



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED

DEC 21 1990

DEC 24 1990

4APT-AEB

DER-BAQM

Mr. Steve Smallwood, P.E., Director
Air Resources Management Division
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: TECO Power Services Corp. Hardee Power Station (PSD-FL-140)

Dear Mr. Smallwood:

This is to acknowledge receipt of the revised preliminary determination for the above referenced facility by letter dated December 5, 1990. We have reviewed the package as submitted and have significant comments as outlined in the following paragraphs. The issues raised in this letter are sufficient to preclude the issuance of a construction permit to TECO Power Services Corp. In order to prevent additional action by EPA, we strongly advise that you not issue this construction permit until the following issues are resolved.

MODELING/MONITORING

As noted in our comments on the permit application dated August 11, 1989, and in our comments on the preliminary determination of August 2, 1990, we indicated that preconstruction monitoring based on regional monitors was acceptable if such monitors could be found to be representative. As you know, the requirement for preconstruction monitoring under PSD regulations is not discretionary. A source may be exempted from preconstruction monitoring only if its impacts are predicted to be de minimis as defined in PSD regulations. Once the predicted impacts are determined to be greater than de minimis, a reviewing agency may allow the use of representative data in place of on-site monitoring. Such decision is made on a case-by-case basis and is not discretionary; the basis for such decision must conform to the "Ambient Monitoring Guidelines for Prevention of Significant Deterioration."

For SO₂, the monitors located north of the site fall into the representative category and we will accept one of those monitors as fulfilling the PSD requirement for SO₂.

For ozone however, we believe the Tampa monitoring site is the most representative site based on the prevailing winds and distance to the Hardee County site. Also, since maximum ozone concentrations will occur downwind from an urban area in the range of 30 or more kilometers, it is possible that the background levels at the site are higher than at sites that are not downwind of the Tampa area. The purpose of PSD monitoring is to quantify the background levels in the impact area. Therefore, we do not concur that the identified monitoring sites are representative and we recommend actual preconstruction monitoring at the Hardee site or use of data from the Tampa monitoring site.

BACT ANALYSIS

In light of Region IV's previous comments on the application and preliminary determination for this source along with the permitting history for combustion turbines both in the Region and nationwide, Region IV cannot condone the BACT determination presented in the revised preliminary determination. The applicant has continually based the rejection of SCR as a NO_x control on the fact that the projected use of the facility is 25% of capacity, thereby rendering the application of SCR to be technically infeasible (when firing in the simple cycle mode) and economically unreasonable (when firing in the combined cycle mode). This is consistent with recent BACT determinations in Florida and Region IV; however, the sources in previous cases (Key West, Panda Energy, and South Carolina Electric and Gas) each accepted permit limits on hours of operation to roughly 25% of capacity.

The NESCAUM Stationary Source Committee published a recommendation in June of 1990 concerning the permitting of simple cycle turbines. This recommendation stated: "Historically, simple cycle gas turbines used in peaking service have operated, on the average, less than fifteen hundred hours per year. However, actual hours of operation in any given year can vary substantially and could easily exceed fifteen hundred hours per year." 1500 hours per year is roughly 18% of full capacity (8760 hours per year). The recommendation suggested that regulatory agencies limit the hours of operation of "peaking units" and proposed emission guidelines for sources which included limiting the hours of operation to 2500 hours per year (28.5%).

Correspondence from the applicant indicates that in addition to the predicted capacity utilization of 25%, a maximum capacity utilization of 55% is expected. In other words, the applicant proposes to utilize the facility in a cycling manner, going from peak load to

mid-range to base load according to need. The August 2, 1990, preliminary determination is consistent with recent BACT determinations in that it proposed to limit the hours of operation of the source to 25% with the condition that if this capacity would be exceeded, the source would install SCR. However, the December 5, 1990, preliminary determination proposes to allow the source to operate at 60% lifetime capacity before having to install SCR. It is not acceptable to limit capacity on a 60% lifetime average such that the source could operate at 20% capacity one year and 100% capacity the next year and still not be required to apply SCR. In essence, the revised preliminary determination allows the source to operate as a base load unit without requiring add-on controls or even dry low-NO_x combustors. Furthermore, a lifetime average is not an enforceable entity.

The August 2, 1990 BACT determination for TECO required the use of wet injection and limited the hours of operation of the combined cycle units to 2190 hours per year. This is equivalent to 25% of capacity which is typical of a "peaking" unit. The simple cycle turbine of Phase IA, however, was not limited on hours of operation. In addition, the combined cycle units have the capacity to use by-pass vents and thus function as simple cycle units. It would appear, then, that the combined cycle units could operate continuously provided the hours of operation in the combined phase did not exceed 2190.

If the units are "peaking" units as the applicant previously claimed, then the combined capacity of all the units (both combined cycle and simple cycle) should be limited to 25% of facility capacity. This is in keeping with the precedent set with Key West and facilities in North and South Carolina. Otherwise, the BACT analysis would indicate the need for add-on NO_x controls.

In addition, the burner design should be evaluated for BACT. The applicant proposes to use General Electric Frame 7EA turbines. General Electric manufactures a "quiet combustor" which achieves NO_x levels of 25 ppm using wet injection when firing natural gas. Other burner designs are available which are capable of achieving equal or better emission levels with and without wet injection. For example, the South Bay Power Plant in Chula Vista, CA, has recently proposed a 140 MW combined cycle turbine with emission limits of 9 ppm NO_x and 8 ppm CO firing natural gas, using steam injection. The technology proposed is currently in practice at the Delmarva Power and Light, Hay Road Station, Delaware. NO_x emissions at this facility have been tested at lower than 25 ppm.

In any case, it does not seem appropriate to allow a simple cycle "peaking" unit to operate 8760 hours per year without a lower emission rate. Also, clarification should be given as to whether the combined cycle units will be allowed to operate in simple cycle mode.

The applicant has continually pointed to the firing of fuel oil as another drawback to implementing the use of SCR; however, as seen in publications such as the "White Paper Selective Catalytic Reduction Controls to Abate NO_x Emissions" by the Industrial Gas Cleaning Institute (November, 1989), SCR manufacturers are confident with performance on "high sulfur" fuels, and especially low sulfur distillate fuels such as proposed by the applicant.

As with the Key West permit, the permit for TECO should contain provisions to require the facility reevaluate BACT, with SCR as a minimum, in the event that the 25% capacity factor is exceeded or the source wishes to operate as other than a peaking unit. The determination made by DER staff in the August 2, 1990, document is justified and consistent with previous BACT determinations.

Thank you for the opportunity to review and comment on this package. If you have any questions on these comments, please do not hesitate to contact me at (404) 347-3043.

Sincerely yours,

Richard A. Smith, Deputy/for

Winston A. Smith, Director
Air, Pesticides, and Toxics
Management Division

cc: TECO Hardee

B. Andrews

B. Owen

C. Francis

B. Thomas, SW Dept

M. Sims

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION IV
AIR, PESTICIDES AND TOXICS MANAGEMENT DIVISION
345 Courtland Street, N.E.
Atlanta, Georgia 30365
Fax Number: FTS 257-5207 or (404) 347-5207

FACSIMILE TRANSMISSION SHEET

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(preparer must number all pages)

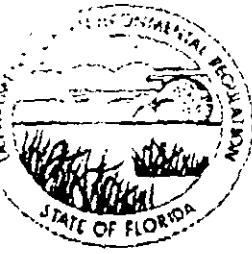
TO: Clair Fancu
Frank OYER PHONE: _____

ADDRESS: _____ FAX NO. (404) 602-922

FROM: Winston Smith PHONE: 347-~~333~~3093

If the following pages are received poorly, please call Angela
at FTS 257- 2904 or (404) 347- 2904

SPECIAL INSTRUCTIONS FOR RECEIVER: _____



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Swainmann, Secretary

John Shearer, Assistant Secretary

December 13, 1990

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DEC 20 1990

Mr. Jerry Williams
Director, Environmental
Tampa Electric Company
PO Box 111
Tampa, Florida 33601-0111

Handwritten signature/initials

Re: Federal PSD Permit-Hardy Power Project

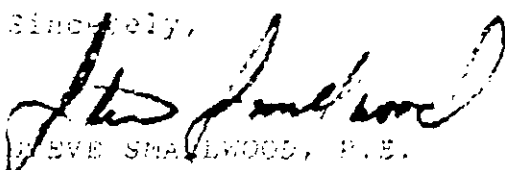
Dr. Mr. Williams:

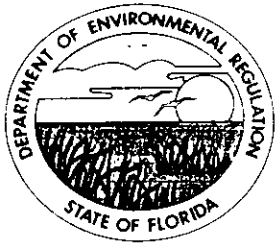
As we discussed earlier this week, the Department plans to take final action on the federal PSD permit for the Hardy Power Project on or around December 27th. A copy of the proposed permits was mailed to EPA earlier this month for their review and comment. A thirty day public comment period required for federal PSD permits was satisfied by the notice for the site certification hearing.

The term "simultaneous" in the siting act does not mean literally simultaneously; that should be read to mean, as soon as possible after the site certification decision. EPA does not regard the site certification as a substitute for the federal PSD permit, and therefore requires the Department as EPA's agent to issue a separate PSD permit based on the results of the site certification hearing.

Our delegation agreement also calls for us to give them a reasonable time to review the proposed permit after the siting hearing has taken place. It has been customary to allow EPA thirty days to review the proposed permit before we take final action on it. In this case we have advised EPA that we need to make an expedited review in order that we may take final action before the end of this month. It is my understanding that they are agreeable to doing that.

Should you have any additional questions on this matter, please give me a call.

Sincerely,

EVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

December 17, 1990

Ms. Jewell A. Harper
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Ms. Harper:

RE: TECO/Seminole Electric, Hardee Power Station
PSD-FL-140

In accordance with a recent telephone conversation with Mr. Greg Worley, please find the enclosed correspondences that are not in your files for the above referenced project. The correspondence being sent is listed in chronological order as follows:

TECO letter dated April 4, 1990
TECO letter dated May 4, 1990
TECO letter dated May 18, 1990
Internal Memorandum dated June 5, 1990
TECO letter dated July 17, 1990
TECO letter dated July 18, 1990
TECO letter dated July 25, 1990
Internal Memorandum dated August 10, 1990
TECO letter dated September 26, 1990
TECO letter dated December 7, 1990

If you have questions regarding any of these correspondences, please contact Barry Andrews at (904)488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BA/pa

Enclosures

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3. Article Addressed to: Ms. Jewell A. Harper Air Enforcement Branch U.S. EPA, Region IV 345 Courtland Street, N.E. Atlanta, Georgia 30365	4. Article Number P 256 395 044 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature ^{Addressee} X <i>Charles Davis</i>	8. Addressee's Address (ONLY if requested and fee paid)
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PS Form 3811, Apr. 1989

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PS Form 3800, June 1985



December 7, 1990

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Federal Express
Airbill #7284299142

Mr. Steve Smallwood
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Hardee Power Station

Dear Steve:

On behalf of the Hardee Power Station applicants, I would again like to thank you, Buck, Clair, Barry and the Department for your support in getting the facility approved by the Governor and Cabinet on November 27, 1990. As we discussed after the Governor and Cabinet meeting, due to contractual obligations, it is critical that construction begin on the Hardee Power Station project in early 1991. The remaining authorization required from the state is the PSD permit issued by your office.

We received today the PSD materials that were transmitted by Clair Fancy to EPA for review. We understand that the normal procedure is to provide EPA with 30 days in which to comment on the material prior to issuance of the permit. Obviously, if the 30 day period is adhered to in this case, we will not have the PSD permit in calendar 1990 and this will cause us to be behind schedule with the construction. We believe under the circumstances that the normal 30 day period can be substantially shortened, and we are requesting your assistance in accomplishing this. We will take whatever steps are required to assist in expediting the matter and will be available at your request to meet with either you or EPA to review any of the matters relating to the BACT determination of the PSD permit.

It would be useful if we could meet to discuss this in the near future. I will contact you to determine whether such a meeting can take place the week of December 10, 1990.

Mr. Steve Smallwood
December 7, 1990
Page -2-

Thank you for your cooperation.

Sincerely,



Jerry L. Williams
Director
Environmental

JLW/ams/AA033.DOC

cc: Mr. Buck Oven, FDER
Mr. Clair Fancy, FDER
Mr. Barry Andrews, FDER
Mr. John Shearer, FDER