

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

May 5, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Michael P. Opalinski
Director of Environmental Affairs
Seminole Electric Cooperative Incorporated
Post Office Box 272000
Tampa, Florida 33688-2000

Re: DEP File PSD-FL-214A
Hardee Power Station Unit 3 (Payne Creek Generating Station)

Dear Mr. Opalinski:

Enclosed is one copy of the Draft PSD Permit Modification for the Hardee Power Station Combined Cycle facility which will be located near Bowling Green, Hardee County. The Department's Intent to Issue PSD Permit Modification and the "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION" must be published in a newspaper of general circulation in Hardee County. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Bureau of Air Regulation at the above letterhead address. If you have any other questions, please call Mr. Syed Arif at 850/921-9528.

Sincerely,

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

CHF/sa

Enclosures

**TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION**

Seminole Electric Cooperative, Incorporated

**Hardee Power Station Unit 3
Combined Cycle Project
Hardee County**

Construction Permit No. PSD-FL-214 (A) / PA-89-25SA

**Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation**

May 5, 1999

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Seminole Electric Cooperative, Inc. (Seminole) submitted an application to modify permit No. PSD-FL-214 to install a Selective Catalytic Reduction (SCR) system and a carbon monoxide (CO) oxidation catalyst control system at its Combined Cycle Facility which will be located near Bowling Green, Hardee County.

The facility was originally permitted in September 1995 as a 440 megawatt (MW) power plant consisting of two Westinghouse Model 501F (or equivalent) gas or oil-fired combustion turbines and a heat recovery steam generator. The actual equipment to be installed has a power capability of 488 MW (nominal) and is powered by two Siemens/Westinghouse 501F(D) combustion turbines. The permit requires that nitrogen oxides (NO_x) emissions be controlled through Dry Low NO_x (DLN) combustion technology. The DLN combustors installed will not be able to achieve the permit limit of 15 parts per million volume dry (ppmvd) at 15 percent oxygen (O₂) or 106 pounds per hour per turbine. Siemens/Westinghouse and Seminole have decided to install SCR in addition to Siemens/Westinghouse's present generation of DLN combustors in order to comply with the revised permitted limit for NO_x of 12 ppmvd @ 15% O₂. The revised NO_x emission limit of 12 ppmvd will be granted for a period of one year (12 months) from the start-up date. The NO_x emission limit will be reduced to 9 ppmvd based on the operating experience of the combustion turbines with SCR.

The applicant has consented to equip the combustion turbines with a CO oxidation catalyst control system to meet the established CO limits in the existing PSD permit. Seminole has also requested that the name for Hardee Unit 3 be changed to "Payne Creek Generating Station".

Adjustments to emission limits due to the change in combustion turbines have been less than PSD significant amounts. These changes will not cause or contribute to a violation of the National Ambient Air quality Standards or Allowable Increments under the requirements for Prevention of Significant Deterioration of air Quality.

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations provided that vendor guarantees for emissions rates are verified and certain conditions are met. The proposed revisions to the original construction permit conditions are attached.

Engineer: *Syed Arif, P.E.*

**NOTICE TO BE PUBLISHED
IN THE NEWSPAPER**

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File PSD-FL-214A/ PA-89-25SA

Hardee Power Station Unit 3 (Payne Creek Generating Station)
Hardee County

The Department of Environmental Protection (Department) gives notice of its intent to issue a PSD Permit Modification to Seminole Electric Cooperative Incorporated (Seminole) to install a Selective Catalytic Reduction (SCR) system and a carbon monoxide (CO) oxidation catalyst control system at its Combined Cycle Facility to be located near Bowling Green, Hardee County. A Best Available Control Technology determination was not required pursuant to Rule 62-212.400, F.A.C. or 40CFR52.21, Prevention of Significant Deterioration (PSD). The applicant's name and address are: Seminole Electric Cooperative Incorporated, Post Office Box 272000, Tampa, Florida 33688-2000.

The facility was originally permitted in 1995 as a 440 megawatt power plant consisting of two Westinghouse Model 501F (or equivalent) gas or oil-fired combustion turbines and a heat recovery steam generator. The actual equipment to be installed has a power capability of 488 MW and is powered by two Siemens/Westinghouse 501F(D) combustion turbines. The current permit requires that nitrogen oxides (NO_x) emissions be controlled through Dry Low NO_x (DLN) combustion technology. The DLN combustors installed will not be able to achieve the permit limit of 15 parts per million volume dry (ppmvd) at 15 percent oxygen (O₂) or 106 pounds per hour per turbine. Siemens/Westinghouse and Seminole have decided to install Selective Catalytic Reduction (SCR) in addition to Siemens/Westinghouse's present generation of DLN combustors in order to comply with the revised permitted limit for NO_x of 12 ppmvd @ 15% O₂. The revised NO_x emission limit of 12 ppmvd @ 15% O₂ will be granted for a period of one year (12 months) from the start-up date. The NO_x emission limit will be reduced to 9 ppmvd @ 15 % O₂ based on the operating experience of the combustion turbines with SCR.

The applicant has consented to equip the combustion turbines with a CO oxidation catalyst control system to meet the established CO limits in the existing PSD permit. Seminole has also requested that the name for Hardee Unit 3 be changed to "Payne Creek Generating Station".

Adjustments to emission limits due to the change in combustion turbines have been less than PSD significant amounts. These changes will not cause or contribute to a violation of the National Ambient Air quality Standards or Allowable Increments under the requirements for Prevention of Significant Deterioration of Air Quality.

The Department will accept written comments concerning the proposed permit modification issuance action for a period of 30 (thirty) days from the date of publication of "Public Notice of Intent to Issue PSD Permit Modification." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station 5505, 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 modification and require, if applicable, another Public Notice.

The Department will issue the permit modification 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, Mail Station 35, 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 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(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, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a

**NOTICE TO BE PUBLISHED
IN THE NEWSPAPER**

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 28-106.205 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 proceeding; 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 there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

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. 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.

Pursuant to Condition of Certification XXVIII.C of the separate Power Plant Site (PPSA) Certification Order, PA 89-25SA, for the Hardee Power Station Unit 3, the PPSA certification will be automatically modified to conform to amendments to the facility's PSD permit. Upon issuance of any amended PSD permit, the Department will also modify the parallel PPSA conditions of certification to conform to the amended conditions of the PSD permit.

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
111 S. Magnolia Drive, Suite 4
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
Fax: 813/744-6084

The complete project file includes the Draft Permit Modification, the application, and the information submitted by the applicant or responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114 for additional information.

In the Matter of an
Application for Permit Modification by:

Mr. Michael P. Opalinski
Director of Environmental Affairs
Seminole Electric Cooperative Incorporated
Post Office Box 272000
Tampa, Florida 33688-2000

DEP File PSD-FL-214A
Hardee Power Station Unit 3
Hardee County

INTENT TO ISSUE PSD PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification (copy of DKAFT Permit Modification attached) for the proposed action, as detailed in the application specified above, for the reasons stated below.

The applicant, Seminole Electric Cooperative, Inc. (Seminole), applied on February 15, 1999 to the Department for a permit modification to install a Selective Catalytic Reduction System and a carbon monoxide oxidation catalyst control system at the Hardee Power Station Combined Cycle Facility which will be located near Bowling Green, Hardee County. Seminole has also requested that the name for Hardee Power Station Unit 3 be changed to "Payne Creek Generating Station".

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212, and 40CFR52.21(u). The above actions are not exempt from permitting procedures. The Department has determined that a modification of the permit issued pursuant to the Prevention of Significant Deterioration (PSD Permit) is required to modify the permit as requested.

The Department intends to issue this PSD Permit modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue PSD Permit Modification." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit modification. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station 5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). The Department suggests that you publish the notice within thirty days of receipt of this letter. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit modification or other authorization. Failure to publish the notice and provide proof of publication may result in the denial of the permit modification pursuant to Rules 62-110.106(9) & (11), F.A.C.

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

The Department will accept written comments concerning the proposed permit modification issuance action for a period of 30 (thirty) days from the date of publication of "Public Notice of Intent to Issue PSD Permit Modification." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, 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 modification and require, if applicable, another Public Notice.

The Department will issue the permit modification 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, Mail Station 35, 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 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(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, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. 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 28-106.205 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 proceeding; 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 there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

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. 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.

Is your RETURN ADDRESS completed on the reverse side?

SENDER: ■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ Print your name and address on the reverse of this form so that we can return this card to you. ■ Attach this form to the front of the mailpiece, or on the back if space does not permit. ■ Write "Return Receipt Requested" on the mailpiece below the article number. ■ The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Michael Opalinski, DEA Seminole Electric PO Box 272000 Tampa, FL 33688-2000		4a. Article Number 2 333 618 105	
		4b. Service Type <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail <input type="checkbox"/> Insured <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> COD	
		7. Date of Delivery 5-16-99	
5. Received By: (Print Name)		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature: (Addressee or Agent) X <i>William R. Ste</i>			

Thank you for using Return Receipt Service.

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

2 333 618 105

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to		<i>Michael Opalinski</i>	
Street & Number		<i>Seminole Electric</i>	
Post Office, State, & ZIP Code		<i>Tampa FL</i>	
Postage	\$		
Certified Fee			
Special Delivery Fee			
Restricted Delivery Fee			
Return Receipt Showing to Whom & Date Delivered			
Return Receipt Showing to Whom, Date, & Addressee's Address			
TOTAL Postage & Fees	\$		
Postmark or Date		<i>PSD-F1-214A 5-6-99</i>	

PS Form 3800, April 1995

DRAFT

PERMITTEE:
Seminole Electric Cooperative
Incorporated
P.O. Box 272000
Tampa, FL 33688-2000

Permit Number: PSD-FL-214A/PA-89-25SA
Issued: 9/28/95 Revised: 5/xx/99
Expiration Date: January 1, 2000
County: Polk & Hardee
Latitude/Longitude: 27°38'30"N
81°57'45"W
Project: ~~48840~~ MW Combined Cycle
Power Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-212 and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and specifically described as follows:

For a ~~48840~~ MW (nominal) combined cycle power plant consisting of two 157.5 ~~150~~ MW (nominal) combustion turbines (CTs), two heat recovery steam generators (HRSGs), a 173 ~~140~~ MW (nominal) steam turbine generator and a 4.4 million gallon fuel oil storage tank. The maximum heat input at 32°F is 1962 ~~1,862~~ MMBtu/hr/CT (natural gas) and 1888 ~~1,965~~ MMBtu/hr/CT (oil). The plant will be located at the Polk and Hardee County site near Bowling Green, Florida which is also the site of a 295 MW power plant which is operated by TECO Power Services. The combustion turbines are to be Westinghouse Model 501F (D) or equivalent and equipped with dry low NO_x combustors and a Selective Catalytic Reduction (SCR) system ~~or an equivalent system~~ for natural gas firing and wet injection for fuel oil firing. The CT will be fired with natural gas and No. 2 low sulfur fuel oil with a sulfur content limit not to exceed 0.05 percent, by weight, as a back-up only. Each CT will also be equipped with a carbon monoxide oxidation catalyst control system.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Howard L. Rhodes, Director
Division of Air Resources
Management

PERMITTEE:
Seminole Electric Cooperative Inc.
Expiration Date: January 1, 2000

Permit Number: PSD-FL-214A
(PA-89-25SA)

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Attachments are listed below:

1. Seminole Electric Cooperative Incorporated's (SECI) application received May 9, 1994.
2. Department's letters dated June 27, September 21, and November 16, 1994.
3. SECI's letters dated August 26, October 6, and November 23, 1994.
4. SECI's letter dated February 9, 1995.
5. SECI's letters dated December 1 and December 21, 1998; January 29 and February 11, 1999.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this

PERMITTEE:
Seminole Electric Cooperative Inc.
Expiration Date: January 1, 2000

Permit Number: PSD-FL-214A
(PA-89-25SA)

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permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. A description of and cause of non-compliance; and,
- b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee

PERMITTEE:
Seminole Electric Cooperative Inc.
Expiration Date: January 1, 2000

Permit Number: PSD-FL-214A
(PA-89-25SA)

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shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (X) Determination of Best Available Control Technology (BACT)
- (X) Determination of Prevention of Significant Deterioration (PSD)
- (X) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and,
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

16. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly pursuant to Rule 62-210.650 F.A.C.

PERMITTEE:
Seminole Electric Cooperative Inc.
Expiration Date: January 1, 2000

Permit Number: PSD-FL-214A
(PA-89-25SA)

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SPECIFIC CONDITIONS:

The construction and operation of the project shall be in accordance with all applicable provisions of Chapters 62-210 through 62-297 and 62-4, Florida Administrative Code (F.A.C.), and 40 CFR 60, Subpart GG, Appendix A, Appendix B, and Appendix F (1994 version). The following emission limitations and conditions reflect the BACT determinations for the 315 300 megawatts (nominal) (MW; two 157.5 150 MW (nominal) combined cycle combustion turbines) of generating capacity. Each combustion turbine (CT) will be connected to a heat recovery steam generator (HRSG), which will recover the waste heat to produce steam for utilization in a single 173 140-MW (net) steam generator. There is no fuel firing in the associated HRSG. The facility will have a total nominal generating capacity of 48840 MW (nominal) (~~net~~). In addition to the foregoing, the project shall comply with the following Specific Conditions:

A. General Requirements

1. Pursuant to Rule 62-212.200(56), F.A.C., Potential to Emit (PTE), the maximum heat input to each Westinghouse 501F (D) CT, or equivalent, at an ambient temperature of 32°F, shall neither exceed 1,962 1,862 MMBtu/hr while firing natural gas nor 1,888 1,965 MMBtu/hr while firing fuel oil.
2. Pursuant to Rule 62-212.200(56), F.A.C., PTE, the CTs may operate continuously, i.e., 8,760 hrs/year.
3. Pursuant to Rule 62-212.200(56), F.A.C., PTE, only natural gas or No. 2 fuel oil is allowed to be fired in the CTs. The maximum sulfur content limit of the No. 2 fuel oil shall not exceed 0.05 percent, by weight.
4. Pursuant to Rule 62-212.200(56), F.A.C., PTE, the maximum No. 2 fuel oil consumption allowed to be burned is 41,751,000 gallons per year, which is equivalent to 1500 hours per CT per year of operation at full load (not to exceed 3,000 hrs/yr between the two CTs). The No. 2 fuel oil is to be used as a back-up fuel only.
5. Pursuant to Rule 62-296.310(3), F.A.C., Unconfined Emissions of Particulate Matter (PM), the emissions of unconfined PM shall be minimized during the construction period by covering or watering dust generating areas.

B. Emission Limits

1. Pursuant to Rule 62-212.410, F.A.C., BACT, the maximum allowable emission limitations from two CTs, when firing natural gas or No. 2 fuel oil, shall not exceed the following:

PERMITTEE:
 Seminole Electric Cooperative Inc.
 Expiration Date: January 1, 2000

Permit Number: PSD-FL-214A
 (PA-89-25SA)

DRAFT

MAXIMUM ALLOWABLE EMISSION LIMITATIONS

<u>POLLUTANT</u>	<u>FUEL</u>	<u>CONCENTRATION</u>	<u>lbs/hr(a)</u>	<u>TPY(b)</u>	<u>TPY(TOTAL)^c</u>
NO _x	Gas	9 15 ppmvd(d)	68 106	596 931	906 1212
	Oil	42 ppmvd(e)	336	504	
CO	Gas	20 ppmvd	71	622	618
	Oil	25 ppmvd	91	136	
PM/PM ₁₀	Gas		7	65	147
	Oil		67	100	
SO ₂	Gas		5	47	182
	Oil		101	152	
VOC	Gas	5 ppmvd	10	88	99
	Oil	10 ppmvd	21	31	
Sulfuric Acid Mist	Gas		1	6	39
	Oil		22	34	
Beryllium	Oil		0.0049	0.007	0.007
Arsenic	Oil		0.0097	0.014	0.014
Visible Emissions	Gas		≤ 10 percent opacity		
	Oil		≤ 10 percent opacity		

(a) The emission limitations in lbs/hr/CT are a 1-hour average as determined pursuant to the Performance Testing conducted pursuant to Condition C.1 below.

(b) The annual emission limitations (TPY) for natural gas are based on two CTs operating at full load for 8,760 hours per year. The annual emission limitations (TPY) for fuel oil are based on the equivalent of full-load operation for a maximum of 1500 hours per year for each of the two CTs (not to exceed 3,000 hrs/yr between the two CTs). The emission calculations are also based at a worst case ambient temperature of 32°F.

(c) Maximum allowable emissions from two CTs if any fuel oil is burned at the facility during the year. The emission calculations are also based at an ambient temperature of 59°F.

(d) The natural gas NO_x allowable emission limitation of 9 15 ppmvd is corrected to 15 percent O₂. An interim limit of 12 ppmvd (91 lb/hr/CT, 797 TPY) corrected to 15 percent O₂ shall be allowed for a period of one year from the startup date. Compliance shall be determined through the initial and annual compliance tests.

(e) The fuel oil NO_x allowable emission limitation of 42 ppmvd is corrected to 15 percent oxygen. Compliance shall be determined through the initial and

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annual compliance tests. The annual compliance test will be required if the fuel oil is fired for more than 400 hours in the preceding 12-months.

For fuel oil firing, NO_x emissions of 42 ppmvd @ 15 percent O₂ are based on fuel bound nitrogen (FBN) content of 0.015 percent by weight or less. When FBN levels are above this percentage, the CTs may produce higher NO_x concentrations due to increased fuel NO_x formation. When FBN levels are above

0.015 percent, the operator shall employ all reasonable measures to maintain the NO_x concentrations below 42 ppmvd. However, NO_x emissions (ppmvd and lb/hr), as calculated from the formula below, shall be allowed if the permittee submits data (FBN levels from most recent fuel shipment or as fired fuel sampling and hourly averages of: fuel rate, heat rate, ambient conditions, and NO_x control system parameters) which demonstrates that emissions (hourly averages) above 42 ppmvd are due solely to FBN levels above 0.015 percent.

The emission level for NO_x is adjusted for higher fuel nitrogen contents up to a maximum of 0.030 percent by weight as follows:

FUEL BOUND NITROGEN (% by weight)	NO _x LEVELS (ppmvd @ 15% O ₂)	NO _x EMISSIONS (lb/hr/CT) ¹	NO _x EMISSIONS INCREASE (TPY) ¹
0.015 or less	42	336.2	0
0.020	44	352.1	0
0.025	46	368.2	0
0.030	48	384.2	0

1 - From 336.2 lb/hr/CT at 32⁰F basis.

For intermediate values of FBN use the formula:

$$STD = 0.0042 + F$$

where,

STD = allowable NO_x emissions (ppmvd @ 15% O₂)

F = NO_x emission allowance for fuel bound nitrogen

and

N (fuel bound nitrogen), is defined as follows:

N (% by weight)	F (NO _x % by volume)
0 < N ≤ 0.015	0
0.015 < N ≤ 0.030	0.04 (N - 0.015)
0.030 < N	0.0006

2. The following estimated CT emissions are tabulated for PSD tracking purposes only:

ESTIMATED EMISSIONS

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<u>POLLUTANT</u>	<u>FUEL</u>	<u>TPY</u>
Lead	Oil(a,b)	0.16
Fluoride	Oil(a,b)	0.090
Mercury	Gas(c)	0.0003
	Oil(a,b)	0.024

(a) The annual emission limitations (TPY) for fuel oil are based on full-load operation for a total of 3,000 hours per year between the two CTs at an ambient temperature of 59°F.

(b) The No. 2 fuel oil shall have a maximum sulfur content limit of 0.05 percent, by weight.

(c) The annual emission limitation (TPY) for natural gas is based on two CTs operating at full-load for 8,760 hours per year at an ambient temperature of 59°F.

3. The permittee will install a dry low-NO_x (DLN) combustor and a SCR system ~~or an equivalent system~~ on each CT. Ammonia slip from the SCR system shall not exceed 10 ppm. The permittee shall make every practicable effort to achieve the lowest possible NO_x emission rate, but must not exceed 12 ±5 ppmvd at 15 percent O₂ per CT on a continuous basis when firing natural gas during the first year of operation. If a more advanced DLN burner is developed by Siemens/Westinghouse which is able to comply with the original emission limits (listed in B.1) and is installed by November 1, 2000, the SCR system may be removed and replaced with these new burners upon 30 days prior notice to the Department. This notice shall include information on the new burners which provides reasonable assurance and PE certification that these DLN burners can consistently meet the original NO_x emission limits. In this case the new DLN burners shall be tested in accordance with the initial performance test as described in Section C.1 within 180 days of startup with the new burners. This action would not be subject to PSD review.

4. After the ~~startup of initial compliance tests~~ on the CTs, the permittee shall operate a certified continuous emissions monitor for NO_x emissions and collect 12 months of monitoring data. The monitor will, at a minimum, meet the requirements of 40 CFR 60, Appendix F's quality assurance procedures. Within ~~15 ±8~~ months after the ~~startup initial compliance test~~, the permittee shall prepare and submit for the Department's review an engineering report regarding the collection and the analysis of the data gathered from the monitor. In addition, this report shall include a conclusion regarding the lowest NO_x emission rate that can be consistently achieved with a reasonable operating margin, taking into account long-term performance expectations and assuming good operating and maintenance practices. The report shall also include results of the testing requirements of 40 CFR 60, Appendix F's quality assurance procedures and the actual CEMS data for the period of the study in an acceptable format.

5. The Department will make a determination as to whether to seek to revise the permitted NO_x emission limitation and will base it on the engineering data

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report submitted by the permittee. If the data demonstrate that a NO_x emission rate of less than ~~12~~ 15 ppmvd at 15 percent O₂ is consistently achievable, the NO_x emission limit may be adjusted accordingly, but not lower than 9 ppmvd at 15 percent O₂.

6. Excess emissions from a turbine resulting from start up, shutdown, malfunction, fuel switch or load change shall be reported in accordance with 40 CFR 60.334(c) and accepted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for a longer duration. The permittee shall provide a general description of the procedures to be followed during periods of start up, shutdown, malfunction, fuel switch or load change to ensure that the best operational practices to minimize emissions will be adhered to and the duration of any excess emissions will be minimized. The description should be submitted to the Department along with the initial compliance test data. The description may be updated as needed by submitting such update to the Department within thirty (30) days of implementation.

7. Excess emissions from fuel switching shall not exceed 15 minutes.

8. Excess emissions due to fuel bound nitrogen levels above 0.015 percent are allowed pursuant to Condition B.1 foot note (e) of the emission limitation table.

C. Performance Testing

1. Initial (I) compliance tests shall be performed on each CT using both fuels. Testing of emissions shall be conducted at 95-100% of the manufacturer's rated heat input based on the average ambient air temperature for the CT during the test. Annual (A) compliance tests shall be performed on the CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests at permit renewal shall also be performed on the non-PSD pollutants. Tests and procedures shall be in accordance with 40 CFR 60.335. Tests shall be conducted using EPA reference methods in accordance with 40 CFR 60, Appendix A, as adopted by reference in Chapter 62-297, F.A.C, and follows:

a. Reference Method 5B for PM (I, A: for oil only; assumption is that all PM is PM₁₀).

b. Reference Method 9 for VE (I, A).

c. Reference Method 10 for CO (I, A).

d. Reference Method 20 for NO_x (I, A) or Method 7E if sampling downstream of the heat recovery steam generator.

e. Reference Method 18 or 25A for VOC (I, A).

f. Reference Method 8 for H₂SO₄ Mist (I, A).

g. Trace elements of Beryllium (Be) and Arsenic (As) shall be tested (I, for oil only) using EMTIC Interim Test Methods. As an alternative, EPA Method 104 for Be may be used; or, Be and As may be

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determined from fuel analysis using either Method 7090 or 7091 and sample extraction using Method 3040, as described in the EPA solid waste regulations SW 846.

h. ASTM D4294 (or equivalent) for sulfur content of distillate oil (I and A), which can be used for determining SO₂ emissions annually.

i. ASTM D1072-80, D3031-81, D4084-82, or D3246-81 (or equivalent) for sulfur content of natural gas (I; and, A if deemed necessary by the Department).

j. Other USEPA or DEP approved test methods for the permitted facilities may be used for compliance testing after departmental approval. Unless the permittee requests to modify a reference method, or to use a method for which a method was not designed, such approval shall not constitute an alternative test procedure under Section 62-297.620, F.A.C., or otherwise require modification of the permit.

2. The maximum sulfur content of the fuel oil shall not exceed 0.05 percent, by weight. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60.334(b).

3. As an alternative to Condition C.1.i above, natural gas supplier data for sulfur content may be submitted. However, the applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1993 version). Any request for a future custom monitoring schedule shall be made in writing to the Department's Bureau of Air Regulation. Any custom schedule approved by the USEPA pursuant to 40 CFR 60.334(b) (1993 version) will be recognized as enforceable provisions of the permit.

D. Monitoring Requirements

Monitoring of operations shall be in accordance with 40 CFR 60.334. Also, and for each CT, the permittee shall install, operate, and maintain a continuous emission monitoring system (CEMS) to monitor nitrogen oxides in accordance with 40 CFR 60, Appendix F, and, if necessary, a diluent gas (CO₂ or O₂). The Federal Acid Rain Program requirements of 40 CFR 75 shall apply when those requirements are adopted and if applicable.

1. Each CEMS shall meet performance specifications of 40 CFR 60, Appendix B.

2. CEMS data shall be recorded and reported in accordance with Rule 62-297.500, F.A.C.; 40 CFR 60; and, 40 CFR 75, if it becomes applicable. The record shall include periods of start up, shutdown, load change, fuel switch, high fuel bound nitrogen, and malfunction.

3. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless

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operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

4. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of all CEMS. If applicable, 40 CFR 75 shall apply when the Federal Acid Rain Program is adopted.

5. For purposes of the reports required under this permit, excess emissions, as determined pursuant to Condition B.6 herein, are defined as any calculated average emission rate which exceeds the applicable emission limitation in Condition B.1.

E. Notification, Reporting and Recordkeeping

1. To determine compliance with the natural gas and fuel oil firing heat input limitation, the permittee shall maintain daily records of natural gas and fuel oil consumption for each turbine, and provide the heating value for each fuel during the compliance test. All records shall be maintained for a minimum of three years after the date of each record and shall be made available to representatives of the Department upon request.

2. The project shall comply with all the applicable requirements of Chapters 62-210 through 62-297 and 62-4, F.A.C., and 40 CFR 60, Subparts A and GG. The requirements shall include:

- a. 40 CFR 60.7(a)(1) - By postmarking or delivering notification of the start of construction no more than 30 days after such date.
- b. 40 CFR 60.7(a)(2) - By postmarking or delivering notification of the anticipated date of the initial start up of each CT not less than 30 days prior to such date.
- c. 40 CFR 60.7(a)(3) - By postmarking or delivering notification of the actual start up of each turbine within 15 days after such date.
- d. 40 CFR 60.7(a)(5) - By postmarking or delivering notification of the date for demonstrating the CEMS performance, no less than 30 days prior to such date.
- e. 40 CFR 60.7(a)(6) - By postmarking or delivering notification of the anticipated date for conducting the opacity observations no less than 30 days prior to such date.
- f. 40 CFR 60.7(b) - By initiating a recordkeeping system to record the occurrence and duration of any start up, shutdown, load change, fuel switch, high fuel bound nitrogen, and malfunction of a turbine, malfunction of the air pollution control equipment, and the periods when the CEMS is inoperable.

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- g. 40 CFR 60.7(c) - By postmarking or delivering a quarterly excess emissions and monitoring system performance report within 30 days after the end of each calendar quarter. This report shall contain the information specified in 40 CFR 60.7(c) and (d).
- h. 40 CFR 60.8(a) - By conducting all performance tests within 60 days after achieving the maximum turbine and boiler firing rates, but not more than 180 days after the initial start up of each CT.
- i. 40 CFR 60.8(d) - By postmarking or delivering notification of the date of each performance test required by this permit at least 30 days prior to the test date; and,
- j. Rule 62-297.345 - By providing stack sampling facilities for each turbine.
- k. All notifications and reports required by this specific condition shall be submitted to the Department's Southwest District office. Performance test results shall be submitted within 45 days of completion of such test.

3. The following information shall be submitted to the Department's Bureau of Air Regulation within 90 days after the permittee has made the selection of the following:

a. Description of the final selection of the turbines, SCR and CO oxidation catalyst control systems ~~for installation at the facility~~. The descriptions shall include the specific make and model numbers and any changes in the proposed method of operation, fuels, emissions or equipment.

b. Description of the CEMS selected. The description shall include the type of sensors and the manufacturer and model numbers of the equipment.

4. The following protocols shall be submitted to the Department's Southwest District office for approval:

a. CEMS Protocol - Within 120 days after selection of the CEMS, but 180 days prior to the initial startup, a CEMS protocol describing the system, its installation, operating and maintenance characteristics and requirements. The protocol shall meet the requirements of 40 CFR 60.13, Appendix B and Appendix F or 40 CFR 75, and be approved within 60 days.

b. Performance Test Protocol - At least 90 days prior to conducting the initial performance tests required by this permit, the permittee shall submit to the Department's Southwest District office a protocol outlining the procedures to be followed, the test methods and any differences between the reference methods and the test methods proposed to be used to verify compliance with the conditions of this permit. The Department shall approve the testing protocol within 60 days provided that it meets the requirements of this permit.

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c. Heat Input Curves - Within 120 days after final selection of the turbine, but 180 days prior to initial startup of the turbine, manufacturer's curves or equations of heat input and NOx emission rate (lbs/hr) corrections to other temperatures shall be provided to the Department.

d. Subject to the approval by the Department for technical validity while applying sound engineering principles, the manufacturer's curves shall be used to establish the heat input rates over a range of temperatures for the purposes of compliance determination.

F. Modifications

The permittee shall give written notification to the Department when there is any modification to this facility pursuant to Rule 62-212.200, F.A.C., Definitions - Modifications. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and, the anticipated completion date of the change.

G. No. 2 Fuel Oil Storage Tank

The permittee shall be in compliance with the monitoring requirements of 40 CFR 60.116b(a) and (b).

H. Additional General Conditions

1. Pursuant to Rule 62-4.090, F.A.C., the permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit.

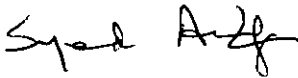
2. An application for an operation permit pursuant to Rule 62-4.220, F.A.C., is not required if the facility is also certified under the Power Plant Siting Act, Chapter 403, Part II, F.S. That certification serves as the operation permit also. The permittee must submit an application for an operation permit for a major source of pollution pursuant to Chapter 62-213, F.A.C.

3. If site construction does not commence within 18 months of issuance of this permit, then Seminole shall obtain from the Department a review and, if necessary, a modification of the BACT determination and allowable emissions for the unit(s) on which construction has not commenced [40 CFR 52.21(r)(2)].

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy

FROM: Syed Arif 

DATE: April 28, 1999

SUBJECT: Seminole Electric Cooperative, Inc. Hardee Power Station
PSD-FL-214A Combined Cycle Facility

Attached is the Public Notice and draft permit modification to install a Selective Catalytic Reduction (SCR) system and a carbon monoxide oxidation catalyst control system at its Combined Cycle Facility which will be located near Bowling Green, Hardee County.

The changes will allow Seminole to meet its revised NO_x commitment with SCR and based on the operating experience with SCR the NO_x limit can be further lowered to 9 ppmvd. Seminole has also agreed to install an oxidation catalyst control system to meet the established CO limits in the permit.

Other changes in the permit reflect the technical specifications of the Westinghouse 501 FD versus the Westinghouse 501F units originally proposed at the site. These include a higher heat input rate and total power generation capability of 488 megawatts (MW) versus 440 MW.

I recommend your approval and signature.

SA/a

Attachments