

Memorandum

Florida Department of Environmental Protection

TO: Trina Vielhauer, Bureau of Air Regulation
THROUGH: Jeff Koerner, Air Permitting North Section *JK*
FROM: Bruce Thomas, Air Permitting North Section
DATE: October 9, 2007
SUBJECT: Project No. 0490015-009-AV
Hardee Power Partners, Hardee Power Station
Heat Input Increase for CT-2B Simple Cycle Gas Turbine

This project is a minor revision to the original air construction permit for this unit with a concurrent revision of the Title V air operation permit. Attached for your review are the following items:

- Proposed Determination
- Statement of Basis
- Proposed Permit

I recommend your approval of the attached Proposed Permit.

Attachments



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

October 9, 2007

Mr. Alex C. George
Vice President
Hardee Power Partners
6695 North County Road 663
Fort Green Springs, FL 33834

Re: Title V Air Operation Permit Revision
Proposed Permit Project No.: 0490015-009-AV
Revision to Title V Air Operation Permit No.: 0490015-007-AV
Hardee Power Station

Dear Mr. George:

One copy of the Proposed Determination for the Title V Air Operation Permit Revision for the Hardee Power Station located at 6695 County Road 663 North in Fort Green Springs, Hardee County, is enclosed. This letter is only a courtesy to inform you that the Draft Permit has become a Proposed Permit.

An electronic version of this determination has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is: "<http://www.dep.state.fl.us/air/eproducts/ards/default.asp>".

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the Proposed Permit is made by the USEPA within 45 days, the Proposed Permit will become a Final Permit no later than 55 days after the date on which the Proposed Permit was mailed (posted) to USEPA. If USEPA has an objection to the Proposed Permit, the Final Permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Bruce Thomas at 850/488-0114.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/jfk/bt
Enclosures

copy furnished to:

Mr. Alex C. George, Hardee Power Partners (ageorge@invergyllc.com)
Mr. Frank Sarduy, Hardee Power Partners (fsarduy@invergysservices.com)
Mr. Thomas W. Davis, ECT (tdavis@ectinc.com)
Ms. Cindy Zhang-Torres, Southwest District Office (Cindy.Zhang-Torres@dep.state.fl.us)
Mr. Mike Halpin, Siting Office (Mike.Halpin@dep.state.fl.us)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Mr. Dee Morse, National Park Service (Dee_Morse@nps.gov)

Proposed Determination

Title V Air Operation Permit Revision
Proposed Permit Project No. 0490015-009-AV
Revision to Title V Air Operation Permit No. 0490015-007-AV
Page 1 of 1

I. Public Notice.

An Intent to Issue Title V Air Operation Permit Revision to Hardee Power Partners for the Hardee Power Station located at 6695 County Road 663 North in Fort Green Springs, Hardee County was clerked on August 15, 2007. The Public Notice of Intent to Issue Title V Air Operation Permit Revision was published in the The Herald - Advocate on September 6, 2007. The Draft Permit was available for public inspection at the Southwest District in Temple Terrace and the permitting authority's office in Tallahassee. Proof of publication of the Public Notice of Intent to Issue Title V Air Operation Permit Revision was received on September 13, 2007.

II. Public Comment(s).

No comments were received during the 30 day public comment period. Since no comments were received, the Draft Permit becomes the Proposed Permit.

III. Conclusion.

Since there were no comments received during the Public Notice period, no changes were made to the Draft Permit and the permitting authority hereby issues the Proposed Permit.

STATEMENT OF BASIS

FACILITY DESCRIPTION

The Hardee Power Partners operates a nominal 370 megawatt (MW) electric generation facility located approximately nine miles northwest of Wauchula in Hardee County at 6695 North County Road 663 North in Fort Green Springs, Florida. The UTM coordinates are Zone 17, 405.02 km East and 3057.18 km North. The existing electrical generating power plant has a Standard Industrial Classification Code of SIC No. 4911.

The Hardee Power Station includes four General Electric (GE), dual-fuel fired combustion turbines (CT). The facility utilizes pipeline natural gas as its primary fuel source with No. 2 distillate fuel oil serving as a backup fuel. Units CT-1A, CT-1B and CT-2A are identical combustion turbines (GE Model No. PG-7111EA). Unit CT-2B is a GE Model No. PG-7121EA combustion turbine. Together, Units CT-1A and CT-1B comprise a combined-cycle system with each combustion turbine paired with a heat recovery steam generator that is ducted to a common steam-electrical generator (76 MW). Each combustion turbine has a nominal power production output of 75 MW. Units CT-2A and CT-2B operate as a simple cycle units.

PRIMARY REGULATORY REQUIREMENTS

The emissions units of this facility are regulated in accordance with the applicable provisions in the following Chapters of the Florida Administrative Code (F.A.C.): 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures).

The gas turbines are subject to the following federal regulations regarding the New Source Performance Standards (NSPS): Subpart A (General Provisions) in 40 CFR 60 and Subpart GG (Stationary Gas Turbines) in 40 CFR 60. These units are not affected by the Acid Rain Program since they meet the requirements of 40 CFR 72.6(b)(6).

Units CT-1A, CT-1B and CT-2A use water injection to control NO_x emissions when firing natural gas and distillate oil. Therefore, a compliance assurance monitoring (CAM) plan is required for these units. Although Unit CT-2B uses water injection to control NO_x emissions when firing distillate oil, a CAM plan is not required because compliance is demonstrated by data collected with the continuous emissions monitoring system.

Based on the application submitted on February 7, 2007 to revise the Title V air operation permit, the facility is a major source of hazardous air pollutants (HAP).

PROJECT DESCRIPTION

This Title V revision incorporates the revisions made in air construction Permit No. 0490015-008-AC (PSD-FL-140B). Briefly, the permit revision allows increases to the heat input rates for the Unit CT-2B simple cycle gas turbine from 880 to 950 MMBtu per hour when firing natural gas and from 950 to 1060 MMBtu per hour when firing distillate oil. Actual operating data indicates that the heat input rates provided by the gas turbine vendor underestimate the actual performance of the installed gas turbine. No physical or operational changes are necessary to realize the actual installed capacity of Unit CT-2B. No increases in the emissions standards (concentrations or mass emissions rates) were necessary to accommodate the change. No emissions increases or increased utilization were expected as a result of the change. Unit CT-2B will continue to comply with all other applicable provisions of the air construction and operation permits.

CONCLUSION

This project revises Title V air operation permit No. 0490015-007-AV, which was issued on December 27, 2006. This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.

PROPOSED TITLE V AIR OPERATION PERMIT REVISION

PERMITTEE

Hardee Power Partners
6695 North County Road 663
Fort Green Springs, FL 33834

PLANT

The Hardee Power Partners operate the Hardee Power Station, which is located in Hardee County at 6695 North County Road 663 North in Fort Green Springs, Florida.

PROJECT

Project No. 0490015-009-AV revises Title V air operation Permit No. 0490015-007-AV to incorporate the revisions made in air construction Permit No. 0490015-008-AC (PSD-FL-140B) regarding the maximum heat input rates to Unit CT-2B (ARMS EU-005).

REVISIONS

This permitting action will revise the following specific condition in current Title V air operating Permit No. 0490015-009-AV as follows:

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

B.1. Permitted Capacity. The CT shall operate only in simple-cycle mode and generate a nominal 75 MW of electrical power. Operation of this emissions unit shall not exceed ~~880~~ 950 MMBtu per hour of heat input from firing natural gas nor ~~950~~ 1060 MMBtu per hour of heat input from firing low sulfur distillate oil. The maximum heat inputs are based on the lower heating value (LHV) of each fuel, an inlet air supply cooled to 59° F, a relative humidity of 60%, an ambient air pressure of 14.7 psi, and 100% base load. Therefore, maximum heat input rates will vary depending upon ambient conditions and the CT characteristics. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions, have been provided and are a part of this permit. See Attachment G-1. [Permit Revision No. 0490015-008-AC (PSD-FL-140AB)]

Friday, Barbara

To: 'ageorge@invenergyllc.com'; 'fsarduy@invenergyservices.com'; 'tdavis@ectinc.com'; Zhang-Torres; Halpin, Mike; 'Fomey.Kathleen@epamail.epa.gov'; 'dee_morse@nps.gov'

Cc: Thomas, Bruce X.

Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Attachments: 0490015-009ProposedCoverLetter&ProposedDetermination.pdf; 0490015-009-AV Proposed Permit.pdf; 0490015-009-AV Statement of Basis.pdf

Dear Sir/Madam:

A copy of the "PROPOSED PERMIT DETERMINATION" and the related permit documents for the above referenced facility are attached. This e-mail is being provided as a courtesy to inform you that the DRAFT permit has become a PROPOSED permit, and that the PROPOSED permit has been transmitted to the USEPA for their review.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

The attached document(s) is(are) in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

10/12/2007

Friday, Barbara

From: System Administrator
To: Alex George
Sent: Friday, October 12, 2007 11:29 AM
Subject: Delivered:PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: ageorge@invenergyllc.com; fsarduy@invenergyservices.com; tdavis@ectinc.com; Zhang-Torres; Halpin, Mike; Forney.Kathleen@epamail.epa.gov; dee_morse@nps.gov
Cc: Thomas, Bruce X.
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Sent: 10/12/2007 11:28 AM

was delivered to the following recipient(s):

Alex George on 10/12/2007 11:25 AM

Friday, Barbara

From: Alex George [AGeorge@invenenergyllc.com]
To: undisclosed-recipients
Sent: Friday, October 12, 2007 12:25 PM
Subject: Read: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: AGeorge@invenenergyllc.com
Subject:

was read on 10/12/2007 12:25 PM.

Friday, Barbara

From: Exchange Administrator
Sent: Friday, October 12, 2007 11:29 AM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT24611.txt; PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station



ATT24611.txt (284 PROPOSED Title V
B) Permit Revisi...

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

tdavis@ectinc.com

Friday, Barbara

From: Mailer-Daemon@ectinc.com
Sent: Friday, October 12, 2007 11:42 AM
To: Friday, Barbara
Subject: Confirm: 'PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station' received

A message which requested delivery confirmation recently arrived at this server. This server honors all delivery confirmation requests whether generated from local mail traffic or from mail received via an outside source (such as SMTP/POP).

Message-ID: <1900D374FE4CCB4AB8DEB001320338BABA7F5C@tlhexsmb5.floridadep.net>
To : tdavis@ectinc.com
From : Barbara.Friday@dep.state.fl.us
Subject : PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Date : Fri, 12 Oct 2007 11:28:12 -0400

Receiving Domain: ectinc.com

Friday, Barbara

From: System Administrator
To: Thomas, Bruce X.; Zhang-Torres
Sent: Friday, October 12, 2007 11:28 AM
Subject: Delivered:PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: 'ageorge@invenergyllc.com'; 'fsarduy@invenergyservices.com'; 'tdavis@ectinc.com'; Zhang-Torres; Halpin, Mike; 'Forney.Kathleen@epamail.epa.gov'; 'dee_morse@nps.gov'
Cc: Thomas, Bruce X.
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Sent: 10/12/2007 11:28 AM

was delivered to the following recipient(s):

Thomas, Bruce X. on 10/12/2007 11:28 AM
Zhang-Torres on 10/12/2007 11:28 AM

Friday, Barbara

From: Thomas, Bruce X.
To: Friday, Barbara
Sent: Friday, October 12, 2007 2:09 PM
Subject: Read: New Posting #0490015

Your message

To: Gracy Danois; Kathleen Forney; Walker, Elizabeth (AIR)
Cc: Thomas, Bruce X.
Subject: New Posting #0490015
Sent: 10/12/2007 11:25 AM

was read on 10/12/2007 2:09 PM.

Friday, Barbara

From: Zhang-Torres
To: Friday, Barbara
Sent: Friday, October 12, 2007 11:59 AM
Subject: Read: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: 'ageorge@inveneryllc.com'; 'fsarduy@inveneryservices.com'; 'tdavis@ectinc.com'; Zhang-Torres; Halpin, Mike; 'Forney.Kathleen@epamail.epa.gov'; 'dee_morse@nps.gov'
Cc: Thomas, Bruce X.
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Sent: 10/12/2007 11:28 AM

was read on 10/12/2007 11:59 AM.

Friday, Barbara

From: System Administrator
To: Halpin, Mike
Sent: Friday, October 12, 2007 11:28 AM
Subject: Delivered:PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: 'ageorge@inveneryllc.com'; 'fsarduy@inenergyservices.com'; 'tdavis@ectinc.com'; Zhang-Torres; Halpin, Mike; 'Forney.Kathleen@epamail.epa.gov'; 'dee_morse@nps.gov'
Cc: Thomas, Bruce X.
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Sent: 10/12/2007 11:28 AM

was delivered to the following recipient(s):

Halpin, Mike on 10/12/2007 11:28 AM

Friday, Barbara

From: Halpin, Mike
To: Friday, Barbara
Sent: Friday, October 12, 2007 11:39 AM
Subject: Read: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Your message

To: 'ageorge@inenergyllc.com'; 'fsarduy@inenergyservices.com'; 'tdavis@ectinc.com'; Zhang-Torres; Halpin, Mike; 'Forney.Kathleen@epamail.epa.gov'; 'dee_morse@nps.gov'
Cc: Thomas, Bruce X.
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station
Sent: 10/12/2007 11:28 AM

was read on 10/12/2007 11:39 AM.

Friday, Barbara

From: Mail Delivery System [MAILER-DAEMON@mseive01.rtp.epa.gov]
Sent: Friday, October 12, 2007 11:28 AM
To: Friday, Barbara
Subject: Successful Mail Delivery Report

Attachments: Delivery report; Message Headers



Delivery report.txt
(491 B)

Message
Headers.txt (2 KB)

This is the mail system at host mseive01.rtp.epa.gov.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<Forney.Kathleen@epamail.epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250
OK, sent 470F928E_18485_18487_12

Friday, Barbara

From: Forney.Kathleen@epamail.epa.gov
Sent: Friday, October 12, 2007 1:47 PM
To: Friday, Barbara
Subject: Re: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

thanks

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30024

Phone: 404-562-9130
Fax: 404-562-9019

"Friday,
Barbara"
<Barbara.Friday@
dep.state.fl.us>

10/12/2007 11:28
AM

To
<ageorge@invenergyllc.com>,
<fsarduy@invenergyservices.com>,
<tdavis@ectinc.com>,
"Zhang-Torres"
<Cindy.Zhang-Torres@dep.state.fl.
us>, "Halpin, Mike"
<Mike.Halpin@dep.state.fl.us>,
Kathleen Forney/R4/USEPA/US@EPA,
<dee_morse@nps.gov>

cc

"Thomas, Bruce X."
<Bruce.X.Thomas@dep.state.fl.us>
Subject
PROPOSED Title V Permit Revision
No.: 0490015-009-AV - Hardee
Power Partners - Hardee Power
Station

Dear Sir/Madam:

A copy of the "PROPOSED PERMIT DETERMINATION" and the related permit documents for the above referenced facility are attached. This e-mail is being provided as a courtesy to inform you that the DRAFT permit has become a PROPOSED permit, and that the PROPOSED permit has been transmitted to the USEPA for their review.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be

issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

The attached document(s) is(are) in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey. [attachment "0490015-009ProposedCoverLetter&ProposedDetermination.pdf" deleted by Kathleen Forney/R4/USEPA/US] [attachment "0490015-009-AV Proposed Permit.pdf" deleted by Kathleen Forney/R4/USEPA/US] [attachment "0490015-009-AV Statement of Basis.pdf" deleted by Kathleen Forney/R4/USEPA/US]

Friday, Barbara

From: Exchange Administrator
Sent: Friday, October 12, 2007 11:28 AM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT24497.txt; PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station



ATT24497.txt (284 PROPOSED Title V
B) Permit Revisi...

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

dee_morse@nps.gov

Friday, Barbara

From: Dee_Morse@nps.gov
Sent: Tuesday, October 16, 2007 5:05 PM
To: Friday, Barbara
Subject: PROPOSED Title V Permit Revision No.: 0490015-009-AV - Hardee Power Partners - Hardee Power Station

Return Receipt

Your PROPOSED Title V Permit Revision No.: 0490015-009-AV -
document: Hardee Power Partners - Hardee Power Station

was Dee Morse/DENVER/NPS
received
by:

at: 10/16/2007 03:05:12 PM