HARDEE POWER STATION
SIMPLE-CYCLE COMBUSTION TURBINE CT2B
TITLE V OPERATION PERMIT APPLICATION

Prepared for:

TECO POWER SERVICES

HARDEE POWER PARTNERS

Tampa, Florida

Prepared by:

ECT

Environmental Consulting & Technology, Inc.

3701 Northwest 98th Street

Gainesville, Florida 32606

ECT No. 001100-0100

January 2001

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INTRODUCTION

Hardee Power Partners, Limited (HPP) operates an electric generation facility located approximately 9 miles northwest of Wauchula in Hardee County, Florida. Prior to May 2000, the Hardee Power Station (HPS) was comprised of two combined-cycle General Electric (GE) 7EA combustion turbines (CT1A and CT1B), one simple-cycle GE 7EA combustion turbine (CT2A), fuel oil storage, and ancillary support equipment. The combined-cycle combustion turbine (CT) module includes one unfired heat recovery steam generator (HRSG) for each CT and one common steam turbine (ST). The facility utilizes pipeline natural gas as its primary fuel source with No. 2 distillate fuel oil serving as a backup fuel.

An application for a Title V Air Operation Permit for HPS was submitted to the Florida Department of Environmental Protection (FDEP) in June 1996. In response, FDEP issued Final Permit No. 0490015-001-AV with an effective date of June 20, 1999. Permit No. 0490015-001-AV expires on June 20, 2004.

In June 1999, an Air Construction Permit application was submitted to FDEP requesting approval to install and operate an additional simple-cycle GE 7EA CT (CT2B). In response to this application, FDEP issued Prevention of Significant Deterioration (PSD) Permit No. PSD-FL-140A on October 8, 1999. The Florida Power Plant Siting Act (PPSA) Certification PA 89-25 was subsequently modified on August 21, 2000, to include CT2B.

Unit CT2B commenced initial operations in May 2000. Emissions performance testing, as required by Permit No. PSD-FL-140A, Section II., Condition No. 29, was conducted on May 17, 2000 (for natural gas-firing) and during May 30 through June 1, 2000 (for distillate fuel oil-firing). The initial emissions performance testing demonstrated that Unit CT2B was operating in compliance with all applicable permit emission limits. A report of the initial performance testing was submitted to FDEP's Southwest District Office on July 12, 2000.

Permit No. PSD-FL-140A, Section II, Condition No. 12 notes that a Title V operation permit is required for regular operation of the permitted emissions unit (i.e., Unit CT2B) and requires HPP to "apply for and receive a Title V operation permit prior to expiration of this permit". This permit application, using DEP Form No. 62-210.900(1), Application for Air Permit—Title V Source, constitutes HPP's application to revise Title V Final Permit No. 0490015-001-AV to include new unit CT2B pursuant to the requirements of Permit No. PSD-FL-140A and Chapter 62-213, F.A.C.

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Hardee Power Partners, Ltd.**	
2. Site Name: **Hardee Power Station**	
3. Facility Identification Number: **0490015** [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **3.5 mi. north of State Road 62 on County Road 663** City: **Fort Green Springs** County: **Hardee** Zip Code: **33834**	
5. Relocatable Facility? [ ] Yes [✔] No	6. Existing Permitted Facility? [✔] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Paul L. Carpinone, P.E.** **Director, Environmental Safety & Fuels**
2. Application Contact Mailing Address: Organization/Firm: **TECO Power Services Corporation** Street Address: **702 North Franklin Street** City: **Tampa** State: **FL** Zip Code: **33602**
3. Application Contact Telephone Numbers: Telephone: **(813)228 – 4858** Fax: **(813) 228-1308**

Application Processing Information (DEP Use)

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

Purpose of Application

Air Operation Permit Application

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

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

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

Current construction permit number: _____

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

Current construction permit number: **PSD-FL-140(A) / PA89-25**

Operation permit number to be revised: **0490015-001-AV**

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

Operation permit number to be revised/corrected: _____

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

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

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

[ ] Air construction permit to construct or modify one or more emissions units.

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   John T. Duff, Vice President – Power Operations

2. Application Contact Mailing Address:
   Organization/Firm: **Hardee Power Partners, Ltd.**
   Street Address: **P.O. Box 111**
   City: **Tampa** State: **FL** Zip Code: **33601-0111**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(813) 228-1381** Fax: **(813) 228-1360**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [✔], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   Signature Date 01/18/01

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Thomas W. Davis**
   Registration Number: **36777**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Environmental Consulting & Technology, Inc.**
   Street Address: **3701 Northwest 98th Street**
   City: **Gainesville** State: **FL** Zip Code: **32606**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 332-0444** Fax: **(352) 332-6722**

4. Professional Engineer Statement:

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

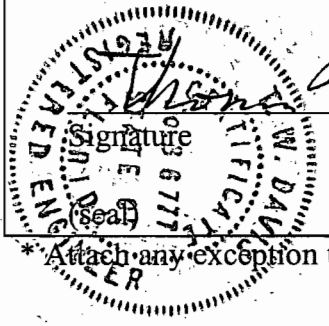
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions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

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [✔], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [✔], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.



Signature

1/16/01
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
004	Combustion Turbine 2B	N/A	N/A

Application Processing Fee

Check one: [ ] Attached - Amount: $_____ [✔] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Project consists of one nominal 75-MW General Electric 7121 7EA simple cycle combustion turbine generator (CTG) referred to as CT2B. The primary fuel for CT2B is pipeline quality natural gas with low-sulfur, distillate fuel oil serving as a backup fuel. Construction and initial operation of CT2B was authorized by Department Permit No. PSD-FL-140A / PA89-25 issued on October 8, 1999 and expiring on May 1, 2001.

CT2B was constructed as described in the Air Construction Permit Application submitted to the Department in June 1999.

2. Projected or Actual Date of Commencement of Construction: **December 1999**

3. Projected Date of Completion of Construction: **Not Applicable**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **404.80** North (km): **3,057.40**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): Longitude (DD/MM/SS):			
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	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: **William F. O'Brien, General Manager – Operations**
2. Facility Contact Mailing Address: Organization/Firm: **Hardee Power Partners, Ltd.** Street Address: **County Road 663** City: **Fort Green Springs** State: **FL** Zip Code: **33834**
3. Facility Contact Telephone Numbers: Telephone: **(863) 375-4587** Fax: **(863) 375-2092**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [✔] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [✔] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [✔] One or More Emissions Units Subject to NSPS?	
7. [ ] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	

List of Applicable Regulations

See Attachment A-1 of June 1999 Air Construction Permit Application.

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
NOX	**A**	**N/A**	**N/A**	**N/A**	
SO2	**A**	**N/A**	**N/A**	**N/A**	
CO	**A**	**N/A**	**N/A**	**N/A**	
PM10	**A**	**N/A**	**N/A**	**N/A**	
PM	**A**	**N/A**	**N/A**	**N/A**	
SAM	**A**	**N/A**	**N/A**	**N/A**	
VOC	**A**	**N/A**	**N/A**	**N/A**	
PB	**B**	**N/A**	**N/A**	**N/A**	
H106	**A**	**N/A**	**N/A**	**N/A**	**Hydrochloric Acid**
H107	**A**	**N/A**	**N/A**	**N/A**	**Hydrofluoric Acid**
H113	**A**	**N/A**	**N/A**	**N/A**	**Manganese Cmpds.**
H133	**A**	**N/A**	**N/A**	**N/A**	**Nickel Cmpds.**
H148	**A**	**N/A**	**N/A**	**N/A**	**Phosphorus**
HAPS	**A**	**N/A**	**N/A**	**N/A**	**Total HAPs**

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **See Figure 2-1 of June 1999 Air Construction Permit Application**
2. Facility Plot Plan: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **See Figure 2-2 of June 1999 Air Construction Permit Application**
3. Process Flow Diagram(s): [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **See Figure 2-3 of June 1999 Air Construction Permit Application**
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **See Attachment A-2 of June 1999 Air Construction Permit Application**
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [✔] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID: [✔] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

Items 8. through 15. above previously submitted – see Hardee Power Station Title V permit application.

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

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

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

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

2. Regulated or Unregulated Emissions Unit? (Check one)

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

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

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of one General Electric (GE) 7121 7EA simple-cycle combustion turbine generator (CTG) CT2B having a nominal rating of 75 megawatts (MW). The primary fuel for CT2B is pipeline quality natural gas with low-sulfur, distillate fuel oil serving as a backup fuel.

4. Emissions Unit Identification Number: [ ] No ID
ID: **004 (CT2B)** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**May 2000**	**49**	[✔]

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

Emissions Unit Control Equipment

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

   NO_x Controls

   Dry low-NO_x combustors (natural gas-firing)
   Water injection (distillate fuel-oil firing)

2. Control Device or Method Code(s): **25 (dry low-NO_x), 28 (water injection)**

Emissions Unit Details

1. Package Unit:
   Manufacturer: **General Electric** Model Number: **PG7121 (7EA)**
2. Generator Nameplate Rating: **75** MW **(nominal)**
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**950 (LHV)**	mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input is lower heating value (LHV) at 100 percent load, 59°F, fuel oil-firing operating conditions. Heat input will vary with load, fuel type, and ambient temperature.

CTG CT2B will operate at up to 8,760 and 876 hours per year when firing natural gas and distillate fuel oil, respectively.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment A-1 of the June 1999 Air Construction Permit Application.

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **CT2B**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **85** feet	7. Exit Diameter: **14.8** feet
8. Exit Temperature: **999** °F	9. Actual Volumetric Flow Rate: **1,465,518** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **Stack temperature and flow rate are at 100 percent load, 59°F, and natural gas-firing operating conditions. Stack temperature and flow rate will vary with load, fuel type, and ambient temperature.** **Stack exit is a rectangular 9 ft by 19 ft. Equivalent diameter is 14.8 ft.**		

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

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Combustion turbine fired with pipeline quality natural gas.		
2. Source Classification Code (SCC): **20100201**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.998**	5. Maximum Annual Rate: **8,742.5**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,051**
10. Segment Comment (limit to 200 characters): **Fuel heat content (Field 9) represents higher heating value (HHV).**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Combustion turbine fired with distillate fuel oil.		
2. Source Classification Code (SCC): **20100101**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **7.868**	5. Maximum Annual Rate: **6,892.4**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **0.01**	9. Million Btu per SCC Unit: **138**
10. Segment Comment (limit to 200 characters): **Fuel heat content (Field 9) represents higher heating value (HHV).**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – NOX	**025**		**EL**
2 – CO			**EL**
3 – PM			**EL**
4 – PM10			**EL**
5 – SO2			**EL**
6 – VOC			**EL**

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **167.0** lb/hour **199.3** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **167.0 lb/hr** Reference: **FDEP Permit PSD-FL-140A**	7. Emissions Method Code: **0**

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

Hourly potential emission rate based on FDEP Permit PSD-FL-140A, Section III., Condition No. 17.(b), distillate fuel oil-firing case. Annual potential emissions based on 32.0 lb/hr [FDEP Permit PSD-FL-140A, Section III., Condition No. 17.(a), natural gas-firing case] for 7,884 hrs/yr and 167.0 lb/hr (distillate fuel oil-firing case) for 876 hrs/yr.

$\frac{7,884 \times 32}{2000} \Rightarrow 126.14$ (199.3) $\frac{876 \times 167}{2000} = 73.146$

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **9.0 ppmvd @ 15% O_2 (3-and 24-hr average)**	4. Equivalent Allowable Emissions: **32.0 lb/hr (3-hour average)**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 20 (3-hr avg.), NO_x CEMS (3- and 24-hr block avg.)**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 17.(a) - BACT. Unit is also subject to less stringent NO_x limits of 40 CFR Part 60, Subpart GG (NSPS). Limit applicable for natural gas-firing.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42.0 ppmvd @ 15% O_2 (3-hr average)**	4. Equivalent Allowable Emissions: **167.0 lb/hr (3-hour average)**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 20 (3-hr avg.), NO_x CEMS (3-hr block avg.)**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 17.(b) - BACT Unit is also subject to less stringent NO_x limits of 40 CFR Part 60, Subpart GG (NSPS). Limit applicable for distillate fuel oil-firing.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **54.0** lb/hour **231.7** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **54.0 lb/hr** Reference: **FDEP Permit PSD-FL-140A**	7. Emissions Method Code: **0**

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

Hourly potential emission rate based on FDEP Permit PSD-FL-140A, Section III., Condition No. 16.(a), natural gas-firing case. Annual potential emissions based on 54.0 lb/hr (natural gas-firing case) for 7,884 hrs/yr and 43.0 lb/hr [FDEP Permit PSD-FL-140A, Section III., Condition No. 16.(b), distillate fuel oil-firing case] for 876 hrs/yr. 212.87 18.83 231.7

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

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **25.0 ppmvd @ 15% O_2 (3-hr average)**	4. Equivalent Allowable Emissions: **54.0 lb/hr (3-hour average)**

5. Method of Compliance (limit to 60 characters):
EPA Reference Method 10

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

FDEP Permit PSD-FL-140A, Section III., Condition No. 16.(a) - BACT
Performance testing required annually.
Limit applicable for natural gas-firing during the first 12 months after initial startup.

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20.0 ppmvd @ 15% O_2 (3-hr average)**	4. Equivalent Allowable Emissions: **43.0 lb/hr (3-hour average)**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 10**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 16.(a) - BACT** **Performance testing required annually.** **Limit applicable for natural gas-firing following the first 12 months after initial startup.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20.0 ppmvd @ 15% O_2 (3-hr average)**	4. Equivalent Allowable Emissions: **43.0 lb/hr (3-hour average)**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 10**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 16.(a) - BACT** **Performance testing required annually.** **Limit applicable for distillate fuel oil –firing.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **10.0** lb/hour	**24.1** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **10.0 lb/hr** Reference: **GE Data**		7. Emissions Method Code: **5**

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

Hourly emission rate based on GE data for 100 percent load, 32°F, fuel oil-firing case. Annual emissions based on 5.0 lb/hr (100 percent load, 59°F, natural gas-firing case) for 7,884 hrs/yr and 10.0 lb/hr (100 percent load, 59°F, distillate fuel oil-firing case) for 876 hrs/yr.

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

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **5.0** lb/hour **N/A** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Reference Method 9

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

FDEP Permit PSD-FL-140A, Section III., Condition No. 18.(b) - BACT
Performance testing required annually.
Limit applicable for natural gas-firing.

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10.0** lb/hour **N/A** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 18.(b) - BACT Performance testing required annually. Limit applicable for distillate fuel oil-firing.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **10.0** lb/hour	**24.1** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **10.0 lb/hr** Reference: **GE data**		7. Emissions Method Code: **5**

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

Hourly emission rate based on GE data for 100 percent load, 32°F, fuel oil-firing case. Annual emissions based on 5.0 lb/hr (100 percent load, 59°F, natural gas-firing case) for 7,884 hrs/yr and 10.0 lb/hr (100 percent load, 59°F, distillate fuel oil-firing case) for 876 hrs/yr.

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

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **5.0** lb/hour	**N/A** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Reference Method 9

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

FDEP Permit PSD-FL-140A, Section III., Condition No. 18.(b) - BACT
Performance testing required annually.
Limit applicable for natural gas-firing.

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10.0** lb/hour **N/A** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 18.(b) - BACT Performance testing required annually. Limit applicable for distillate fuel oil-firing.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **55.9** lb/hour **43.7** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **55.9 lb/hr** Reference: **GE data**	7. Emissions Method Code: **2**

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

(0.05 lb S/100 lb oil) x (55,864.8 lb oil/hr) x (2 lb SO_2/lb S) = 55.9 lb/hr SO_2

Annual emissions based on 5.3 lb/hr (100 percent load, 59°F, natural gas-firing case) for 7,884 hrs/yr and 51.9 lb/hr (100 percent load, 59°F, distillate fuel oil-firing case) for 876 hrs/yr.

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

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2 grains S / 100 dscf**	4. Equivalent Allowable Emissions: **5.7** lb/hour **N/A** tons/year
5. Method of Compliance (limit to 60 characters): **40 CFR 75 Appendix D Procedures**	

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

FDEP Permit PSD-FL-140A, Section III., Condition No. 5 and 18.(a) - BACT
Unit is also subject to less stringent SO_2 limits of 40 CFR Part 60, Subpart GG (NSPS).
Limit applicable for natural gas-firing.

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05 weight % S**	4. Equivalent Allowable Emissions: **55.9** lb/hour **N/A** tons/year
5. Method of Compliance (limit to 60 characters): **40 CFR 60 Subpart GG Procedures**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 5 and 18.(a) - BACT Unit is also subject to less stringent SO_2 limits of 40 CFR Part 60, Subpart GG (NSPS). Limit applicable for distillate fuel oil-firing.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.0** lb/hour **10.1** tons/year	4. Synthetically Limited? [✔]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **5.0 lb/hr** Reference: **FDEP Permit PSD-FL-140A**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Hourly potential emission rate based on FDEP Permit PSD-FL-140A, Section III., Condition No. 19.(b), distillate fuel oil-firing case. Annual potential emissions based on 2.0 lb/hr [FDEP Permit PSD-FL-140A, Section III., Condition No. 19.(a), natural gas-firing case] for 7,884 hrs/yr and 5.0 lb/hr (distillate fuel oil-firing case) for 876 hrs/yr.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.0 ppmvd (3-hr average) as CH_4**	4. Equivalent Allowable Emissions: **2.0 lb/hr (3-hour average) as CH_4**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 18, 25, and/or 25A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 19.(a) - BACT** **Performance testing required prior to permit renewal.** **Limit applicable for natural gas-firing.**	

Emissions Unit Information Section 1 of 1

Pollutant Detail Information Page 12 of 12

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **4.0 ppmvd (3-hr average) as CH_4**	4. Equivalent Allowable Emissions: **5.0 lb/hr (3-hour average) as CH_4**
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 18, 25, and/or 25A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 19.(a) - BACT** **Performance testing required prior to permit renewal.** **Limit applicable for distillate fuel oil-firing.**	

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity:
VE10	[ ] Rule [✔] Other
3. Requested Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Reference Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Permit PSD-FL-140A, Section III., Condition No. 18.(b) - BACT**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity:
	[✔] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Reference Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Excess emissions resulting from startup, shutdown, or malfunction not-to-exceed 2 hours in any 24 hour period unless authorized by FDEP for a longer duration. Rule 62-210.700(1), F.A.C.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NOX**
3. CMS Requirement:	[✔] Rule [ ] Other
4. Monitor Information: Manufacturer: **Thermo Environmental** Model Number: **42CHL**	Serial Number: **42CPL-65518-348**
5. Installation Date: **August 2000**	6. Performance Specification Test Date: **August 2000**
7. Continuous Monitor Comment (limit to 200 characters): **Required by 40 CFR Part 75 (Acid Rain Program).**	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **O_2**	2. Pollutant(s):
3. CMS Requirement:	[✔] Rule [ ] Other
4. Monitor Information: Manufacturer: **Servomex** Model Number: **1440C**	Serial Number: **01420C/1298**
5. Installation Date: **August 2000**	6. Performance Specification Test Date: **August 2000**
7. Continuous Monitor Comment (limit to 200 characters): **Required by 40 CFR Part 75 (Acid Rain Program).**	

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

Supplemental Requirements

1. Process Flow Diagram
   [ ] Attached, Document ID: _____ [ ] Not Applicable [✔] Waiver Requested
   See Figure 2-3 of June 1999 Air Construction Permit Application

2. Fuel Analysis or Specification
   [ ] Attached, Document ID: _____ [ ] Not Applicable [✔] Waiver Requested
   See Appendix C of June 2000 Permit Compliance Test Report

3. Detailed Description of Control Equipment
   [ ] Attached, Document ID: _____ [ ] Not Applicable [✔] Waiver Requested
   See Section 5.0 of June 1999 Air Construction Permit Application

4. Description of Stack Sampling Facilities
   [ ] Attached, Document ID: _____ [ ] Not Applicable [ ] Waiver Requested
   See Appendix A of June 2000 Permit Compliance Test Report

5. Compliance Test Report
   [ ] Attached, Document ID: _____
   [✔] Previously submitted, Date: **July 12, 2000 (FDEP Southwest District Office)**
   [ ] Not Applicable

6. Procedures for Startup and Shutdown
   [ ] Attached, Document ID: _____ [✔] Not Applicable [ ] Waiver Requested

7. Operation and Maintenance Plan
   [ ] Attached, Document ID: _____ [✔] Not Applicable [ ] Waiver Requested

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

9. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [✔] Not Applicable

10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

15. Acid Rain Part Application (Hard-copy Required)

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

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

Above items previously submitted, see Hardee Power Station Title V permit application.