to obtaining an operating permit for such emissions unit.

Recent data from analyses of new distillate fuel oil indicate that metal concentrations are low and in many cases non-detectable by ASTM test methods. Distillate fuel oil is defined as any fuel oil that contains 0.05 or less percent nitrogen, by weight, and complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society of Testing and Materials in ASTM D396-78, Standard Specifications for Fuel Oils. Test data indicate that the metal concentrations in gaseous fuels are non-detectable. Also, the analyses indicate that testing requirements for metal concentrations in gaseous fuels or the above mentioned distillate oils are unnecessary, burdensome, and costly. The metals of concern are lead (Pb), inorganic arsenic compounds (As), cadmium (Cd), chromium (Cr), nickel (Ni), mercury (Hg), vanadium (V), and beryllium (Be).

If permit applications and Department review show that emissions units that exclusively use natural gas, propane, or distillate oil fuels do <u>not</u> trigger Prevention of Significant Deterioration (PSD) or Nonattainment Area (NAA) New Source Review (NSR) determinations, mass emissions limitations for metals should not be included in the permit. Even if the emission levels of one or more of the above mentioned metals trigger PSD or NAA NSR, the permitting authority need not establish mass emissions limitations for such metals. However, the permit (which includes BACT or LAER determinations) should note that the metals emissions levels for natural gas, propane, and distillate fuels (as defined above) are generally non-detectable by ASTM test methods. A BACT or LAER determination that requires the exclusive use of the above referenced fuels automatically minimizes the emissions of the heavy

metals and should suffice without imposing specific mass emissions limitations for metals, which would require testing pursuant to Rule 62-297.340(1)(a), F.A.C.

Each permit for emissions units exclusively using natural gas, propane, or distillate oils, as defined above, shall include a requirement that the owner maintain records to reflect that all the fuels delivered for these emissions units meet the specifications necessary to classify them as distillate fuels, natural gas, or propane.

To the extent that this conflicts with an existing permit, the existing permit prevails until a new permit is issued. For such changes to be federally enforceable, it is necessary to change both the air construction permit and the air operation permit.

HLR/mc/c

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

April 23, 1996

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Jeffrey J. Fassett
Senior Plant Engineer
Tiger Bay Cogen
3219 State Road, 630 West
Fort Meade, Florida 33841

Dear Mr. Fassett:

Re: Amendment of Permits AC53-214903, PSD-FL-190. AIRS ID# 1050223-001-AC
Tiger Bay Cogen, Combined Cycle Unit

The Department has reviewed your letters dated January 18 and January 24 requesting an increase in the allowable heat input rate to produce 184 MW of electrical power from the combustion turbine. The Department has also received your letter dated February 9 requesting the deletion of the requirement to adjust source test results to ISO conditions for the purpose of BACT compliance. The above referenced permit is hereby amended as follows:

From:
Specific Condition:

5. The permitted materials and utilization rates for the combined cycle gas turbine system shall be as stated in the application. The operation parameters include, but are not limited to:

184 MW Combustion Turbine

a) The maximum heat input of 1849.9 MMBtu/hr (LHV) at 27°F and at base load for distillate fuel oil.

b) The maximum heat input of 1614.8 MMBtu/hr (LHV) at 27°F and at base load for natural gas.

Duct Burner

c) The maximum heat input of 100 MMBtu/hr (HHV) of natural gas.

13. During performance tests, to determine compliance with the NOx standard, measured NOx emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$NO_x = (NO_{x\,obs})(P_{ref}/P_{obs})^{0.5} e^{19(Hobs - 0.00633)} (288°K/T_{AMB})^{1.53}$

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} = Measured 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.

To:
Specific Condition:

5. The permitted materials and utilization rates for the combined cycle gas turbine system shall be as stated in the application. The operation parameters include, but are not limited to:

184 MW Combustion Turbine

a) The maximum heat input of 1849.9 MMBtu/hr (LHV) at 27°F and at base load for distillate fuel oil.

b) The maximum heat input of 1710 MMBtu/hr and at base load for natural gas.

Duct Burner

c) The maximum heat input of 100 MMBtu/hr (HHV) of natural gas.

13. This condition is deleted. Tests conducted to establish compliance with NO_x limits which are more stringent than the NSPS standard shall not require an ISO correction (Guidance on Rate of Operation During Compliance Testing for Combustion Turbines dated November 22, 1995).

A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC53-214903.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/al/w

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this PERMIT AMENDMENT and all copies were mailed by certified mail before the close of business on 4/29/96 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 4/29/96
Clerk Date

Copies to be furnished to:

T. Ellison, SWD
J. Harper, EPA
J. Bunyak, NPS
J. Benedetti, DESTEC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permits by:

Mr. Robert I. Taylor, Project Manager
Central Florida Power, L.P.
2500 City West Blvd., Suite 150
Houston, Texas 77042

DER File No. AC53-214903
PSD-FL-190
Polk County

_____/

Enclosed is Permit Number AC 53-214903 for Central Florida Power, L.P. to consruct a 258 MW cogeneration facility in Ft. Meade, Polk 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 5-17-93 to the listed persons.

Clerk Stamp

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

(Clerk) 5-17-93 (Date)

Copies furnished to:

B. Thomas, SW District
K. Kosky, P.E., KBN
J. Harper, EPA
J. Bunyak, NPS
L. Novak, Polk County

Final Determination

Central Florida Power, Limited Partnership
Ft. Meade, Polk County, Florida

258 MW Cogeneration Facility

Permit Number: AC53-214903
PSD-FL-190

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

May 6, 1993

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 258 cogeneration facility at Central Florida Power, Limited Partnership (CFPLP), in Ft. Meade, Polk County, Florida, was distributed on January 15, 1993. The Notice of Intent to Issue was published in The Polk County Democrat on February 4, 1993. Copies of the evaluation were available for public inspection at the Department's offices in Tampa and Tallahassee.

CFPLP's application for a permit to construct a 258 MW cogeneration facility has been reviewed by the Bureau of Air Regulation in Tallahassee. No adverse comments were submitted by the U.S. Environmental Protection Agency (EPA) in their letter dated February 16, 1993, or by the U.S. Department of the Interior (Fish and Wildlife Services) in their letter of February 5, 1993.

Comments regarding the Technical Evaluation and Preliminary Determination (Sypnosis of Application) and Permit Specific Conditions were submitted by Kennard F. Kosky, P.E., President of KBN Engineering and Applied Sciences, Inc. The Bureau has considered Mr. Kosky's comments and agreed to the changes proposed in the wording and adjustment of numerical limits to reflect manufacturer's specifications since these changes will not affect the potential emissions considered during the evaluation of this project. The amendments to the Specific Conditions of the permit are as follows:

RESPONSE TO COMMENTS NOS. 1, 2, 3, 4, AND 5

These changes will be incorporated in Table 1.

RESPONSE TO COMMENTS NOS. 5 AND 6

The table on page 9 of the BACT determination and Table 1 of the permit (Specific Condition No. 1) will be amended to reflect these comments.

BACT DETERMINATION BY DER (PAGE 8)

This paragraph will be added to the NO_x control section: For this turbine, an even lower NO_x emission level than 15 (gas)/42 (oil) ppmvd, corrected to 15% O_2, may become a condition of this permit pursuant to F.A.C. Rule 17-4.080, Modification of Permit Conditions.

RESPONSE TO ITEM NO. 2 ON KBN'S LETTER OF JANUARY 30, 1993

Information given to DER and to the U.S. Department of Interior (Fish and Wildlife Services) indicates that General Electric's goal is to attempt a NO_x level of 9 ppmvd when firing natural gas.

IN RESPONSE TO THE U.S. DEPARTMENT OF INTERIOR, SPECIFIC CONDITION NO. 15 WILL BE CHANGED AS FOLLOWS:

FROM: The permittee shall leave sufficient space in the heat recovery steam generator suitable for future installation of SCR equipment should the facility be unable to meet the NO_x standards, if required.

TO: The permittee shall comply with the following by 12/31/97:

a) For this turbine, if the 15 (gas)/42 (oil) ppmv emission rates cannot be met by 12/31/97, SCR or other control technology will be installed. Hence, the permittee shall install a duct module suitable for future installation of SCR equipment.

IN RESPONSE TO THE MARCH 11, 1993, LETTER FROM KENNARD F. KOSKY, KBN

The Department has determined the following:

Mandating SCR: The Department is giving the permittee the flexibility to incorporate any design feature to meet the 15 (gas) ppmvd at 15% O_2 NO_x emission limit. SCR or other control technology shall be installed if the 15 (gas) ppmvd cannot be met by 12/31/97.

Lowering the permit/BACT limit for NO_x: The Department may revise the permitted emission level for NO_x. For this turbine, an even lower NO_x emission level than 15 (gas)/42 (oil) ppmvd, corrected to 15% O_2, may become a condition of this permit, pursuant to F.A.C. Rule 17-4.080, Modification of Permit Conditions.

SPECIFIC CONDITION NO. 14 WILL BE MODIFIED AS FOLLOWS. THE PARAGRAPH IN BOLD WAS INADVERTENTLY OMITTED IN THE DRAFT PERMIT

Specific Condition No. 14: Test results will be the average of 3 valid runs. The Southwest District office will be notified at least 30 days in writing in advance of the compliance test(s). The sources, combustion turbine and duct burner, shall operate between 95% to 100% of the maximum capacity for the ambient conditions experienced during compliance test(s). **The turbine manufacturer's capacity vs temperature (ambient) curve shall be included with the compliance test results.** Compliance test results shall be submitted to the Southwest District office no later than 45 days after completion.

The final action of the Department will be to issue construction permit AC53-214903 (PSD-FL-190) with the changes noted above.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

PERMITTEE:
Central Florida Power, L.P.
2500 City West Blvd., Ste. 150
Houston, Texas 77042

Permit Number: AC53-214903
PSD-FL-190
Expiration Date: January 1, 1996
County: Polk
Latitude/Longitude: 27°44'46.7"N
81°51'0.3"W
Project: A 258 MW Cogeneration Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 275, 296, 297 and 17-4. 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:

Central Florida Power, Limited Partnership, proposes to operate a 258 MW cogeneration facility consisting of one combustion turbine generator, one steam turbine generator, one duct burner-fired heat recovery steam generator and ancillary equipment. This facility is located near Ft. Meade, Polk County, Florida. The UTM coordinates are Zone 17, 416.22 km East and 3069.22 km North.

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

Attachments are listed below:

1. Central Florida Power, Limited Partnership's (CFPLP) application received on June 15, 1992.
2. Department's letters dated July 14 and October 9, 1992.
3. CFPLP's letters received on August 26, October 9, and October 23, 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, Florida Statutes. 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), Florida Statutes, 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, Florida Statutes. 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 Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;

GENERAL CONDITIONS:

- 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:

Emission Limits

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

2. Visible emissions for full load operation shall not exceed 10% opacity when firing natural gas and 20% opacity when firing distillate fuel oil.

Operating Rates

3. This source is allowed to operate continuously (8,760 hours per year).

4. This source is allowed to use natural gas as the primary fuel for 8,760 hours per year and low sulfur distillate fuel oil (0.05% S) as the secondary fuel up to 3,742,327 gallons per calendar year.

5. The permitted materials and utilization rates for the combined cycle gas turbine system shall be as stated in the application. The operating parameters include, but are not limited to:

184 MW Combustion Turbine

a) The maximum heat input of 1,849.9 MMBtu/hr (LHV) at 27°F and at base load for distillate fuel oil.

b) The maximum heat input of 1,614.8 MMBtu/hr (LHV) at 27°F and at base load for natural gas.

SPECIFIC CONDITIONS:

Duct Burner

c) The maximum heat input of 100 MMBtu/hr (HHV) of natural gas.

6. Any change in the method of operation, equipment or operating hours pursuant to Rule 17-212.200, F.A.C., Definitions-Modifications, shall be submitted to DER's Bureau of Air Regulation and Southwest District offices.

7. 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.

Compliance Determination

8. Compliance with the NO_x, SO_2, CO, PM, PM_{10}, and VOC standards shall be determined (while operating at 95-100% of the permitted maximum heat rate input corresponding to the particular ambient conditions) within 180 days of initial operation of the maximum capability of the unit and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July, 1992 version) and adopted by reference in F.A.C. Rule 17-297.

- Method 1 Sample and Velocity Traverses for Stationary Sources
- Method 2 Determination of Stack Gas Velocity and Volumetric Flow Rate
- Method 3 Gas Analysis
- Method 5 or Method 17 Determination of Particulate Emissions from Stationary Sources
- Method 18 Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
- Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources
- Method 8 Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources
- Method 10 Determination of Carbon Monoxide Emission from Stationary Sources
- Method 20 Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

SPECIFIC CONDITIONS:

- Method 201A and Method 202 — Determination of PM_{10} Emissions from Stationary Sources; Determination of Condensible Particulate Emissions from Stationary Sources

Other DER approved methods may be used for compliance testing after prior Departmental approval.

9. Method 5 or Method 17 or Method 201A and Method 202 must be performed to determine the initial compliance status of particulate matter emissions of the unit. Thereafter, the opacity emissions test, Method 9, may be used unless the applicable opacity is exceeded. Also, the ambient particulate matter entering the gas turbine can be subtracted from the total particulate matter emissions if that quantity can be measured at the inlet of the gas turbine.

10. Compliance with the SO_2 and sulfuric acid mist emission limit can also be determined by calculations based on fuel analysis using ASTM D4294 for the sulfur content of liquid fuels and ASTM D3246-81 for sulfur content of gaseous fuel.

11. Trace elements of Beryllium (Be) shall be tested during initial compliance test using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.

12. Mercury (Hg) shall be tested during initial compliance test using EPA Method 101 (40 CFR 61, Appendix B) or fuel sampling analysis using methods acceptable to the Department.

13. During performance tests, to determine compliance with the NO_X standard, measured NO_X emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_X = (NO_{X\ obs}) \left(\frac{P_{ref}}{P_{obs}}\right)^{0.5} e^{19\,(H_{obs} - 0.00633)} \left(\frac{288°K}{T_{AMB}}\right)^{1.53}$$

where:

SPECIFIC CONDITIONS:

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} = Measured 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.

14. Test results will be the average of 3 valid runs. The Southwest District office will be notified at least 30 days in writing in advance of the compliance test(s). The sources, combustion turbine and duct burner, shall operate between 95% and 100% of maximum capacity for the ambient conditions experienced during compliance test(s). The turbine manufacturer's capacity vs temperature (ambient) curve shall be included with the compliance test results. Compliance test results shall be submitted to the Southwest District office no later than 45 days after completion.

15. The permittee shall comply with the following by 12/31/97:

a) For this turbine, if the 15 (gas)/42 (oil) ppmvd, corrected to 15% O_2 emission rates cannot be met by 12/31/97, SCR or other control technology will be installed. Hence, the permittee shall install a duct module suitable for future installation of SCR equipment.

16. 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, 1992).

17. A continuous monitoring system shall be installed to monitor and record the fuel consumption on the CT and duct burner. While water/steam injection is being utilized for NO_X control, the water/steam to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be continuously monitored. The system shall meet the requirements of 40 CFR Part 60, Subpart GG.

SPECIFIC CONDITIONS:

18. Sulfur and nitrogen content and lower heating value of the fuel being fired in the combustion turbines shall be determined as specified in 40 CFR 60.334(b). Any request for a future custom monitoring schedule shall be made in writing and directed to the Southwest District office. Any custom schedule approved by DER pursuant to 40 CFR 60.334(b) will be recognized as enforceable provisions of the permit, provided that the holder of this permit demonstrates that the provisions of the schedule will be adequate to assure continuous compliance. The records of distillate fuel oil usage shall be kept by the company for a two-year period for regulatory agency inspection purposes. For sulfur dioxide, periods of excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.05 percent sulfur by weight.

Rule Requirements

19. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, Chapters 17-210, 212, 275, 296, 297 and 17-4, Florida Administrative Code and 40 CFR 60 (July, 1992 version).

20. The sources shall comply with all requirements of 40 CFR 60, Subpart GG and Subpart Dc, and F.A.C. Rule 17-296.800,(2)(a), Standards of Performance for Stationary Gas Turbines and Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

21. 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 17-210.300(1)).

22. This source shall be in compliance with all applicable provisions of F.A.C. Rules 17-210.650: Circumvention; 17-210.700: Excess Emissions; 17-296.800: Standards of Performance for New Stationary Sources (NSPS); 17-297: Stationary Sources-Emissions Monitoring; and, 17-4.130: Plant Operation-Problems.

23. If construction does not commence within 18 months of issuance of this permit, then the permittee shall obtain from the Department a review and, if necessary, a modification of the control technology and allowable emissions for the unit(s) on which contruction has not commenced (40 CFR 52.21(r)(2)).

24. Quarterly excess emission reports, in accordance with the July 1, 1992 version of 40 CFR 60.7 and 60.334 shall be submitted to the Department's Southwest District office.

SPECIFIC CONDITIONS:

25. Fugitive dust emissions, during the construction period, shall be minimized by covering or watering dust generation areas.

26. Pursuant to F.A.C. Rule 17-210.300(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: sulfur content and the lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Southwest District office by March 1 of each calendar year.

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

28. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of May, 1993

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Virginia B. Wetherell

Virginia B. Wetherell
Secretary

CENTRAL FLORIDA POWER, L.P. - AC53-214903 (PSD-FL-190)
258 MW COMBINED CYCLE GAS TURBINE

Table 1 - Allowable Emission Rates

Pollutant	Fuel[A]	Allowable Emission[C] Standard/Limitation	Basis
NO_x (CT)	Gas	15 ppmvd @ 15% O_2 (97.2 lbs/hr; 425.7 TPY)[B]	BACT
	Gas	25 ppmvd @ 15% O_2 (161.9 lbs/hr; 709.1 TPY)	BACT
	Oil	42 ppmvd @ 15% O_2 (326 lbs/hr; 48.9 TPY)	BACT
NO_x (DB)	Gas	0.1 lbs/MMBtu (10 lbs/hr, 43.8 TPY)	BACT
CO (CT)	Gas	15 ppmvd (48.8 lbs/hr; 213.7 TPY)[D]	BACT
	Oil	30 ppmvd (98.4 lbs/hr; 14.8 TPY)	BACT
CO (DB)	Gas	10 lbs/hr; 43.8 TPY	BACT
VOC (CT)	Gas	2.8 lbs/hr; 12.3 TPY	BACT
	Oil	7.5 lbs/hr; 1.1 TPY	BACT
VOC (DB)	Gas	2.9 lbs/hr; 12.7 TPY	BACT
PM_{10} (CT)	Gas	9 lbs/hr; 39.4 TPY	BACT
	Oil	17 lbs/hr; 2.6 TPY	BACT
PM_{10} (DB)	Gas	0.0100 lbs/MMBtu	BACT
SO_2 (CT)	Gas	4.86 lbs/hr; 21.3 TPY	Appl.
	Oil	99.7 lbs/hr; 15.0 TPY	Appl.
SO_2 (DB)	Gas	0.3 lbs/hr; 1.32 TPY	Appl.
H_2SO_4 (CT)	Gas	5.95×10^{-1} lbs/hr; 2.6 TPY	Appl.
	Oil	1.22 lbs/hr; 0.183 TPY	Appl.
H_2SO_4 (DB)	Gas	3.7×10^{-2} lbs/hr; 1.61×10^{-1} TPY	Appl.
Opacity	Gas	10% opacity[D]	BACT
	Oil	20% opacity[D]	BACT
Hg	Oil	3.0×10^{-6} lbs/MMBtu (5.55×10^{-3} lbs/hr; 8.32×10^{-4} TPY)	Appl.
As	Oil	4.2×10^{-6} lbs/MMBtu (7.77×10^{-3} lbs/hr; 1.17×10^{-3} TPY)	BACT
Be	Oil	2.5×10^{-6} lbs/MMBtu (4.62×10^{-3} lbs/hr; 6.94×10^{-4} TPY)	BACT
Pb	Oil	8.9×10^{-6} lbs/MMBtu (1.65×10^{-2} lbs/hr; 2.47×10^{-3} TPY)	Appl.

A) Fuel: Natural Gas: Emissions are based on 8760 hours per year operating time.
Fuel: Distillate Fuel Oil (0.05% S): Emissions are based on fuel usage equivalent to 300 hours per year at maximum capacity (i.e., 3,742,327 gallons per year).

B) The NO_x maximum limit will be lowered to 97.2 (lbs/hr) equivalent to 15 ppmvd @ 15% O_2 not later than 12/31/97 using appropriate combustion technology improvements or SCR.

C) Emission rates are based on 27°F at base load.

D) At full load conditions.

Best Available Control Technology (BACT) Determination
Central Florida Power, L.P.
Polk County
PSD-FL-190

The applicant proposes to construct a cogeneration facility near Ft. Meade, Polk County. This generator system will consist of a 184 MW General Electric PG7221FA combustion turbine generator (CT), equipped with a duct burner-fired heat recovery steam generator (HRSG), which will be used to power a nominal 74 MW steam turbine generator (ST).

The applicant has requested to burn natural gas for 8760 hours per year and distillate fuel oil, with a 0.05 percent sulfur content for a maximum 3,742,327 gallons per year. The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility at base load, 27°F and type of fuel fired to be as follows:

Pollutant	Emissions (TPY) Gas		Oil	Total	PSD Significant Emission Rate (TPY)
	PG7221FA (8460 hrs)	Duct Burner (8760 hrs)	PG7221FA (300 hrs)		
NO_x	684.7	43.8	48.9	777.4	40
SO_2	20.5	1.3	15	36.8	40
PM/PM_{10}	38.1	4.4	2.6	45.1	25/15
CO	206.5	43.8	14.8	265.1	100
VOC	11.80	12.7	1.1	25.6	40
H_2SO_4	2.5	0.16	1.9	4.5	7
Be	nil	nil	6.94×10^{-4}	6.94×10^{-4}	0.0004
Hg	nil	nil	8.32×10^{-4}	8.32×10^{-4}	0.1
Pb	nil	nil	2.47×10^{-4}	2.47×10^{-4}	0.6
As	nil	nil	1.17×10^{-3}	1.17×10^{-3}	0

Florida Administrative Code (F.A.C.) Rule 17-212.400(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

June 15, 1992

BACT Determination Requested by the Applicant

Pollutant	Proposed Limits
NO_x	25 ppmvd @ 15% O_2 (natural gas burning) 42 ppmvd @ 15% O_2 (for oil firing) Control Technology: Dry Low-NO_x Burners when firing natural gas and steam/water injection when firing distillate oil
SO_2	0.05% sulfur by weight (fuel oil firing)
CO, VOC	Combustion Control
PM/PM_{10}	Combustion Control

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-212, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

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

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

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

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

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, 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 good combustion of clean fuels.
- Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- Acid Gases (e.g., NO_X). Controlled generally by gaseous control devices.

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.

BACT POLLUTANT ANALYSIS

COMBUSTION PRODUCTS

Particulate Matter (PM/PM_{10})

The design of this system ensures that particulate emissions will be minimized by combustion control and the use of clean fuels. The particulate emissions from the combustion turbine when burning natural gas and fuel oil will not exceed 9 lbs/hr and 17 lbs/hr, respectively. The Department accepts the applicant's proposed control for particulate matter and heavy metals.

Lead, Mercury, Beryllium, Arsenic (Pb, Hg, Be, As)

The Department agrees with the applicant's rationale that there are no feasible methods to control lead, mercury, arsenic, and beryllium; except by limiting the inherent quality of the fuel.

Although the emissions of these toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber, the amount of emission reductions would not warrant the added expense. As this is the case, the Department does not believe that the BACT determination for PM would be affected by the emissions of these pollutants.

PRODUCTS OF INCOMPLETE COMBUSTION

Carbon Monoxide (CO)

The 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 combined cycle turbine is on exhaust concentrations of 15 ppmv for natural gas firing and 30 ppmv for fuel oil firing.

The majority of BACT emissions limitations have been based on combustion controls for carbon monoxide and volatile organic compounds minimization, 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.

Due to the oxidation of sulfur compounds and excessive formation of H_2SO_4 mist emissions, oxidation catalyst are not considered to be technically feasible for gas turbines fired with fuel oil.

Catalytic oxidation has not been demonstrated on a continuous basis when using fuel oil.

Use of oxidation catalyst technology would be technically feasible for this natural gas-fired unit; however, the cost of $10,000 per ton for the PG7221FA of CO removed will have an adverse economic impact on this project.

The Department is in agreement with the applicant's proposal of combustor design and good operating practices as BACT for CO for this cogeneration project.

ACID GASES

Nitrogen Oxides (NO_x)

The emissions of nitrogen oxides represent a significant proportion of the total emissions generated by this project, and need to be controlled if deemed appropriate. As such, the applicant presented an extensive analysis of the different available technologies for NO_x control.

The applicant has stated that BACT for nitrogen oxides will be met by using water/steam injection (when firing distillate fuel oil) and advanced combustor design to limit emissions to 25 ppmvd (corrected to 15% O_2) when burning natural gas and 42 ppmvd (corrected to 15% O_2) when burning fuel oil.

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

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

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

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

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

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

a) Reduced power output.
b) Emissions of unreacted ammonia (slip).
c) Disposal of hazardous waste generated (spent catalyst).
d) Ammonium bisulfate and ammonium sulfate particulate emissions (ammonium salts) due to the reaction of NH_3 with SO_3 present in the exhaust gases.
e) The energy impacts of SCR will reduce potential electrical power generation of more than 7 million kwh per year.
f) Incremental cost effectiveness for the application of SCR technology to the Central Florida Power project was considered to be $7,400 per ton of NO_x removed.

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 NO_x 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 formed has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this is the case, SCR has been judged to be technically infeasible for oil firing in some previous BACT determinations.

The latest information available now indicates that SCR can be used for oil firing provided that adjustments are made in the ammonia to NO_X injection ratio. For natural gas firing operation, NO_X emissions can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater ammonia injection ratio. By lowering the injection ratio for oil firing, testing has indicated that NO_X can be controlled with efficiencies ranging from 60 to 80 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 NO_X emission limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

The applicant has indicated that the total levelized annual operating cost to install SCR for this project at 100 percent capacity factor and burning natural gas is $3,364,400 for the PG7221FA. Taking into consideration the total annual cost, a cost/benefit analysis of using SCR can now be developed.

For this project, based on the information supplied by the applicant, it is estimated that the maximum annual NO_X emissions using dry low-NO_X (natural gas) and water injection (oil firing) will be 702.1 tons/year (at 72°F). Assuming that SCR would reduce the NO_X emissions by 65%, about 245.7 TPY would be emitted annually. When this reduction (456.4 TPY) is taken into consideration with the total levelized annual operating cost of $3,364,400; the cost per ton of controlling NO_X is $7,400. This calculated cost is higher than has previously been approved as BACT.

A review of the latest DER BACT determinations show limits of 15 ppmvd (natural gas) using low-NO_X burn technology for combined cycle turbines. General Electric is currently developing programs using both steam/water injection and dry low NO_X combustor to achieve NO_X emission control level of 9 ppm when firing natural gas. Therefore, since this technology will likely be available by

1997, the Department has accepted the water/steam injection (for distillate fuel oil firing), the dry low-NO_x burner design, and the 25 ppmvd (natural gas)/42 ppmvd (oil) at 15% O_2 as BACT for a limited time (up to 12/31/97).

BACT Determination by DER

NO_x Control

The information that the applicant presented and Department calculations indicates that the cost per ton of controlling NO_x for this turbine [$7,400 per ton (natural gas)] is high compared to other BACT determinations which require SCR. Based on the information presented by the applicant, the Department believes that the use of SCR for NO_x control is not justifiable as BACT at this time.

A review of the permitting activities for 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, and various capacity factors). Although, the cost and other concerns expressed by the applicant are valid, the Department, in this case, is willing to accept water/steam injection and low NO_x burner design as BACT for this project for a limited time (up to 12/31/97).

It is the Department's understanding that General Electric is developing programs for the PG7221FA using either steam/water injection or dry low NO_x combustor technology to achieve a NO_x emission control level of 9 ppm when firing natural gas.

Based on this, the Department has determined to revise and lower the allowable BACT limit for this project to 15 ppmvd at 15% O_2 no later than 12/31/97. For this turbine, an even lower NO_x emission level than 15 (gas)/42 (oil) ppmvd, corrected to 15% O_2, may become a condition of the permit pursuant to F.A.C. Rule 17-4.080.

CO Control

Combustion control will be considered as BACT for CO and VOC when firing natural gas.

Other Emissions Control

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

The emission limits for the Central Florida Power, L.P. project are thereby established as follows:

258 MW COMBINED CYCLE COMBUSTION TURBINE
100 MMBtu/hr Duct Burner

Pollutant	Emission Standards/Limitations[a] Oil[b]	Gas[c]	Method of Control
NO_x (CT)	42 ppmvd at 15% O_2; 362.2 lbs/hr	25 ppmvd at 15% O_2; 161.9 lbs/hr	Water Injection/ Dry Low-NO_x Combustor
		15 ppmvd at 15% O_2; 97.2 lbs/hr	Dry Low-NO_x Combustor or any other NO_x Control Technology
NO_x (DB)		0.1 lbs/MMBtu	
CO (CT)	98.4 lbs/hr	49 lbs/hr	Combustion
CO (DB)		10 lbs/hr	
PM/PM_{10} (CT)	17 lbs/hr	9 lbs/hr	Combustion
PM/PM_{10} (DB)		0.01 lbs/MMBtu	
SO_2 (CT)	99.7 lbs/hr	4.9 lbs/hr	Distillate Fuel Oil (0.05% S)
SO_2 (DB)		0.3 lbs/hr	
H_2SO_4 (CT)	1.2 lbs/hr	5.95×10^{-1} lbs/hr	Distillate Fuel Oil (0.05% S)
H_2SO_4 (DB)		3.7×10^{-2} lbs/hr	
VOC (CT)	7.5 lbs/hr	2.8 lbs/hr	Combustion
VOC (DB)		2.9 lbs/hr	
Hg	3.0×10^{-6} lbs/MMBtu (5.5×10^{-3} lbs/hr)		Fuel Quality
Pb	8.9×10^{-6} lbs/MMBtu (1.65×10^{-2} lbs/hr)		Fuel Quality
Be	2.5×10^{-6} lbs/MMBtu (4.62×10^{-3} lbs/hr)		Fuel Quality
As	4.2×10^{-6} lbs/MMBtu (7.77×10^{-3} lbs/hr)		Fuel Quality

(a) Emissions calculated at base load and 27°F.
(b) Fuel oil with a maximum of 0.05% sulfur by weight.
(c) Natural gas (8760 hours per year), Fuel oil (3,742,327 gallons per calendar year).
(d) Initial NO_x emission rates for natural gas firing shall not exceed 25 ppmvd at 15% oxygen on a dry basis. The permittee shall achieve NO_x emissions of 15 ppmvd at 15% oxygen at the earliest achievable date based on dry low NO_x combustor injection technology or any other combustion technology, but no later than 12/31/97.

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, BACT Coordinator
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

May 4 1993
Date

Approved by:

Virginia B. Wetherell, Secretary
Dept. of Environmental Regulation

May 17 1993
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): **Zero Liquid Discharge System**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **002**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This emission unit consists of a spray dryer air heater that is fired by natural gas only with a baghouse for PM control.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters): **Baghouse, Fabric Filter**
2. Control Device or Method Code: **16**

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: **1 Aug 1994**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Unitech-Graver-Water**	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:		**3**	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: 3.07 MMBtu/hr (rounded to 3). This unit is fired with natural gas only.**			

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 TB-EU2-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: **ZLD Stack (2)**
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **The ZLD stack is a single point emission source for VE emissions.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **002 EU3 Stack for Spray Dryer and Baghouse**
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **70** feet
7. Exit Diameter: **1.3** feet
8. Exit Temperature: **340** °F

9. Actual Volumetric Flow Rate:	**5,000** acfm
10. Percent Water Vapor:	**20** %
11. Maximum Dry Standard Flow Rate:	**2,640** dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates:	
Zone: **17** East (km): **416.3**	North (km): **3069.3**
14. Emission Point Comment (limit to 200 characters):	

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

Segment Description and Rate: Segment 1 of 1

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

Industrial Boiler - Natural Gas - Less than 10 MMBtu/hr.

2. Source Classification Code (SCC):

1-02-006-03

3. SCC Units:

Million cubic feet

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.003	**29**

6. Estimated Annual Activity Factor:

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

9. Million Btu per SCC Unit:

942

10. Segment Comment (limit to 200 characters):

Maximum Hourly Rate: 0.003227 SCC Units per hour (rounded to 0.003). Maximum Annual Rate: 28.5 (rounded to 29). Maximum percent sulfur: 0.003% by weight.

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
PM	101		EL

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

Pollutant Detail Information:

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Potential Emissions: **0.021** lb/hour **0.092** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.021 lb/hr** Reference: **AC53-230744**
7. Emissions Method Code: [ ] 0 [ ] 1 [**X**] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Potential-to-emit authorized by FDEP permit AC53-230744.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions are based on operating at maximum capacity 8,760 hrs per year.**

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:	
4. Equivalent Allowable Emissions:	**0.021** lb/hour **0.092** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test, EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **FDEP Air Construction Permit AC53-230744, Specific Condition No. 5. Note: Source is exempt from particulate testing as granted in Specific Condition No. 6. [Also Rule 62-297.620(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):	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE05**
2.	Basis for Allowable Opacity: [ ] Rule [x] Other
3.	Requested Allowable Opacity Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9; Annual Compliance Test**
5.	Visible Emissions Comment (limit to 200 characters): **In lieu of a particulate test, VE standard emission established as part of FDEP Air Construction Permit AC53-230744, Specific Condition No. 6.**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [x] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **5** min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters): **Excess emissions are allowed for startup and shutdown pursuant to FDEP Rule 62-210.700(1) for 2 hours/24 hours (5 min/hr average).**

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):			
	This source is a minor source as specified in FDEP Air Construction Permit AC53-230744.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: TB-EU2-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: TB-EU2-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: TB-EU2-L3	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 19 Oct 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

[ ] Attached, Document ID: _____ [X] 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: TB-EU2-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 TB-EU2-D

LIST OF APPLICABLE REGULATIONS

Attachment TB-EU2-D
Emission Unit Applicable Requirement List -Tiger Bay Limited Partnership - ZLD System - Page 1

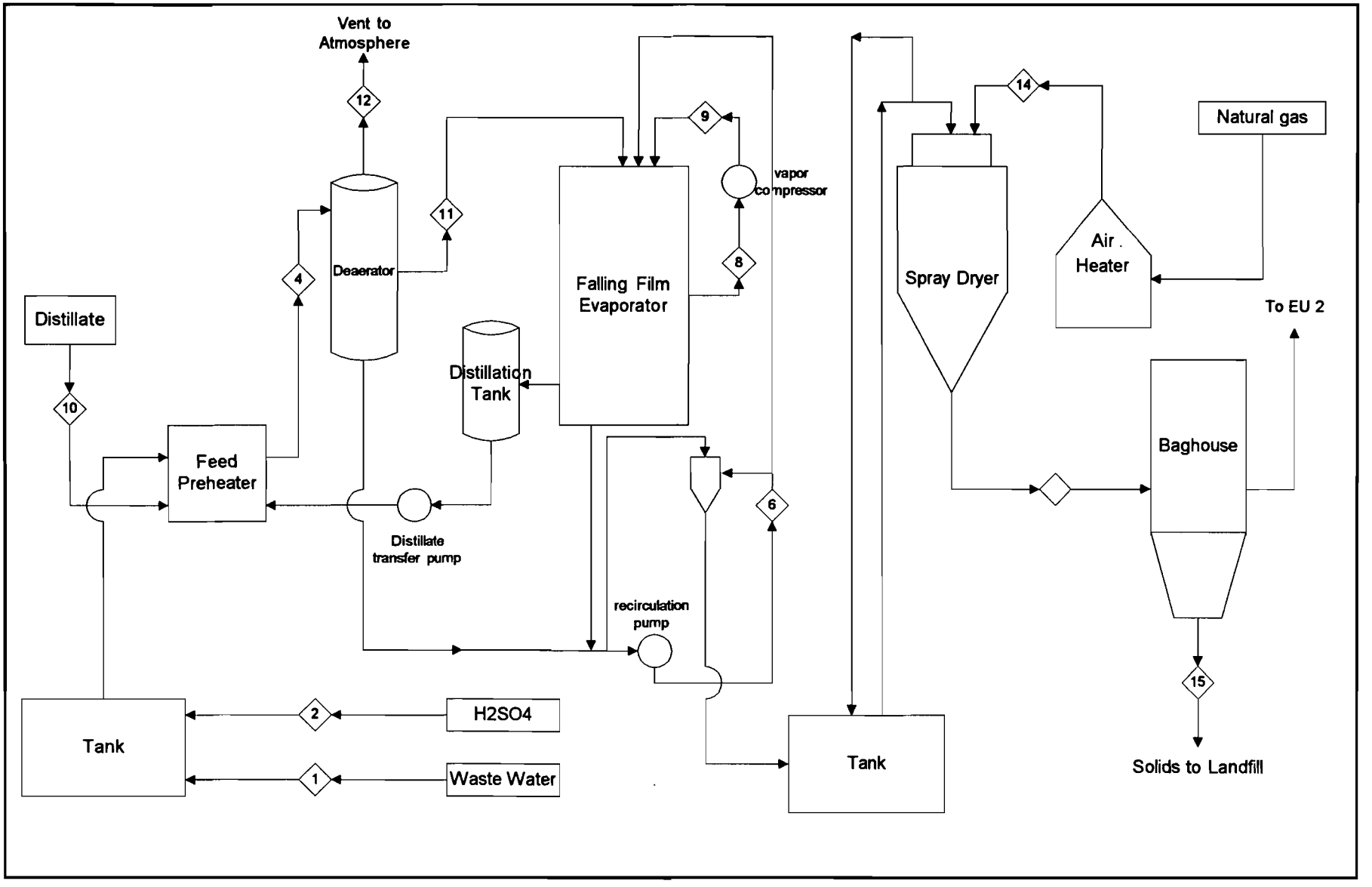
Chapter 210 Stationary Sources – General Requirements	
62-210.650	Circumvention.
62-210.700	Excess Emissions; (1).

Chapter 296 Stationary Sources – Emission Standards	
62-296.700	Reasonably Available Control Technology(RACT) Particulate matter.
	(2) Exceptions - (a), and (c).

Chapter 297 Stationary Sources – Emission Monitoring	
62-297.310	General Test Requirements.
	(2) Operating Rate During Testing (b)
	(4) Applicable Test Procedures (a)2.
	(5) Determination of Process Variables.
	(7) Frequency of Compliance Tests (a)3.; 4.a.
	(8) Test Reports.
62-297.620	Exceptions and Approval of Alternate Procedures and Requirements (4).

ATTACHMENT TB-EU2-L1

PROCESS FLOW DIAGRAM



ATTACHMENT: TB-EU2-L1 **Flow Diagram of Emission Unit** **Process Area: Tiger Bay**	**Process Flow Legend** Solid/Liquid/Gas → Gas Steam	Emission Unit: Filename: **TBCOGEN.VSD** Date: **06/10/96**	**Engineering and Applied Sciences, Inc.**

ATTACHMENT TB-EU2-L2

FUEL ANALYSIS OR SPECIFICATION

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(Perry Chromatograph)

DATE: April 29, 1996
TIME: 08:26 TIME: 08:22

Stream No. 1 Component Name	Mole %	Stream No. 2 Component Name	Mole %
Hexane	0.070	Hexane	0.084
Propane	0.754	Propane	0.345
Isobutane	0.194	Isobutane	0.092
n-Butane	0.149	n-Butane	0.076
Isopentane	0.055	Isopentane	0.038
n-Pentane	0.027	n-Pentane	0.025
Nitrogen	0.312	Nitrogen	0.435
Methane	94.477	Methane	95.608
CO_2	1.078	CO_2	0.797
Ethane	2.884	Ethane	2.500
Totals	100.000	Totals	100.000
Dry Btu/cf 1/	1047.1	Dry Btu/cf 1/	1035.6
RRD 2/	0.5965	RRD 2/	0.5859
Total Sulfur	8.32 PPM	Total Sulfur	1.3 PPM
H^2S	2.08 PPM	H^2S	0.8 PPM
H^2O	3.0 lb/MMcf	H^2O	2.3 lb/MMcf

1/ @ 14.730 psia & 60°F
2/ Real Relative Density

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(Brooker Chromatograph)

DATE: April 30, 1996
TIME: 12:56

Component Name	Mole %
Hexane	0.073
Propane	0.549
Isobutane	0.140
n-Butane	0.116
Isopentane	0.045
n-Pentane	0.027
Nitrogen	0.364
Methane	95.100
CO_2	0.921
Ethane	2.666
Totals	100.000

Dry Btu/cf @ 14.730 psia and 60°F = 1041.1
Real Relative Density = 0.5906

Total Sulfur	6.3 PPM
H^2S	1.3 PPM
H^2O	2.1 lb/MMcf

FLORIDA GAS TRANSMISSION COMPANY

Spot Analysis of Natural Gas for Delivery in Florida
(West Palm Beach Chromatograph)

DATE: April 25, 1996
TIME: 16:03

Component Name	Mole %
Hexane	0.074
Propane	0.584
Isobutane	0.140
n-Butane	0.106
Isopentane	0.043
n-Pentane	0.024
Nitrogen	0.389
Methane	94.879
CO_2	0.934
Ethane	2.827
Totals	100.000

Dry Btu/cf @ 14.730 psia and 60°F = 1042.3
Real Relative Density = 0.5919

Total Sulfur	11.36 PPM
H^2S	1.6 PPM
H^2O	4.39 lb/MMcf

ATTACHMENT TB-EU2-L3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT TB-EU2-L3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The control equipment for the spray dryer is a fabric filter (baghouse) system with a control efficiency of 99.9 percent or greater. The spray dryer evaporates concentrated wastewater, primarily consisting of cooling tower blowdown from the facility. However, waste waters from other plant operations are also evaporated. The particulate generated from the spray drying consists primarily of calcium, magnesium and sodium salts (chloride and sulfate) found naturally in the surface waters and groundwater in the area. The nominal design of the baghouse is as follows: Flow rate - 5,050 ACM; Temperature - 340°F; Air to Cloth Ratio - 4 (maximum); Number of bags - 50 (minimum); Type of Bag - Nomex (although Fiberglass, Teflon or Gortex bags can be used); Bag Cleaning - pulsed air. The baghouse demonstrated 0 percent opacity during the initial compliance tests. PM emissions are not to exceed 0.021 lb/hr and 0.092 tons/yr by the air construction permit.

ATTACHMENT TB-EU2-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

(file:destbeu2.l12)

ATTACHMENT TB-EU2-L12

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

This request is to revise in the Title V permit, one condition of the FDEP issued air construction permit (AC53-230744) that are obsolete and 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 Condition 4

The maximum heat input of the spray dryer as listed in the construction permit is 3.07 mmBtu/hr. The actual nameplate heat input of the unit is 3.3 mmBtu/hr. The change in heat input will not affect the emissions of the pollutant regulated by the permit. The regulated pollutant is particulate matter and is controlled by a baghouse.

Florida Department of Environmental Regulation
Southwest District • 3804 Coconut Palm Dr. • Tampa, Florida 33619
Lawton Chiles, Governor 813-744-6100 Virginia Wetherell, Secretary

NOTICE OF PERMIT

In the Matter of an Application for Permit by:

DER File No.: AC53-230744
County: Polk

Mr. Robert I. Taylor, Project Manager
Central Florida Power Limited Partnership
2500 City West Boulevard, Suite 150
Houston, Texas 77042

_____/

Enclosed is Permit Number AC53-230744 for the construction of a wastewater treatment system spray dryer unit at the Tiger Bay Cogeneration Facility located west of Ft. Meade in Polk County, issued pursuant to Section 403.087, 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 Tampa, Florida.

Sincerely,

J. Harry Kerns

J. Harry Kerns, P.E.
District Air Engineer

DRZ/
enclosure

Copy furnished to:
Kennard F. Kosky, P.E., KBN Engineering & Applied Sciences, Inc.

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 JUN 29 1993 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to Section 120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Marilyn Quisspe JUN 29 1993
(Clerk) (Date)

Florida Department of Environmental Protection

Southwest District • 3804 Coconut Palm Dr. • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia Wetherell, Secretary

PERMITTEE:
Central Florida Power Limited Partnership
2500 City West Boulevard, Suite 150
Houston, Texas 77042

PERMIT/PROJECT:
Permit No: AC53-230744
County: Polk
Expiration Date: 01/01/96
Project: Wastewater Treatment System Spray Dryer w/Baghouse

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-200 through 297, and Chapter 17-4. 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:

For the construction of a natural gas fired spray dryer unit and baghouse associated with the wastewater treatment system for a cogeneration facility. This equipment is used to process the concentrated wastewater brine from two falling-film evaporator units. The effluent from the evaporators is pumped to the spray dryer module where it is atomized into a spray and contacted by heated air to evaporate the liquid, thus resulting in the formation of dry particles from the remaining solids. The exhaust gas stream from the spray dryer is sent through a baghouse dust collector where the particulate matter is removed with a removal efficiency of at least 99.9% (based on vendor's guarantee). Design gas flow rate to the baghouse is 5,050 acfm @ 340°F. The spray dryer air heater is fired with natural gas at a maximum heat input rate of 3.07 MMBtu/hr.

Location: Tiger Bay Cogeneration Facility
County 630 Road, 3 miles west of Ft. Meade

UTM: 17-416.3 E 3069.3 N **NEDS No:** 0223 **Point ID No:** 02

Replaces Permit No.: N/A

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions. [Rule 17-4.160, F.A.C.].

2. All applicable rules of the Department and design discharge limitations specified in the application must be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction. [Rule 17-4.070(7), F.A.C.].

Operation and Emission Limitations

3. This source is permitted for continuous operation (8,760 hours/year).
[As requested in construction permit application].

4. The spray dryer unit air heater shall be fired with natural gas only at a maximum heat input rate not to exceed 3.07 MMBtu/hour. [Construction permit application].

5. Particulate matter emissions from the spray dryer unit baghouse exhaust shall not exceed 0.021 pounds per hour and 0.092 tons per year. (Note: on the basis of this limitation this source is exempted from the particulate matter RACT requirements of Rule 17-296.700, F.A.C.)
[Construction permit application and Rule 17-296.700(2)(b) and (c), F.A.C.].

6. Due to the expense and complexity of conducting a stack test on a minor source of particulate matter, and because this source is equipped with a baghouse control device, the Department, pursuant to the authority granted under Rule 17-297.620(4), F.A.C., hereby establishes a visible emission limitation not to exceed an opacity of 5% in lieu of a particulate stack test.

7. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 17-296.320(2), F.A.C.].

8. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provisions in Rule 17-296.310(3)(c), F.A.C. These provisions are applicable to any source, including but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. [Rule 17-296.310(3)(b), F.A.C.].

SPECIFIC CONDITIONS:

Testing Requirements

9. The spray dryer unit baghouse shall be tested for visible emissions within 30 days after it is placed in commercial operation or 180 days after initial operation, whichever occurs first. A test report shall be submitted within 45 days of testing to the Southwest District Office of the Department in conjunction with a Certificate of Completion of Construction.
[Rules 17-297.340(1)(a), and 17-297.570, F.A.C.].

10. Should the Department have reason to believe the particulate emission standard is not being met, the Department may require that compliance with the particulate emission standard be demonstrated by stack testing in accordance with Rule 17-297, F.A.C.
[Rule 17-297.620(4), F.A.C.].

11. Compliance with the visible emission limitation of Specific Condition No. 6 shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 17-297, F.A.C. The visible emissions test shall be conducted by a certified observer and be a minimum of 30 minutes in duration. The test observation period shall include the period during which the highest opacity can reasonably be expected to occur. The minimum requirements for stationary point source emission test procedures and reporting shall be in accordance with Rule 17-297, F.A.C. and 40 CFR 60 Appendix A.
[Rule 17-297.330(1)(b), F.A.C.].

12. Stack testing shall be conducted during operation of the wastewater treatment system and spray dryer unit under conditions that could be reasonably expected to represent the worst case particulate loading to the baghouse. The test report shall include a description of the wastewater treatment system and spray dryer unit operating conditions during the test, including the following:

A. spray dryer wastewater brine feed rate (gal/min. or other appropriate units);
B. spray dryer air heater heat input rate (MMBtu/hr);
C. any other operating parameters (such as pressure drops, temperatures, baghouse gas flow rate (acfm), etc.) that the permittee feels are indicative of the operating conditions during the test.

Failure to submit the above operating information and or operating at conditions which do not reflect the normal operating conditions may invalidate the data and fail to provide reasonable assurance of compliance.
[Rule 17-4.070(3), F.A.C.].

SPECIFIC CONDITIONS:

13. The permittee shall notify the Southwest District Office of the Department at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.
[Rule 17-297.340(1)(i), F.A.C.].

Reporting and Permit Requirements

14. Effective as soon as commercial operation begins at the facility, the permittee shall submit to the Southwest District Office of the Department each calendar year on or before March 1, completed DER Form 17-213.900(4), "Annual Operating Report for Air Pollutant Emitting Facility," for the preceding calendar year.
[Rule 17-210.370(2), F.A.C.].

15. The permittee, may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Southwest District Office of the Department at least 60 days prior to the expiration date of the permit.
[Rule 17-4.090, F.A.C.].

16. Two applications for an operating permit shall be submitted to the Southwest District Office of the Department within 45 days of testing or at least 60 days prior to the expiration date of this permit, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the following:

A. the appropriate application form (Certificate of Completion of Construction) noting any deviations from the construction permit application;
B. the compliance test report as required by Specific Condition No. 9 of this permit.

[Rules 17-4.070(3) and 17-297.340(1)(a), F.A.C.].

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Richard D. Garrity, Ph.D.
Director of District Management
Southwest District

ATTACHMENT - 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 403.141, 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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 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 and used by the permittee to achieve compliance with the conditions of this permit, are 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;

(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.

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 403.111 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.

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 Rule 17-4.120 and 17-730.300, Florida Administrative Code, 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:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

( ) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

( ) Compliance with New Source Performance Standard

14. The permittee shall comply with the following:

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

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

(c) Records of monitoring information shall include:

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.

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 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.

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:

[ ] 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).

[x] 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): **Facility-wide Fugitive; Deminimis and trivial activities**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **003**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This emission unit consists of facility-wide fugitive and vent emissions from various locations throughout the facility. A list of these De Minimis, Trivial and Exempt emission units are listed in TB-EU3-B6. The cummulative emissions from these units are less than the reporting thresholds. List of Exemptions: 62-210.300(3)(a)5,7,9,10,11,12,15,16,20,21 and 22; 62-296.310(2) and (3).**		

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:

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

Emissions Unit Details

1. Initial Startup Date:	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	MW
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		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):		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/yr	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.)

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

62-296.320(2) Not Unit Specific
62-296.320(4)(b) Not Unit Specific
62-296.320(4)(c) Not Unit Specific

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:
2. Emission Point Type Code: [ ] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [ ] W
6. Stack Height: feet
7. Exit Diameter: feet
8. Exit Temperature: °F

9. Actual Volumetric Flow Rate:	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):	

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

Segment Description and Rate: Segment 1 of 2

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

Petroleum Product Storage - Fixed Roof Tank - Distillate Fuel #2 - Breathing Loss

2. Source Classification Code (SCC):

4-03-010-19

3. SCC Units:

1,000 gallons stored

4. Maximum Hourly Rate:	5. Maximum Annual Rate: **450**
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):

Distillate fuel oil for CT. Storage Tank included in permit application but not constructed as yet. 40 CFR 60 Subpart Kb would apply when constructed.

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Petroleum Product Storage - Fixed Roof Tank - Distillate Fuel #2 - Working Loss**
2. Source Classification Code (SCC): **4-03-010-21**
3. SCC Units: **1,000 gallons throughput**

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6.5	**701**

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): **Maximum Hourly Rate: 701.1 (rounded to 701). Fuel Usage Based on CT usage authorized by FDEP permit AC53-214903/PSD-FL-190, as amended.**

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

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

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):

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):			
	This source is a minor source as specified in FDEP Air Construction Permit AC53-214903/PSD-FL-190.			

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

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[ ] Attached, Document ID: _____	
	[x] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[x] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[x] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[x] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[x] Not Applicable
	[ ] Previously Submitted, Date: _____	
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

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

11. Alternative Modes of Operation (Emissions Trading)

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

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [x] 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 TB-EU3-B6

EMISSIONS UNIT COMMENT

FUGITIVE/DEMINIMIS/TRIVIAL ACTIVITIES LIST

Title V Permitting, Tiger Bay Limited Partnership, Ft. Meade, Florida

Area	Emission Unit Description	Type/ Pollutant	Status (a)	
Offices/Shop Area	Office Equipment Operation	Fugitive	TR	
	Restrooms and Kitchen	Vent	TR	
	Routine Repairs	Fugitive	TR	
	Indoor Fugitives (grinder, drill press, etc.)	Fugitive	TR	
	Portable Welder - gasoline driven	Fugitive	TR/ER	F CR ✓
	Shop Vaccum	Fugitive	TR	
	Degreasers Non-Halogenerated Solvents(20 gal)	Fugitive	ER	F
	Propane Grill	Fugitive	TR/ER	
	Propane Forklift	Vent	TR/ER	I
	Storage Area	Fugitive	TR	
Lube Oil Storage Outside Area	Waste Oil Tank (500 gal)	Vent	UR	I
	Gas Cylinders (Empty) (He, Acetylene, CO2, H2, Ethane/Methane, NH3)	Fugitive	TR	
	Turbine Oil Storage (55 gal Drums)	Fugitive	TR	I
	Lube Oil Storage	Fugitive	TR	I
Service Water	Water Pumps (2)	Vent	TR	
Potable Water System	Water Pump (1)(4 in Vent)	Vent	TR	
	Water Tank (1350 gal) 2 ea Mixing tanks (300 gal)	Vent	TR	
	Water Treatment (Chlorine Injection) (35 gal HCl)	Fugitive	TR	I
Zero Liquid Discharge(ZLD) Acid Area	Sulfuric Acid Tank (10,000 gal)	Vent	TR	I
	Acid Pumps (4)	Fugitive	TR	I

FUGITIVE/DEMINIMIS/TRIVIAL ACTIVITIES LIST

Title V Permitting, Tiger Bay Limited Partnership, Ft. Meade, Florida

Area	Emission Unit Description	Type/ Pollutant	Status (a)	
Cooling Towers Area	Cooling Tower Treatment (Chemical Feed System)(2 pumps)	Fugitive	TR	
	Sulfuric Acid (20 gal)	Fugitive	TR	
	Microbiocide (5 gal)	Fugitive	TR	
	PHguard 2205 (500 gal, 2925 lb)	Fugitive	TR	
	Conquor 3583 (2 @ 550 lb)	Fugitive	TR	
	Chlorine Injection Skid	Fugitive	TR	
	Chlorine Storage (room for 6 cylinders) (on hand 2 cyl. @ 1 ton each)	Fugitive	TR	
	Gas Cyliners Storage (H2, CO2)	Fugitive	TR	
	Fresh Water Cooling Towers	Vents	UR	?
	Cooling Water Pumps (3)	Fugitive	TR	
Fire Protection	185 Hp Diesel Engine	Stack	ER	UR? ✓
	4 large Batteries	Vent	TR	
	Diesel fuel tank (200 gal)	Vent	TR	
Emergency 250 KW Generator	Detroit Cummings Diesel Engine	Stack	ER/UR	UnReg. ✓
	Batteries (2)	Vent	TR	
	Diesel Fuel Tank (200 gal)	Vent	UR	I
Electrical/Control Building	Switch Gear Fire Protection (1,1,1,2,3,3,3,-Heptafluoropropane) (4 cyl UN 1956 @ 877 lb ea.)	Fugitive	ER	I
	Electrical Switching Equipment	Fugitive	TR	
	Battery Room (40 car type, 12 large type)	Fugitive	TR	
	Battery Room Fire Protection (1,1,1,2,3,3,3,-Heptafluoropropane) (2 cyl UN 1956 74 lb ea.)	Fugitive	ER	I
	Control Room Fire Protection (1,1,1,2,3,3,3,-Heptafluoropropane) (2 cyl UN @ 1956 60 lb ea.)	Fugitive	ER	I

FUGITIVE/DEMINIMIS/TRIVIAL ACTIVITIES LIST

Title V Permitting, Tiger Bay Limited Partnership, Ft. Meade, Florida

Area	Emission Unit Description	Type/ Pollutant	Status (a)
	Water Lab	Vent	ER
	Heating and AC System (2-120 tons)	Fugitive	Reg > 50 lb
West of Electrial Building	2 Auxillary Transformers (Mineral Oil) (400 gal ea)(AT-002A & B)	Fugitive	TR
ZLD Control Building	Small Laboratory (Water Analysis) (No Hood or Vent)	Fugitive	TR/ER
	Heating and AC System (3 tons)	Fugitive	UR
	Electrical Switching Equipment	Fugitive	TR
ZLD Area	Chemical Injection Skid Pumps	Fugitive	TR
	Chemical Injection Tanks (3 @ 50 gal ea)	Fugitive	TR
	Miscellaneous pumps and vents	Fugitive	TR
	Chemical EL5600 (550lb tank)	Fugitive	TR
	Chemical BoilerGuard(450 lb tank)	Fugitive	TR
	Brine Storage Tank(9,900 gal)(TK026)	Fugitive	TR
	Waste Water Tank(142,778 gal)(TK005)	Vent	TR
	Waste Water Pumps(2)	Fugitive	TR
Natural Gas Yard	Natural Gas Release Valve	Vent	TR
	Natural Gas Metering Station	Fugitive	TR
	Calibration Cylinders (1-Ethylene/Methane, 2-He)		TR
	Natural Gas Knockout Tank	Vent	TR
	Emergency Line Release Valve	Vent/NF	TR
ST Turbine Area	Lube-oil Reservoir (Mist Eliminator)	Vent/VOC	UR
	Turbine/Generator Cooling Air	Vent	TR
	Various Pumps (sumps, condensate, etc.)	Fugitive	TR
	Miscellaneous Drains Tank	Vent	TR
	Lube Oil Reservoir (Mist Eliminator)	Vent	UR

FUGITIVE/DEMINIMIS/TRIVIAL ACTIVITIES LIST

Title V Permitting, Tiger Bay Limited Partnership, Ft. Meade, Florida

Area	Emission Unit Description	Type/ Pollutant	Status (a)	
	Condenser Pumps (2)	Fugitive	TR	
	Condenser	Vent	TR	
CT Turbine Area	Lube Oil Reservoir (700 gal) (Mist Eliminator)	Vent/VOC	UR	I
	Turbine/Generator Fire System (CO_2, 6 ton capacity)	Fugitive	ER	I
	Turbine Cooling Air	Vent	TR	
	Various Pumps (sumps, condensate, etc.)	Fugitive	TR	
	Miscellaneous Drains Tank	Vent	TR	
	Generator H_2/CO_2 System	Fugitive	TR	
	Hydraulic Equipment	Fugitive	TR	
	Natural Gas Release Valve	Vent	TR	
HRSG	Natural Gas Release Valve	Vent	TR	
	Various Steam Vents & Pressure Relief Valves	Vents	TR	
	Turbine Wash System	Vent	TR	
	HP Steam Vent	Vent	TR	
	Blowdown Quench Tank	Vent	TR	
	Various Pumps (feedwater, and chemical feed)	Fugitive	TR	
Boiler Chemical Feed Skid	Conquor 3583 Tank 1 @ 2755 lb	Vent	TR	
	Burolock HP 06 Tank 1 @ 3200 lb	Vent	TR	
	Conquor 3475 Tank 1 @ 2790 lb	Vent	TR	
	Boiler Feed Water Pumps (2)	Fugitive	TR	
General Site	Brazing, Soldering or Welding	Fugitive	ER	I
	Plant Grounds Maintenance	Fugitive	TR	

FUGITIVE/DEMINIMIS/TRIVIAL ACTIVITIES LIST

Title V Permitting, Tiger Bay Limited Partnership, Ft. Meade, Florida

Area	Emission Unit Description	Type/ Pollutant	Status (a)	
	Routine Maintenance	Fugitive	TR	
	Oil/Water Separator	Fugitive	TR	
	CEM Equipment & Calibration Gas Venting	Fugitive	TR	
	Air Compressed System	Vent	TR	
	Non-Halogenated Solvent	Fugitive	ER	
	Portable Maintenance Equipment Diesel Engine	Stack	UR/ER	UR
	Steam Line to customer(4 in Vent)	Vent	TR	
	Lube Oil storage tank (9,500 gal)(TK-010)	Vent	UR	UR
Substation	Transformers and Associated Equipment (5 transformers) (MT-001,MT-002, AT-001A & B, AT-003)	Fug./VOC	TR	
Parking Lot	Vehicles	Exhausts	ER	
	Vehicles	Fugitive	UR	

(a) TR = Trivial (as provided by FDEP policy memorandum dated April 19, 1996 DARM-PER/V-15).
ER = Exempt by Rule 62-210.300(3)(a).
UR = Unregulated.