Florida Power & Light Company, P.O. Box 088801, North Palm Beach, FL 33408-8801

VIA AIRBORNE EXPRESS

June 10, 1996

Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
State of Florida
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Submittal of FPL Putnam Plant Title V Application

Dear Mr. Fancy:

Enclosed, pursuant to DEP Rules 62-210.300(2), F.A.C., and 62-213.420(1)(a)1.a., F.A.C., please find four (4) hard copies of the subject Title V permit application. Due to the recent FDEP recall of the ELSA program, the diskettes containing the electronic application are not included at this time. FPL has worked diligently to prepare an electronic submittal and will submit diskettes containing the electronic application at a later date (when the ELSA program deficiencies have been resolved).

If you have any questions regarding this application, please do not hesitate to contact me at (561) 625-7661.

Very truly yours,

Richard Piper
Environmental Specialist
Florida Power & Light Company

cc: DEP Northeast District Office (w/o att)

TABLE OF CONTENTS

PUTNAM PLANT TITLE V APPLICATION

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 form.

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 a brief reference to the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: Florida Power & Light Company
2. Site Name: Putnam Plant
3. Facility Identification Number : 1070014
4. Facility Location Information: Facility Street Address: US 17 South City: East Palatka County: Putnam Zip Code: 32031
5. Relocatable Facility? (Y/N): N 6. Existing Permitted Facility?(Y/N): Y

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:
   Name: Tom Bethea
   Title : Plant General Manager

2. Owner or Responsible Official Mailing Address:

   Organization/Firm: FPL Environmental Services Department
   Street Address: 11770 U.S. Highway One
   City: North Palm Beach State: FL Zip Code: 33408

3. Owner or Responsible Official Telephone Numbers:
   Telephone: 9043251206 Fax: 9043294699

4. Owner 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 statues 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.*

W. T. Bethea
Signature

5/15/96
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 (or Title V source). 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
10	Unregulated Emission Units	
01	Putnam Combustion Turbine 1GT-1 (ARMS ID # 31JAX54001401)	
02	Putnam Combustion Turbine 1GT-2 (ARMS ID # 31JAX54001401)	
03	Putnam Combustion Turbine 2GT-1 (ARMS ID # 31JAX54001402)	
04	Putnam Combustion Turbine 2GT-2 (ARMS ID # 31JAX54001402)	
05	Putnam Ductburners on Combustion Turbine HRSG 1GT-1	
06	Putnam Ductburners on Combustion Turbine HRSG 1GT-2	
07	Putnam Ductburner on Combustion Turbine HRSG 2GT-1	
08	Putnam Ductburner on Combustion Turbine HRSG 2GT-2	
09	Putnam Auxiliary Boiler	

Purpose of Application and Category

Enter the Letter that applies and related information (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 17-213, F.A.C.

This Application for Air Permit is submitted to obtain (A,B,C,D,E,F): A

[A] Initial air operation permit under Chapter 17-213, F.A.C., for an existing facility which is classified as a Title V source.

[B] Initial air operation permit under Chapter 17-213, 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:

[C] Air operation permit renewal under Chapter 17-213, F.A.C., for a Title V source.

Operation permit to be renewed:

[D] 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 revised:

[E] 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 for such emissions unit(s). Also check appropriate item under Category III.

Operation permit to be revised/corrected:

[F] 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 Operation Permit Applications Subject to Processing Under Rule 17-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain (A,B,C):

[A] Initial air operation permit under Rule 17-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

[B] Renewal air operation permit under Rule 17-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed:

[C] 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 addressed herein.

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 (A,B,C):

[A] 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:

[B] 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):

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

Application Processing Fee

Check one:

[N] Applicable (Y/N) Attached - Amount: $

Construction/Modification Information

1. Description of Proposed Project or Alterations : N/A
2. Projected or Actual Date of Commencement of Construction (DD-MON-YYYY):
3. Projected Dates of Completion of Construction (DD-MON-YYYY):

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address: Organization/Firm: KBN Engineering & Appl Sciences Street Address: 6241 NW 23rd Street City: Gainesville State: FL Zip Code: 326531500
3. Professional Engineer Telephone Numbers: Telephone: 3523365600 Fax: 3523366603

4. Professional Engineer Statement:

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

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

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for a emission 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 her [X] if so), I further certify that each emissions unit described inthis 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 emission 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 Kenneth F. Kast Date 6/5/96

(seal)

* Attach any exception to certification statement.

Application Contact Information

1. Name and Title of Application Contact:
   Name: Richard G. Piper
   Title: Environmental Specialist

2. Application Contact Mailing Address:

Organization/Firm: FPL Environmental Services Department
Street Address: P.O. Box 088801
City: North Palm Beach State: FL Zip Code: 33408

3. Application Contact Telephone Numbers:
Telephone: 5616257661 Fax: 5616257251

Application Comment

This facility is comprised of 2 combined-cycle combustion turbine units. There is also an auxiliary boiler and an emergency diesel generator on the property. Each combined-cycle unit is composed of 2 combustion turbines (CTs) and 2 heat recovery steam generators (HRSGs), for a total of 4 CTs and 4 HRSGs.

The HRSG ductburners are new sources subject to NSPS Subpart Db regulations. The combustion turbines are existing units that are not subject to NSPS.

`II. FACILITY INFOR Should be

A. GENERAL FACILITY II Kilometers

Information for Facility-Id : *1*

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East: 443368.85 North: 3277807.32
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 29 - 37 - 44 Longitude (DD/MM/SS): 81 - 35 - 6
3. Governmental Facility Code: None (non-governmental facility) 4. Facility Status Code: Active 5. Facility Major Group SIC Code: 49 6. Facility SIC(s): 4911
7. Facility Comment: (limit to 500 characters)

Facility Contact

1. Name and Title of Facility Contact: Name : Pat Wilson Title : Environmental Specialist
2. Facility Contact Mailing Address: Organization/Firm: FPL Putnam Plant Street Address: 392 U.S. 17 South City: East Palatka State: FL Zip Code: 32131 -
3. Facility Contact Telephone Numbers: Telephone: 9043294609 Fax: 9043294699

Facility Regulatory Classifications

1. Small Business Stationary Source? (Yes/No/Unknown)(Y/N/U) : N
2. Title V Source? (Yes/No) (Y/N) : Y
3. Synthetic Non-Title V Source? (Yes/No) (Y/N) : N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? (Yes/No) (Y/N) : Y
5. Synthetic Minor Source of Pollutants Other than HAPs? (Yes/No) (Y/N) : N
6. Major Source of HAPs? (Yes/No/Possible) (Y/N/P) : Y
7. Synthetic Minor Source of HAPs? (Yes/No) (Y/N) : N
8. One or More Emissions Units Subject to NSPS? (Yes/No) (Y/N) : Y
9. One or More Emissions Units Subject to NESHAP? (Yes/No) (Y/N) : Y
10. Title V Source by EPA Designation? (Yes/No) (Y/N) : N
11. Facility Regulatory Classifications Comment (limit to 200 characters): The Heat Recovery Steam Generators (HRSG's) are new sources subject to NSPS. The CTs & other emission units at the facility are existing sources not subject to NSPS. NESHAP = 40 CFR 61, Subpart M.

B. FACILITY REGULATIONS

Rule Applicability Discussion (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.)

Information for Facility-Id : *1*

40 CFR 61.05 40 CFR 61.12(b) 40 CFR 61.145 40 CFR 61.148 40 CFR 61.150 40 CFR 61.19 F.A.C. 62-204.800(8)(b)8. (state only) F.A.C. 62-204.800(8)(d) (state only) F.A.C. 62-210.300(2) (except (b)) F.A.C. 62-210.300(3)(a)10. F.A.C. 62-210.300(3)(a)11. F.A.C. 62-210.300(3)(a)12. F.A.C. 62-210.300(3)(a)15. F.A.C. 62-210.300(3)(a)16. F.A.C. 62-210.300(3)(a)17. F.A.C. 62-210.300(3)(a)20. F.A.C. 62-210.300(3)(a)21.	F.A.C. 62-210.300(3)(a)22. F.A.C. 62-210.300(3)(a)23. F.A.C. 62-210.300(3)(a)24. F.A.C. 62-210.300(3)(a)4. F.A.C. 62-210.300(3)(a)5. F.A.C. 62-210.300(3)(a)7. F.A.C. 62-210.300(3)(a)8. F.A.C. 62-210.300(3)(a)9. F.A.C. 62-210.300(3)(b) F.A.C. 62-210.370(3) F.A.C. 62-210.900(5) F.A.C. 62-213.205(1)(a) F.A.C. 62-213.205(1)(b) F.A.C. 62-213.205(1)(c) F.A.C. 62-213.205(1)(e) F.A.C. 62-213.205(1)(f) F.A.C. 62-213.205(1)(g)	F.A.C. 62-213.205(1)(i) F.A.C. 62-213.205(1)(j) F.A.C. 62-213.205(4) F.A.C. 62-213.205(5) F.A.C. 62-213.400 F.A.C. 62-213.410 F.A.C. 62-213.420(1)(b)2. F.A.C. 62-213.420(1)(b)3. F.A.C. 62-213.430(3) F.A.C. 62-213.460 F.A.C. 62-256.300(1) F.A.C. 62-256.300(2) F.A.C. 62-256.300(3) F.A.C. 62-256.300(4) F.A.C. 62-256.300(7) F.A.C. 62-256.300(8) F.A.C. 62-256.300(9)	F.A.C. 62-256.500 F.A.C. 62-256.600 F.A.C. 62-256.700 F.A.C. 62-257.300 F.A.C. 62-257.301 F.A.C. 62-257.350 F.A.C. 62-257.400 F.A.C. 62-257.401 F.A.C. 62-257.900 F.A.C. 62-296.320(2) (state only) F.A.C. 62-296.320(3)(b) (state only) F.A.C. 62-296.320(4)(b) F.A.C. 62-296.320(4)(c) F.A.C. 62-297.310(7)(a)10. F.A.C. 62-4.030 F.A.C. 62-4.040(1)(a) F.A.C. 62-4.040(1)(b) F.A.C. 62-4.100 F.A.C. 62-4.130

C. FACILITY POLLUTANTS

Facility Pollutant Information :

1. Pollutant Emitted:	2. Pollutant Classification
SO2	A
NOX	A
CO	A
PM	A
PM10	A
VOC	A
PB	A
H148	A
H133	A
H095	A
SAM	A
HAP	A

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications For Facility :*1*

1. Area Map Showing Facility Location: PPNFS_1.BMP **(Enter the Attached Document ID, NA - Not Applicable or WaiverRequested)**
2. Facility Plot Plan: PPNFS_2.BMP **(Enter the Attached Document ID, NA - Not Applicable or WaiverRequested)**
3. Process Flow Diagram(s): PPNFS_3.BMP **(Enter the Attached Document ID, NA - Not Applicable or WaiverRequested)**
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: PPNFS_4.DOC **(Enter the Attached Document ID, NA - Not Applicable or WaiverRequested)**
5. Fugitive Emissions Identification : PPNFS_5.DOC **(Enter the Attached Document ID, NA - Not Applicable or WaiverRequested)**
6. Supplemental Information for Construction Permit Application: N **(Enter the Attached Document ID, NA - Not Applicable)**

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities: Not Applicable **(Enter the Attached Document ID, NA - Not Applicable)**
8. List of Equipment/Activities Regulated under Title VI: PPNFS_8.DOC **(Enter the Attached Document ID, Equipment/Activities Onsite but not Required to be Individually Listed, NA - Not Applicable)**
9. Alternative Methods of Operation: PPNFS_9.DOC **(Enter the Attached Document ID, NA - Not Applicable)**
10. Alternative Modes of Operation (Emissions Trading): NA **(Enter the Attached Document ID, NA - Not Applicable)**
11. Identification of Additional Applicable Requirements: PPNFS_11.DOC **(Enter the Attached Document ID, NA - Not Applicable)**
12. Compliance Assurance Monitoring Plan: NA **(Enter the Attached Document ID, NA - Not Applicable)**

13. Risk Management Plan Verification: PLANNED

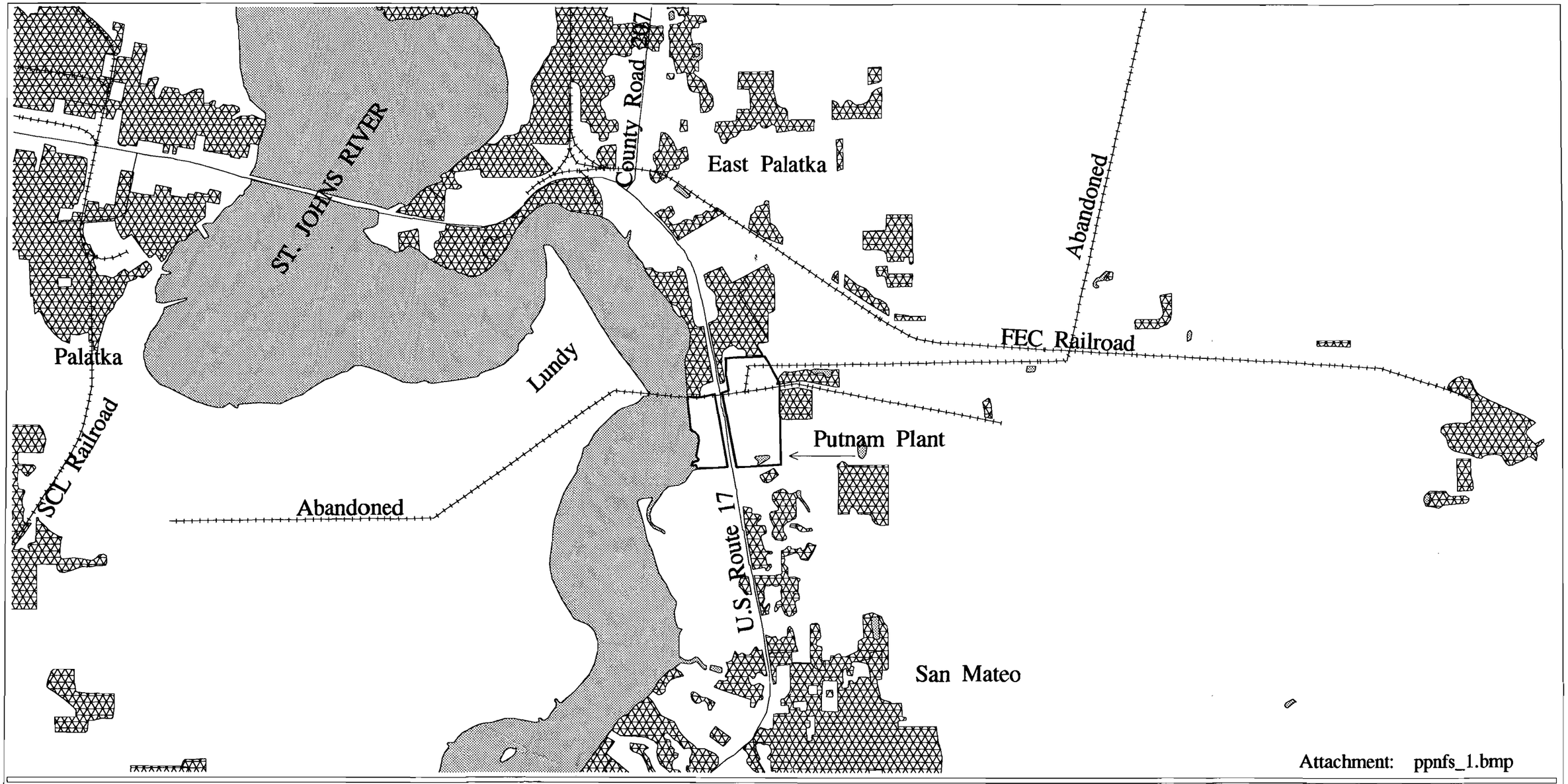
Plan Submitted to Implementing Agency - Verification Attached(Attached Document ID)

Plan to be Submitted to Implementing Agency by Required Date

Not Applicable (NA)

14. Compliance Report and Plan: PPN FS_13.txt
(Enter the Attached Document ID, NA - Not Applicable)

15. Compliance Statement (Hard-copy Required): PPNFS_14.DOC
(Enter the Attached Document ID, NA - Not Applicable)



Attachment: ppnfs_1.bmp

Putnam Plant Area Map
Putnam County

FPL Environmental Affairs

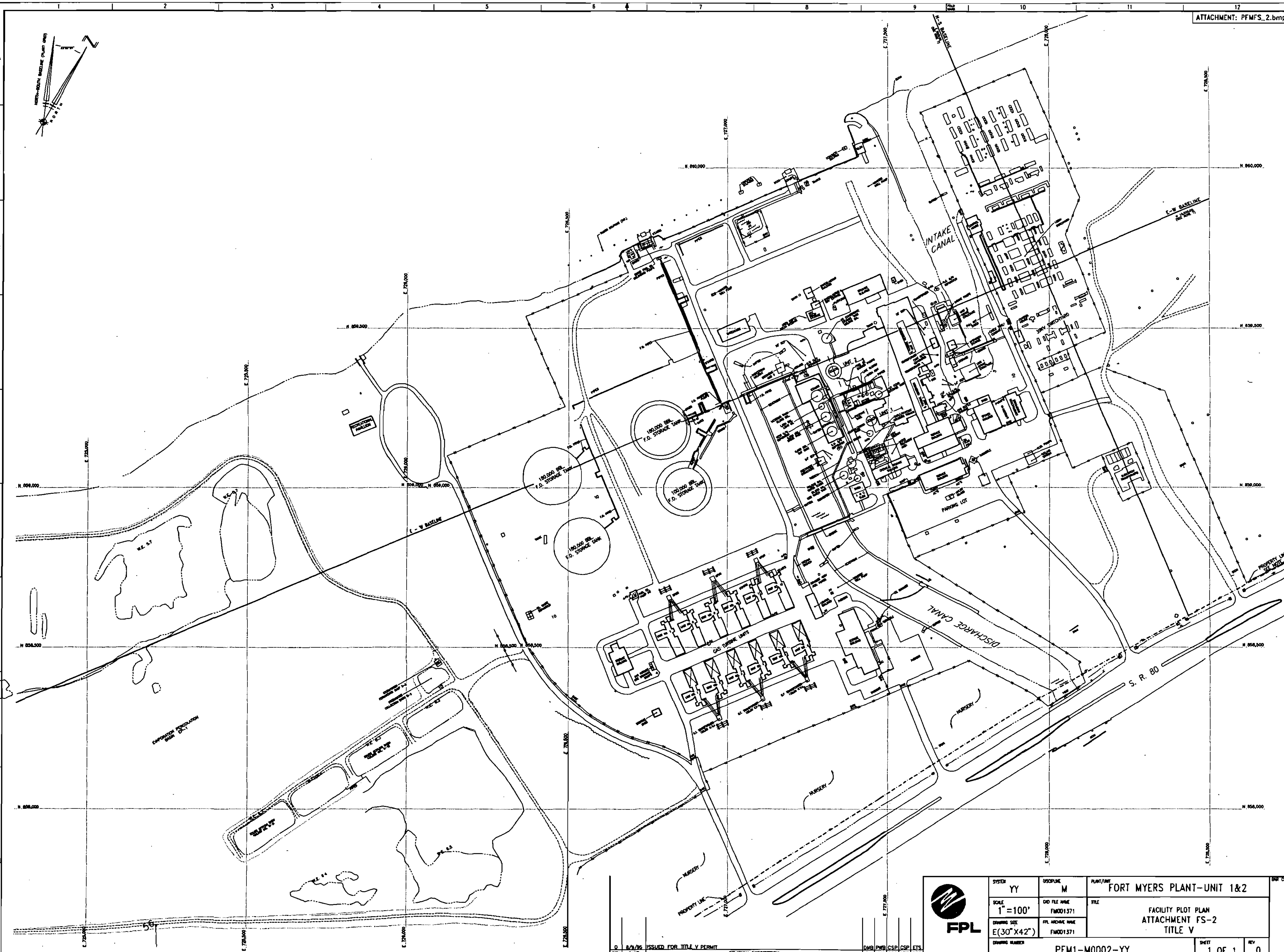
N W E S

- Water
- Residential
- Plant Site
- Major Roads
- Railroads

SOURCE: Landuse data provided by Saint Johns River Water Management District (1993)

/export/home/ron/ppn-site.map (3-95)

ATTACHMENT: PFMFS_2.bmp



REV	DATE	REVISION DESCRIPTION
0	8/9/96	ISSUED FOR TITLE V PERMIT

SYSTEM	YY
DISCIPLINE	M
PLANT/UNIT	FORT MYERS PLANT-UNIT 1&2
SCALE	1"=100'
CAD FILE NAME	FM001371
TITLE	FACILITY PLOT PLAN ATTACHMENT FS-2 TITLE V
DRAWING SIZE	E(30"X42")
FPL ARCHIVE NAME	FM001371
DRAWING NUMBER	PFM1-M0002-YY
SHEET	1 OF 1
REV	0

FPL

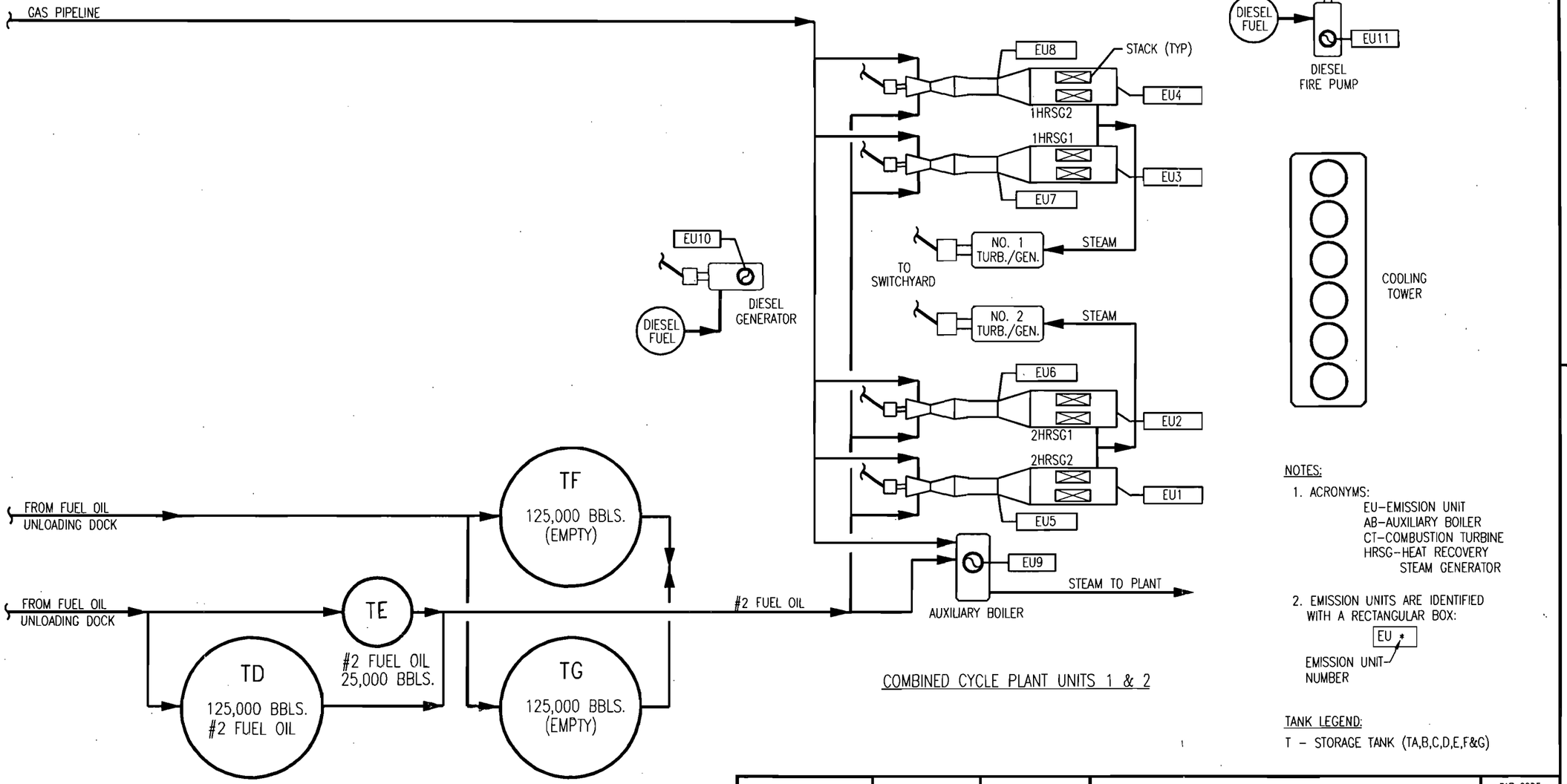
ATTACHMENT: PPNFS_3.bmp

TECHNICAL ACCEPTANCE	ORG	BY	DATE
ENGINEERING ORGANIZATION			

WALKDOWN INFORMATION	ORG	BY	DATE
AS-BUILT INFORMATION			

SCALE 3/8" = 1'-0"

SCALE 1/4" = 1'-0"



COMBINED CYCLE PLANT UNITS 1 & 2

NOTES:

1. ACRONYMS:
   EU-EMISSION UNIT
   AB-AUXILIARY BOILER
   CT-COMBUSTION TURBINE
   HRSG-HEAT RECOVERY STEAM GENERATOR
2. EMISSION UNITS ARE IDENTIFIED WITH A RECTANGULAR BOX:
   EU *
   EMISSION UNIT NUMBER

TANK LEGEND:

T - STORAGE TANK (TA,B,C,D,E,F&G)

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/27/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT	BAR CODE
YY	M	PUTNAM PLANT-UNITS 1 & 2	
SCALE: N/A	CAD FILE NAME: PN002143	TITLE: FACILITY SOURCE FLOW DIAGRAM ATTACHMENT NO. FS-3 TITLE V	
DRAWING SIZE: B(11"X17")	FPL ARCHIVE NAME: PN002143		
DRAWING NUMBER: PPN1-M0101-YY		SHEET: 1 OF 1	REV: 0

GSYM/FPGBDR-B 5/93

Attachment PPNFS_4.txt
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 unpaved roads
- sandblasting abrasive material from plant maintenance activities
- fugitive particulates from the use of bagged chemical products (soda ash, di-, tri- and monosodium phosphate, and other chemicals as needed)

Several precautions were taken to prevent emissions of particulate matter in the *original design* of the facility. These include:

- Paving of roads, parking areas and equipment yards

- Landscaping and planting of vegetation

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 17-296.310 F.A.C.:

- Use of hoods, fans and filters to contain and capture sand in sandblasting facility. The facility also constructs temporary sandblasting enclosures when necessary, in order to perform sandblasting on fixed plant equipment.

- Maintenance of paved areas as needed

- Regular mowing of grass and care of vegetation

- Limiting access to plant property by unnecessary vehicles.

- Bagged chemical products are stored in weather-tight buildings until they are used.Spills of powdered chemical products are cleaned up a soon as practicable.

<u>Estimates of fugitive particulate emissions</u>

Bagged chemical products - The facility utilizes several bagged chemical products for various purposes. Mono-, di-, and trisodium phosphate are used for the treatment of process water.I One 50-lb bag is currently used every 2-3 months. Soda ash and bagged citric acid are maintained on site as neutralizing agents in the event of particulate emissions associated with bagged chemical products are estimated to be significantly less than 1 ton per year.

Attachment PPNFS_5.txt
Fugitive Emission Identification

Criteria and Precursor Air Pollutants

Fugitive particulate emissions are addressed in Attachment PPNFS_4.DOC. FPL is not aware of fugitive emissions of sulfur dioxide, nitrogen oxides, carbon monoxide or lead compounds which would exceed the reporting thresholds defined in the permit application instructions.

Fugitive HAPs Emissions

FPL is not aware of fugitive emissions of HAP pollutants which would exceed the reporting thresholds defined in the permit application instrucitons.

Attachment PPNFS_8.txt
List of Equipment/Activities Regulated Under Title VI

The Putnam facility includes several enclosed air-conditioned office buildings, maintenance buildings, etc.. In addition, the facility maintains several refrigerators for the storage of foodstuffs and laboratory chemicals. The plant maintains a purchase order (P.O.) with a service company that uses certified repair technicians for the servicing of all CFC-containing equipment on the plant property.

There is no equipment on the Putnam facility property that contains in excess of 50 pounds of CFC's.

Attachment PPNFS_9.txt
Alternative Methods of Operation

There are no known methods of operation at the current time at Putnam which would simultaneously affect emissions at more than one emissions unit but would not constitute emissions trading.

Attachment PPNFS_13.txt
Putnam Plant
Compliance Report and Plan

The facility and emissions units identified in this application are in compliance with the Applicable Requirements identified in Sections II.B. and III.D. of the application form and attachments referenced in Section III.L. 12 (if included). Compliance is certified as of the date this application is submitted to the Florida Department of Environmental Regulation as required in Rule 62-213.420(1)(a) F.A.C.

Attachment PPNFS_14.txt
Putnam Plant
Compliance Statement

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

W.T. Bethea
Signature, Responsible Official

5/15/96
Date

Proposed Schedule for submittal of periodic compliance statements to the Department:

FPL will submit an annual compliance statement to the Department's Central District Office concurrently with the submittal of the Annual Operating Report for this facility.

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): EU 1GT-1 is a 70-MW combustion turbine
2. Emissions Unit Identification Number: 001 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This emissions unit is one of 4 combustion turbines (CTs) at this facility. The electrical output of the CT is affected extensively by ambient temperature fluctuations. The 70 MW value above is reflective of approximately 85 F ambient condition.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 04/24/78

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Westinghouse Model Number: W501B-5A

4. Generator Nameplate Rating: 70 MW

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

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: 968.3 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   Heat input rate in #1 is for natural gas fuel @ 85F. The heat input rate for #2 diesel fuel is 910.6 mmBtu/hr @ 85F. The method of compliance for heat input rate is fuel sampling and analysis.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 1

40 C.F.R. 72.20(a) 40 C.F.R. 72.20(b) 40 C.F.R. 72.20(c) 40 C.F.R. 72.21(a) 40 C.F.R. 72.21(b) 40 C.F.R. 72.21(d) 40 C.F.R. 72.22(a) 40 C.F.R. 72.22(c) 40 C.F.R. 72.23 40 C.F.R. 72.24(a) 40 C.F.R. 72.30(a) 40 C.F.R. 72.30(b)(2) 40 C.F.R. 72.30(c) 40 C.F.R. 72.30(d) 40 C.F.R. 72.32 40 C.F.R. 72.33(b) 40 C.F.R. 72.33(c) 40 C.F.R. 72.33(d) 40 C.F.R. 72.40(a) 40 C.F.R. 72.40(b) 40 C.F.R. 72.40(c) 40 C.F.R. 72.40(d) 40 C.F.R. 72.51 40 C.F.R. 72.90 40 C.F.R. 72.9(a)(1)(iii) 40 C.F.R. 72.9(a)(1)(i) 40 C.F.R. 72.9(a)(2) 40 C.F.R. 72.9(b) 40 C.F.R. 72.9(c)(1)(iii) 40 C.F.R. 72.9(c)(2) 40 C.F.R. 72.9(c)(4) 40 C.F.R. 72.9(c)(5) 40 C.F.R. 72.9(d) 40 C.F.R. 72.9(e) 40 C.F.R. 72.9(f) 40 C.F.R. 72.9(g)(4) 40 C.F.R. 73.33 40 C.F.R. 73.35	40 C.F.R. 75 Appendix A-1 40 C.F.R. 75 Appendix A-2 40 C.F.R. 75 Appendix A-3 40 C.F.R. 75 Appendix A-4 40 C.F.R. 75 Appendix A-5 40 C.F.R. 75 Appendix A-6 40 C.F.R. 75 Appendix B 40 C.F.R. 75 Appendix C-1 40 C.F.R. 75 Appendix C-2 40 C.F.R. 75 Appendix D 40 C.F.R. 75 Appendix F 40 C.F.R. 75 Appendix G-2 40 C.F.R. 75 Appendix H 40 C.F.R. 75.10(a)(2) 40 C.F.R. 75.10(a)(3)(ii) 40 C.F.R. 75.10(b) 40 C.F.R. 75.10(c) 40 C.F.R. 75.10(f) 40 C.F.R. 75.10(g) 40 C.F.R. 75.11(d) 40 C.F.R. 75.12(a) 40 C.F.R. 75.12(b) 40 C.F.R. 75.13(b) 40 C.F.R. 75.14(c) 40 C.F.R. 75.20(a)(5) 40 C.F.R. 75.20(b) 40 C.F.R. 75.20(c) 40 C.F.R. 75.20(g) 40 C.F.R. 75.21(a) 40 C.F.R. 75.21(b) 40 C.F.R. 75.21(c) 40 C.F.R. 75.21(d) 40 C.F.R. 75.21(e) 40 C.F.R. 75.21(f) 40 C.F.R. 75.22 40 C.F.R. 75.24 40 C.F.R. 75.30(a)(3) 40 C.F.R. 75.31	40 C.F.R. 75.32 40 C.F.R. 75.33 40 C.F.R. 75.36 40 C.F.R. 75.4 40 C.F.R. 75.5 40 C.F.R. 75.51(c) 40 C.F.R. 75.53(a) 40 C.F.R. 75.53(b) 40 C.F.R. 75.53(c) 40 C.F.R. 75.53(d)(1) 40 C.F.R. 75.54(a) 40 C.F.R. 75.54(b) 40 C.F.R. 75.54(d) 40 C.F.R. 75.55(c) 40 C.F.R. 75.55(e) 40 C.F.R. 75.56 40 C.F.R. 75.60(a) 40 C.F.R. 75.60(b) 40 C.F.R. 75.60(c)(3) 40 C.F.R. 75.61(a)(1) 40 C.F.R. 75.61(a)(5) 40 C.F.R. 75.61(b) 40 C.F.R. 75.62 40 C.F.R. 75.63 40 C.F.R. 75.64(a) 40 C.F.R. 75.64(b) 40 C.F.R. 75.64(c) 40 C.F.R. 75.64(d) 40 C.F.R. 75.65 40 C.F.R. 75.66(a) 40 C.F.R. 75.66(b) 40 C.F.R. 75.66(c) 40 C.F.R. 75.66(d) 40 C.F.R. 75.66(g) 40 C.F.R. 75.66(h) 40 C.F.R. 77.3 40 C.F.R. 77.5(b) 40 C.F.R. 77.6	F.A.C. 62-204.800(12) (state only) F.A.C. 62-204.800(13) (state only) F.A.C. 62-204.800(14) (state only) F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-214.300 F.A.C. 62-214.320 F.A.C. 62-214.330 F.A.C. 62-214.350 (2) F.A.C. 62-214.350 (3) F.A.C. 62-214.350 (5) F.A.C. 62-214.350 (6) F.A.C. 62-214.370 (1) F.A.C. 62-214.370 (3) F.A.C. 62-214.370 (4) F.A.C. 62-214.370 (7) F.A.C. 62-214.430 F.A.C. 62-297.310(1) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8) Table 62-297.310-1

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***1*

1. Identification of Point on Plot Plan or Flow Diagram: EU 1, stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 1GT-1 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-1 2. Duct burners in 1GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.2 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.732
14. Emission Point Comment (limit to 200 characters): CT 1GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU1 and EU5 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

E. EMISSION POINT (STACK/V
(Regulated Emissions

Duplicate

Emission Point Description and Type
Information for Facility-ID *1* **Emission Unit # :***1*

1. Identification of Point on Plot Plan or Flow Diagram: EU 1, stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 1GT-1 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-1 2. Duct burners in 1GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.2 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.732
14. Emission Point Comment (limit to 200 characters): CT 1GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU1 and EU5 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *1* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Light distillate oil burned in combustion turbine 1GT-1
2. Source Classification Code (SCC): 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 6.7
5. Maximum Annual Rate: 58692
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.05
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing distillate oil fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *1* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural gas burned in combustion turbine 1GT-1
2. Source Classification Code **(SCC):** 2-01-001-02
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.922
5. Maximum Annual Rate: 8077
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.031
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): Data only applicable for the CT operating without the afterburners while firing natural gas fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *1* Segment #: *3*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): No. 6 Residual oil burned in combustion turbine 1GT-1
2. Source Classification Code **(SCC):** 2-02-005-01
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 5.99
5. Maximum Annual Rate: 52479.3
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.1
9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing No. 6 residual oil..

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *1*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	NS
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
PB	NA	NA	NS
H133	NA	NA	NS
H095	NA	NA	NS
SAM	NA	NA	NS
H148	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: 1 Emission Unit #: 1 Pollutant #: 1

Pollutant Detail Information

1. Pollutant Emitted: Sulfur Dioxide
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 647.8 lbs/hr 2837.4 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to *tons/yr*
6. Emission Factor: 0.7 **Units** percent sulfur oil Reference: Site Certification # 74-01
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 46,270 lb/hr oil x 0.7% S oil x 2 lb SO2/lb S = 647.8 lb/hour 647.8 lb/hr x 8760 hr / yr / 2,000 lb/ton = 2837.4 tons per year
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emissions based on distillate oil firing.

Information for Facility_ID: *1* **Emission Unit #:** *1* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Required or assumed by permittee for other reasons.
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 647.8 Units : lb / hr
4. Equivalent Allowable Emissions: 647.8 lbs/hr 2837.4 tons/yr
5. Method of Compliance: Fuel sampling and analysis
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **0**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *1*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): OTHER [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.B.(ii).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *1*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *1*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0319T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *1*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49802-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

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

Information for Facility-ID : *1* Emission Unit # : *1*
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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):
Unit commenced construction prior to the PSD baseline date of July 1, 1975.

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

Information for Facility-ID : *1* Emission Unit # : *1*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU1_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU1_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU1_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU1_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU1_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU1_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : NA
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU1_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

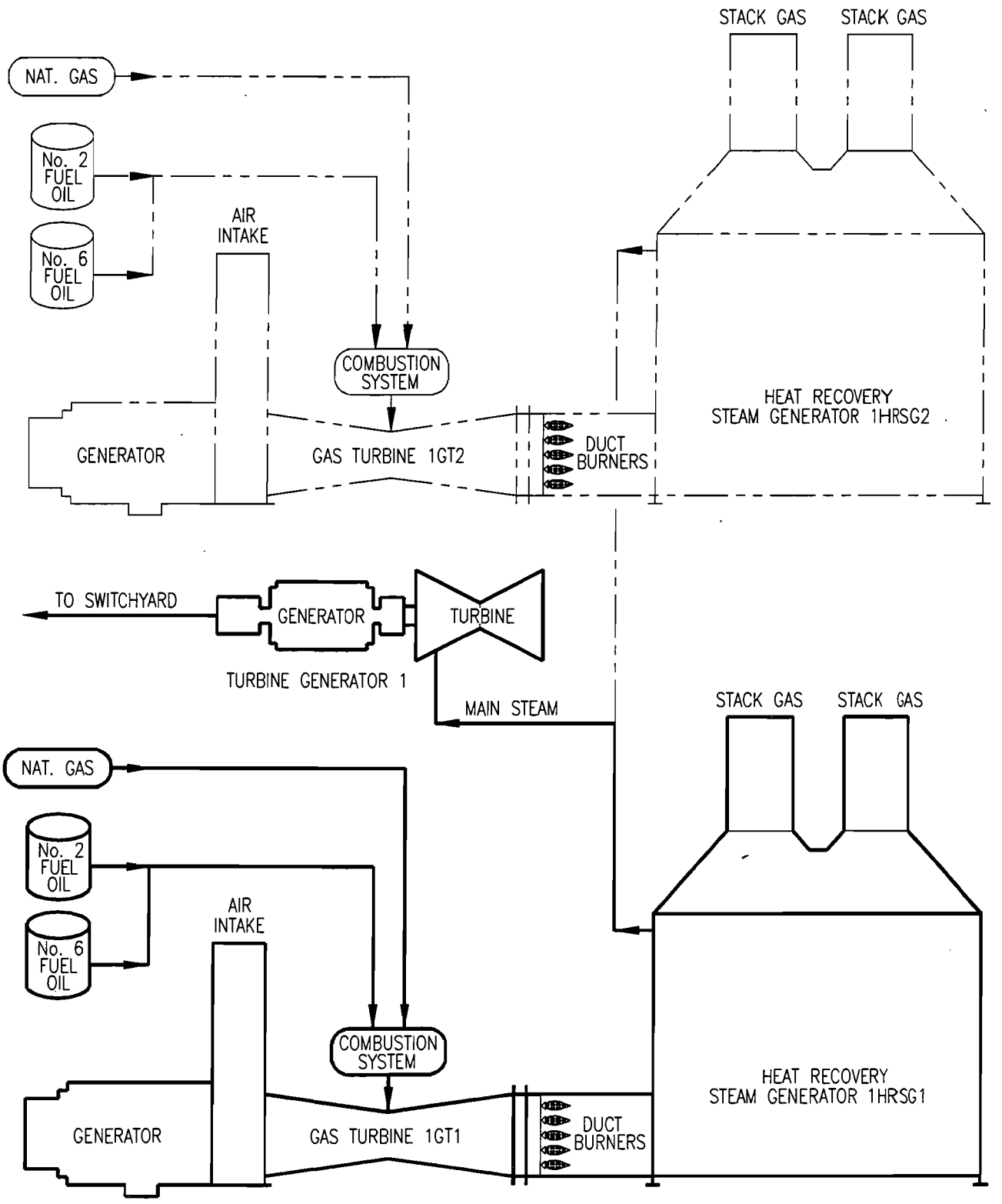
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU1_1.bmp



TECHNICAL ACCEPTANCE | ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION | AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	BY	CH	COR	APR	ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT	PWB	PWB	CSP	CSP	ETS

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT-UNIT 1
SCALE: N/A	CAD FILE NAME: PN002144	TITLE: EMISSION UNIT FLOW DIAGRAM COMBUSTION TURBINES ATTACHMENT NO. EU1
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002144	
DRAWING NUMBER: PPN1-M0102-YY	SHEET: 1 OF 1	REV: 0

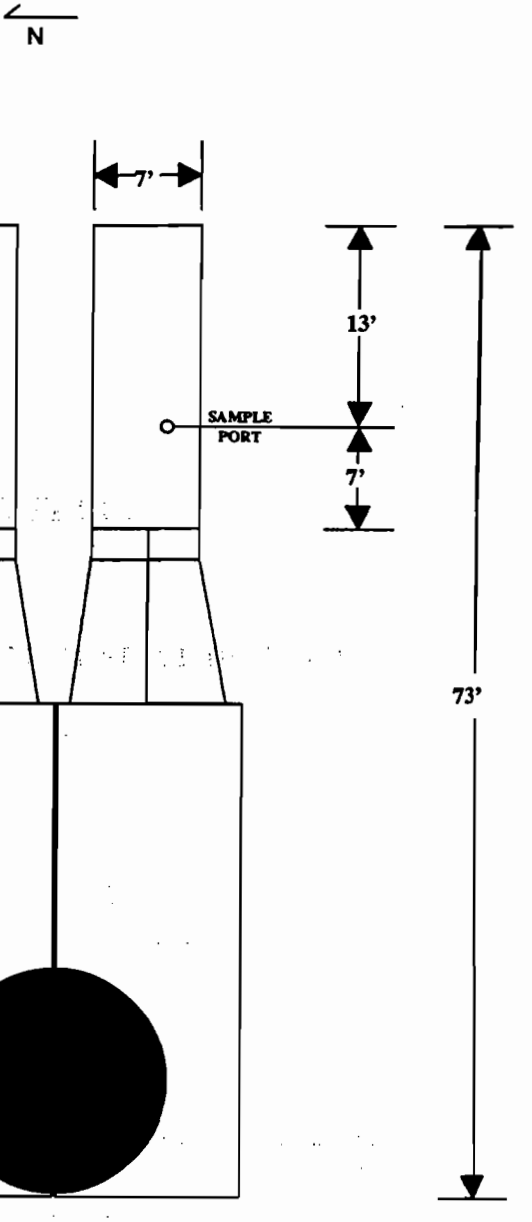
FPGSYM/FPGBDR-A 9/90

FLORIDA POWER & LIGHT CO.
PUTNAM PLANT

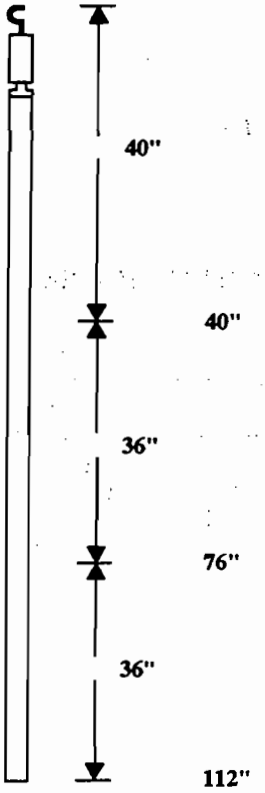
STACK SPECIFICATIONS

STACK DEPTH: 12 ft.
SAMPLING PORT DEPTH: 4 in.
No. OF PORTS: 1
No. OF POINTS PER TRAVERSE: 3
TOTAL No. OF POINTS : 3
SAMPLING TIME PER POINT: 20 min.
TOTAL SAMPLING TIME: 60.0 min.
NOTE: DRAWING IS NOT TO SCALE

TYPICAL STACK DIAGRAM



PROBE DIAGRAM



FILE: STACKPPN

Fuel Analysis
Natural Gas Analysis (typical)[2]

Parameter	Typical value	Max value
Specific gravity(@ 60° F)	0.887	none
Heat content (Btu/cu ft)	950 - 1124	none
% sulfur (grains/CCF)	0.43[1]	1.00
% nitrogen (by volume)	0.8	none
% ash	negligible	none

*Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

(1) Data from laboratory analysis

(2) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU1_2.txt

Fuel Analysis
No.6 Oil Analysis (typical)[4]

Parameter	Typical value	Specifications
API gravity (@ 60° F)	8 - 12	10.1 min[1]
Heat content (MBtu/bbl)	6,310 - 6420	6,340[1]
% Sulfur	0.7	0.7 max[3]
% Nitrogen	0.2 - 0.5[2]	none
% Ash	0.06 - 0.09[2]	0.10 max[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) Maximum permitted from current air operation permit.

(4) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU1_2.txt

Fuel Analysis
No. 2 Distillate oil (typical)[3]

Parameter	Typical value	Specifications
API gravity (@ 60 F)	35.0[2]	30 - 40[1]
Heat content (MBtu/bbl)	5,700 - 5,800[2]	none
% sulfur	0.3 - 0.5[1]	0.7 maximum[1]
% nitrogen	no specification	none
% ash	<0.01[2]	0.01[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU1_2.txt

Fuel Analysis
On Specification Used Oil

The boiler may occasionally burn used oil during normal operation. All used oil fired in the unit meets the specifications mandated by 40 CFR 279.11. Used oil fired by this boiler is typically derived from plant maintenance activities, and may include used lube oils, transformer oils, etc. that meet the analytical specifications. Criteria used oil values follow:

Parameter	Typical value	Specifications
API gravity (@ 60 F)	30.0[1]	none
Heat content (MBtu/bbl)	6,000[1]	none
% sulfur	0.3[1]	none
% nitrogen	negligible	none
% ash	0.01[1]	0.01

Footnotes:
(1) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU1_6.txt
Procedures for Startup/Shutdown

Startup for the combustion turbines begins with "lighting off" ofthe machines on either natural gas or light distillate oil. A period of from two to several hours is required to allow metal temperatures in the heat recovery steam generator (HRSG) and in the steam turbine to equilibrate without undue metal stress, before putting the unit "on the line" and sending electrical power to the grid.

Emissions are continuously monitored by Continuous Emission Monitors (CEM's) for O2 and NOx. If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective actions taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control, or changing fuel combination(s). Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop. The CT is then put "on turning gear" to prevent possible disfiguration of the turbine components.

Attachment PPNU1_10.txt

Alternative Methods of Operation - Combustion turbines

This combustion turbine (CT) emission unit will operate primarily on natural gas fuel, with light distillate oil as a backup fuel. Each CT will be operated independently of each other, and can operate from 0 to 968.3 MMBtu/hour (@ 85 F) on gas fuel and from 0 to 910.6 MMBtu/hour (@ 85 F) on distillate oil.

Emissions from the combustion turbines are affected by ambient temperature, type of fuel, and megawatt load on the unit. Ambient temperature is a factor because at cooler ambient temperatures the air is more dense; therefore more air can be forced through the unit, with a correspondingly higher fuel useage (and therefore increased emissions) than at higher ambient temperatures. Increased megawatt production is also possible at lower ambient temperatures.

The type of fuel combusted affects emissions due to the variability of contarninants contained in the fuel and differences in the combustion process for different fuels. Please refer to Source Supplemental Information Question #3 for fuel analytical information.

Water injection is performed periodically to clean turbine blades and other components. Various cleaning compounds are used periodically in this process. Ground pecan shells may also be used to clean turbine components.

Attachment PPNU1_12.txt

Identification of Additional Applicable Requirements

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

The Putnam Plant has a federally-enforceable Site Certification (PPSA 74-01). This document was modified in 1980, 1984, 1991 and 1992. Following are air-related excerpted specific conditions from the Site Certification, a description as to how FPL is currently complying with each specific condition, and in some cases, a request that the specific condition be deleted.

Combustion Turbine Specific Conditions

1. The combustion turbines shall fire fuel oil not exceeding 0.7 percent sulfur and natural gas.

FPL maintains records regarding the sulfur percentage of the fuel fired in the combustion turbines.

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent.

FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document compliance with the opacity limit.

3. If sustained winds exceed 20 miles per hour for any continuous period of 3 hours or longer, the sulfur content of the fuel may be no greater than 0.5%. If oil with a sulfur content of > 0.5% is burned, the wind velocity and wind direction must be measured at hourly intervals.

FPL normally fires the combustion turbines with only natural gas fuel. The fuel oil that is available to be fired contains less than 0.5% sulfur at present. If fuel oil is purchased containing greater than 0.5% sulfur, then FPL will undertake the wind velocity and direction monitoring as specified by the permit condition.

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *2*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): **1**

[1] 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).

[2] 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.

[3] 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.

Should be 1GT1

B. GENERAL EMISSIONS UNIT INFORM
(Regulated and Unregulated Emissions U

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): EU 1GT-2 is a 70-MW combustion turbine.
2. Emissions Unit Identification Number: 01A (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This emissions unit is one of 4 combustion turbines (CTs) at this facility. The electrical output of the CT is affected extensively by ambient temperature fluctuations. The 70 MW value above is reflective of approximately 85 F ambient condition.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 04/24/78

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Westinghouse Model Number: W501B-5A

4. Generator Nameplate Rating: 70 MW

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

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: 968.3 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   Heat input rate in #1 is for natural gas fuel @ 85F. The heat input rate for #2 diesel fuel is 910.6 mmBtu/hr @ 85F. The method of compliance for heat input rate is fuel sampling and analysis.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 2

40 C.F.R. 72.20(a) 40 C.F.R. 72.20(b) 40 C.F.R. 72.20(c) 40 C.F.R. 72.21(a) 40 C.F.R. 72.21(b) 40 C.F.R. 72.21(d) 40 C.F.R. 72.22(a) 40 C.F.R. 72.22(c) 40 C.F.R. 72.23 40 C.F.R. 72.24(a) 40 C.F.R. 72.30(a) 40 C.F.R. 72.30(b)(2) 40 C.F.R. 72.30(c) 40 C.F.R. 72.30(d) 40 C.F.R. 72.32 40 C.F.R. 72.33(b) 40 C.F.R. 72.33(c) 40 C.F.R. 72.33(d) 40 C.F.R. 72.40(a) 40 C.F.R. 72.40(b) 40 C.F.R. 72.40(c) 40 C.F.R. 72.40(d) 40 C.F.R. 72.51 40 C.F.R. 72.90 40 C.F.R. 72.9(a)(1)(iii) 40 C.F.R. 72.9(a)(1)(i) 40 C.F.R. 72.9(a)(2) 40 C.F.R. 72.9(b) 40 C.F.R. 72.9(c)(1)(iii) 40 C.F.R. 72.9(c)(2) 40 C.F.R. 72.9(c)(4) 40 C.F.R. 72.9(c)(5) 40 C.F.R. 72.9(d) 40 C.F.R. 72.9(e) 40 C.F.R. 72.9(f) 40 C.F.R. 72.9(g)(4) 40 C.F.R. 73.33 40 C.F.R. 73.35	40 C.F.R. 75 Appendix A-1 40 C.F.R. 75 Appendix A-2 40 C.F.R. 75 Appendix A-3 40 C.F.R. 75 Appendix A-4 40 C.F.R. 75 Appendix A-5 40 C.F.R. 75 Appendix A-6 40 C.F.R. 75 Appendix B 40 C.F.R. 75 Appendix C-1 40 C.F.R. 75 Appendix C-2 40 C.F.R. 75 Appendix D 40 C.F.R. 75 Appendix F 40 C.F.R. 75 Appendix G-2 40 C.F.R. 75 Appendix H 40 C.F.R. 75.10(a)(2) 40 C.F.R. 75.10(a)(3)(ii) 40 C.F.R. 75.10(b) 40 C.F.R. 75.10(c) 40 C.F.R. 75.10(f) 40 C.F.R. 75.10(g) 40 C.F.R. 75.11(d) 40 C.F.R. 75.12(a) 40 C.F.R. 75.12(b) 40 C.F.R. 75.13(b) 40 C.F.R. 75.14(c) 40 C.F.R. 75.20(a)(5) 40 C.F.R. 75.20(b) 40 C.F.R. 75.20(c) 40 C.F.R. 75.20(g) 40 C.F.R. 75.21(a) 40 C.F.R. 75.21(b) 40 C.F.R. 75.21(c) 40 C.F.R. 75.21(d) 40 C.F.R. 75.21(e) 40 C.F.R. 75.21(f) 40 C.F.R. 75.22 40 C.F.R. 75.24 40 C.F.R. 75.30(a)(3) 40 C.F.R. 75.31	40 C.F.R. 75.32 40 C.F.R. 75.33 40 C.F.R. 75.36 40 C.F.R. 75.4 40 C.F.R. 75.5 40 C.F.R. 75.51(c) 40 C.F.R. 75.53(a) 40 C.F.R. 75.53(b) 40 C.F.R. 75.53(c) 40 C.F.R. 75.53(d)(1) 40 C.F.R. 75.54(a) 40 C.F.R. 75.54(b) 40 C.F.R. 75.54(d) 40 C.F.R. 75.55(c) 40 C.F.R. 75.55(e) 40 C.F.R. 75.56 40 C.F.R. 75.60(a) 40 C.F.R. 75.60(b) 40 C.F.R. 75.60(c)(3) 40 C.F.R. 75.61(a)(1) 40 C.F.R. 75.61(a)(5) 40 C.F.R. 75.61(b) 40 C.F.R. 75.62 40 C.F.R. 75.63 40 C.F.R. 75.64(a) 40 C.F.R. 75.64(b) 40 C.F.R. 75.64(c) 40 C.F.R. 75.64(d) 40 C.F.R. 75.65 40 C.F.R. 75.66(a) 40 C.F.R. 75.66(b) 40 C.F.R. 75.66(c) 40 C.F.R. 75.66(d) 40 C.F.R. 75.66(g) 40 C.F.R. 75.66(h) 40 C.F.R. 77.3 40 C.F.R. 77.5(b) 40 C.F.R. 77.6	F.A.C. 62-204.800(12) (state only) F.A.C. 62-204.800(13) (state only) F.A.C. 62-204.800(14) (state only) F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-214.300 F.A.C. 62-214.320 F.A.C. 62-214.330 F.A.C. 62-214.350 (2) F.A.C. 62-214.350 (3) F.A.C. 62-214.350 (5) F.A.C. 62-214.350 (6) F.A.C. 62-214.370 (1) F.A.C. 62-214.370 (3) F.A.C. 62-214.370 (4) F.A.C. 62-214.370 (7) F.A.C. 62-214.430 F.A.C. 62-297.310(1) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8) Table 62-297.310-1

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***2*

1. Identification of Point on Plot Plan or Flow Diagram: EU 2, stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 1GT-2 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-2 2. Duct burners in 1GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.754
14. Emission Point Comment (limit to 200 characters): CT 1GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU2 and EU6 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type
Information for Facility-ID *1* **Emission Unit # :***2*

1. Identification of Point on Plot Plan or Flow Diagram: EU 2, stack2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 1GT-2 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-2 2. Duct burners in 1GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.759
14. Emission Point Comment (limit to 200 characters): CT 1GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU2 and EU6 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *2* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural gas burned in combustion turbine 1GT-2
2. Source Classification Code **(SCC):** 2-01-001-02
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.922
5. Maximum Annual Rate: 8077
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.031
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without the afterburners while firing natural gas fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *2* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Light distillate oil burned in combustion turbine 1GT-2
2. Source Classification Code **(SCC):** 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 6.7
5. Maximum Annual Rate: 58692
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.05
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing distillate oil fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *2* Segment #: *3*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): No. 6 Residual oil burned in combustion turbine 1GT-2
2. Source Classification Code **(SCC):** 2-02-005-01
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 5.99
5. Maximum Annual Rate: 52479.3
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.1
9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing No. 6 residual oil..

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *2*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	NS
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
PB	NA	NA	NS
H133	NA	NA	NS
H095	NA	NA	NS
SAM	NA	NA	NS
H148	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *2* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Sulfur Dioxide
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 647.8 lbs/hr 2837.4 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.7 **Units** percent sulfur oil Reference: Site Certification # 74-01
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 46,270 lb/hr oil x 0.7% S oil x 2 lb SO2/lb S = 647.8 lb/hour 647.8 lb/hr x 8760 hr / yr / 2,000 lb/ton = 2837.4 tons per year
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emissions based on distillate oil firing.

Information for Facility_ID: *1* **Emission Unit #:** *2* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Required or assumed by permittee for other reasons.
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 647.8 Units : lb / hr
4. Equivalent Allowable Emissions: 647.8 lbs/hr 2837.4 tons/yr
5. Method of Compliance: Fuel sampling and analysis
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **0**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *2*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): OTHER [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.B.(ii).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *2*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *2*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0310T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *2*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49812-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

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

Information for Facility-ID : *1* Emission Unit # : *2*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):
Unit commenced construction prior to the PSD baseline date of July 1, 1975.

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

Information for Facility-ID : *1* Emission Unit # : *2*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU2_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU1_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU1_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU1_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU1_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU1_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU1_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

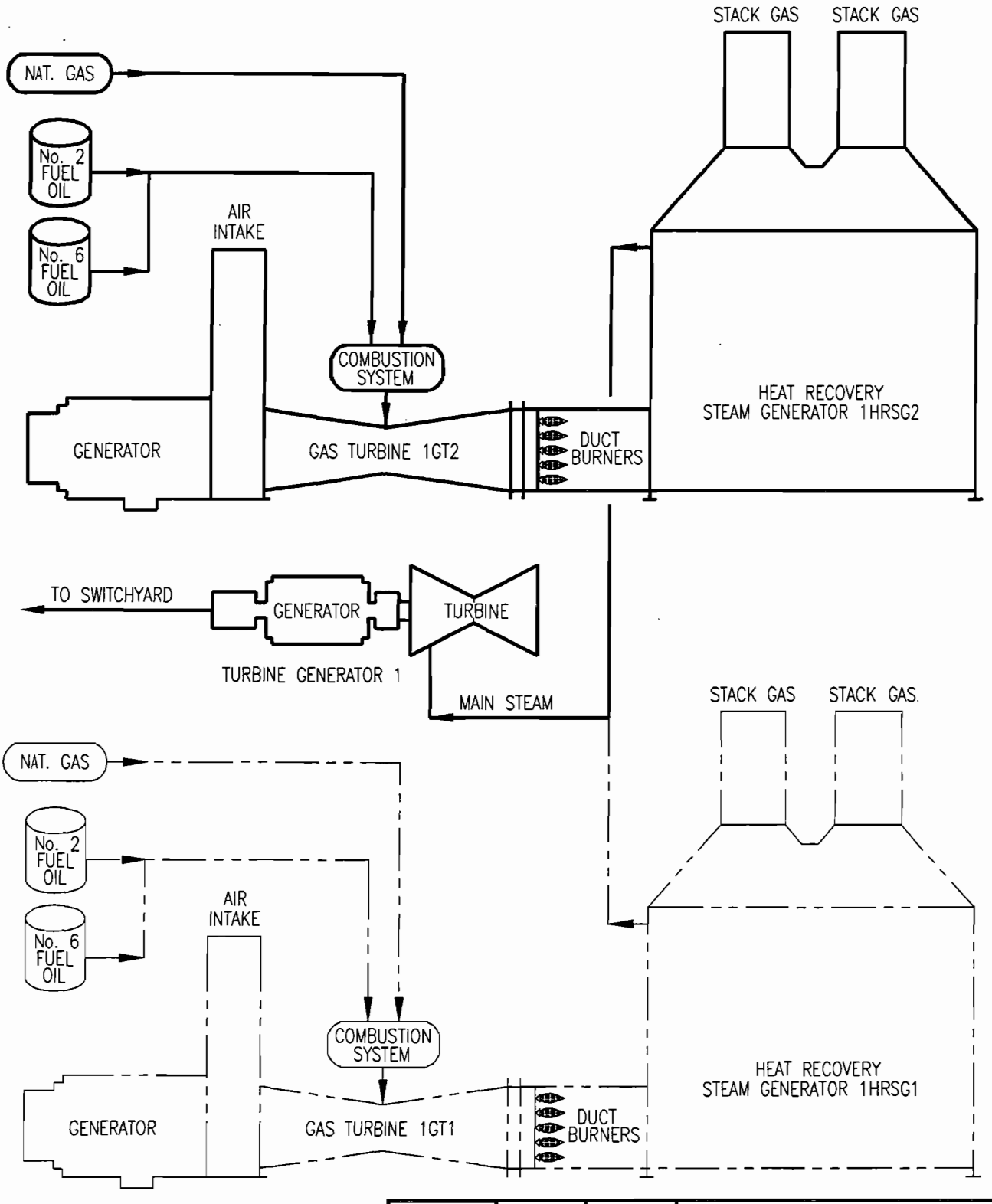
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU2_1.bmp



TECHNICAL ACCEPTANCE | ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION | AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT–UNIT 1
SCALE: N/A	CAD FILE NAME: PN002145	TITLE: EMISSION UNIT FLOW DIAGRAM COMBUSTION TURBINES ATTACHMENT NO. EU2
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002145	

DRAWING NUMBER: PPN1–M0103–YY

SHEET: 1 OF 1 | REV: 0

FPGSYM/FPGBDR–A 9/90

Attachment PPNU2_12.txt

Identification of Additional Applicable Requirements

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

The Putnam Plant has a federally-enforceable Site Certification (PPSA 74-01). This document was modified in 1980, 1984, 1991 and 1992. Following are air-related excerpted specific conditions from the Site Certification, a description as to how FPL is currently complying with each specific condition, and in some cases, a request that the specific condition be deleted.

Combustion Turbine Specific Conditions

1. The combustion turbines shall fire fuel oil not exceeding 0.7 percent sulfur and natural gas.

FPL maintains records regarding the sulfur percentage of the fuel fired in the combustion turbines.

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent.

FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document compliance with the opacity limit.

3. If sustained winds exceed 20 miles per hour for any continuous period of 3 hours or longer, the sulfur content of the fuel may be no greater than 0.5%. If oil with a sulfur content of > 0.5% is burned, the wind velocity and wind direction must be measured at hourly intervals.

FPL normally fires the combustion turbines with only natural gas fuel. The distillate oil fuel that is available to be fired contains less than 0.5% sulfur at present. If distillate oil fuel is purchased containing greater than 0.5% sulfur, then FPL will undertake the wind velocity and direction monitoring as specified by the permit condition.

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *3*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): 1

[1] 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).

[2] 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.

[3] 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): EU 2GT-1 is a 70-MW combustion turbine.
2. Emissions Unit Identification Number: 002 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This emissions unit is one of 4 combustion turbines (CTs) at this facility. The electrical output of the CT is affected extensively by ambient temperature fluctuations. The 70 MW value above is reflective of approximately 85 F ambient condition.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 08/06/77

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Westinghouse Model Number: W501B-5A

4. Generator Nameplate Rating: 70 MW

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

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: 968.3 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   Heat input rate in #1 is for natural gas fuel @ 85F. The heat input rate for #2 diesel fuel is 910.6 mmBtu/hr @ 85F. The method of compliance for heat input rate is fuel sampling and analysis.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 3

40 C.F.R. 72.20(a) 40 C.F.R. 72.20(b) 40 C.F.R. 72.20(c) 40 C.F.R. 72.21(a) 40 C.F.R. 72.21(b) 40 C.F.R. 72.21(d) 40 C.F.R. 72.22(a) 40 C.F.R. 72.22(c) 40 C.F.R. 72.23 40 C.F.R. 72.24(a) 40 C.F.R. 72.30(a) 40 C.F.R. 72.30(b)(2) 40 C.F.R. 72.30(c) 40 C.F.R. 72.30(d) 40 C.F.R. 72.32 40 C.F.R. 72.33(b) 40 C.F.R. 72.33(c) 40 C.F.R. 72.33(d) 40 C.F.R. 72.40(a) 40 C.F.R. 72.40(b) 40 C.F.R. 72.40(c) 40 C.F.R. 72.40(d) 40 C.F.R. 72.51 40 C.F.R. 72.90 40 C.F.R. 72.9(a)(1)(iii) 40 C.F.R. 72.9(a)(1)(i) 40 C.F.R. 72.9(a)(2) 40 C.F.R. 72.9(b) 40 C.F.R. 72.9(c)(1)(iii) 40 C.F.R. 72.9(c)(2) 40 C.F.R. 72.9(c)(4) 40 C.F.R. 72.9(c)(5) 40 C.F.R. 72.9(d) 40 C.F.R. 72.9(e) 40 C.F.R. 72.9(f) 40 C.F.R. 72.9(g)(4) 40 C.F.R. 73.33 40 C.F.R. 73.35	40 C.F.R. 75 Appendix A-1 40 C.F.R. 75 Appendix A-2 40 C.F.R. 75 Appendix A-3 40 C.F.R. 75 Appendix A-4 40 C.F.R. 75 Appendix A-5 40 C.F.R. 75 Appendix A-6 40 C.F.R. 75 Appendix B 40 C.F.R. 75 Appendix C-1 40 C.F.R. 75 Appendix C-2 40 C.F.R. 75 Appendix D 40 C.F.R. 75 Appendix F 40 C.F.R. 75 Appendix G-2 40 C.F.R. 75 Appendix H 40 C.F.R. 75.10(a)(2) 40 C.F.R. 75.10(a)(3)(ii) 40 C.F.R. 75.10(b) 40 C.F.R. 75.10(c) 40 C.F.R. 75.10(f) 40 C.F.R. 75.10(g) 40 C.F.R. 75.11(d) 40 C.F.R. 75.12(a) 40 C.F.R. 75.12(b) 40 C.F.R. 75.13(b) 40 C.F.R. 75.14(c) 40 C.F.R. 75.20(a)(5) 40 C.F.R. 75.20(b) 40 C.F.R. 75.20(c) 40 C.F.R. 75.20(g) 40 C.F.R. 75.21(a) 40 C.F.R. 75.21(b) 40 C.F.R. 75.21(c) 40 C.F.R. 75.21(d) 40 C.F.R. 75.21(e) 40 C.F.R. 75.21(f) 40 C.F.R. 75.22 40 C.F.R. 75.24 40 C.F.R. 75.30(a)(3) 40 C.F.R. 75.31	40 C.F.R. 75.32 40 C.F.R. 75.33 40 C.F.R. 75.36 40 C.F.R. 75.4 40 C.F.R. 75.5 40 C.F.R. 75.51(c) 40 C.F.R. 75.53(a) 40 C.F.R. 75.53(b) 40 C.F.R. 75.53(c) 40 C.F.R. 75.53(d)(1) 40 C.F.R. 75.54(a) 40 C.F.R. 75.54(b) 40 C.F.R. 75.54(d) 40 C.F.R. 75.55(c) 40 C.F.R. 75.55(e) 40 C.F.R. 75.56 40 C.F.R. 75.60(a) 40 C.F.R. 75.60(b) 40 C.F.R. 75.60(c)(3) 40 C.F.R. 75.61(a)(1) 40 C.F.R. 75.61(a)(5) 40 C.F.R. 75.61(b) 40 C.F.R. 75.62 40 C.F.R. 75.63 40 C.F.R. 75.64(a) 40 C.F.R. 75.64(b) 40 C.F.R. 75.64(c) 40 C.F.R. 75.64(d) 40 C.F.R. 75.65 40 C.F.R. 75.66(a) 40 C.F.R. 75.66(b) 40 C.F.R. 75.66(c) 40 C.F.R. 75.66(d) 40 C.F.R. 75.66(g) 40 C.F.R. 75.66(h) 40 C.F.R. 77.3 40 C.F.R. 77.5(b) 40 C.F.R. 77.6	F.A.C. 62-204.800(12) (state only) F.A.C. 62-204.800(13) (state only) F.A.C. 62-204.800(14) (state only) F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-214.300 F.A.C. 62-214.320 F.A.C. 62-214.330 F.A.C. 62-214.350 (2) F.A.C. 62-214.350 (3) F.A.C. 62-214.350 (5) F.A.C. 62-214.350 (6) F.A.C. 62-214.370 (1) F.A.C. 62-214.370 (3) F.A.C. 62-214.370 (4) F.A.C. 62-214.370 (7) F.A.C. 62-214.430 F.A.C. 62-297.310(1) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8) Table 62-297.310-1

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***3*

1. Identification of Point on Plot Plan or Flow Diagram: EU 3, stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 2GT-1 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-1 2. Duct burners in 2GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.828
14. Emission Point Comment (limit to 200 characters): CT 2GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU3 and EU7 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type
Information for Facility-ID *1* **Emission Unit # :***3*

1. Identification of Point on Plot Plan or Flow Diagram: EU 3, stack2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 2GT-1 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-1 2. Duct burners in 2GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.833
14. Emission Point Comment (limit to 200 characters): CT 2GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU3 and EU7 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *3* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural gas burned in combustion turbine 2GT-1
2. Source Classification Code **(SCC):** 2-01-001-02
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.922
5. Maximum Annual Rate: 8077
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.031
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without the afterburners while firing natural gas fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *3* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Light distillate oil burned in combustion turbine 2GT-1
2. Source Classification Code **(SCC):** 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 6.7
5. Maximum Annual Rate: 58692
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.05
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing distillate oil fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *3* Segment #: *3*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): No. 6 Residual oil burned in combustion turbine 2GT-1
2. Source Classification Code **(SCC):** 2-02-005-01
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 5.99
5. Maximum Annual Rate: 52479.3
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.1
9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing No. 6 residual oil..

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *3*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	NS
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
PB	NA	NA	NS
H133	NA	NA	NS
H095	NA	NA	NS
SAM	NA	NA	NS
H148	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *3* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Sulfur Dioxide
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 647.8 lbs/hr 2837.4 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.7 **Units** percent sulfur oil Reference: Site Certification # 74-01
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 46,270 lb/hr oil x 0.7% S oil x 2 lb SO2/lb S = 647.8 lb/hour 647.8 lb/hr x 8760 hr / yr / 2,000 lb/ton = 2837.4 tons per year
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emissions based on distillate oil firing.

Information for Facility_ID: *1* **Emission Unit #:** *3* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Required or assumed by permittee for other reasons.
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 647.8 Units : lb / hr
4. Equivalent Allowable Emissions: 647.8 lbs/hr 2837.4 tons/yr
5. Method of Compliance: Fuel sampling and analysis
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **0**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *3*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): OTHER [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.B.(ii).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *3*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *3*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0321T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *3*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49804-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

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

Information for Facility-ID : *1* Emission Unit # : *3*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):
Unit commenced construction prior to the PSD baseline date of July 1, 1975.

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

Information for Facility-ID : *1* Emission Unit # : *3*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU3_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU1_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU1_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU3_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU1_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU1_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU1_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

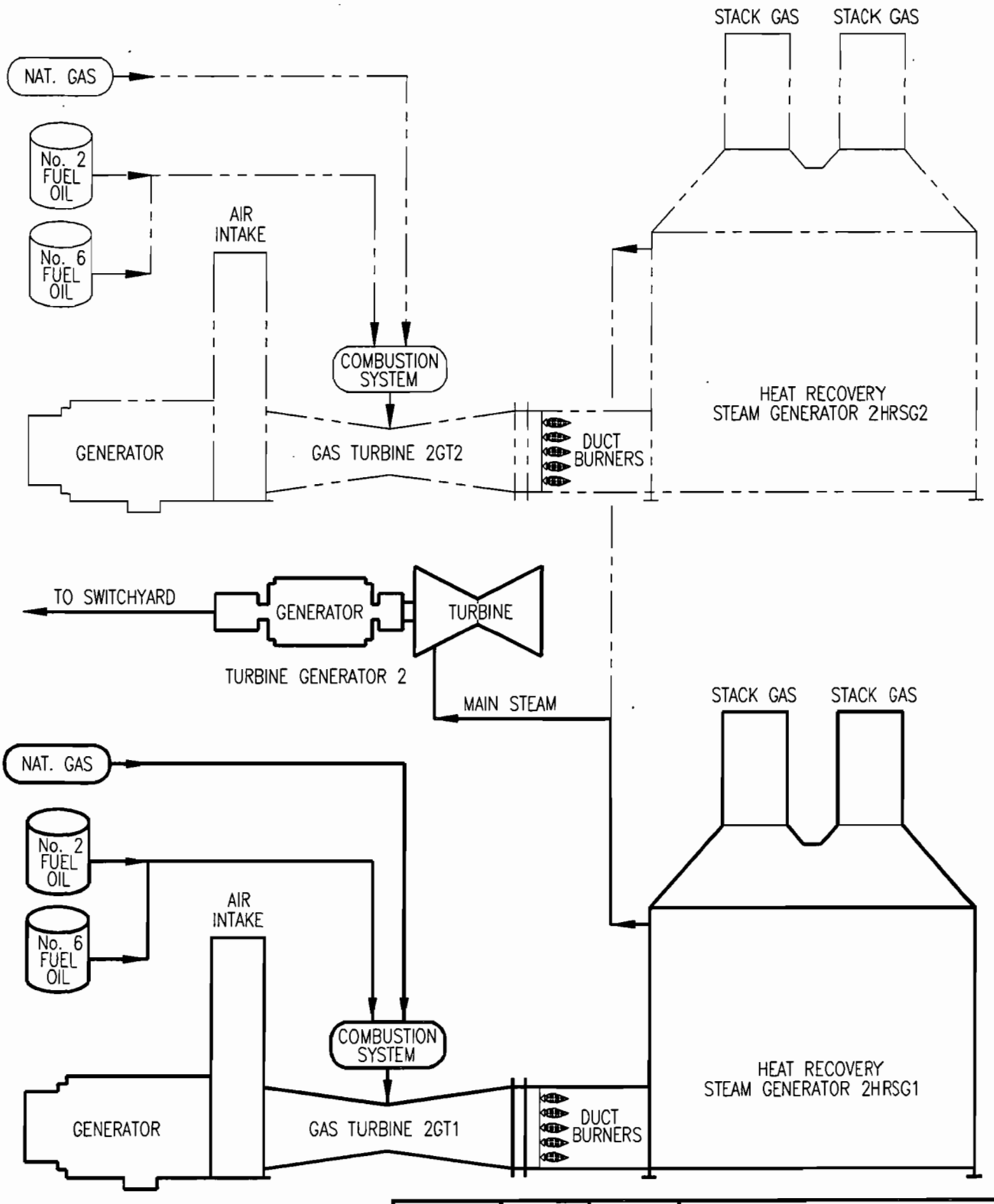
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU3_1.bmp



TECHNICAL ACCEPTANCE | ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION | AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT	PWB	PWB	CSP	CSP	ETS

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT–UNIT 2
SCALE: N/A	CAD FILE NAME: PN002146	TITLE: EMISSION UNIT FLOW DIAGRAM COMBUSTION TURBINES ATTACHMENT NO. EU3
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002146	

DRAWING NUMBER: PPN1–M0104–YY

SHEET: 1 OF 1 | REV: 0

FPGSYM/FPGBDR–A 9/90

Attachment PPNU3_12.txt

Identification of Additional Applicable Requirements

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

The Putnam Plant has a federally-enforceable Site Certification (PPSA 74-01). This document was modified in 1980, 1984, 1991 and 1992. Following are air-related excerpted specific conditions from the Site Certification, a description as to how FPL is currently complying with each specific condition, and in some cases, a request that the specific condition be deleted.

Combustion Turbine Specific Conditions

1. The combustion turbines shall fire fuel oil not exceeding 0.7 percent sulfur and natural gas.

FPL maintains records regarding the sulfur percentage of the fuel fired in the combustion turbines.

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent.

FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document compliance with the opacity limit.

3. If sustained winds exceed 20 miles per hour for any continuous period of 3 hours or longer, the sulfur content of the fuel may be no greater than 0.5%. If oil with a sulfur content of > 0.5% is burned, the wind velocity and wind direction must be measured at hourly intervals.

FPL normally fires the combustion turbines with only natural gas fuel. The distillate oil fuel that is available to be fired contains less than 0.5% sulfur at present. If distillate oil fuel is purchased containing greater than 0.5% sulfur, then FPL will undertake the wind velocity and direction monitoring as specified by the permit condition.

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *4*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): 1

[1] 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).

[2] 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.

[3] 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): EU 2GT-2 is a 70-MW combustion turbine.
2. Emissions Unit Identification Number: 02A (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This emissions unit is one of 4 combustion turbines (CTs) at this facility. The electrical output of the CT is affected extensively by ambient temperature fluctuations. The 70 MW value above is reflective of approximately 85 F ambient condition.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 08/06/77

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Westinghouse Model Number: W501B-5A

4. Generator Nameplate Rating: 70 MW

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

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: 968.3 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   Heat input rate in #1 is for natural gas fuel @ 85F. The heat input rate for #2 diesel fuel is 910.6 mmBtu/hr @ 85F. The method of compliance for heat input rate is fuel sampling and analysis.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 4

40 C.F.R. 72.20(a) 40 C.F.R. 72.20(b) 40 C.F.R. 72.20(c) 40 C.F.R. 72.21(a) 40 C.F.R. 72.21(b) 40 C.F.R. 72.21(d) 40 C.F.R. 72.22(a) 40 C.F.R. 72.22(c) 40 C.F.R. 72.23 40 C.F.R. 72.24(a) 40 C.F.R. 72.30(a) 40 C.F.R. 72.30(b)(2) 40 C.F.R. 72.30(c) 40 C.F.R. 72.30(d) 40 C.F.R. 72.32 40 C.F.R. 72.33(b) 40 C.F.R. 72.33(c) 40 C.F.R. 72.33(d) 40 C.F.R. 72.40(a) 40 C.F.R. 72.40(b) 40 C.F.R. 72.40(c) 40 C.F.R. 72.40(d) 40 C.F.R. 72.51 40 C.F.R. 72.90 40 C.F.R. 72.9(a)(1)(iii) 40 C.F.R. 72.9(a)(1)(i) 40 C.F.R. 72.9(a)(2) 40 C.F.R. 72.9(b) 40 C.F.R. 72.9(c)(1)(iii) 40 C.F.R. 72.9(c)(2) 40 C.F.R. 72.9(c)(4) 40 C.F.R. 72.9(c)(5) 40 C.F.R. 72.9(d) 40 C.F.R. 72.9(e) 40 C.F.R. 72.9(f) 40 C.F.R. 72.9(g)(4) 40 C.F.R. 73.33 40 C.F.R. 73.35	40 C.F.R. 75 Appendix A-1 40 C.F.R. 75 Appendix A-2 40 C.F.R. 75 Appendix A-3 40 C.F.R. 75 Appendix A-4 40 C.F.R. 75 Appendix A-5 40 C.F.R. 75 Appendix A-6 40 C.F.R. 75 Appendix B 40 C.F.R. 75 Appendix C-1 40 C.F.R. 75 Appendix C-2 40 C.F.R. 75 Appendix D 40 C.F.R. 75 Appendix F 40 C.F.R. 75 Appendix G-2 40 C.F.R. 75 Appendix H 40 C.F.R. 75.10(a)(2) 40 C.F.R. 75.10(a)(3)(ii) 40 C.F.R. 75.10(b) 40 C.F.R. 75.10(c) 40 C.F.R. 75.10(f) 40 C.F.R. 75.10(g) 40 C.F.R. 75.11(d) 40 C.F.R. 75.12(a) 40 C.F.R. 75.12(b) 40 C.F.R. 75.13(b) 40 C.F.R. 75.14(c) 40 C.F.R. 75.20(a)(5) 40 C.F.R. 75.20(b) 40 C.F.R. 75.20(c) 40 C.F.R. 75.20(g) 40 C.F.R. 75.21(a) 40 C.F.R. 75.21(b) 40 C.F.R. 75.21(c) 40 C.F.R. 75.21(d) 40 C.F.R. 75.21(e) 40 C.F.R. 75.21(f) 40 C.F.R. 75.22 40 C.F.R. 75.24 40 C.F.R. 75.30(a)(3) 40 C.F.R. 75.31	40 C.F.R. 75.32 40 C.F.R. 75.33 40 C.F.R. 75.36 40 C.F.R. 75.4 40 C.F.R. 75.5 40 C.F.R. 75.51(c) 40 C.F.R. 75.53(a) 40 C.F.R. 75.53(b) 40 C.F.R. 75.53(c) 40 C.F.R. 75.53(d)(1) 40 C.F.R. 75.54(a) 40 C.F.R. 75.54(b) 40 C.F.R. 75.54(d) 40 C.F.R. 75.55(c) 40 C.F.R. 75.55(e) 40 C.F.R. 75.56 40 C.F.R. 75.60(a) 40 C.F.R. 75.60(b) 40 C.F.R. 75.60(c)(3) 40 C.F.R. 75.61(a)(1) 40 C.F.R. 75.61(a)(5) 40 C.F.R. 75.61(b) 40 C.F.R. 75.62 40 C.F.R. 75.63 40 C.F.R. 75.64(a) 40 C.F.R. 75.64(b) 40 C.F.R. 75.64(c) 40 C.F.R. 75.64(d) 40 C.F.R. 75.65 40 C.F.R. 75.66(a) 40 C.F.R. 75.66(b) 40 C.F.R. 75.66(c) 40 C.F.R. 75.66(d) 40 C.F.R. 75.66(g) 40 C.F.R. 75.66(h) 40 C.F.R. 77.3 40 C.F.R. 77.5(b) 40 C.F.R. 77.6	F.A.C. 62-204.800(12) (state only) F.A.C. 62-204.800(13) (state only) F.A.C. 62-204.800(14) (state only) F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-214.300 F.A.C. 62-214.320 F.A.C. 62-214.330 F.A.C. 62-214.350 (2) F.A.C. 62-214.350 (3) F.A.C. 62-214.350 (5) F.A.C. 62-214.350 (6) F.A.C. 62-214.370 (1) F.A.C. 62-214.370 (3) F.A.C. 62-214.370 (4) F.A.C. 62-214.370 (7) F.A.C. 62-214.430 F.A.C. 62-297.310(1) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8) Table 62-297.310-1

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***4*

1. Identification of Point on Plot Plan or Flow Diagram: EU 4, stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 2GT-2 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-2 2. Duct burners in 2GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.85
14. Emission Point Comment (limit to 200 characters): CT 2GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU4 and EU8 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***4*

1. Identification of Point on Plot Plan or Flow Diagram: EU 4, stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Combustion Turbine 2GT-2 has two identical emission points (stacks)
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-2 2. Duct burners in 2GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.855
14. Emission Point Comment (limit to 200 characters): CT 2GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU4 and EU8 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *4* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural gas burned in combustion turbine 2GT-2
2. Source Classification Code **(SCC):** 2-01-001-02
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.922
5. Maximum Annual Rate: 8077
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.031
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without the afterburners while firing natural gas fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *4* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Light distillate oil burned in combustion turbine 2GT-2
2. Source Classification Code (**SCC**): 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 6.7
5. Maximum Annual Rate: 58692
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.05
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing distillate oil fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *4* Segment #: *3*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): No. 6 Residual oil burned in combustion turbine 2GT-2
2. Source Classification Code (SCC): 2-02-005-01
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 5.99
5. Maximum Annual Rate: 52479.3
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.7
8. Maximum Percent Ash: 0.1
9. Million Btu per SCC Unit: *152*
10. Segment Comment (limit to 200 characters): This data is only applicable for the combustion turbine operating without ductburners while firing No. 6 residual oil..

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *4*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	NS
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
PB	NA	NA	NS
H133	NA	NA	NS
H095	NA	NA	NS
SAM	NA	NA	NS
H148	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *4* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Sulfur Dioxide
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 647.8 lbs/hr 2837.4 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.7 **Units** percent sulfur oil Reference: Site Certification # 74-01
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 46,270 lb/hr oil x 0.7% S oil x 2 lb SO2/lb S = 647.8 lb/hour 647.8 lb/hr x 8760 hr / yr / 2,000 lb/ton = 2837.4 tons per year
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emissions based on distillate oil firing.

Information for Facility_ID: *1* **Emission Unit #:** *4* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Required or assumed by permittee for other reasons.
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 647.8 Units : lb / hr
4. Equivalent Allowable Emissions: 647.8 lbs/hr 2837.4 tons/yr
5. Method of Compliance: Fuel sampling and analysis
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **0**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *4*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): OTHER [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.B.(ii).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *4*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *4*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0307T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *4*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49809-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

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

Information for Facility-ID : *1* Emission Unit # : *4*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):
Unit commenced construction prior to the PSD baseline date of July 1, 1975.

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

Information for Facility-ID : *1* Emission Unit # : *4*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU4_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU1_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU1_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU1_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU1_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU1_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU1_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

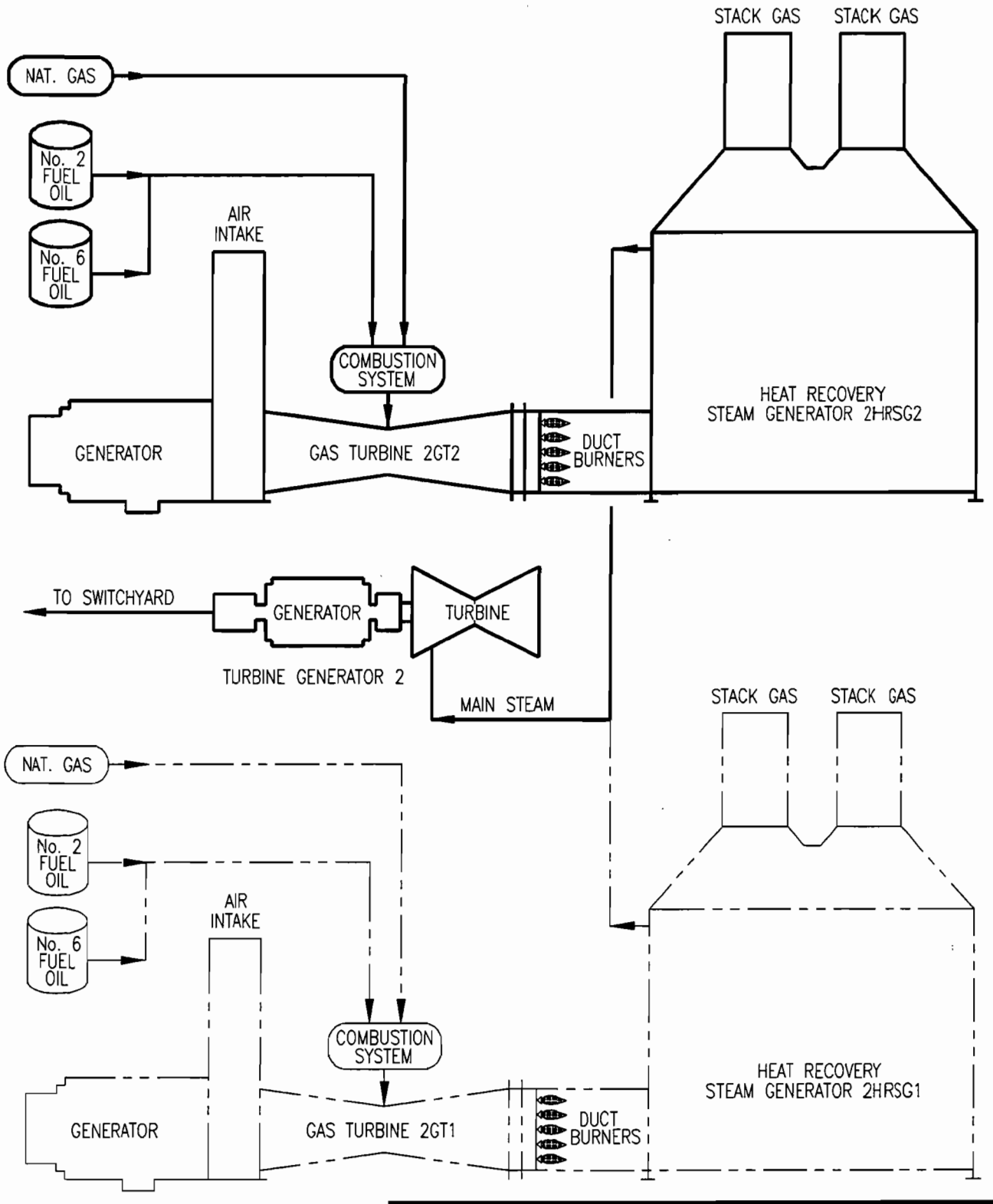
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU4_1.bmp



TECHNICAL ACCEPTANCE	ORG	BY	DATE
ENGINEERING ORGANIZATION			

WALKDOWN INFORMATION	ORG	BY	DATE
AS-BUILT INFORMATION			

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/27/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT–UNIT 2
SCALE: N/A	CAD FILE NAME: PN002147	TITLE: EMISSION UNIT FLOW DIAGRAM COMBUSTION TURBINES ATTACHMENT NO. EU4
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002147	

DRAWING NUMBER	SHEET	REV
PPN1–M0105–YY	1 OF 1	0

FPGSYM/FPGBDR–A 9/90

Attachment PPNU4_12.txt

Identification of Additional Applicable Requirements

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

The Putnam Plant has a federally-enforceable Site Certification (PPSA 74-01). This document was modified in 1980, 1984, 1991 and 1992. Following are air-related excerpted specific conditions from the Site Certification, a description as to how FPL is currently complying with each specific condition, and in some cases, a request that the specific condition be deleted.

Combustion Turbine Specific Conditions

1. The combustion turbines shall fire fuel oil not exceeding 0.7 percent sulfur and natural gas.

FPL maintains records regarding the sulfur percentage of the fuel fired in the combustion turbines.

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent.

FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document compliance with the opacity limit.

3. If sustained winds exceed 20 miles per hour for any continuous period of 3 hours or longer, the sulfur content of the fuel may be no greater than 0.5%. If oil with a sulfur content of > 0.5% is burned, the wind velocity and wind direction must be measured at hourly intervals.

FPL normally fires the combustion turbines with only natural gas fuel. The distillate oil fuel that is available to be fired contains less than 0.5% sulfur at present. If distillate oil fuel is purchased containing greater than 0.5% sulfur, then FPL will undertake the wind velocity and direction monitoring as specified by the permit condition.

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *5*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): **1**

[1] 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).

[2] 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.

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

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Duct burners in 1-HRSG-1 for combustion turbine 1GT-1
2. Emissions Unit Identification Number: Un1 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This EU is one of 4 Heat Recovery Steam Generators (HRSGs) at Putnam. Waste heat from combustion turbine 1GT-1 passes through the HRSG to augment steam production. These ductburners, located in the HRSG inlet, may be fired in order to produce additional steam in the HRSG. Steam from the HRSG is sent to a steam turbine-generator for the production of additional electric power. No model no. is available for the HRSGs; they were rebuilt in 1992 and have a rating of 440,000 lb/hr of steamflow.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 04/24/78

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Deltak Model Number: Na

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: 250 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   The heat input rate given in Item 1 above is for both natural gas fuel and for #2 diesel. This number is reflective of 85 degrees Fahrenheit conditions.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.*)

Emissions Unit ID 5

40 CFR 60.42b(d)(3) (oil only) 40 CFR 60.42b(j) (oil only) 40 CFR 60.43b(f) (oil only) 40 CFR 60.44b(a)4.i. (gas only) 40 CFR 60.45b(a) (oil only) 40 CFR 60.45b(j) (oil only) 40 CFR 60.46b(a) (gas only) 40 CFR 60.46b(d)(7) (gas only) 40 CFR 60.46b(d)(7) (oil only) 40 CFR 60.46b(f) (gas only) 40 CFR 60.47b(f) (oil only) 40 CFR 60.48b(a) (oil only) 40 CFR 60.48b(f) (gas only) 40 CFR 60.48b(h) (gas only) 40 CFR 60.49b(d) (gas only) 40 CFR 60.49b(d) (oil only)	40 CFR 60.49b(f) (oil only) 40 CFR 60.49b(h)(1) (oil only) 40 CFR 60.49b(r) (oil only) 40 C.F.R. 60.12 40 C.F.R. 60.13(b) 40 C.F.R. 60.13(c) 40 C.F.R. 60.13(d)(1) 40 C.F.R. 60.13(d)(2) 40 C.F.R. 60.13(e) 40 C.F.R. 60.13(g) 40 C.F.R. 60.13(h) 40 C.F.R. 60.43b(g) 40 C.F.R. 60.7(b) 40 C.F.R. 60.7(f) 40 C.F.R. 60.8(c) 40 C.F.R. 60.8(e)	40 C.F.R. 60.8(f) F.A.C. 62-204.800(7)(b)3. (state only) F.A.C. 62-204.800(7)(d) (state only) F.A.C. 62-210.650 F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-296.320(4)(b) (state only) F.A.C. 62-296.800(3)(a)3. (state only) F.A.C. 62-296.800(4)(a) F.A.C. 62-297.310(1) F.A.C. 62-297.310(2)(b) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b)	F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4.b. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8)

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***5*

1. Identification of Point on Plot Plan or Flow Diagram: EU 5 (DB), stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 1GT-1 share the two emission points (stacks) utilized by CT 1GT-1.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-1 2. Duct burners in 1GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.732
14. Emission Point Comment (limit to 200 characters): CT 1GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU1 and EU5 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***5*

1. Identification of Point on Plot Plan or Flow Diagram: EU 5 (DB), stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 1GT-1 share the two emission points (stacks) utilized by CT 1GT-1.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-1 2. Duct burners in 1GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.737
14. Emission Point Comment (limit to 200 characters): CT 1GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU1 and EU5 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *5* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in Heat Recovery Steam Generators 1GT-1 burning natural gas
2. Source Classification Code (**SCC**): 1-02-006-01
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.238
5. Maximum Annual Rate: 2085
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *5* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in HRSG 1GT-1 burning distillate oil fuel.
2. Source Classification Code (**SCC**): 1-02-005-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 1.838
5. Maximum Annual Rate: 16100.88
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *5*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	EL
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
H133	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *5* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Nitrogen Oxides
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 50 lbs/hr 219 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.2 **Units** lb/mmBtu Reference: 40 CFR 60.44b(a)4.i.
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 0.2 lb/mmBtu x 250 mmBtu / hr = 50 lb / hour 50 lb/hr* 8760 hr/yr * 1 ton/2000 lb = 219 tons / yr
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emission rates are reflective of natural gas firing.

Information for Facility_ID: *1* **Emission Unit #:** *5* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.2 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 50 lbs/hr 219 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **90** NOx emissions limit for natural gas or distillate oil firing [Rule 40 CFR 60.44b(a)(4)(i)]

Information for Facility_ID: *1* **Emission Unit #:** *5* **Pollutant #:** *1*
Basis For *Allowable Emission* #: *2*

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.4 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 100 lbs/hr 438 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **74** NOx emissions limit for residual oil firing [Rule 40 CFR 60.44b(a)(4)(ii)]

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *5*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code: EPA Method 9
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.C.(ii)(a).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *5*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *5*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0319T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *5*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49802-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): Required by 40 CFR 75. Please note that EU5 and EU1 share common emission points and therefore share common emission monitors. The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *5*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Visible emissions (opacity)
3. CMS Requirement Code(R/O): OTHER Rule / Other
4. Monitor Information: Manufacturer: Lear Siegler Model Number: 1100M Serial Number: 1223
5. Installation Date (DD-MON-YYYY): 03/28/91
6. Performance Specification Test Date (DD-MON-YYYY): 05/10/96
7. Continuous Monitor Comment (limit to 200 characters): Not required by rule or permit; plant has elected to maintain devices for internal purposes.

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

Information for Facility-ID : *1* Emission Unit # : *5*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):

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

Information for Facility-ID : *1* Emission Unit # : *5*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU5_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU5_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU5_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU5_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU5_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU5_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : NA
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU5_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: NA

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: NA

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: NA

Not Applicable

Fuel Analysis
Natural Gas Analysis (typical)[2]

Parameter	Typical value	Max value
Specific gravity(@ 60° F)	0.887	none
Heat content (Btu/cu ft)	950 - 1124	none
% sulfur (grains/CCF)	0.43[1]	1.00
% nitrogen (by volume)	0.8	none
% ash	negligible	none

*Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

(1) Data from laboratory analysis

(2) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU5_2.txt

Fuel Analysis
No.6 Oil Analysis (typical)[4]

Parameter	Typical value	Specifications
API gravity (@ 60° F)	8 - 12	10.1 min[1]
Heat content (MBtu/bbl)	6,310 - 6420	6,340[1]
% Sulfur	0.7	0.7 max[3]
% Nitrogen	0.2 - 0.5[2]	none
% Ash	0.06 - 0.09[2]	0.10 max[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) Maximum permitted from current air operation permit.

(4) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU5_2.txt

Fuel Analysis
No. 2 Distillate oil (typical)[3]

Parameter	Typical value	Specifications
API gravity (@ 60 F)	35.0[2]	30 - 40[1]
Heat content (MBtu/bbl)	5,700 - 5,800[2]	none
% sulfur	0.3 - 0.5[1]	0.5 maximum[1]
% nitrogen	no specification	none
% ash	<0.01[2]	0.01[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU5_2.txt

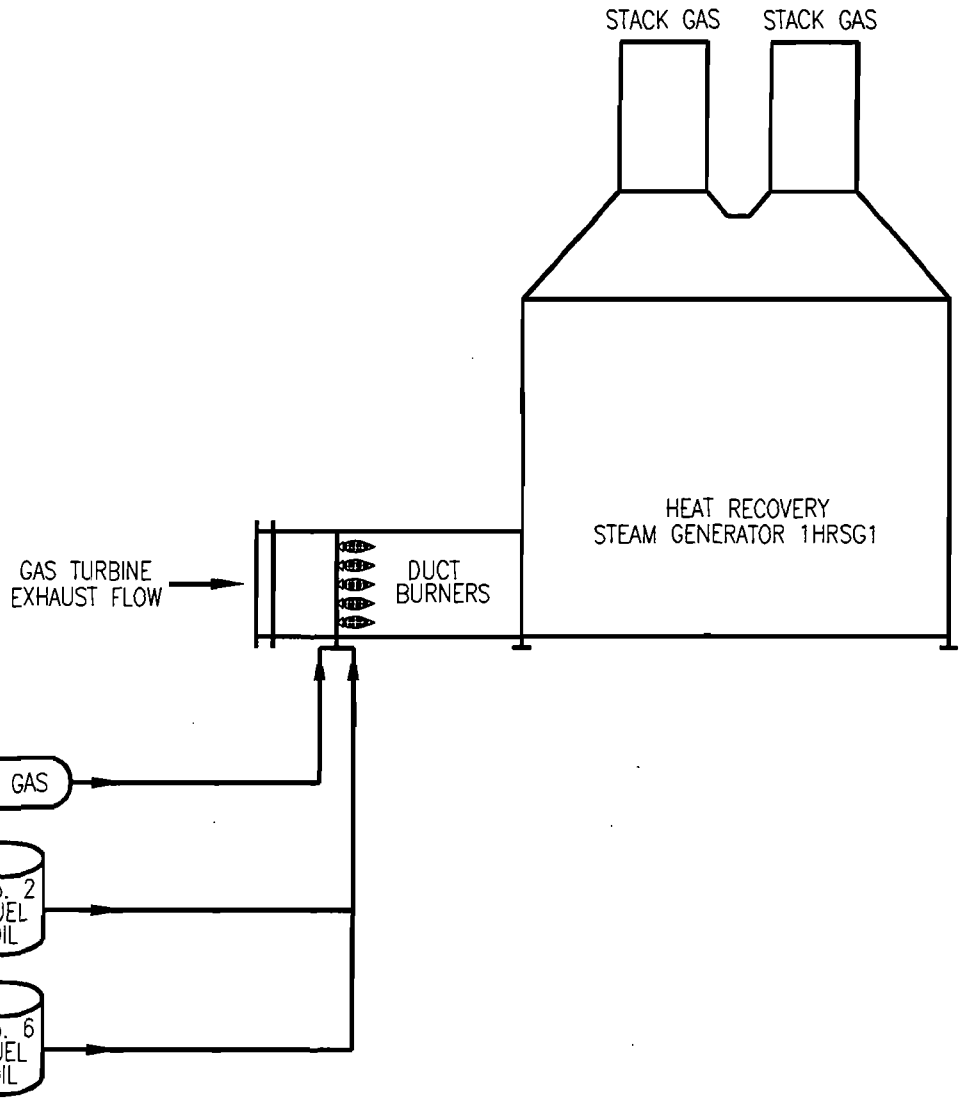
Fuel Analysis
On Specification Used Oil

The boiler may occasionally burn used oil during normal operation. All used oil fired in the unit meets the specifications mandated by 40 CFR 279.11. Used oil fired by this boiler is typically derived from plant maintenance activities, and may include used lube oils, transformer oils, etc. that meet the analytical specifications. Criteria used oil values follow:

Parameter	Typical value	Specifications
API gravity (@ 60 F)	30.0[1]	none
Heat content (MBtu/bbl)	6,000[1]	none
% sulfur	0.3[1]	none
% nitrogen	negligible	none
% ash	0.01[1]	0.01

Footnotes:
(1) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

ATTACHMENT: PPNEU5_1.bmp



TECHNICAL ACCEPTANCE | ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION | AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT-UNIT 1
SCALE: N/A	CAD FILE NAME: PN002148	TITLE: EMISSION UNIT FLOW DIAGRAM DUCTBURNERS ATTACHMENT NO. EU5
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002148	

DRAWING NUMBER	SHEET	REV
PPN1-M0106-YY	1 OF 1	0

FPGSYM/FPGBDR-A 9/90

Attachment PPNU5_12.txt
Heat Recovery Steam Generators (HRSG's)
Identification of Additional Applicable Requirements

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

The Putnam Plant has a federally-enforceable Site Certification (PPSA 74-01). This document was modified in 1980, 1984, 1991 and 1992. Following are air-related excerpted specific conditions from the Site Certification, a description as to how FPL is currently complying with each specific condition, and in some cases, a request that the specific condition be deleted.

1. The heat recovery steam generators shall fire fuel oil not exceeding 0.5 percent sulfur content and natural gas.

FPL maintains records demonstrating that the sulfur percentage of the fuel fired in the heat recovery steam generators is in compliance with the specific condition .

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent.

FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document that the opacity readings are within permitted limits.

3. Excess opacity resulting from malfunctions is permitted, provided that the best operational practices to minimize emissions are adhered to and the duration of excess opacity shall be minimized, but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration.

FPL maintains opacity records and submits quarterly excess emission reports in which excess opacity events are documented. If excess emissions appear to have the potential to occur in excess of 2 hours in 24 hours, FPL makes the requisite notification to the Department. This has not been a frequent occurrence at Putnam.

4. Excess opacity resulting from startup or shutdown is permitted, provided that the best operational practices to minimize emissions are adhered to and the duration of excess opacity shall be minimized.

FPL maintains opacity records and submits quarterly excess emission reports in which excess opacity events are documented. If excess emissions appear to have the potential to occur in excess of 2 hours in 24 hours, FPL makes the requisite notification to the Department. This has not been a frequent occurrence at Putnam.

5. Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu heat input when natural gas or distillate oil is combusted or 0.4 lb/mmBtu heat input when residual oil is combusted. The nitrogen oxides standard applies at all times, including periods of startup, shutdown, or malfunction.

FPL has requested and received DEP approval to use an Alternative Sampling Procedure (ASP) for NOx monitoring on the ductburner emissions.

6. Within 90 days after this modification becomes effective, FPL shall submit to the DER Siting Coordination Office for review and approval a report outlining best operational practices to be implemented at the Putnam Plant to minimize excess opacity emissions as referenced in Conditions ii (a) and (b).

FPL has previously submitted the referenced Best Operational Practices Plan to the Department. ***This permit condition is obsolete, and is requested to be deleted.***

7. To determine compliance with the emissions limit for sulfur dioxide, receipts from the fuel supplier shall be maintained for each shipment which certify that the oil complies with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396-78, Standard Specifications for Fuel Oils. Quarterly reports based on such receipts shall be submitted to the Northeast District Office certifying that only oil containing no more than 0.5 weight percent sulfur or oil that has a sulfur dioxide emission rate equal to or less than 0.5 lb/mmBtu heat input and which meets the ASTM specifications was combusted in the duct burners during the preceding quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

FPL has submitted quarterly reports to the Department documenting the conformance to the ASTM standard specification.

8. To determine compliance with the opacity limits, Method 9 shall be used as required under 40 CFR 60.8 (July 1, 1990 Edition). The initial performance test shall be performed within 60 days after achieving the maximum production rate for the HRSGs, but not later than 180 days after initial startup. Annual compliance tests shall be performed at least once during each federal fiscal year (October 1 - September 30). Thirty (30) days prior to the initial compliance test and fifteen (15) days prior to each annual compliance test, notice shall be provided to the Northeast District Office. The reulsts of each test shall be submitted to the Northeast Dsitrict Office within 45 days of test completion. Other Department approved methods may be used for comliance testing after prior Department approval.

FPL has conducted periodic method 9 visible emission evaluations. Records are available to the Department upon request. ***The portion of the specific condition which addresses initial compliance testing is obsolete and is requested to be deleted from the permit.***

9. To determine compliance with the nitrogen oxides emissions limit, FPL shall conduct a performance test using EPA Reference Methods 7E and 3A, (as codified in 40 CFR 60, Appendix A). The initial compliance test shall be performed within 60 days after achieving the maximum production rate for the HRSGs, but not later than 180 days after initial startup. Annual compliance test shall be performed at least once during each federal fiscal year (October 1 - September 30). Thirty (30) dyas prior to the initial compliance test and fifteen (15) days prior to each annual compliance test, notice shall be provided to the Northeast District Office. The results of each test shall be submitted to the Northeast District Office within 45 days of test completion.

FPL has conducted annual testing utilizing the reference methods specified. Records are available to the Department upon request. ***The portion of the specific condition which addresses initial compliance testing is obsolete and is requested to be deleted from the permit.***

10. FPL shall maintain records of opacity and must submit excess emissions reports for any calendar quarter during which there are excessw emissions from the HRSGs. If there are no excess emissions during the calendar quarter, FPL shall submit a report stating that no excess emissions occurred during the quarterly reporting period. The quarterly reports shall be submitted to the Department's Northeast District Office.

FPL does maintain the opacity records as specified. Excess Emission Reports are submitted on behalf of the Putnam facility each quarter. No Continuous Opacity Monitor (COM) or Continuous Emission Monitor (CEM) for SO2 is required if the unit does not fire fuel oil in the ductburners. If fuel oil is fired, then both the COM and the CEM are required to be installed.

11. FPL shall satisfy any applicable nitrogen oxides emissions records maintenance requirements set forth in 40 CFR 60.49b(g) (July 1, 1990 Edition).

FPL maintains nitrogen oxides emission records pursuant to the specific condition.

12. All records required under this condition shall be maintained by FPL for a period of two years following the date of such record.

FPL maintains the required records for at least two years.

13. Stack Height: Minimum stack heights for the paired combined cycle unit exhaust stack shall be 71 feet above grade. Stacks with a height of at least 150 feet shall be constructed if monitoring data per Condition 5 indicates ambient air standards have been violated.

The combined cycle exhaust stacks were constructed in conformance with the specific condition. Monitoring data did not support the requirement to construct the higher-elevation stacks. ***Therefore this specific condition is obsolete and is requested to be deleted from the permit.***

14. Wind Restriction: The permittee will burn fuel oil containing no more than 0.5% sulfur when sustained winds exceed 20 miles per hour for any continuous period of three hours or longer.

FPL maintains fuel oil on hand of less than 0.5% sulfur. If FPL decides to fire fuel oil with a sulfur content in excess of 0.5%, then the wind monitoring will be performed, and the 3 hour limit will be complied with.

15. Wind Monitoring: The permittee shall measure wind velocity and wind direction at hourly intervals in the plant vicinity, only for those hours during which combustion turbines at either of the combined cycle units of the plant operates on oil with greater than 0.5 percent sulfur content. Wind data for the hours during which oil with greater than 0.5 percent sulfur content was burned each month, or, if applicagle, a statement that no oil with greater than 0.5 percent sulfur content was burned during that month, shall be reported to the Northeast District Director of the Department by the last day of the month following each reporting period. Wind velocity and direction measurements required by this paragraph shall be made in accordance with recognized methods and procedures.

[FPL and DER shall examine the provisions of this condition and determine necessary revisions by 1/10/92 to conform to any decisin made pursuant to Condition No. 5, below.]

FPL maintains fuel oil on hand of less than 0.5% sulfur. If FPL decides to fire fuel oil with a sulfur content in excess of 0.5%, then the wind monitoring will be performed, and the notifications to the Department will be complied with.

16. The permittee shall install a sampling platform on one stack or shall provide sampling ports and such temporary access facilities as may be prescribed by the Department in performing stack sampling.

FPL has installed stack sampling platforms on 4 of the 8 stacks at the Putnam facility, in accordance with this specific condition.

17 The permittee shall install and operate continuous monitoring devices on one of the paired combined cycle unit exhaust stacks for each unit for the following: Opacity, Nitrogen Oxides. Records of such monitoring shall be available for inspection.

In view of the effect of the recent requirements of Title IV of the Clean Air Act Amendments of 1990, this specific condition is duplicative and is therefore requested to be deleted from the permit.

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *6*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): 1

[1] 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).

[2] 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.

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

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Duct burners located in 1HRSG-2 for combustion turbine 1GT-2
2. Emissions Unit Identification Number: Un2 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This EU is one of 4 Heat Recovery Steam Generators (HRSGs) at Putnam. Waste heat from combustion turbine 1GT-2 passes through the HRSG to augment steam production. These ductburners, located in the HRSG inlet, may be fired in order to produce additional steam in the HRSG. Steam from the HRSG is sent to a steam turbine-generator for the production of additional electric power. No model no. is available for the HRSGs; they were rebuilt in 1992 and have a rating of 440,000 lb/hr of steamflow.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 04/24/78

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Deltak Model Number: Na

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: 250 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   The heat input rate given in Item 1 above is for both natural gas fuel and for #2 diesel. This number is reflective of 85 degrees Fahrenheit conditions.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 6

40 CFR 60.42b(d)(3) (oil only) 40 CFR 60.42b(j) (oil only) 40 CFR 60.43b(f) (oil only) 40 CFR 60.44b(a)4.i. (gas only) 40 CFR 60.45b(a) (oil only) 40 CFR 60.45b(j) (oil only) 40 CFR 60.46b(a) (gas only) 40 CFR 60.46b(d)(7) (gas only) 40 CFR 60.46b(d)(7) (oil only) 40 CFR 60.46b(f) (gas only) 40 CFR 60.47b(f) (oil only) 40 CFR 60.48b(a) (oil only) 40 CFR 60.48b(f) (gas only) 40 CFR 60.48b(h) (gas only) 40 CFR 60.49b(d) (gas only) 40 CFR 60.49b(d) (oil only)	40 CFR 60.49b(f) (oil only) 40 CFR 60.49b(h)(1) (oil only) 40 CFR 60.49b(r) (oil only) 40 C.F.R. 60.12 40 C.F.R. 60.13(b) 40 C.F.R. 60.13(c) 40 C.F.R. 60.13(d)(1) 40 C.F.R. 60.13(d)(2) 40 C.F.R. 60.13(e) 40 C.F.R. 60.13(g) 40 C.F.R. 60.13(h) 40 C.F.R. 60.43b(g) 40 C.F.R. 60.7(b) 40 C.F.R. 60.7(f) 40 C.F.R. 60.8(c) 40 C.F.R. 60.8(e)	40 C.F.R. 60.8(f) F.A.C. 62-204.800(7)(b)3. (state only) F.A.C. 62-204.800(7)(d) (state only) F.A.C. 62-210.650 F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-296.320(4)(b) (state only) F.A.C. 62-296.800(3)(a)3. (state only) F.A.C. 62-296.800(4)(a) F.A.C. 62-297.310(1) F.A.C. 62-297.310(2)(b) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b)	F.A.C. 62-297.310(4)(c) F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4.b. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8)

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***6*

1. Identification of Point on Plot Plan or Flow Diagram: EU 6 (DB), stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Tlhe duct burners located in HRSG 1GT-2 share the two emission points (stacks) utilized by CT 1GT-2.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-2 2. Duct burners in 1GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.754
14. Emission Point Comment (limit to 200 characters): CT 1GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU2 and EU6 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***6*

1. Identification of Point on Plot Plan or Flow Diagram: EU 6 (DB), stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 1GT-2 share the two emission points (stacks) utilized by CT 1GT-2.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 1GT-2 2. Duct burners in 1GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.759
14. Emission Point Comment (limit to 200 characters): CT 1GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU2 and EU6 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *6* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in Heat Recovery Steam Generators 1GT-2 burning natural gas
2. Source Classification Code **(SCC):** 1-02-006-01
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.238
5. Maximum Annual Rate: 2085
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *6* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in HRSG 1GT-2 burning distillate oil fuel.
2. Source Classification Code **(SCC):** 1-02-005-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 1.838
5. Maximum Annual Rate: 16100.88
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *6*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	EL
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
H133	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *6* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Nitrogen Oxides
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 50 lbs/hr 219 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.2 **Units** lb/mmBtu Reference: 40 CFR 60.44b(a)4.i.
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 0.2 lb/mmBtu x 250 mmBtu / hr = 50 lb / hour 50 lb/hr* 8760 hr/yr * 1 ton/2000 lb = 219 tons / yr
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emission rates are reflective of natural gas firing.

Information for Facility_ID: *1* Emission Unit #: *6* Pollutant #: *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.2 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 50 lbs/hr 219 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **90** NOx emissions limit for natural gas or distillate oil firing [Rule 40 CFR 60.44b(a)(4)(i)]

Information for Facility_ID: *1* **Emission Unit #:** *6* **Pollutant #:** *1*
Basis For Allowable Emission #: 2

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.4 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 100 lbs/hr 438 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **74** NOx emissions limit for residual oil firing [Rule 40 CFR 60.44b(a)(4)(ii)]

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *6*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code: EPA Method 9
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.C.(ii)(a).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *6*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *6*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0310T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *6*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49812-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/18/94
7. Continuous Monitor Comment (limit to 200 characters): Required by 40 CFR 75. Please note that EU6 and EU2 share common emission points and therefore share common emission monitors. The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *6*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Visible emissions (opacity)
3. CMS Requirement Code(R/O): OTHER Rule / Other
4. Monitor Information: Manufacturer: Lear Siegler Model Number: 1100M Serial Number: 1223
5. Installation Date (DD-MON-YYYY): 03/28/91
6. Performance Specification Test Date (DD-MON-YYYY): 05/10/96
7. Continuous Monitor Comment (limit to 200 characters): Not required by rule or permit; plant has elected to maintain devices for internal purposes.

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

Information for Facility-ID : *1* Emission Unit # : *6*

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.

Select (1-5) : *5*

[**1**] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. Final determination is that emissions unit consumes increment.

[**2**] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[**3**] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[**4**] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[**5**] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):

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

Information for Facility-ID : *1* Emission Unit # : *6*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU6_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU5_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU5_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU5_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU5_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU5_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU5_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

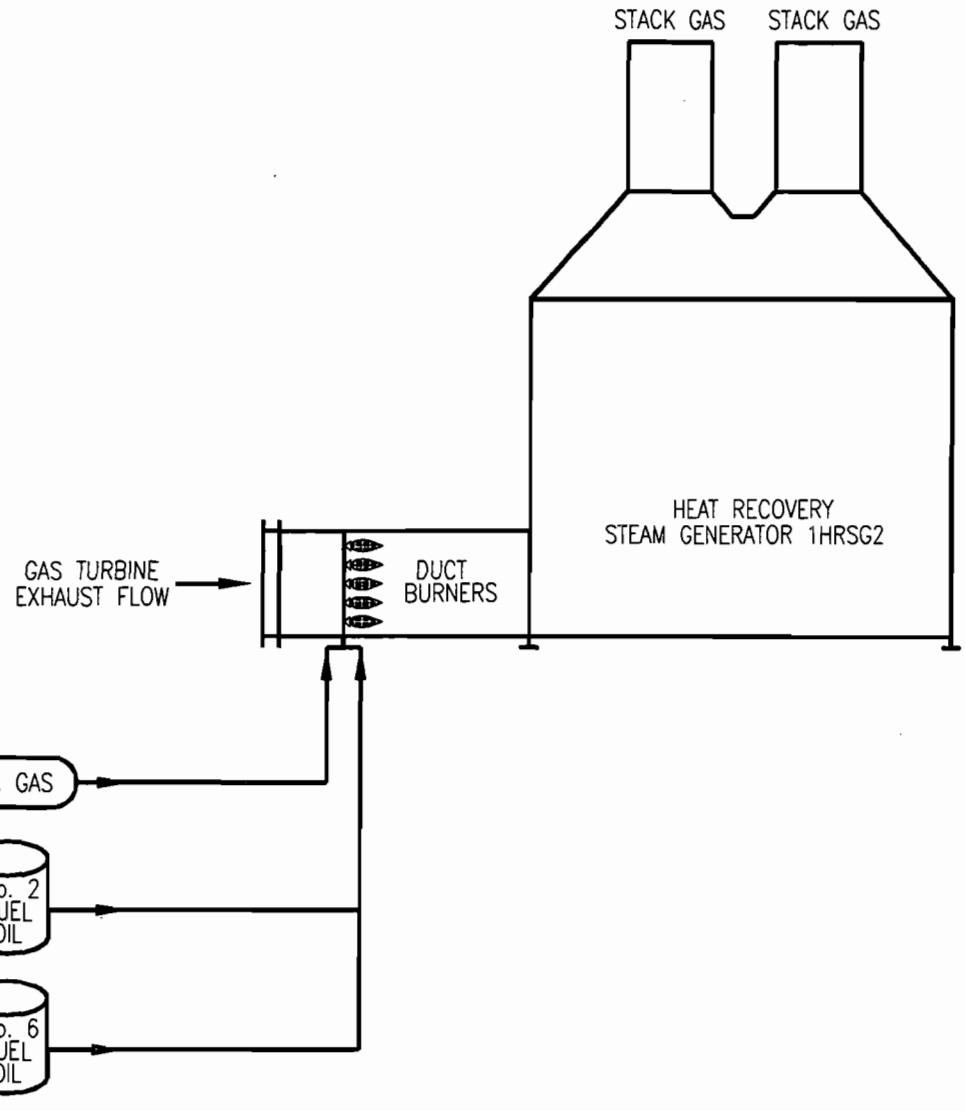
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU6_1.bmp



WALKDOWN INFORMATION				TECHNICAL ACCEPTANCE			
AS-BUILT INFORMATION	ORG	BY	DATE	ENGINEERING ORGANIZATION	ORG	BY	DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT–UNIT 1
SCALE: N/A	CAD FILE NAME: PN002149	TITLE: EMISSION UNIT FLOW DIAGRAM DUCTBURNERS ATTACHMENT NO. EU6
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002149	

DRAWING NUMBER	SHEET	REV
PPN1–M0107–YY	1 OF 1	0

FPGSYM/FPGBDR–A 9/90

Attachment PPNU6_12.txt
Heat Recovery Steam Generators (HRSG's)
Identification of Additional Applicable Requirements

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

1. The heat recovery steam generators shall fire fuel oil not exceeding 0.5 percent sulfur and natural gas. *FPL maintains records regarding the sulfur percentage of the fuel fired in the heat recovery steam generators.*

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent. *FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document opacity readings.*

3. Excess opacity resulting from startup or shut down is permitted, provided that the best operational practices to minimize emissions are adhered to. *FPL maintains opacity records and submits quarterly excess emission reports in which excess opacity events are documented.*

4. Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu heat input when natural gas or distillate oil is combusted or 0.4 lb/mmBtu heat input when residual oil is combusted. The nitrogen oxides standard applies at all times, including periods of startup, shutdown, or malfunction. *FPL utilized a CEM to document compliance with this limit.*

5. To determine compliance with the emissions limit for sulfur dioxide, the Permittee shall comply with the specification for the fuel oil as defined by the American society of testing and materials in ASTM D396-78. Quaterly reports based on such receipts shall be submitted to the Northeast District Office certifying that only oil containing no more than 0.5 weight percent sulfur or oil that has a sulfur dioxide emission rate that doesn't exceed 0.5 lb/mmBtu heat input. *FPL has submitted quarterly reports to the Department documenting the conformance to the ASTM standard specification.*

6. To determine compliance with the opacity limits, method 9 shall be used as required under 40 CFR & 60.8 rule. *FPL has conducted periodic method 9 visible emission evaluations. Records are available to the Department upon request.*

7. To determine compliance with the nitrogen oxides emissions limit, FPL shall conduct a performance test using EPA Reference Methods 7E and 3A. *FPL has conducted annual testing utilizing the reference methods specified. Records are available to the Department upon request.*

FPL has the records required by the above permit condition and such records are available to the Department for review.

8. Any change in the method of operation, fuels or equipment shall be submitted for approval to DER's bureau of Air Regulation. *FPL has not undertaken any such changes, but if such changes are contemplated, will notify the department accordingly.*

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *7*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): **1**

[1] 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).

[2] 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.

[3] 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): Ductburners located in 2-HRSG-1 for combustion turbine 2GT-1
2. Emissions Unit Identification Number: Un3 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This EU is one of 4 Heat Recovery Steam Generators (HRSGs) at Putnam. Waste heat from combustion turbine 2GT-1 passes through the HRSG to augment steam production. These ductburners, located in the HRSG inlet, may be fired in order to produce additional steam in the HRSG. Steam from the HRSG is sent to a steam turbine-generator for the production of additional electric power. No model no. is available for the HRSGs; they were rebuilt in 1992 and have a rating of 440,000 lb/hr of steamflow.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 08/06/77

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: Deltak Model Number: NA

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: 250 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   The heat input rate given in Item 1 above is for both natural gas fuel and for #2 diesel. This number is reflective of 85 degrees Fahrenheit conditions.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 7

40 CFR 60.42b(d)(3) (oil only) 40 CFR 60.42b(j) (oil only) 40 CFR 60.43b(f) (oil only) 40 CFR 60.44b(a)4.i. (gas only) 40 CFR 60.45b(a) (oil only) 40 CFR 60.45b(j) (oil only) 40 CFR 60.46b(a) (gas only) 40 CFR 60.46b(d)(7) (gas only) 40 CFR 60.46b(d)(7) (oil only) 40 CFR 60.46b(f) (gas only) 40 CFR 60.47b(f) (oil only) 40 CFR 60.48b(a) (oil only) 40 CFR 60.48b(f) (gas only) 40 CFR 60.48b(h) (gas only) 40 CFR 60.49b(d) (gas only) 40 CFR 60.49b(d) (oil only)	40 CFR 60.49b(f) (oil only) 40 CFR 60.49b(h)(1) (oil only) 40 CFR 60.49b(r) (oil only) 40 C.F.R. 60.12 40 C.F.R. 60.13(b) 40 C.F.R. 60.13(c) 40 C.F.R. 60.13(d)(1) 40 C.F.R. 60.13(e) 40 C.F.R. 60.13(g) 40 C.F.R. 60.13(h) 40 C.F.R. 60.43b(g) 40 C.F.R. 60.7(b) 40 C.F.R. 60.7(f) 40 C.F.R. 60.8(c) 40 C.F.R. 60.8(e) 40 C.F.R. 60.8(f)	F.A.C. 62-204.800(7)(b)3. (state only) F.A.C. 62-204.800(7)(d) (state only) F.A.C. 62-210.650 F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-296.320(4)(b) (state only) F.A.C. 62-296.800(3)(a)3. (state only) F.A.C. 62-296.800(4)(a) F.A.C. 62-297.310(1) F.A.C. 62-297.310(2)(b) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c)	F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4.b. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8)

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***7*

1. Identification of Point on Plot Plan or Flow Diagram: EU 7 (DB), stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 2GT-1 share the two emission points (stacks) utilized by CT 2GT-1.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-1 2. Duct burners in 2GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.828
14. Emission Point Comment (limit to 200 characters): CT 2GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU3 and EU7 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***7*

1. Identification of Point on Plot Plan or Flow Diagram: EU 7 (DB), stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 2GT-1 share the two emission points (stacks) utilized by CT 2GT-1.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-1 2. Duct burners in 2GT-1 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 968628.8 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.833
14. Emission Point Comment (limit to 200 characters): CT 2GT-1 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU3 and EU7 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *7* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in Heat Recovery Steam Generators 2GT-1 burning natural gas
2. Source Classification Code **(SCC):** 1-02-006-01
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.238
5. Maximum Annual Rate: 2085
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *7* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in HRSG 2GT-1 burning distillate oil fuel.
2. Source Classification Code **(SCC):** 1-02-005-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 1.838
5. Maximum Annual Rate: 16100.88
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *7*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	EL
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
H133	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *7* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Nitrogen Oxides
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 50 lbs/hr 219 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.2 **Units** lb/mmBtu Reference: 40 CFR 60.44b(a)4.i.
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 0.2 lb/mmBtu x 250 mmBtu / hr = 50 lb / hour 50 lb/hr* 8760 hr/yr * 1 ton/2000 lb = 219 tons / yr
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emission rates are reflective of natural gas firing.

Information for Facility_ID: *1* **Emission Unit #:** *7* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.2 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 50 lbs/hr 219 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **90** NOx emissions limit for natural gas or distillate oil firing [Rule 40 CFR 60.44b(a)(4)(i)]

Information for Facility_ID: *1* **Emission Unit #:** *7* **Pollutant #:** *1*
Basis For Allowable Emission #: 2

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.4 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 100 lbs/hr 438 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **74** NOx emissions limit for residual oil firing [Rule 40 CFR 60.44b(a)(4)(ii)]

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *7*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code: EPA Method 9
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.C.(ii)(a).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *7*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *7*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0321T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *7*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49804-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): Required by 40 CFR 75. Please note that EU7 and EU3 share common emission points and therefore share common emission monitors. The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *7*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Visible emissions (opacity)
3. CMS Requirement Code(R/O): OTHER Rule / Other
4. Monitor Information: Manufacturer: Lear Siegler Model Number: 1100M Serial Number: 1182
5. Installation Date (DD-MON-YYYY): 12/27/90
6. Performance Specification Test Date (DD-MON-YYYY): 03/25/96
7. Continuous Monitor Comment (limit to 200 characters): Not required by rule or permit; plant has elected to maintain devices for internal purposes.

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

Information for Facility-ID : *1* Emission Unit # : *7*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):

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

Information for Facility-ID : *1* Emission Unit # : *7*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU7_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU5_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU5_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU5_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU5_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU5_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU5_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

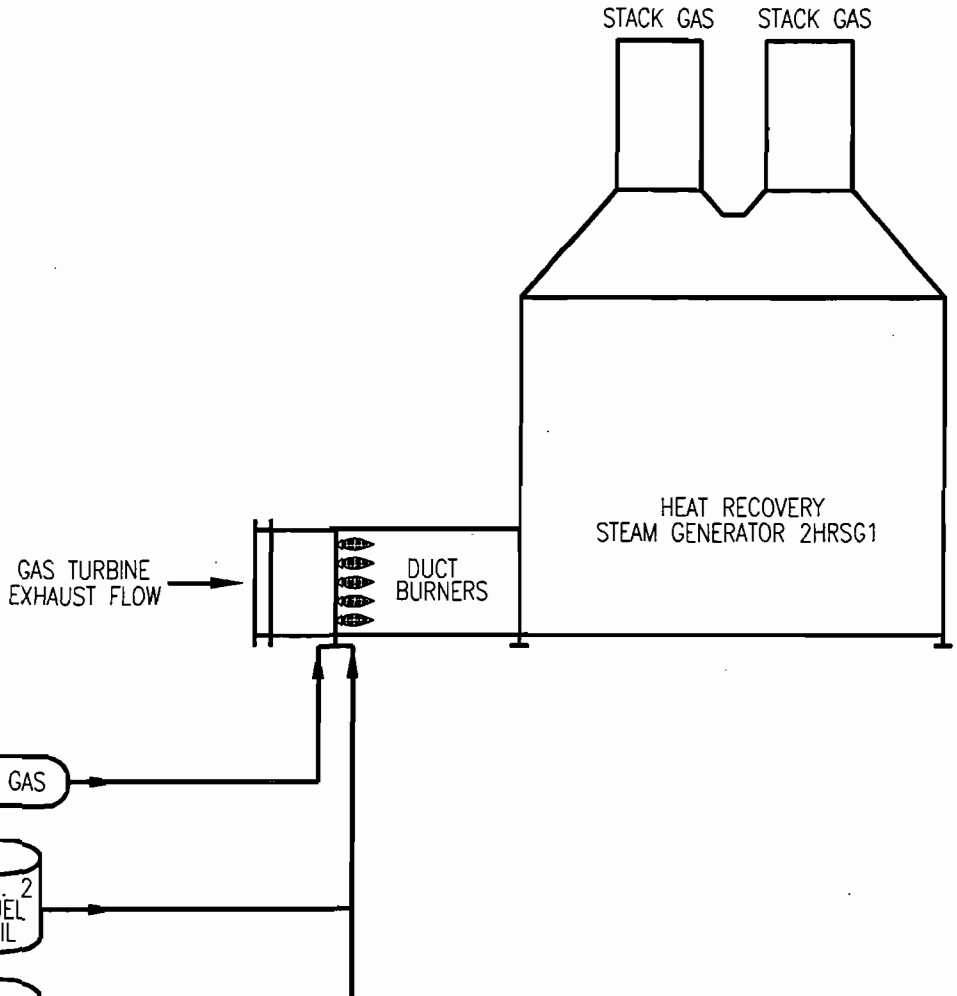
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU7_1.bmp



TECHNICAL ACCEPTANCE
ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION
AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	BY	CH	COR	APR	ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT	PWB	PWB	CSP	CSP	ETS

FPL

SYSTEM: YY	DISCIPLINE: M	PLANT/UNIT: PUTNAM PLANT-UNIT 2
SCALE: N/A	CAD FILE NAME: PN002150	TITLE: EMISSION UNIT FLOW DIAGRAM DUCTBURNERS ATTACHMENT NO. EU7
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002150	

DRAWING NUMBER: PPN1-M0108-YY

SHEET: 1 OF 1 | REV: 0

FPGSYM/FPGBDR-A 9/90

Attachment PPNU7_12.txt
Heat Recovery Steam Generators (HRSG's)
Identification of Additional Applicable Requirements

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

1. The heat recovery steam generators shall fire fuel oil not exceeding 0.5 percent sulfur and natural gas. *FPL maintains records regarding the sulfur percentage of the fuel fired in the heat recovery steam generators.*

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent. *FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document opacity readings.*

3. Excess opacity resulting from startup or shut down is permitted, provided that the best operational practices to minimize emissions are adhered to. *FPL maintains opacity records and submits quarterly excess emission reports in which excess opacity events are documented.*

4. Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu heat input when natural gas or distillate oil is combusted or 0.4 lb/mmBtu heat input when residual oil is combusted. The nitrogen oxides standard applies at all times, including periods of startup, shutdown, or malfunction. *FPL utilized a CEM to document compliance with this limit.*

5. To determine compliance with the emissions limit for sulfur dioxide, the Permittee shall comply with the specification for the fuel oil as defined by the American society of testing and materials in ASTM D396-78. Quaterly reports based on such receipts shall be submitted to the Northeast District Office certifying that only oil containing no more than 0.5 weight percent sulfur or oil that has a sulfur dioxide emission rate that doesn't exceed 0.5 lb/mmBtu heat input. *FPL has submitted quarterly reports to the Department documenting the conformance to the ASTM standard specification.*

6. To determine compliance with the opacity limits, method 9 shall be used as required under 40 CFR & 60.8 rule. *FPL has conducted periodic method 9 visible emission evaluations. Records are available to the Department upon request.*

7. To determine compliance with the nitrogen oxides emissions limit, FPL shall conduct a performance test using EPA Reference Methods 7E and 3A. *FPL has conducted annual testing utilizing the reference methods specified. Records are available to the Department upon request.*

FPL has the records required by the above permit condition and such records are available to the Department for review.

8. Any change in the method of operation, fuels or equipment shall be submitted for approval to DER's bureau of Air Regulation. *FPL has not undertaken any such changes, but if such changes are contemplated, will notify the department accordingly.*

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *8*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): 1

[1] 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).

[2] 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.

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

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Duct burners located in 2HRSG-2 for combustion turbine 2GT-2
2. Emissions Unit Identification Number: Un4 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): Y
5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): This EU is one of 4 Heat Recovery Steam Generators (HRSGs) at Putnam. Waste heat from combustion turbine 2GT-2 passes through the HRSG to augment steam production. These ductburners, located in the HRSG inlet, may be fired in order to produce additional steam in the HRSG. Steam from the HRSG is sent to a steam turbine-generator for the production of additional electric power. No model no. is available for the HRSGs; they were rebuilt in 1992 and have a rating of 440,000 lb/hr of steamflow.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 08/06/77
2. Long-term Reserve Shutdown Date (DD-MON-YYYY):
3. Package Unit: Manufacturer: Deltak Model Number:
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: 250 mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **Units:**
4. Maximum Production Rate: **Units:**
5. Operating Capacity Comment (limit to 200 characters): The heat input rate given in Item 1 above is for both natural gas fuel and for #2 diesel. This number is reflective of 85 degrees Fahrenheit conditions.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule: hours/day days/week weeks/yr 8760 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.)

Emissions Unit ID 8

40 CFR 60.42b(d)(3) (oil only) 40 CFR 60.42b(j) (oil only) 40 CFR 60.43b(f) (oil only) 40 CFR 60.44b(a)4.i. (gas only) 40 CFR 60.45b(a) (oil only) 40 CFR 60.45b(j) (oil only) 40 CFR 60.46b(a) (gas only) 40 CFR 60.46b(d)(7) (gas only) 40 CFR 60.46b(d)(7) (oil only) 40 CFR 60.46b(f) (gas only) 40 CFR 60.47b(f) (oil only) 40 CFR 60.48b(a) (oil only) 40 CFR 60.48b(f) (gas only) 40 CFR 60.48b(h) (gas only) 40 CFR 60.49b(d) (gas only) 40 CFR 60.49b(d) (oil only)	40 CFR 60.49b(f) (oil only) 40 CFR 60.49b(h)(1) (oil only) 40 CFR 60.49b(r) (oil only) 40 C.F.R. 60.12 40 C.F.R. 60.13(b) 40 C.F.R. 60.13(c) 40 C.F.R. 60.13(d)(1) 40 C.F.R. 60.13(e) 40 C.F.R. 60.13(g) 40 C.F.R. 60.13(h) 40 C.F.R. 60.43b(g) 40 C.F.R. 60.7(b) 40 C.F.R. 60.7(f) 40 C.F.R. 60.8(c) 40 C.F.R. 60.8(e) 40 C.F.R. 60.8(f)	F.A.C. 62-204.800(7)(b)3. (state only) F.A.C. 62-204.800(7)(d) (state only) F.A.C. 62-210.650 F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-296.320(4)(b) (state only) F.A.C. 62-296.800(3)(a)3. (state only) F.A.C. 62-296.800(4)(a) F.A.C. 62-297.310(1) F.A.C. 62-297.310(2)(b) F.A.C. 62-297.310(3) F.A.C. 62-297.310(4)(a)1. F.A.C. 62-297.310(4)(a)2.c. F.A.C. 62-297.310(4)(b) F.A.C. 62-297.310(4)(c)	F.A.C. 62-297.310(4)(d) F.A.C. 62-297.310(4)(e) F.A.C. 62-297.310(5) F.A.C. 62-297.310(6)(a) F.A.C. 62-297.310(6)(c) F.A.C. 62-297.310(6)(d) F.A.C. 62-297.310(6)(e) F.A.C. 62-297.310(6)(f) F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4.b. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8)

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***8*

1. Identification of Point on Plot Plan or Flow Diagram: EU 8 (DB), stack 1
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 2GT-2 share the two emission points (stacks) utilized by CT 2GT-2.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-2 2. Duct burners in 2GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.85
14. Emission Point Comment (limit to 200 characters): CT 2GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU4 and EU8 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Emission Point Description and Type
Information for Facility-ID *1* **Emission Unit # :***8*

1. Identification of Point on Plot Plan or Flow Diagram: EU 8 (DB), stack 2
2. Emission Point Type Code (1,2,3,4) : 3
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): The duct burners located in HRSG 2GT-2 share the two emission points (stacks) utilized by CT 2GT-2.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 1. Combustion Turbine 2GT-2 2. Duct burners in 2GT-2 Heat Recovery Steam Generator
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 73 ft
7. Exit Diameter: 10.34 ft
8. Exit Temperature: 327.6 °F
9. Actual Volumetric Flow Rate: 1009847.1 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.957 North: 3277.855
14. Emission Point Comment (limit to 200 characters): CT 2GT-2 is a gas turbine capable of firing both nat. gas and #2 fuel oil. EU4 and EU8 both share two common emission points (stacks). Refer to the Attachment PPNFS_3.bmp for clarification.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *8* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in Heat Recovery Steam Generators 2GT-2 burning natural gas
2. Source Classification Code (SCC): 1-02-006-01
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.238
5. Maximum Annual Rate: 2085
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *8* Segment #:

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Duct burners in HRSG 2GT-2 burning distillate oil fuel.
2. Source Classification Code (**SCC**): 1-02-005-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 1.838
5. Maximum Annual Rate: 16100.88
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): The duct burners typically only fire natural gas fuel although they are currently permitted to fire distillate oil fuel as well.

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *8*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	EL
CO	NA	NA	NS
VOC	NA	NA	NS
PM	NA	NA	NS
PM10	NA	NA	NS
H133	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *8* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Nitrogen Oxides
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 50 lbs/hr 219 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.2 **Units** lb/mmBtu Reference: 40 CFR 60.44b(a)4.i.
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 0.2 lb/mmBtu x 250 mmBtu / hr = 50 lb / hour 50 lb/hr* 8760 hr/yr * 1 ton/2000 lb = 219 tons / yr
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emission rates are reflective of natural gas firing.

Information for Facility_ID: *1* **Emission Unit #:** *8* **Pollutant #:** *1*
Basis For Allowable Emission #: 1

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.2 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 50 lbs/hr 219 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **90** NOx emissions limit for natural gas or distillate oil firing [Rule 40 CFR 60.44b(a)(4)(i)]

Information for Facility_ID: *1* **Emission Unit #:** *8* **Pollutant #:** *1*
Basis For Allowable Emission #: 2

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Emissions limit required by rule
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.4 Units : lb/mmBtu
4. Equivalent Allowable Emissions: 100 lbs/hr 438 tons/yr
5. Method of Compliance: EPA Methods 7E & 3A (A.S.P. per Rule 62-297.620)
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **74** NOx emissions limit for residual oil firing [Rule 40 CFR 60.44b(a)(4)(ii)]

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *8*
Visible Emissions Limitation #: *1*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hr
4. Method of Compliance Code: EPA Method 9
5. Visible Emissions Comment (limit to 200 characters): Please refer to Condition of Certification No. 1.C.(ii)(a).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *8*
Visible Emissions Limitation #: *3*

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hr
4. Method of Compliance Code: DEP Method 9
5. Visible Emissions Comment (limit to 200 characters): Rule 62-210.700(1), F.A.C. allows up to 100% opacity for up to 2 hrs/24 hrs for startup, shutdown & malfunctions.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *8*
Continuous Monitor #: *2*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Carbon dioxide
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: Milton Roy Model Number: 3300 Serial Number: N4C0307T
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): The CO2 monitor provides % O2 data to the NOx monitor per 40 CFR 75 Appendix E, eqn E-3. The CO2 data is calculated using 40 CFR 75 Appendix G, eqn G-4, due to the absence of a flow monitor.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *8*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Nitrogen Oxides
3. CMS Requirement Code(R/O): RULE Rule / Other
4. Monitor Information: Manufacturer: TECO Model Number: 42 Serial Number: 42D-49809-284
5. Installation Date (DD-MON-YYYY): 11/01/94
6. Performance Specification Test Date (DD-MON-YYYY): 12/20/94
7. Continuous Monitor Comment (limit to 200 characters): Required by 40 CFR 75. Please note that EU8 and EU4 share common emission points and therefore share common emission monitors. The CO2 monitor provides percent O2 data to the NOx monitoring system in accordance with 40 CFR 75 Appendix E, equation E-3. Please note that this emission unit is a gas-fired unit, per 40 CFR 72.2.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *8*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s): Visible emissions (opacity)
3. CMS Requirement Code(R/O): OTHER Rule / Other
4. Monitor Information: Manufacturer: Lear Seigler Model Number: 1100M Serial Number: 1182
5. Installation Date (DD-MON-YYYY): 12/27/90
6. Performance Specification Test Date (DD-MON-YYYY): 03/25/96
7. Continuous Monitor Comment (limit to 200 characters): Not required by rule or permit; plant has elected to maintain devices for internal purposes.

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

Information for Facility-ID : *1* Emission Unit # : *8*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):

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

Information for Facility-ID : *1* Emission Unit # : *8*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU8_1.BMP Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU5_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : PPNU5_3.txt Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : PPNU5_4.BMP Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : NA Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU5_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU5_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : PPNU5_13.txt
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : NA
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

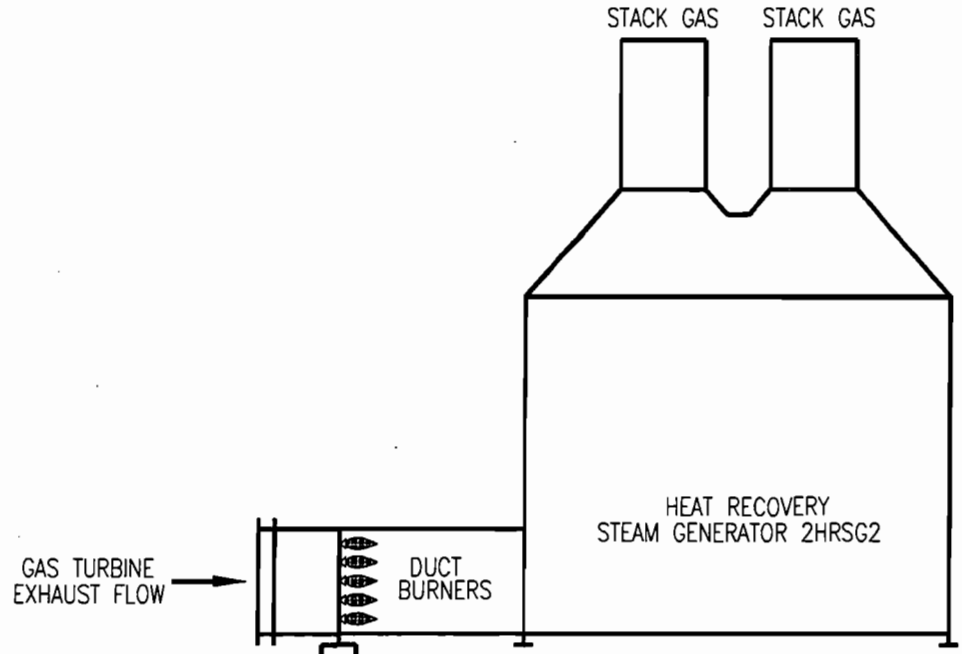
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU8_1.bmp



WALKDOWN INFORMATION				TECHNICAL ACCEPTANCE			
AS-BUILT INFORMATION	ORG	BY	DATE	ENGINEERING ORGANIZATION	ORG	BY	DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/28/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM PLANT–UNIT 2
SCALE: N/A	CAD FILE NAME: PN002151	TITLE: EMISSION UNIT FLOW DIAGRAM DUCTBURNERS ATTACHMENT NO. EU8
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002151	

DRAWING NUMBER	SHEET	REV
PPN1–M0109–YY	1 OF 1	0

FPGSYM/FPGBDR–A 9/90

Attachment PPNU8_12.txt
Heat Recovery Steam Generators (HRSG's)
Identification of Additional Applicable Requirements

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

1. The heat recovery steam generators shall fire fuel oil not exceeding 0.5 percent sulfur and natural gas. *FPL maintains records regarding the sulfur percentage of the fuel fired in the heat recovery steam generators.*

2. Visible emissions shall not exceed 20 percent opacity expect for one 6-minute period per hour during which opacity shall not exceed 27 percent. *FPL performs periodic EPA method 9 visible emission evaluations on these units, and maintains records to document opacity readings.*

3. Excess opacity resulting from startup or shut down is permitted, provided that the best operational practices to minimize emissions are adhered to. *FPL maintains opacity records and submits quarterly excess emission reports in which excess opacity events are documented.*

4. Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu heat input when natural gas or distillate oil is combusted or 0.4 lb/mmBtu heat input when residual oil is combusted. The nitrogen oxides standard applies at all times, including periods of startup, shutdown, or malfunction. *FPL utilized a CEM to document compliance with this limit.*

5. To determine compliance with the emissions limit for sulfur dioxide, the Permittee shall comply with the specification for the fuel oil as defined by the American society of testing and materials in ASTM D396-78. Quaterly reports based on such receipts shall be submitted to the Northeast District Office certifying that only oil containing no more than 0.5 weight percent sulfur or oil that has a sulfur dioxide emission rate that doesn't exceed 0.5 lb/mmBtu heat input. *FPL has submitted quarterly reports to the Department documenting the conformance to the ASTM standard specification.*

6. To determine compliance with the opacity limits, method 9 shall be used as required under 40 CFR & 60.8 rule. *FPL has conducted periodic method 9 visible emission evaluations. Records are available to the Department upon request.*

7. To determine compliance with the nitrogen oxides emissions limit, FPL shall conduct a performance test using EPA Reference Methods 7E and 3A. *FPL has conducted annual testing utilizing the reference methods specified. Records are available to the Department upon request.*

FPL has the records required by the above permit condition and such records are available to the Department for review.

8. Any change in the method of operation, fuels or equipment shall be submitted for approval to DER's bureau of Air Regulation. *FPL has not undertaken any such changes, but if such changes are contemplated, will notify the department accordingly.*

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *9*

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 Units? 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 a unregulated emissions unit.

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): **2**

[1] 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).

[2] 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.

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

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Auxiliary Boiler, EU 9
2. Emissions Unit Identification Number: Un5 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): N
5. Emissions Unit Major Group SIC Code: 049
6. Emissions Unit Comment (limit to 500 characters): The aux. boiler's operational schedule depends on the operation of units 1 & 2 (EU1 - EU4) & the need for electric power. The aux. boiler is generally used to supply steam during units 1 & 2 start-up, shutdown, and stand-by operations. The primary fuel is natural gas with distillate oil as a backup fuel.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY): 12/08/93

2. Long-term Reserve Shutdown Date (DD-MON-YYYY):

3. Package Unit:
   Manufacturer: VA- Power Model Number: Circulatic

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: 16.275 mmBtu/hr

2. Maximum Incineration Rate: lbs/hr
   tons/day

3. Maximum Process or Throughput Rate: **Units:**

4. Maximum Production Rate: **Units:**

5. Operating Capacity Comment (limit to 200 characters):
   The max. heat input reflects natural gas firing. The max. heat input on No. 2 fuel oil is 14.28 mmBtu/hr or 0.105Kgal/hr.Heat input rate was provided by the manufacturer VA -Power.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:
hours/day days/week
weeks/yr 8760 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.)

Emissions Unit ID 9

40 CFR 60.42c(d) 40 CFR 60.42c(g) 40 CFR 60.42c(h)(1) 40 CFR 60.44c(g) 40 CFR 60.45c(a)7. 40 CFR 60.46c(e) 40 CFR 60.48c(d) 40 CFR 60.48c(e) 40 CFR 60.48c(f) 40 CFR 60.48c(i) 40 C.F.R. 60.11(a) 40 C.F.R. 60.11(b) 40 C.F.R. 60.11(c)	40 C.F.R. 60.11(d) 40 C.F.R. 60.11(e)(2) 40 C.F.R. 60.12 40 C.F.R. 60.13(a) 40 C.F.R. 60.13(c) 40 C.F.R. 60.13(d)(1) 40 C.F.R. 60.13(d)(2) 40 C.F.R. 60.13(e) 40 C.F.R. 60.13(h) 40 C.F.R. 60.7(b) 40 C.F.R. 60.7(f) 40 C.F.R. 60.8(c) 40 C.F.R. 60.8(e)	40 C.F.R. 60.8(f) F.A.C. 62-204.800(7)(b)4. (state only) F.A.C. 62-204.800(7)(d) (state only) F.A.C. 62-210.650 F.A.C. 62-210.700 (1) F.A.C. 62-210.700 (2) F.A.C. 62-210.700 (3) F.A.C. 62-210.700 (4) F.A.C. 62-210.700 (6) F.A.C. 62-296.320(4)(b) F.A.C. 62-296.800(3)(a)4. F.A.C. 62-297.310(2)(b) F.A.C. 62-297.310(3)	F.A.C. 62-297.310(4)(a)2. F.A.C. 62-297.310(5) F.A.C. 62-297.310(7)(a)1. F.A.C. 62-297.310(7)(a)3. F.A.C. 62-297.310(7)(a)4. F.A.C. 62-297.310(7)(a)5. F.A.C. 62-297.310(7)(a)9. F.A.C. 62-297.310(8) F.A.C. 62-297.330 F.A.C. 62-297.340(1)(c) F.A.C. 62-297.340(1)(d) F.A.C. 62-297.340(1)(e) F.A.C. 62-297.340(1)(i) F.A.C. 62-297.345 (1) F.A.C. 62-297.345 (3) F.A.C. 62-297.350

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

Emission Point Description and Type

Information for Facility-ID *1* **Emission Unit # :***9*

1. Identification of Point on Plot Plan or Flow Diagram: EU-9 (Aux Blr)
2. Emission Point Type Code (1,2,3,4) : 1
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters): Not Applicable
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA
5. Discharge Type Code (D, F, H, P, R, V, W) : V
6. Stack Height: 45 ft
7. Exit Diameter: 2 ft
8. Exit Temperature: 550 °F
9. Actual Volumetric Flow Rate: 5786 acfm
10. Percent Water Vapor: 4.5 %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: ft
13. Emission Point UTM Coordinates: Zone: 17 East: 490.57 North: 3277.732
14. Emission Point Comment (limit to 200 characters):

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *9* Segment #: *1*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural gas burned in the auxiliary boiler
2. Source Classification Code **(SCC):** 1-02-006-02
3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.0155
5. Maximum Annual Rate: 135.78
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.0031
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to 200 characters): Natural gas is the main fuel burned in the auxiliary boiler. Distillate oil #2 is the backup fuel.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *9* Segment #: *2*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Diesel fuel burned in the auxiliary boiler
2. Source Classification Code **(SCC):** 1-02-005-02
3. SCC Units: Thousand gallons burned
4. Maximum Hourly Rate: 0.105
5. Maximum Annual Rate: 919.8
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): The max. annual rate above reflects 8,760 hours of operation per year.

G. EMISSIONS UNIT POLLUTANTS
(Regulated Emissions Units Only)

Information for Facility_ID: *1* **Emission Unit #:** *9*

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2	NA	NA	EL
NOX	NA	NA	NS
H095	NA	NA	NS
H014	NA	NA	NS
H162	NA	NA	NS
H107	NA	NA	NS
HAP	NA	NA	NS

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

Information for Facility_ID: *1* **Emission Unit #:** *9* **Pollutant #:** *1*

Pollutant Detail Information

1. Pollutant Emitted: Sulfur Dioxide
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 7.26 lbs/hr 31.8 tons/yr
4. Synthetically Limited? (Yes/No): N
5. Range of Estimated Fugitive/Other Emissions: (1, 2, 3) : to tons/yr
6. Emission Factor: 0.5 **Units** percent sulfur oil Reference: Site Certification # 74-01
7. Emissions Method Code: (0, 1, 2, 3, 4, 5): 0 [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): 725.6 lb/hr oil x 0.5% S oil x 2 lb SO2/lb S = 7.26 lb/hour 7.26 lb/hr x 8760 hr / yr / 2,000 lb/ton = 31.8 tons per year
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Potential emissions based on distillate oil firing.

Information for Facility_ID: *1* **Emission Unit #:** *9* **Pollutant #:** *1*
Basis For Allowable Emission #: *1*

Allowable Emissions (Pollutant identified on front page)

1. Basis for Allowable Emissions Code: Required or assumed by permittee for other reasons.
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 7.26 Units : lb / hr
4. Equivalent Allowable Emissions: 7.26 lbs/hr 31.8 tons/yr
5. Method of Compliance: Fuel sampling and analysis
6. Pollutant Allowable Emissions Comment **(Desc. of Related Operating Method/Mode)** (limit to 200 characters)**:** **0**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *9*
Visible Emissions Limitation #: *2*

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hr
4. Method of Compliance Code: Annual visible emission evaluation (EPA Method 9).
5. Visible Emissions Comment (limit to 200 characters): VE limit based on rule 62-296.320(4)(b). If unit operates < 400 hr/yr, no compliance test is req'd, [Rule 62-297.310(7)(a)3.b.]

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *9*
Visible Emissions Limitation #: *3*

2

1. Visible Emissions Subtype: VE100
2. Basis for Allowable Opacity Code(R/O): RULE [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 100 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): Excess opacity is allowed during periods of startup, shutdown, and malfunction if the period of excess emissions is minimized and Best Operating Practices (BOP) are complied with.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *9*
Continuous Monitor #: *1*

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s):
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:
5. Installation Date (DD-MON-YYYY):
6. Performance Specification Test Date (DD-MON-YYYY):
7. Continuous Monitor Comment (limit to 200 characters): Continuous monitoring equipment is not required to be installed, operated or maintained on the auxiliary boiler.

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

Information for Facility-ID : *1* Emission Unit # : *9*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	C
SO2	C
NO2	C

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):
The yearly emission for pollutants SO2 and NO2 are 32.65tons/yr and 9.2tons/yr respectively.

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

Information for Facility-ID : *1* Emission Unit # : *9*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU9_1.bmp Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU9_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : Not Applicable Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : Not Applicable Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : Not Applicable Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU9_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : NA Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : NA Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : NA Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : PPNU9_10.txt
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : NA
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : Not applicable
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : Not Applicable
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

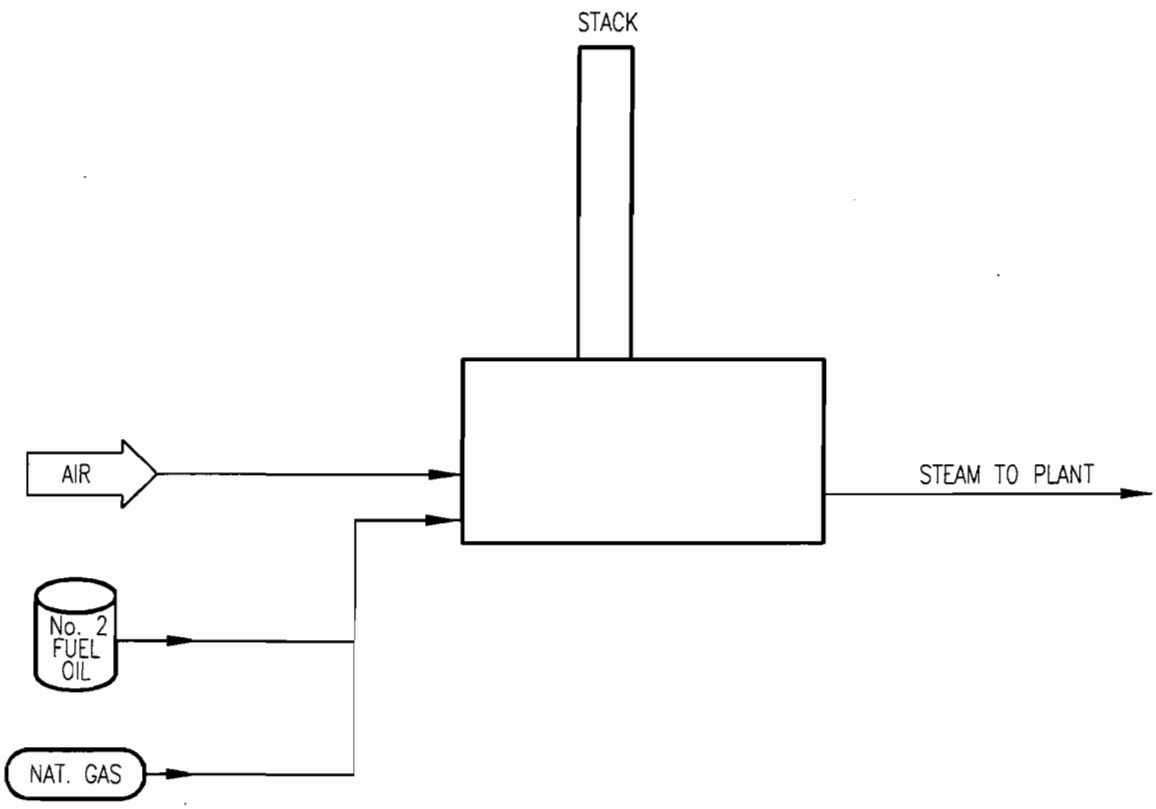
Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT: PPNEU9_1.bmp



TECHNICAL ACCEPTANCE
ENGINEERING ORGANIZATION: ORG | BY | DATE

WALKDOWN INFORMATION
AS-BUILT INFORMATION: ORG | BY | DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/27/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM SITE-UNIT 1 & 2
SCALE: N/A	CAD FILE NAME: PN002152	TITLE: EMISSION UNIT FLOW DIAGRAM AUXILIARY BOILER ATTACHMENT NO. EU9
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002152	

DRAWING NUMBER: PPN1-M0110-YY

SHEET: 1 OF 1 | REV: 0

FPGSYM/FPGBDR-A 9/90

Fuel Analysis
Natural Gas Analysis (typical)[2]

Parameter	Typical value	Max value
Specific gravity(@ 60° F)	0.887	none
Heat content (Btu/cu ft)	950 - 1124	none
% sulfur (grains/CCF)	0.43[1]	1.00
% nitrogen (by volume)	0.8	none
% ash	negligible	none

*Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

(1) Data from laboratory analysis

(2) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU9_2.txt

Fuel Analysis
No. 2 Distillate oil (typical)[3]

Parameter	Typical value	Specifications
API gravity (@ 60 F)	35.0[2]	30 - 40[1]
Heat content (MBtu/bbl)	5,700 - 5,800[2]	none
% sulfur	0.3 - 0.5[1]	0.5 maximum[1]
% nitrogen	no specification	none
% ash	<0.01[2]	0.01[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU9_6.txt

Procedures for Startup / Shutdown

The auxiliary boiler is a primary component of the auxiliary steam system at the combined-cycle units. The function of the auxiliary steam system is to produce and convey steam to both steam turbine steam seal systems during startup and emergency situations.

Startup for the auxiliary boiler begins with "lighting off" of the machine on natural gas fuel. As the water heats up in the boiler tubes it will start to steam. When the steam pressure and temperature reach acceptable conditions, the steam is conveyed to the steam seal regulator of the steam turbine.

Shutdown is performed when the steam seals on the steam turbine become self-sealing. Shutdown is performed by shutting off the natural gas fuel supply to the auxiliary boiler.

Best Operating Practices include periodic monitoring of the visible emissions from the auxiliary boiler to ensure that the 20% opacity limitation is not exceeded. Built-in safeguards monitor the main flame and initiate shutdown in the event of loss of flame. All efforts to minimize both the level and duration of excess emissions are undertaken.

Attachment PPNU9_12.txt

Identification of Additional Applicable Requirements

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

1. The auxiliary boiler shall not fire fuel oil that contains more than 0.7 percent sulfur and the stack emissions shall not exceed those specified in chapter 17-2.600(6).

FPL maintains records regarding the sulfur percentage of the fuel fired in the auxiliary boiler. However, EPA Rule 40 CFR 60.44c(g) limits the percent sulfur to 0.5% for facilities that demonstrate compliance by fuel shipment sampling and analysis. ***Therefore, this specific condition is requested to be deleted.***

III. EMISSIONS UNIT INFORMATION

Information for Facility - ID : *1* Emission Unit # : *10*

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 Units? Check one:

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

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

2. Single Process, Group Processes, or Fugitive Only?

Enter The Number (1-3): **2**

[1] 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).

[2] 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.

[3] 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): Unregulated emission units
2. Emissions Unit Identification Number: Un6 (No Corresponding ID or Unknown)
3. Emission Unit Status Code: (A or C) : A
4. Acid Rain Unit? (Y/N): N
5. Emissions Unit Major Group SIC Code: 4911
6. Emissions Unit Comment (limit to 500 characters): This emission unit includes all unregulated emission sources at the Putnam facility, including a trailer-mounted emergency diesel generator which may be used to provide backup power to the combustion turbines in the event of a catastrophic loss of power, and a fire protection diesel pump. Please refer to Attachment PPN - FW for a complete listing of unregulated trivial and de minimis emission units.

Emissions Unit Control Equipment

A. Control Equipment # :

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

B. Control Equipment # :

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

C. Control Equipment # :

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

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units)

Emissions Unit Details

1. Initial Startup Date (DD-MON-YYYY):
2. Long-term Reserve Shutdown Date (DD-MON-YYYY):
3. Package Unit: Manufacturer: Detroit Diesel Model Number: 16V-71N
4. Generator Nameplate Rating: 0.5 MW
5. Incinerator Information: Dwell Temperature: °F Dwell Time: seconds Incinerator Afterburner Temperature: °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: 4.64 mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **Units:**
4. Maximum Production Rate: **Units:**
5. Operating Capacity Comment (limit to 200 characters): Information provided is for the emergency diesel generator, which is limited to 400 hr / yr of operation. Other emission sources in this emission unit section may operate up to 8760 hr / yr.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule: hours/day days/week weeks/yr 8760 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.)

Emissions Unit ID 10

F.A.C. 62-210.700(1)	F.A.C. 62-210.700(4)	F.A.C. 62-210.700(5)	F.A.C. 62-210.700(6) F.A.C. 62-296.320(4)(b)

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

Emission Point Description and Type
Information for Facility-ID *1* **Emission Unit # :***10*

1. Identification of Point on Plot Plan or Flow Diagram: EU10- Fire Pump Diesel Engine
2. Emission Point Type Code (1,2,3,4) : 1
3. Descriptions of Emissions Points Comprising this Emissions Unit (limit to 100 characters):
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) : H
6. Stack Height: 6 ft
7. Exit Diameter: 0.5 ft
8. Exit Temperature: 980 °F
9. Actual Volumetric Flow Rate: 3190 acfm
10. Percent Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm
12. Nonstack Emission Point Height: 17 ft
13. Emission Point UTM Coordinates: Zone: 17 East: 443.466 North: 3277.785
14. Emission Point Comment (limit to 200 characters): Data in field 8 and 9 were provided by the manufacturer.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *10* Segment #: *1*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): EU10- Fire Pump Diesel Engine burning No.2 distillate oil.
2. Source Classification Code **(SCC):** 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 0.0244
5. Maximum Annual Rate: 213.744
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 0.5
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): Refer to attachment PPNU11_2.TXT for details on No.2 fuel oil analysis.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *10* Segment #: *1*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Diesel fuel burned in the mobile emergency diesel generator
2. Source Classification Code **(SCC):** 2-02-001-02
3. SCC Units: thousand gallons burned
4. Maximum Hourly Rate: 0.034
5. Maximum Annual Rate: 297.84
6. Estimated Annual Activity Factor:
7. Maximum Percent Sulfur: 1
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters):

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *10* Segment #: *1*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Above-ground tank #D - Working and breathing loss
2. Source Classification Code **(SCC):** 4-03-010-21
3. SCC Units: Thousand gallons transferred or handled
4. Maximum Hourly Rate:
5. Maximum Annual Rate:
6. Estimated Annual Activity Factor: 234796835
7. Maximum Percent Sulfur:
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): Breathing loss = 2729.81 lbs VOC / yr (per EPA Tanks2 program) Working loss = 8777.56 lbs VOC / yr (per EPA Tanks2 program) Total est. losses = 5.75 TPY, using estimated activity factor given above.

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

Segment Description and Rate:

Information for Facility_ID :*1* Emission Unit #: *10* Segment #: *2*

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Above-ground tank #E - Working and breathing loss
2. Source Classification Code **(SCC):** 4-03-010-21
3. SCC Units: Thousand gallons transferred or handled
4. Maximum Hourly Rate:
5. Maximum Annual Rate:
6. Estimated Annual Activity Factor: 234644899
7. Maximum Percent Sulfur:
8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): Breathing loss = 544.63 lbs VOC / yr (per EPA Tanks2 program) Working loss = 3140.33 lbs VOC / yr (per EPA Tanks2 program) Total est. losses = 1.84 TPY, using estimated activity factor given above.

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *10*
Visible Emissions Limitation #:

1. Visible Emissions Subtype: VE20
2. Basis for Allowable Opacity Code(R/O): OTHER [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: min/hr
4. Method of Compliance Code:
5. Visible Emissions Comment (limit to 200 characters): The variety of equipment in this EU may be subject to the general visible emission standard, if they emit PM.

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Information for Facility-ID : *1* Emission Unit #: *10*
Continuous Monitor #:

Continuous Monitoring System

1. Parameter Code: 2. Pollutant(s):
3. CMS Requirement Code(R/O): Rule / Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:
5. Installation Date (DD-MON-YYYY):
6. Performance Specification Test Date (DD-MON-YYYY):
7. Continuous Monitor Comment (limit to 200 characters): Continuous monitoring equipment is not required to be installed, operated, or maintained on the mobile emergency diesel generator.

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

Information for Facility-ID : *1* Emission Unit # : *10*

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.

Select (1-5) : 5

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

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

Select (1-5) : 5

[1] 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. Final determination is that emissions unit consumes increment.

[2] 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 17-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

[3] 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. Preliminary determination is that baseline emissions are zero, and emissions unit consumes increment.

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

[5] 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.

3. Increment Consuming/Expanding Code: (C, E, U- unkown):

PM	U
SO2	U
NO2	U

4. Baseline Emissions:

PM	lbs/hr	tons/yr
SO2	lbs/hr	tons/yr
NO2	tons/yr	

5. PSD Comment (limit to 200 characters):

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

Information for Facility-ID : *1* Emission Unit # : *10*

Supplemental Requirements for All Applications

1. Process Flow Diagram : PPNU10_1.bmp Attached Document ID / Not Applicable / Waiver Requested
2. Fuel Analysis or Specification: PPNU10_2.txt Attached Document ID / Not Applicable / Waiver Requested
3. Detailed Description of Control Equipment : Not Applicable Attached Document ID / Not Applicable / Waiver Requested
4. Description of Stack Sampling Facilities : Not Applicable Attached Document ID / Not Applicable / Waiver Requested
5. Compliance Test Report : Not Applicable Attached Document ID / Previously submitted, Date / Not Applicable
6. Procedures for Startup and Shutdown : PPNU10_6.txt Attached Document ID / Not Applicable
7. Operation and Maintenance Plan : Not Applicable Attached Document ID / Not Applicable
8. Supplemental Information for Construction Permit Application : Not Applicable Attached Document ID / Not Applicable
9. Other Information Required by Rule or Statute : Not Applicable Attached Document ID / Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation : Not Applicable
Attached Document ID / Not Applicable

11. Alternative Modes of Operation (Emissions Trading) : Not Applicable
Attached Document ID / Not Applicable

12. Identification of Additional Applicable Requirements : Not Applicable
Attached Document ID / Not Applicable

13. Enhanced Monitoring Plan : Not Applicable
Attached Document ID / Not Applicable

14. Acid Rain Permit Application

Acid Rain Application - Phase II (Form No. 17-210.900(1)(a))
Attached Document ID: Not Applicable

Repowering Extension Plan (Form No. 17-210.900(1)(b))
Attached Document ID: Not Applicable

New Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Retired Unit Exemption (Form No. 17-210.900(1)(c))
Attached Document ID: Not Applicable

Not Applicable

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

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

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

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

UNITS 1 & 2 COMBINED CYCLE POWER BLOCK

EQUIPMENT/SYSTEMS	SIZE/SOURCE
Boiler Feed	Deaerator Relief Valves L.P. Drum Relief Valves H.P. Drum Relief Valves Relief Valves PSV-1C 3/4" Vents 1" Vents
Main Steam	Relief Valves PSV-3 1" Vents 2" Air Ejector Condenser Vent 6" Hogging Ejector Vent Relief Valve PSV-4 4" Rupture Disk Vent 5" Superheater Steam Relief Valve Vent
Condensate	Condensate Storage Tank Vent Gland Steam Condenser Exhauster 3/4" Vents
River Water	3" Air Release Valves 1" Vents 3/4" Vents
Fire Protection	Fire Protection Tank (100,000 Gal.) 8" Vent Liquid Foam Storage Tank Vent (2,000 Gal.) Fire Pump Air Release Diesel Engine Exhaust 1" Vents
Potable/Service Water	Clearwell 1" Vents
Auxiliary Steam Supply	4" Condensate Return Units Vent
Demineralized Water	1" Vents
Fuel Oil Unloading System	#6 F.O. Sample Tank Vent

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

UNITS 1 & 2 COMBINED CYCLE POWER BLOCK

EQUIPMENT/SYSTEMS	SIZE/SOURCE
H.R.S.G.	Relief Valves PSV-2C PSV-2D PSV-1C 10" Blowdown Tank Vent 10" Vent Relief Valve PSV-16
Lube Oil	Lube Oil Reservoir Vapor Extractor Gen. Loop Seal Reservoir Vapor Extractor
Combustion	Valve FSC-458A,B Discharge
Seal Oil	Generator Bearing & Seal Drain Vapor Extractor Turbine Oil Reservoir Vapor Extractor
Liquid Fuel	Liquid Fuel H.P. Filter Vent Valve Liquid Fuel L.P. Filter Vent Valve
Circulating and Auxiliary Water	Main Condenser Air Release Valves
#6 Fuel Oil	1500 Gallon Drain Collection Tank 4" Vent Underground Relief Valve Blowdown Tank Relief Valve 2500 Gallon 1" Vents
#2 Fuel Oil	Underground Drain Collection Tank 4" Vent With Flame Arrestor 1500 Gallon 1" Vents 12" Vent with Breather Valve for Fuel Storage Tank "E" (25,000 BBL.) 12" Vent with Breather Valve for Fuel Storage Tank "D" (125,000 BBL.)
Cooling Tower	Tower Vapors

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

WASTE WATER TREATMENT

EQUIPMENT/SYSTEMS	SIZE/SOURCE
Plant Effluent	Effluent System Holding Tank Vent Effluent Oil Slop Tank 4" Vent (2,500 Gal.) 1" Vents
Basins	Sludge Drying Basins 161,800 Gal. Oily Waste Basin 320,000 Gal. Solid Settling Basins 322,500 Gal. Neutralization Basins 576,000 Gal. (East) Evaporation Percolating Basin 4,985,000 Gal. (West) Evaporation Percolating Basin 7,122,000 Gal.
Water Treatment	Oily Waste Water Coagulator Tank Oily Waste Holding Tank Vent (125,000 BBL.)

ANCILLARY FACILITIES

EQUIPMENT/SYSTEMS	SIZE/SOURCE
Auxiliary Boiler	4" Disch. for Boiler Drum Relief Valves 24" Stack 6" Blowdown Tank Disch. 2" Deaerator Relief Valve Disch. 24" Building Exhaust Fan
Air Skid	Air Receiver Relief Valve
Gas Metering Area A	1/2" Vents 8" Control Vent 1,000 Gal. Petroleum Tank with 2" Vent to Atmosphere 1/2" Scrubber Vent
Bulk Gas (Hydrogen)	Relief Valve
Bulk Gas (Nitrogen)	Relief Valve
Bulk Gas (Carbon Dioxide)	Relief Valve

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

ANCILLARY FACILITIES

EQUIPMENT/SYSTEMS	SIZE/SOURCE
Used Oil Collection Station	Two Aboveground Used Oil Tank Vent (500 Gal.)
Control Auxiliary and Miscellaneous Buildings Portable and Sanitary	Sanitary Vents
Recreational Pavilion	Kitchen Exhaust Fan Charcoal Grill
Service Building H.V.A.C.	Roof Mounted Exhaust Fans Lab Room Exhaust Fans Bathroom Exhaust Fans
Miscellaneous Buildings H.V.A.C.	Vent/Exhaust Systems for: Service Building Construction Building Communications Building I & E Building Gardener's Shack Overhaul Building Oil & Paint Warehouse Welding Shop Switchyard Building Chemical Storage Building Storage Building M.C.C. Enclosure
Control Building H.V.A.C.	Vent/Exhaust Systems for: Women's Toilet Men's Toilet

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

MISCELLANEOUS FACILITIES ABANDONED

EQUIPMENT/SYSTEMS	SIZE/SOURCE
Auxiliary Boiler	Stack
Fuel Oil	"E" Storage Tank 25,000 BBL "D" Storage Tank 125,000 BBL. "F" Storage Tank 125,000 BBL. "G" Storage Tank 125,000 BBL.
Hurricane Supplies	Two Coleman powermate generators 5000 W, 10 hp, gas-powered

Miscellaneous Activities
Home heating and comfort heating with a gross maximum heat output of less than one million BTU/hr.

Internal combustion engines in boats, aircraft and vehicles used for transportation of passengers or freight

Vacuum pumps used in laboratory operations

Equipment used for steam cleaning

Belt or drum sanders having a total sanding surface of five square feet or less and other equipment used exclusively on wood or plastics or their products having a density of 20 pounds per cubic foot or more.

Equipment used exclusively for space heating, other than boilers

Laboratory equipment used exclusively for chemical or physical analysis

Bulk Gas
Storage Cylinders

Miscellaneous Activities
Plant Grounds Maintenance

ATTACHMENT PPN - FW

LIST OF UNREGULATED TRIVIAL & DE MINIMIS EMISSION UNITS

Routine Maintenance/Repair Activities
Non-Halogenated Solvent Cleaning Operations

Use of spray cans and solvents for routine maintenance activities

Internal Combustion Engines Which Drive Compressors, Generators, Water Pumps or other Auxiliary Equipment

Transformers, Switches and Switchgear, Processing & Venting

Electrically Heated Equipment Used for Heat Treating, Tracing, Drying, Soaking, Case Hardening or Surface Conditioning

Air Compressors and Centrifuges Used for Compressing Air

Storage of Product in Sealed Containers

Miscellaneous Mobile Vehicle Operation
Cars, Light Trucks, Heavy duty Trucks, Back Hoes, Tractors, Forklifts, Cranes, Etc.

Miscellaneous Mobile Equipment Operation
Compressors, Chain Saws, Small Generators, (<100KW) Welding Machines Electric Saws & Drills, Etc.

Laundry dryers, extractors, or tumblers for fabrics cleaned with only water solutions of bleach or detergents

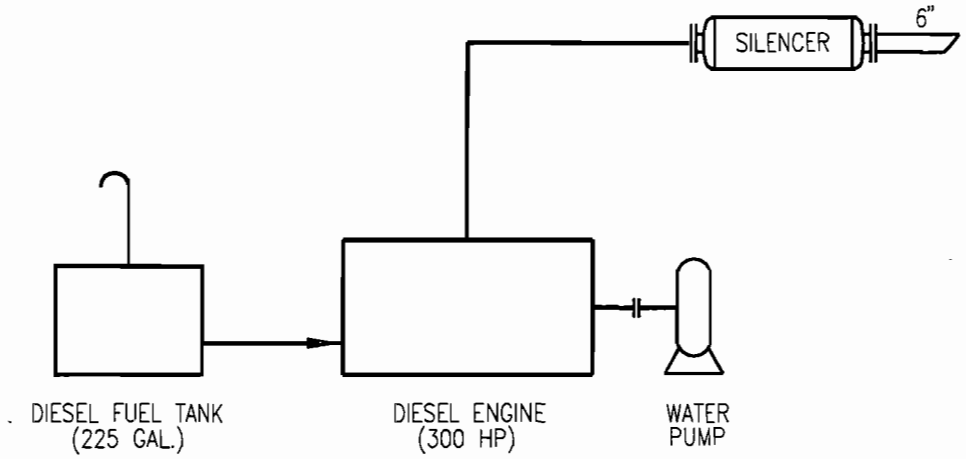
Fire & Safety Equipment

Surface coating facilities in ozone attainment areas (provided that 6.0 gallons of coatings per day are applied)

Degreasing units using heavier-than-air vapors exclusively, except any such unit using or emitting any substance classified as a hazardous air pollutant

Use of solvent and spray cans for maintenance activities

ATTACHMENT: PPNU11_1.bmp



WALKDOWN INFORMATION				TECHNICAL ACCEPTANCE			
AS-BUILT INFORMATION	ORG	BY	DATE	ENGINEERING ORGANIZATION	ORG	BY	DATE

BAR CODE

REV	DATE	REVISION DESCRIPTION	PWB BY	PWB CH	CSP COR	CSP APR	ETS ORG
0	7/27/95	ISSUED FOR TITLE V PERMIT					

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
YY	M	PUTNAM-UNIT 1 & 2
SCALE: N/A	CAD FILE NAME: PN002154	TITLE: EMISSION UNIT FLOW DIAGRAM DIESEL FIRE PUMP ATTACHMENT NO. EU11
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME: PN002154	

DRAWING NUMBER	SHEET	REV
PPN1-M0112-YY	1 OF 1	0

FPGSYM/FPGBDR-A 9/90

Attachment PPNU10_2.txt

Fuel Analysis
No. 2 Distillate oil (typical)[3]

Parameter	Typical value	Specifications
API gravity (@ 60 F)	35.0[2]	30 - 40[1]
Heat content (MBtu/bbl)	5,700 - 5,800[2]	none
% sulfur	0.3 - 0.5[1]	0.5 maximum[1]
% nitrogen	no specification	none
% ash	<0.01[2]	0.01[1]

Footnotes:

(1) Data taken from FPL fuel specifications.

(2) Data taken from laboratory analysis.

(3) The values are "typical" based upon the following:
- Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Attachment PPNU10_6.txt

Procedures for Startup / Shutdown

The emergency diesel generator is the main backup emergency electrical power supply component for the power plant. The function of the emergency diesel generator is to supply electric power to key power plant equipment during emergency loss-of-power situations. This equipment is typically test-run on a monthly basis for 1 to 2 hours to ensure that it will function properly when needed in an emergency.

Startup for the emergency diesel generator begins with actuating a switch which operates an air start motor on the diesel engine which "turns over" the diesel engine until ignition of the diesel fuel commences.

Shutdown is performed when the normal electric power supply to plant equipment is restored. Shutdown is performed by shutting off the diesel fuel supply to the emergency diesel generator.

Best Operating Practices include proper maintenance of the diesel engines by trained personnel on the generating unit, and the purchase of diesel fuel that also meets strict specifications. On occasion, maintenance personnel from the diesel generator manufacturer may be utilized to perform more extensive overhaul work.

If excess emissions are suspected during operation of the emergency diesel, appropriate measures to minimize the duration of the event may include shutting down the equipment and investigating the cause of the opacity.

Attachment PNU10_10.txt

Alternative Methods of Operation

The diesel generators which are included in this emission unit section will be operated up to 400 hours per year, on an as-needed basis, to supply power to essential plant equipment. They will be test-started on a periodic basis, typically once per month, to ensure operability when required.

The fuel storage tanks may be used to stored distillate oil or, on occasion, Black Liquor, a byproduct from the paper pulping process, under an agreement with Georgia Pacific Paper company.