



HARDEE POWER PARTNERS

Via FedEx
June 11, 2001

Mr. Scott M. Sheplak, P.E.
Administrator, Title V Section
Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, FL 32301

RECEIVED

JUN 13 2001

BUREAU OF AIR REGULATION

**Re: Request for Additional Information
Hardee Power Station – Title V Permit Revision
DEP File No. 0490015-003-AV**

Dear Mr. Sheplak:

Hardee Power Partners, Ltd. (HPP) has received your letter dated March 6, 2001 requesting additional information regarding the above referenced project and offers the following responses:

FDEP Item 1: Manufacturer's Performance Curves

Response:

Performance curves provided by General Electric for the Model 7EA combustion turbine are included as Attachment I.

FDEP Item 2: Applicability of the Acid Rain Program

Response:

Pursuant to 40 CFR 72.6 (b)(6), an exemption from the Acid Rain Program exists for independent power production facilities (IPPF's) that (i) have, as of November 15, 1990, one or more qualifying power purchase commitments to sell at least 15% of its planned net output capacity; and (ii) consist of one or more units designated by the owner or operator with total installed net output capacity not exceeding 130% of its total planned output capacity. Hardee Power Station is an IPPF meeting the requirements for this exemption. EPA has stated in guidance letters that, with regard to future expansion of capacity at an exempt facility, "if more

6/14/01 cc = Russell Wieder

Mr. Scott M. Sheplak, P.E
June 11, 2001
Page 2 of 3

than [130%] of net output capacity is ever constructed at the facility, one or more units serving the capacity in excess of that amount will become affected by the Acid Rain Program requirements." See letter from Brian McLean, Director, EPA Acid Rain Division, to Steven Miller, Doswell Ltd. Partnership., Dec. 20, 1994 in Attachment II.

Furthermore, the preamble to the final rule states: "EPA proposed that all units in the facility will be exempt from the program, ..., but units added to the facility at a later time would be required to comply with the Acid Rain Program." 58 Fed. Reg. at 15639.

Thus, the preamble and guidance letters make clear that new units can be added at a later time without destroying the overall exemption of the facility. The facility as a whole is exempt only up to 130% of its planned capacity. Beyond that point, the owner/operator can designate which units shall remain exempt and which units shall be subject to the Acid Rain Program. Therefore, Units CT1A, CT1B, and CT2A are still exempt from the Acid Rain Program.

FDEP Item 3: Custom Fuel Monitoring Schedule

Response:

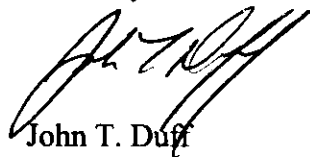
HPS previously submitted a revised Part 75 Monitoring Plan indicating that CT2B (Unit 004) will utilize hourly gas and oil flow data to monitor SO₂ emissions; i.e., use of 40 CFR Part 75, Appendix D monitoring procedures, and specifying the use of pipeline natural gas as the primary fuel. A copy of the revised Part 75 Monitoring Plan was submitted electronically to the EPA, Region 4 on October 9, 2000 and also to the Department in correspondence to Mr. Mike Harley dated October 9, 2000.

40 CFR 60.333(New Source Performance Standards for Stationary Gas Turbines) limits the sulfur content of fuels burned in stationary gas turbines to no more than 0.8 percent by weight. At a typical natural gas density of 0.047 lb/ft³, natural gas would need to contain more 265 gr S / 100 ft³ to exceed the 0.8 weight percent NSPS limit. Typical Florida Gas Transmission (FGT) natural gas sulfur content is approximately 4 parts per million by volume (ppmv) or 0.24 gr S / 100 ft³. The 40 CFR Part 75, Appendix D, Section 2.3.1.1 default SO₂ emission rate for pipeline natural gas is 0.0006 lb/MMBtu or 0.20 gr S / 100 ft³ assuming a natural gas heat content of 1,000 Btu / ft³. Accordingly, use of pipeline natural gas, as defined by 40 CFR 72.2, in CT2B provides reasonable assurance of consistent compliance with the fuel sulfur content limit of 40 CFR 60.33.

As requested in your letter, Responsible Official and Professional Engineer Certifications are attached. If you have any further questions, please contact Paul Carpinone at (813) 228-4858.

Mr. Scott M. Sheplak, P.E
June 11, 2001
Page 3 of 3

Sincerely,

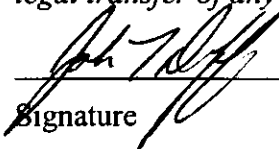
A handwritten signature in black ink, appearing to read "John T. Duff". The signature is stylized with a large, sweeping initial "J" and "D".

John T. Duff
Vice President-Power Operations

Attachments

cc: FDEP, SW District

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. Owner/Authorized Representative or Responsible Official 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>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.</i>  Signature _____ Date <u>6/11/01</u>

* 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.

Thomas R. Dew

Signature

6/8/01

Date

(seal)

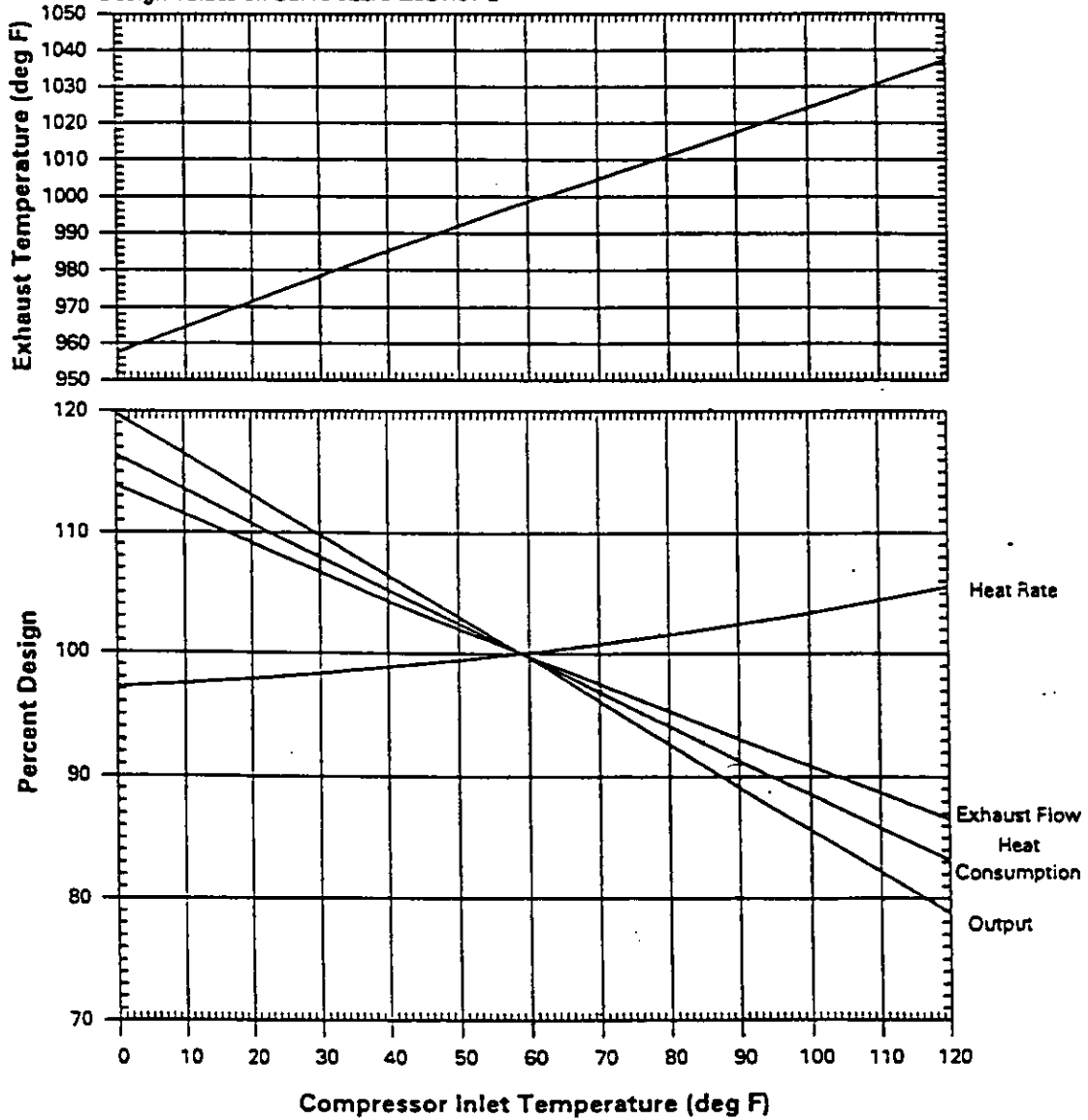
* Attach any exception to certification statement.

ATTACHMENT I
GE PERFORMANCE CURVES FOR CT2B

GENERAL ELECTRIC MODEL PG7121EA GAS TURBINE

Effect of Compressor Inlet Temperature on
Output, Heat Rate, Heat Consumption, Exhaust Flow
And Exhaust Temperature at Base Load and 100% speed.

Configuration: DLN Combustor
Fuel: Natural Gas
Design Values on Curve 522HA282 Rev 2



I Levine
8/17/98

522HA283
Rev - 2

BB

ATTACHMENT II

Letter from Brian McLean, Director, EPA Acid Rain Division, to Steven Miller, Doswell Ltd. Partnership., Dec. 20, 1994



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

Steven K. Miller
Doswell Limited Partnership
2112 W. Laburnum Ave, Suite 108
Richmond, VA 23227

Dear Mr. Miller:

The Acid Rain Division has received your request for an applicability determination for the Doswell Limited Partnership facility in Hanover County, Virginia ("Doswell") under 40 CFR Part §72.6(c). This letter represents EPA's official determination of applicability for Doswell which commenced commercial operation in May, 1992 (ORISPL number 52019).

As described in your letter, Doswell consists of two gas and oil-fired combined cycle trains. Each train has two 127 MWe combustion turbines serving heat recovery steam generators headered to one 147 MWe steam turbine. The facility is the subject of a January, 1990 power sales agreement with Virginia Power for 363 MWe from each unit (726 MWe total). The installed capacity of the facility is 802 MWe. You also submitted information demonstrating that the facility meets the definition for an independent power production facility and that the power sales agreement meets the definition of a qualifying power purchase commitment.

Based on the information above, both units at Doswell are not affected under the Acid Rain Program. Section 405(g)(6) of the Act, implemented at 40 CFR §72.6, provides that independent power production facilities with power purchase commitments prior to November 15, 1990 are exempt from all requirements under Title IV. The implementing regulations require that the power purchase commitment(s), as of November 15, 1990, represent at least 15 percent of the total planned net output capacity. This condition is met by the Doswell-Virginia Power agreement. However, the regulations limit the exempted facility to 130 percent of the total planned net output capacity. Thus, if more than 944 MWe of net output capacity is ever constructed at the facility (one or more units serving the capacity in excess of that amount) will become affected by the Acid Rain Program requirements. (See 40 CFR §72.6(b)(5)(ii).) ✱

This determination is based solely on the representations made in your letter of December 14, 1993. According to 40 CFR 72.6(c)(5), this decision may be appealed under 40 CFR part 78. 40 CFR §72.6(c) requires you to send copies of this letter to each owner or operator of Doswell.

-2-

If you have further questions regarding the Acid Rain Program, please contact Kathy Barylski of my staff at (202) 233-9074.

Sincerely,

/s/ (December 20, 1994)

Brian J. McLean, Director
Acid Rain Division

cc: OECA



HARDEE POWER PARTNERS

Scott
Clair
From: Howard
4/2
RECEIVED

March 29, 2001

APR 02 2001

DIVISION OF AIR
RESOURCES MANAGEMENT

Via Federal Express

Mr. Howard Rhodes
Florida Department of
Environmental Protection
Division of Air Resources
Management
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Via Federal Express

Florida Department of
Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, FL 33619

RE: Hardee Power Station
Conditions of Certification PA 89-25
Title V Air Operations Permit No. 0490015-001-AV
2000 Annual Average Capacity Factor and
Cumulative Lifetime Average Capacity Factor

To Whom It May Concern:

Pursuant to Special Condition S.1 of Title V Air Operations Permit No. 0490015-001-AV and Condition II.A.1 of Conditions of Certification PA 89-25, Hardee Power Partners hereby submits the enclosed report providing calculations of the 2000 annual average capacity factor and cumulative lifetime average capacity factor for Hardee Power Station Units 1A, 1B, 2A, and Steam Turbine.

If you need any additional information, please contact me at (813) 228-1381 or Paul Carpinone at (813) 228-4858.

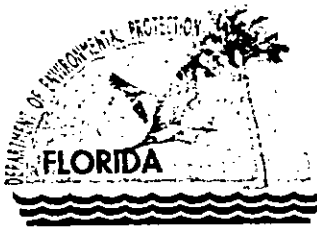
Sincerely,

John T. Duff
Vice President-Power Operations

**ANNUAL CUMULATIVE LIFETIME CAPACITY FACTOR
FOR HARDEE POWER STATION UNITS 1A, 1B, ST, 2A
FOR THE CALENDAR YEAR 2000**

UNIT	UNIT CAPABILITY (MW)	2000 ANNUAL		CUMULATIVE LIFETIME	
		MWH	CAPACITY FACTOR	MWH	CAPACITY FACTOR
CT 1A	86	305,221	40.51%	1,650,769	27.39%
CT 1B	86	306,482	40.68%	1,659,206	27.53%
Steam Turbine	81	305,459	43.05%	1,636,445	28.83%
Total CC	253	917,162	41.38%	4,946,420	27.90%
CT 2A	87	119,822	15.72%	447,909	7.35%
Total	340	1,036,984	34.82%	5,394,329	22.64%

Note: Commercial operation began January 1, 1993.



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

March 6, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John T. Duff
Vice President - Power Operations
Hardee Power Station
Hardee Power Partners, Ltd.
P.O. Box 111
Tampa, FL 33601-0111

Re: Request for Additional Information Regarding Title V Permit Revision Application
File No. 0490015-003-AV
Hardee Power Station, Hardee County

Dear Mr. Duff:

Your Title V permit revision application for the Hardee Power Station was received on January 19, 2001. However, in order to continue processing your application, the Department will need the following additional information pursuant to Rule 62-213.420(1)(b)2., F.A.C.

Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions for this combustion turbine, Unit CT2B, were not a part of the Title V permit application. Please provide them.
2. It has been the Department's understanding that existing independent power production facilities that are not affected by the Acid Rain program, due to meeting the requirements of 40 CFR 72.6(b)(6), might subject the entire facility to the Acid Rain program by the addition of a new unit which is classified as an Acid Rain unit. Please provide clarification as to why these combustion turbines, Units CT1A, CT1B, and CT2A, are still exempt from the Acid Rain program.
3. Custom Fuel Monitoring Schedule. Over the years, numerous requests for USEPA approval of alternative testing and monitoring procedures for combustion turbines (CTs) have been submitted. Approval of certain alternatives has become so routine that Region 4 of the USEPA has determined that these alternatives may be approved by the state agency (the Department). According to permit No.: PSD-FL-140A, you would like a custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2). Please provide additional information supporting that the following conditions have been met if you would like to include such a schedule in this current re-opening of the Title V permit:

"More Protection. Less Process."

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Mr. John T. Duff
March 6, 2001
Page 2

(1) Monitoring Plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 2 grains of sulfur per 100 SCF of gas pursuant to 40 CFR 75.11(d)(2);

(2) Provide data that shows for six months, bimonthly samples indicate that the sulfur content of pipeline quality natural gas shows little variability and indicates consistent compliance with 40 CFR 60.333.

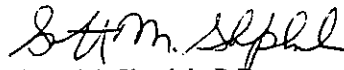
Responsible Official (R.O.) Certification Statement: Rule 62-213.420, F.A.C. requires that all Title V permit applications must be certified by a responsible official. Due to the nature of the information requested in Item number(s) 1, 2, and 3 above, your response should be certified by the responsible official. Please complete and submit a new R.O. certification statement page from the long application form, DEP Form No. 62-210.900.

Professional Engineer (P.E.) Certification Statement: Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. As a result, at a minimum your response to Item number(s) 1, 2, and 3 above should be certified by a professional engineer registered in the State of Florida. Please complete and submit a new P.E. certification statement page from the long application form, DEP Form No. 62-210.900.

The Department must receive a response from you within 90 (ninety) days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-213.420(1)(b)6., F.A.C. A copy of your response should be sent to: Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.

If you should have any questions, please call Russell Wider at 850/921-9585.

Sincerely,



Scott M. Sheplak, P.E.
Administrator
Title V Section

/raw

Enclosure

Letter from EPA Region 4, received by Fax, dated May 26, 2000.

copy to:

Mr. Thomas W. Davis, P.E., Environmental Consulting & Technology, Inc.

Mr. Bill Thomas, DEP SW District Office

3/6/01 ← mailed this date

cc: Reading File
Russell Wider

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
 Mr. John T. Duff
 Vice President-Power
 Operations
 Hardee Power Station
 Hardee Power Partners, Ltd.
 P.O. Box 111
 Tampa, FL 33601-0111

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* B. Date of Delivery
 3/12/11

C. Signature *(Signature)* Agent
 Addressee

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

2. Article Number (Copy from service label)
 7099 3400 0000 1449 2464

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

**U.S. Postal Service
 CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)**

Article Sent To:
 Mr. John T. Duff, Vice President

7099 3400 0000 1449 2464

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
 Here

Name (Please Print Clearly) (to be completed by mailer)
 Mr. John T. Duff, Vice President
 Street, Apt. No., or PO Box No.
 P. O. Box 111
 City, State, ZIP+4
 Tampa, Florida 33601-0111

PS Form 3800, July 1999

See Reverse for Instructions



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 26 2000

4APT-ARB

Ronald W. Gore, Chief
Alabama Department of Environmental
Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2059

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

of pages 7

To	Russel Wider	From	David McNeal
Dept./Agency		Phone #	404/562-9102
Fax #	850/1922-6979	Fax #	
NSN 7540-01-317-7368		5099-101 GENERAL SERVICES ADMINISTRATION	

SUBJ: Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards

Dear Mr. Gore:

Over the past year, Region 4 has received numerous requests for approval of alternative testing and monitoring procedures for combustion turbines (CTs) regulated under 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines). In the process of reviewing these requests, we have identified several alternatives that are routinely approved. Although these alternatives are being approved on a regular basis, the U.S. Environmental Protection Agency (EPA) Region 4 has typically required that all alternative testing and monitoring proposals be submitted for case-by-case reviews. Since the approval of certain alternatives has become so routine, we have concluded that submitting them to Region 4 for review consumes regional, state, and local agency resources and slows down the approval process without providing a corresponding environmental benefit. Specific alternatives for which we have found this to be the case are described in detail in the remainder of this letter, and due to their routine nature, it will no longer be necessary for you to submit such alternative testing or monitoring proposals to Region 4 for case-by-case review or approval. These (alternatives) may be approved by your Agency without additional input from Region 4.

Nitrogen monitoring requirement for gas-fired CTs

Under the provisions for 40 C.F.R. §60.334(b)(2), owners and operators of CTs who do not have intermediate bulk storage for the fuel fired in their turbines are required to conduct daily monitoring to determine the sulfur and nitrogen content of the fuel combusted. Under the terms of the enclosed August 14, 1987, custom fuel monitoring policy issued by EPA Headquarters, the nitrogen monitoring requirement for pipeline quality natural gas-fired turbines can be waived because this fuel does not contain fuel-bound nitrogen and any free nitrogen that it may contain does not contribute appreciably to the formation of nitrogen oxides (NO_x) emissions. Based upon the precedent set in the August 1987 custom fuel monitoring policy, the requirement to monitor the nitrogen content of pipeline quality natural gas can be waived for all Subpart GG turbines.

Sulfur monitoring for gas-fired CTs

EPA's August 1987 custom fuel monitoring policy also provides details regarding a procedure that owners and operators of natural gas-fired turbines can follow in order to obtain approval to reduce their sulfur analysis frequency from a daily to a semiannual basis. Under this policy, owners and operators of affected facilities can obtain approval for a semiannual monitoring frequency by collecting and analyzing samples under the following schedule:

1. Samples must initially be collected and analyzed twice a month for six months. If six months of bi-monthly sampling and analysis indicate that sulfur concentrations are well below the applicable standard with low variability, the sampling frequency can be reduced to a quarterly basis.
2. If six quarters of quarterly sampling and analysis indicate that sulfur concentrations are well below the applicable standard with low variability, the sampling frequency can be reduced to a semiannual basis.
3. If any analyses indicate noncompliance with the applicable sulfur limit of 0.8 weight percent in 40 C.F.R. §60.333(b), samples must be collected and analyzed on a weekly basis while the custom fuel monitoring schedule is re-examined.
4. If there is a substantial change in fuel quality, samples must be collected and analyzed on a weekly basis while the custom fuel monitoring schedule is re-examined.

In addition to situations where the owner or operator of a CT regulated under Subpart GG proposes a custom fuel monitoring schedule that is identical to the one outlined in EPA's August 1987 policy, there are two other natural gas sulfur content monitoring alternatives that will not have to be submitted to Region 4 for review. One of these alternatives involves allowing an owner or operator of a new facility to use a semiannual monitoring frequency for natural gas sulfur content immediately upon startup if they can provide the results of bi-monthly and quarterly analyses conducted in accordance with the first and second steps of the schedule outlined above. Region 4 has approved this type of alternative on several occasions. The analytical data needed to justify a waiver of the bi-monthly and quarterly sampling steps may be available when a new unit is added to a source where ongoing monitoring is being conducted for other CTs at the site or when the company's gas supplier can provide previous analytical results for samples whose sulfur content is representative of the fuel that it will be supplying for the new CT.

The other natural gas sulfur monitoring alternative that will not have to be submitted to Region 4 for case-by-case reviews involves situations in which the owner or operator of a CT subject to Subpart GG proposes that the gas samples be collected at a place in the gas transmission line either upstream or downstream of the site where the CT is located. In several previous determinations Region 4 has indicated using such sampling locations is acceptable provided that no new gas enters the transmission line between the sampling location and the

affected facility in question. The basis for approval of an alternate sampling location in this situation is that if no new gas enters the transmission line between the offsite sampling location and the CT, the sulfur content of the samples collected and analyzed will be representative of that burned in the affected facility.

Use of continuous emission monitors for NO_x

The monitoring provisions in 40 C.F.R. §60.334(c)(1) use operating parameters (water-to-fuel injection rates and fuel nitrogen content) to identify periods of NO_x excess emissions. Since many of the turbines being installed today are fired with pipeline quality natural gas and do not rely on water injection control, the monitoring required in Subpart GG will not provide any useful information about excess emissions for such turbines. According to the enclosed May 31, 1994, EPA Headquarters' determination, owners and operators of CTs that do not use water injection for NO_x control must propose a method for monitoring excess emissions under Subpart GG. One approach that many CT owners and operators rely on to address this requirement is to use NO_x continuous emission monitoring systems (CEMS) that have been installed and certified under other requirements such as the acid rain monitoring rule in 40 C.F.R. Part 75 or through conditions in a Prevention of Significant Deterioration (PSD) permit. The enclosed March 12, 1993, EPA Headquarters' determination contains detailed requirements when CEMS are used as an alternative means of monitoring NO_x emissions under Subpart GG. Requests from owners and operators proposing to follow these procedures would not have to be submitted to Region 4 for review. In cases where a CEMS is used to satisfy the NO_x monitoring requirements under Subpart GG, the requirement to collect and analyze oil samples for nitrogen content under the provisions in 40 C.F.R. §60.334(b) can also be waived.

Correcting NO_x data to International Standards Organization conditions

One provision in the March 12, 1993, Headquarters' policy regarding the use of NO_x CEMS for which Region 4 has routinely approved alternatives involves the requirement that the continuous monitor be capable of calculating emission rates corrected to International Standards Organization (ISO) standard day conditions (288 degrees Kelvin, 60 percent relative humidity, and 101.3 kilopascals of pressure). Since the testing provision in 40 C.F.R. §60.335(c)(1) requires that performance test results be corrected to ISO standard day conditions, CEMS results must also be expressed on this same basis in order to conclusively identify periods of excess emissions. In many cases today, however, CTs are subject to NO_x limits under PSD that are considerably more stringent than those in Subpart GG, and typically these PSD limits are not expressed on an ISO-corrected basis. Depending on the type of turbine, the applicable NO_x standard in Subpart GG is either 75 parts per million (ppm) or 150 ppm, and limits contained in PSD permits being issued today are often less than 10 ppm. Based upon the fact that these limits are more stringent than those in Subpart GG, New Source Performance Standard (NSPS) compliance would generally be a concern only in cases where a source is in violation of the corresponding PSD limit. On this basis, Region 4 routinely waives the requirement to correct CEMS results to ISO standard day conditions on a continuous basis provided that the source

owner or operator maintains records of the data (ambient temperature, ambient humidity, and combustor inlet pressure) that would enable it to make the correction at the request of EPA or a state or local agency to which the authority to implement Subpart GG has been delegated. Based upon the previous approvals granted by Region 4, requests that CEMS not be required to make ISO corrections on a continuous basis when units are subject to PSD NO_x limits that are more stringent than those in Subpart GG would not have to be submitted to Region 4 for case-by-case reviews. One condition imposed on any such approvals, however, must be that the CT owner or operator keeps records of the data needed to make the correction.

Multiple load testing requirements

Under the provisions of 40 C.F.R. §60.335(c)(2), owners and operators of CTs subject to Subpart GG must conduct NO_x performance testing at four different loads across the unit operating range. There are two circumstances under which it would be acceptable for initial performance testing to be conducted at a single operating load. One circumstance which is addressed in the enclosed EPA Region 2 determination dated May 19, 1994, would be one in which a turbine is subject to a permit condition which restricts the unit to operating at a single load level. In this situation, a single load test provides adequate assurance of compliance, and nothing would be gained by conducting testing for three additional load levels at which the turbine is not intended to operate.

Although we are not aware of many CTs that are restricted to operating at a single load level, one common situation where a waiver of the requirement to conduct a multiple load performance test on a CT would be one in which a CEMS is used to satisfy the NO_x monitoring requirements in the rule. One reason for conducting a multiple load test on a CT is to determine the water injection rate needed to maintain NO_x compliance across the unit's normal operating range. Since it is difficult to predict which operating load will represent "worst case" conditions for a CT, conducting a multiple load test is often necessary in order to provide an adequate level of compliance assurance even for turbines that do not use water injection for NO_x control. For CTs equipped with NO_x CEMS, however, the monitors will provide credible evidence regarding the unit's compliance status on a continuous basis following the initial test, and the level of compliance assurance provided in this case is sufficient to justify approval of requests that initial performance testing be allowed at a single operating load.

Initial NO_x performance testing options for CEMS-equipped units

In addition to approving requests that single-load testing be accepted for units equipped with NO_x CEMS, Region 4 has also allowed companies to use certified monitors to collect the data needed for demonstrating initial compliance. The NO_x test method specified for Subpart GG under the provisions in 40 C.F.R. §60.335(c)(3) is EPA Method 20, and once a NO_x CEMS has been certified, the main difference between using the monitor or Method 20 to collect the data for the initial performance test involves the number of traverse points at which the sampling is conducted. Although a CEMS extracts the sample from a single point instead of the eight

traverse points required under Method 20, part of the monitor certification process involves verifying that the CEMS probe is collecting a sample from a representative location in the stack. Therefore, Region 4 has allowed owners and operators of Subpart GG turbines to use certified CEMS to collect data for initial NO_x performance testing on a number of occasions. Conditions for these approvals have been that compliance be based on a minimum of three test runs representing a total of at least three hours of data and that the CEMS be calibrated in accordance with the procedure in Section 6.2.3 of Method 20 following each run. Provided that owners and operators agree to these conditions, it will not be necessary to submit future proposals for using NO_x CEMS to conduct initial performance testing on Subpart GG turbines to Region 4 for a case-by-case review.

Another initial testing alternative that we know has recently been approved in at least one other EPA Region involves demonstrating compliance with the emission standard in Subpart GG using the data collected during the relative accuracy test audit (RATA) performed on a NO_x CEMS. Although no CT owner or operator has made a specific proposal of this type in Region 4, it would be acceptable to us since the amount of sampling conducted during the RATA (a minimum of nine 21-minute test runs) using EPA reference test methods provides enough representative emissions data to determine the CT's compliance status. Therefore, if you receive any proposals to determine NO_x compliance for a CT using the reference method test data collected during a RATA conducted on the unit's CEMS, it will not be necessary to submit the proposal to Region 4 for a case-by-case review.

Alternative sampling procedures for oil storage tanks

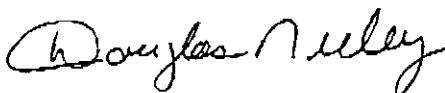
The monitoring provisions for units that have bulk storage tanks require that fuel samples be collected and analyzed each time that oil is added to the tank [see 40 C.F.R. §60.334(b)(1)]. In several recent determinations, Region 4 has approved alternatives to these requirements for owners and operators that use large bulk storage tanks to supply oil to their CTs. For facilities that use tanker trucks to fill large storage tanks, collecting a sample each time oil is added to the tank has the potential to be burdensome due to the fact that a large number of samples might have to be analyzed, and our goal when approving alternative sampling procedures for such tanks has been to reduce the sampling and analysis burden while ensuring that the results of the sampling provide adequate assurance of compliance. One of the alternatives which Region 4 has approved involves situations where a facility owner or operator has multiple storage tanks and switches between the tanks used to supply oil for its CTs. In situations where a tank is isolated from the CTs while it is being filled, we have approved an alternative procedure in which sampling is not required until the owner or operator has finished filling the tank. The basis for the approval of this alternative is that, if the tank is isolated from the CTs while it is being filled, a sample collected once the tank is full will be representative of the oil supplied to the CTs when the tank is put back into service.

Region 4 has also allowed owners and operators that receive oil in tanker trucks to use vendor analyses to satisfy the oil nitrogen and sulfur monitoring requirements under Subpart GG. In order for this option to be acceptable, the sulfur and nitrogen content of all the oil delivered to the source must meet the applicable limits. The sulfur content limit promulgated at 40 C.F.R. §60.333(b) is 0.8 weight percent, and according to 40 C.F.R. §60.334(c)(1), the nitrogen content limit is set using baseline conditions during a performance test. Allowing an owner or operator to monitor oil sulfur and nitrogen content using "as-delivered" samples instead of samples collected from its storage tank is acceptable if the sulfur and nitrogen content of all the oil delivered meets the applicable limits since the average sulfur and nitrogen content of the oil in the storage tank will meet the applicable limits by default under this scenario. Also, determining the nitrogen content of the oil burned in a CT is not necessary in cases where NO_x excess emissions are monitored using a CEMS.

In summary, this letter identifies several Subpart GG testing and monitoring alternatives that can be approved by your agency without additional input from Region 4. In the event that the owner or operator of a Subpart GG turbine proposes other testing or monitoring alternatives, the request(s) for approval should be forwarded to Region 4 for review. In the course of evaluating such additional requests, we may identify other alternatives that do not need to be submitted for Region 4 review because their approval becomes routine. If this occurs, we will notify you accordingly.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404) 562-9102.

Sincerely,



R. Douglas Neeley
 Chief
 Air and Radiation Technology Branch
 Air, Pesticides and Toxics
 Management Division

Enclosures

- (1) August 14, 1987, EPA Headquarters custom fuel monitoring policy for Subpart GG turbines
- (2) May 31, 1994, EPA Headquarters determination regarding monitoring obligations for CTs that do not use water injection for NO_x control



HARDEE POWER PARTNERS

Clarin

Joe Kahn

RECEIVED

Via Certified Mail - 7000 0520 0016 1537 6038

FEB 01 2001

January 17, 2001

RECEIVED

DIVISION OF AIR RESOURCES MANAGEMENT

Mr. Bill Proses
Florida Department of Environmental Protection (FDEP)
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8218

FEB 02 2001

BUREAU OF AIR REGULATION

RECEIVED

Re: Hardee Power Partners (HPP)
Hardee Power Station (HPS)
Title V Air Operation Permit No. 0490015-001-AV
PSD Permit No. PSD-FL-140A
Revised Annual Emission Test Report for Unit CT2B

JAN 25 2001

WASTEWATER COMPLIANCE EVALUATION SECTION

Mr. Proses:

Pursuant to Title V Air Operation Permit No. 0490015-001-AV, Provisions G.8 (a) and R.1, and PSD Permit No. PSD-FL-140A, Section III (40), HPP submitted an annual emissions compliance test report for the Hardee Power Station on November 22, 2000. Also on November 22, 2000, NOx data for Unit CT2B was submitted under a separate report to your office in the Continuous Emissions Monitoring System (CEMS) 2000 Relative Accuracy Test Audit (RATA) Report.

After a discussion between you and Mr. Paul Carpinone and Mr. Frank Sarduy, of TECO Power Services, it was agreed to revise the Unit CT2B Source Emissions Test Report to include the NOx data as well. HPP hereby submits a copy of this report.

Also, please note that Units CT2A and CT2B were tested on natural gas only because they were run for 400 hours or less on No. 2 fuel oil in the preceding 12-month period.

Please call me at (813) 228-1381 or Paul Carpinone at (813) 228-4858 if you have any questions regarding this matter.

I certify that, based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Sincerely,

John T. Duff
Vice President - Power Operations

Cc: Howard Rhodes - FDEP - Tallahassee
H. Oven, FDEP - Tallahassee

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FEB 01 2001

DIVISION OF AIR RESOURCES MANAGEMENT