



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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ATLANTA, GEORGIA 30303-8960

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FEB 19 2001

4 APT-ARB

A. A. Linero, P.E.  
Florida Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

SUBJ: Preliminary Determination and Draft PSD Permit for FPC - Hines  
(PSD-FL-296) located in Polk County, Florida

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for the FPC - Hines facility dated January 12, 2001. The preliminary determination is for the proposed construction and operation of two combined cycle combustion turbines (CTs) with a total nominal generating capacity of 530 MW to be located near Bartow, FL. The combustion turbines proposed for the facility are Siemens Westinghouse 501FD units and will be coupled with unfired heat recovery steam generating units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CTs will be allowed to fire natural gas up to 8,760 hours per year and fire No. 2 fuel oil a maximum of 720 hours per year. Total net emissions increases from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM/PM<sub>10</sub>) and volatile organic compounds (VOC).

Based on our review of the PSD permit application, preliminary determination and draft PSD permit, we have the following comments:

1. In Section III, condition 7 of the draft PSD permit, excess emissions during startup and shutdown are allowed for up to 4 hours in any 24-hour period. Because periods of startup and shutdown are part of normal source operation, we recommend that the Florida Department of Environmental Protection (FDEP) also consider future establishment of startup and shutdown best available control technology (BACT) emission limits for CO and NO<sub>x</sub> derived from monitoring results during the first few months of commercial operation. We further recommend that FDEP include definitions of what constitutes startup and shutdown episodes as referenced in Condition 7.
2. In Section III, condition 5 of the draft PSD permit, the emission rates for NO<sub>x</sub> and CO while burning fuel oil are set as 12 ppmvd and 30 ppmvd on a 24-hour block average, respectively,

as measured by CEMS. We recommend that FDEP consider a 3-hour averaging period, consistent with the limits for fuel oil combustion in several previous Florida PSD permits.

3. The following comments are specific to the economic analyses for selective catalytic reduction (SCR), SCONOx™, and catalytic oxidation pollution control systems.
  - a. The “Direct Annual Costs” section of the above mentioned cost analyses list an “Inventory Cost” (capital recovery for 1/3 catalyst) in addition to a “Catalyst Cost.” It is our understanding that the “inventory cost” refers to the cost of maintaining an inventory of catalyst while the “catalyst cost” is the actual cost of purchasing replacement catalyst annualized over a 3 year period. Further information should be provided detailing the rationale for maintaining a long-term inventory of catalyst if the replacement of catalyst is normally planned for in advance.
  - b. The “Annualized Total Direct Capital” cost of the above mentioned cost analyses is too high because it contains a double-counting of catalyst cost. Catalyst cost is already included in the annualized “Catalyst Cost” and should be deducted from the total capital investment when calculating capital recovery. This concept is explained in the following excerpt from the *OAQPS Control Cost Manual*: “However, whenever there are parts in the control system that must be replaced before the end of its useful life, Equation 2.2 [the capital recovery cost calculation equation] must be adjusted, to avoid double-counting.”
  - c. It is unclear what basis is used for calculating the annual cost associated with the “MW Loss and Heat Rate Penalty” item in the “Energy Cost” section of the SCR and SCONOx™ cost analyses (0.3 percent and 0.75 percent MW loss, respectively). Although it is appropriate to calculate the cost of using additional natural gas to compensate for the power consumption resulting from pressure drops across the catalyst bed, lost revenue should not be included in the cost analyses.
  - d. The “Direct Annual Costs” section of the SCR and SCONOx™ cost analyses includes a 3 percent annual contingency fee in addition to the 3 percent capital contingency fee found in the “Indirect Costs” section. This approach is inconsistent with the *OAQPS Control Cost Manual*. If there is reason to suggest the need for an annual contingency fee in addition to the one included in the capital cost section, the applicant should provide this reason.

Thank you for the opportunity to comment on the FPC - Hines facility preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,



R. Douglas Neeley

Chief

Air and Radiation Technology Branch

Air, Pesticides and Toxics

Management Division

cc: J. Kaku  
C. Holladay  
B. Thomas, SWD  
B. Omer  
N.P.S

**HOPPING GREEN SAMS & SMITH**

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OF COUNSEL  
ELIZABETH C. BOWMAN

Writer's Direct Dial No.

(850) 425-2320

February 19, 2001

Clair Fancy, Chief  
Bureau of Air Regulation  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399

**RECEIVED**

FEB 20 2001

BUREAU OF AIR REGULATION

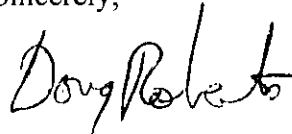
Re: FPC Hines Energy Complex Power Block 2  
DEP File No. 1050234-004-AC  
PSD Permit No. PSD-FL-296

Dear Clair:

Enclosed for your files is the original Proof of Publication from the Lakeland Ledger for the above-referenced Notice of Intent to Issue PSD Permit for the FPC Hines Energy Complex Power Block 2. This notice was published on January 24, 2001.

Please do not hesitate to call me if you have any questions concerning the above.

Sincerely,



Douglas S. Roberts

Encls.

cc: Mike Kennedy  
Joseph Kahn, DEP

# AFFIDAVIT OF PUBLICATION

## THE LEDGER

### Lakeland, Polk County, Florida

Case No .....

STATE OF FLORIDA)  
COUNTY OF POLK)

Before the undersigned authority personally appeared Sandra Beeler, who on oath says that she is the Inside Sales Supervisor of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

..... Notice of Intent to Issue PDS Permit .....

..... in the matter of DEP File No. 1050234-004-AC, PDS-FL-296 .....

..... in the .....

..... Court, was published in said newspaper in the issues of .....

..... 1-24; 2001 .....

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed Sandra Beeler  
Sandra Beeler  
Inside Sales Supervisor  
Who is personally known to me.

Sworn to and subscribed before me this 30TH  
day of January A.D. 01

Patricia Ann Rouse  
Notary Public  
PATRICIA ANN ROUSE

(Seal)  
My Commission Expires .....

PATRICIA ANN ROUSE  
 MY COMMISSION # CC 978018  
 EXPIRES: October 17, 2004  
 Bonded This Notary Public Underwriters

The complete project file includes the application, technical evaluations, draft permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section, or the Department's reviewing engineer for this project, Joseph Kahn, P.E., at the Bureau of Air Regulation in Tallahassee, Florida, or call 850/488-0114 for additional information. Written comments directed to the Department's reviewing engineer should be sent to the following mailing address: Dept. of Environmental Protection, Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #6605, Tallahassee, Florida, 32399-2400. E980-1-24, 2001

Ij530120

E980

### Attach Notice Here

#### PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL PROTECTION  
DEP File No. 1050234-004-AC, PSD-FL-296  
  
Florida Power Corporation  
Hines Energy Complex Power Block 2  
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue a Prevention of Significant Deterioration (PSD) permit to Florida Power Corporation to authorize the construction of its Power Block 2 project to be located at the existing Hines Energy Complex at County Road 555, 2.5 miles south of CR 82, Barrow, Polk County. Power Block 2 will consist of two nominal 170 MW Siemens Westinghouse 501 FD combustion turbines fired primarily with natural gas and very low sulfur distillate fuel oil as a backup fuel, two unfired heat recovery steam generators and one steam electric turbine, with a total nominal generating capacity of approximately 530 MW. The applicant's mailing address is: Florida Power Corporation, One Power Plaza, 263-13th Avenue South, St. Petersburg, Florida 33701-5511. A Best Available Control Technology (BACT) determination was required for PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, sulfur dioxide (SAM), CO and VOC pursuant to Rule 62-212.400, Florida Administrative Code (F.A.C.) and 40 CFR 62.21; Prevention of Significant Deterioration. This project is subject to review under Section 403.501 - .518, Florida Statutes (F.S.) (Power Plant Siting Act), because it provides for an expansion in steam generating capacity.

Generally, NO<sub>x</sub> emissions will be controlled with dry low NO<sub>x</sub> combustors and selective catalytic reduction. Other emissions will be limited by using clean burning fuels and through proper combustion. Emissions from the project are: SO<sub>2</sub>, 1.49; PM/PM<sub>10</sub>, 121; NO<sub>x</sub>, 270; SO<sub>2</sub>, 149; SAM, 23; CO, 683; and VOC, 53. Ammonia slip is also limited.

An air quality impact analysis was conducted. No significant impacts from this project were predicted.

The Department will issue the final permit with the attached conditions unless a response is received in accordance with the following procedures result in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue PSD Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #6605, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

This PSD permitting action is being coordinated with a certification under the Power Plant Siting Act (Sections 403.501-618, F.S.). If a petition for an administrative hearing on the Department's intent to issue is filed by a substantially affected person, that hearing shall be consolidated with the certification hearing, as provided under Section 403.607(3).

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S. before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Room 628, Mail Station 836, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.603(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within the same number of days of publication of the public notice or within the same number of days of receipt of this notice of intent, whichever occurs first. Under section 120.603(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice of agency action, regardless of the date of publication of the notice of intent. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceedings; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact; if these are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific facts or states the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

- Dept. of Environmental Protection
- Bureau of Air Regulation
- Suite 4, 111 S. Magnolia Drive
- Tallahassee, Florida, 32301
- Telephone: 850/488-0114
- Fax: 850/922-6979
- Dept. of Environmental Protection
- Southwest District
- 3804 Coconut Palm Drive
- Tampa, Florida 33619-8218
- Telephone: 813/744-6100