



Jeb Bush  
Governor

# Department of Environmental Protection

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

Colleen M. Castille  
Secretary

April 19, 2005

Mr. Michael P. Opalinski  
Vice President of Technical Services  
Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33688-2000

Re: Payne Creek Generating Station  
DRAFT Air Construction Project No. 0490340-004-AC / PSD-FL-214C  
{Modification of Permit No. PSD-FL-214A}  
DRAFT Title V Air Operation Permit Revision Project No. 0490340-005-AV  
{Revision to Title V Air Operation Permit No. 0490340-002-AV}

Dear Mr. Opalinski:

On November 2, 2004, you submitted an application for an Air Construction Permit Modification and Title V Air Operation Permit Revision for the Payne Creek Generating Station located at 6697 County Road 663 in Bowling Green, Hardee County. Enclosed are the following documents: "Technical Evaluation and Preliminary Determination", "DRAFT Air Construction Permit Modification", "DRAFT Title V Air Operation Permit Revision", "Statement of Basis", and "Public Notice of Intent to Issue Air Construction Permit Modification and Title V Air Operation Permit Revision".

The "Technical Evaluation and Preliminary Determination" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a DRAFT Construction Permit Modification. The proposed "DRAFT Air Construction Permit Modification and DRAFT Title V Air Operation Permit Revision" includes specific conditions that regulate the emissions units at this facility. The "Written Notice of Intent to Issue an Air Construction Permit Modification and a Title V Air Operation Permit Revision" provides important information regarding: the Permitting Authority's intent to issue a Title V air operation permit revision and air construction permit modification (DRAFT Permit); the requirements for publishing a Public Notice of the Permitting Authority's intent to issue the DRAFT Permit; the procedures for submitting comments on the DRAFT Permit; the requirements for requesting a public meeting; the requirements for filing a petition for an administrative hearing; and the availability of mediation. The "Public Notice of Intent to Issue an Air Construction Permit Modification and a Title V Air Operation Permit Revision" is the actual notice that you must publish in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Syed Arif, at 850-921-9528.

Sincerely,

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

**WRITTEN NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

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*In the Matter of an  
Application for Permits by:*

Mr. Michael P. Opalinski, V.P. of Technical Services  
Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33688-2000

Air Construction Permit Project No. **0490340-004-AC**  
DRAFT Title V Permit Revision No. **0490340-005-AV**  
Payne Creek Generating Station  
Hardee County, Florida

**Facility Location:** The applicant requests an Air Construction Permit modification and Title V Air Operation Permit revision for the Payne Creek Generating Station located at 6697 County Road 663 in Bowling Green, Hardee County, Florida.

**Project:** On November 2, 2004, the applicant applied to the Permitting Authority for an Air Construction Permit modification and Title V Air Operation Permit revision. Air Construction Permit Project No. 0490340-004-AC involves the modification of air construction permit No. PSD-FL-214A for the combined cycle gas turbines. The applicant requested increase in authorized periods of excess emissions to 6 hours per day for cold startups; and increase authorized periods of excess emissions to 2 hours per startup event and no more than three startup events in a day for hot and warm startups. Additionally, the applicant requested increase in authorized periods of excess emissions to 2 hours per shutdown event and no more than three shutdown events in a day. Lastly, the applicant requested a concurrent revision of Title V Air Operation Permit No. 0490340-002-AV to incorporate the above request. The revision will be issued as DRAFT Title V Air Operation Permit No. 0490340-005-AV.

Details of the project are provided in the application and the enclosed "Technical Evaluation and Preliminary Determination".

**Permitting Authority:** Applications for an Air Construction Permit modification and a Title V Air Operation Permit revision are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-213 and 62-214, Florida Administrative Code (F.A.C.). The proposed project is not exempt from construction and Title V permitting procedures and an Air Construction Permit modification and Title V Air Operation Permit revision are required to modify or continue operations at the facility. The Department of Environmental Protection, Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: Florida Department of Environmental Protection, Bureau of Air Regulation, 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Mail Station #5505. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850/922-6979.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. The complete project file includes the DRAFT Permits, the Statement of Basis, the application, the Technical Evaluation and Preliminary Determination and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the DRAFT Title V Air Operation Permit revision and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. A copy of the complete project file is also available at the Florida Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352. Telephone: 813/744-6100.

**Notice of Intent to Issue Air Permit:** The Permitting Authority gives notice of its intent to issue a permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296, and

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Seminole Electric Cooperative, Inc.  
Payne Creek Generating Station

Air Construction Permit No. 0490340-004-AC  
DRAFT Title V Permit Revision No. 0490340-005-AV

**WRITTEN NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

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62-297, F.A.C. The Permitting Authority will issue the Air Construction Permit and the PROPOSED Title V Air Operation Permit Revision and subsequent FINAL Title V Air Operation Permit Revision in accordance with the conditions of the DRAFT Air Construction Permit and the DRAFT Title V Air Operation Permit Revision unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

**Public Notice:** Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit Modification and Title V Air Operation Permit Revision" (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within seven (7) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

**Comments:** The Permitting Authority will accept written comments concerning the DRAFT Air Construction Permit for a period of fourteen (14) days and will accept written comments concerning the DRAFT Title V Air Operation Permit Revision for a period of thirty (30) days from the date of publication of this Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5 pm), on or before the end of this 14 or 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://tlhora6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Air Construction Permit or the DRAFT Title V Air Operation Permit Revision, the Permitting Authority shall issue a Revised DRAFT Air Construction Permit or a Revised DRAFT Title V Air Operation Permit Revision and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached Public Notice or within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) 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, F.A.C.

**Seminole Electric Cooperative, Inc.  
Payne Creek Generating Station**

**Air Construction Permit No. 0490340-004-AC  
DRAFT Title V Permit Revision No. 0490340-005-AV**

**WRITTEN NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

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A petition that disputes the material facts on which the Permitting Authority'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 each 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 state; (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 rules or statutes 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 the 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 Permitting Authority'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, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

**Objections:** Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit revision. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/air/permits/Florida.htm>.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief  
Bureau of Air Regulation

WRITTEN NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION

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CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision" package (including the Public Notice, the Technical Evaluation and Preliminary Determination, the Statement of Basis, and the Draft Permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 4/21/05 to the persons listed below.

Mr. Michael P. Opalinski, Seminole Electric Cooperative, Inc.\*  
Mr. Tom Davis, P.E., ECT, Inc. (tdavis@ectinc.com)  
Mr. Jerry Kissel, DEP-SWD  
U. S. EPA Region 4

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Barbara J. Friday (Clerk)      4/21/05 (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Air Construction Permit No. 0490340-004-AC  
DRAFT Title V Air Operation Permit Revision No. 0490340-005-AV  
**Payne Creek Generating Station**  
Hardee County

**Applicant:** The applicant for this project is Seminole Electric Cooperative, Inc., 16313 North Dale Mabry Highway, Tampa, Florida 33688-2000. The applicant's responsible official is Mr. Michael P. Opalinski, Vice President of Technical Services.

**Facility Location:** The applicant operates a nominal 488 MW Power Plant, which is located at 6697 County Road 663, Bowling Green, Hardee County, Florida.

**Project:** The applicant submitted to the Permitting Authority for an Air Construction Permit modification and Title V Air Operation Permit revision. Air Construction Permit Project No. 0490340-004-AC involves the modification of air construction permit No. PSD-FL-214A for the combined cycle gas turbines. The applicant requested increase in authorized periods of excess emissions to 6 hours per day for cold startups; and increase authorized periods of excess emissions to 2 hours per startup event and no more than three startup events in a day for hot and warm startups. Additionally, the applicant requested increase in authorized excess emissions to 2 hours per shutdown event and no more than three shutdown events in a day. Lastly, the applicant requested a concurrent revision of Title V Air Operation Permit No. 0490340-002-AV to incorporate the above request. The revision will be issued as DRAFT Title V Air Operation Permit No. 0490340-005-AV.

Details of the project are provided in the application and the enclosed "Technical Evaluation and Preliminary Determination".

**Permitting Authority:** Applications for an Air Construction Permit modification and a Title V major source air operation permit revision are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from construction and Title V permitting procedures and an Air Construction Permit modification and Title V Air Operation Permit revision are required to modify or continue operations at the facility. The Department of Environmental Protection, Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: Florida Department of Environmental Protection, Bureau of Air Regulation, 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Mail Station #5505. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850/922-6979.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the DRAFT Permits, the Statement of Basis, the application, the Technical Evaluation and Preliminary Determination and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the DRAFT Title V Air Operation Permit revision and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. A copy of the complete project file is also available at the Florida Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352. Telephone: 813/744-6100.

**Notice of Intent to Issue Air Permit:** The Permitting Authority gives notice of its intent to issue a permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. The Permitting Authority will issue the Air Construction Permit and the PROPOSED Title V

**(Public Notice to be Published in the Newspaper)**

**PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

Air Operation Permit Revision and subsequent FINAL Title V Air Operation Permit Revision in accordance with the conditions of the DRAFT Air Construction Permit and the DRAFT Title V Air Operation Permit Revision unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

**Comments:** The Permitting Authority will accept written comments concerning the DRAFT Air Construction Permit for a period of fourteen (14) days and will accept written comments concerning the DRAFT Title V Air Operation Permit Revision for a period of thirty (30) days from the date of publication of this Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5 pm), on or before the end of this 14 or 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://tlhora6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Air Construction Permit or the DRAFT Title V Air Operation Permit Revision, the Permitting Authority shall issue a Revised DRAFT Air Construction Permit or a Revised DRAFT Title V Air Operation Permit Revision and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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A petition that disputes the material facts on which the Permitting Authority'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 each 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 state; (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 rules or statutes 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 the 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 Permitting Authority'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, F.A.C.

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**PUBLIC NOTICE OF INTENT TO ISSUE AN AIR CONSTRUCTION PERMIT  
AND A TITLE V AIR OPERATION PERMIT REVISION**

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

**Objections:** Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit revision. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/air/permits/Florida.htm>.



**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**PROJECT**

Permit Project No. 0490340-004-AC  
Modification of Air Permit No. PSD-FL-214A

Permit Project No. 0490340-005-AV  
Revision of Title V Air Operation Permit No. 0490340-002-AV

**COUNTY**

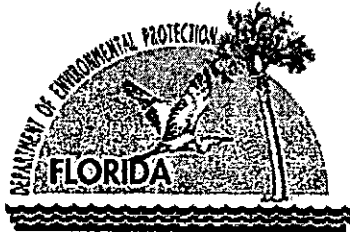
Hardee

**APPLICANT**

Seminole Electric Cooperative, Incorporated  
Payne Creek Generating Station  
ARMS Facility ID No. 0490340

**PERMITTING  
AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
North Permitting Section



April 7, 2005

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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## 1. GENERAL INFORMATION

### Applicant Name and Address

Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33688-2000

### Authorized Representative/Responsible Official:

Mr. Michael P. Opalinski, Vice President of Technical Services

### Processing Schedule

11/02/04 Received application  
02/02/05 Received waiver through facsimile for the processing time requirements of a construction permit

### Facility Description and Location

SECI operates Payne Creek Generating Station (SIC No. 4911) located at 6697 County Road 663 in Bowling Green, Hardee County, Florida. The UTM coordinates are Zone 17, 405.049 km East, and 3057.712 km North (Latitude: 27° 38' 30" North and Longitude: 81° 57' 45" West). This is an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to the Florida and National Ambient Air Quality Standards (NAAQS).

### Regulatory Categories

**Title III:** Based on the Title V permit, the facility is a synthetic minor source of hazardous air pollutants (HAP).

**Title IV:** The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

**Title V:** The facility is a Title V major source of air pollution because potential emissions of at least one regulated pollutant exceed 100 tons per year. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

**PSD:** The existing facility is located in an area currently designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The plant is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality.

**NSPS:** The facility operates units subject to the New Source Performance Standards of 40 CFR 60 (Subpart GG for the gas turbines.).

## 2. PROJECT DESCRIPTION

Seminole Electric Cooperative, Inc. (SECI) submitted an application on November 2, 2004 requesting revision to the excess emissions provisions of Title V Permit No. 0490340-002-AV and air construction permit PSD-FL-214A. SECI operates two Siemens Westinghouse combined-cycle combustion turbines (CT) at its Payne Creek Generating Station located in Bowling Green, Hardee County. Additionally, SECI submitted on February 2, 2005, a waiver on the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

The Payne Creek Generating Station CT/heat recovery steam generators (HRSG) units are each equipped with selective catalytic reduction (SCR) and oxidation catalyst (CatOx) control systems to reduce emissions of NO<sub>x</sub> and CO/VOC, respectively. The Department's Title V permit includes NO<sub>x</sub>, CO and VOC emission limits, both

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

in concentration (ppmvd) and mass (lb/hr) that reflect the performance of these control technologies.

Both catalytic control technologies (i.e., SCR and CatOx) have temperature constraints below which the control technologies will not be effective. For SCR, the catalyst is not effective in reducing NOx at SCR inlet temperatures below approximately 600°F. For this reason, ammonia is not injected until the minimum inlet SCR operating temperature is reached otherwise the ammonia would pass through the system unreacted. Similarly, the CatOx catalyst is not effective in oxidizing CO/VOC below a minimum catalyst inlet temperature of approximately 500°F. Excess emissions of CO and VOC, although not readily quantifiable, may also occur during startup/shutdown events.

Emissions of NOx and CO/VOC will be higher during the low CT loads that occur during startups and shutdowns. Excess emissions during these startup/shutdown events are unavoidable due to emission control system temperature constraints and the inherent CT emissions that occur at low loads. A longer period of excess emissions is required for cold starts due to the warm-up period required for a steam turbine generator (STG). Startup with one CT/HRSG unit requires the equivalent of 70 MW of CT load to raise the HRSG steam pressure to the level needed to bring the STG on line. This type of startup (i.e., use of only one CT/HRSG unit) causes problems since the HRSG steam temperature is too high resulting in uneven warming of the STG casing. This uneven warming causes the STG cover temperature to rise faster than the STG base temperature. To prevent equipment damage, there are protective trips that occur when this temperature difference reaches 100°F. Once the CT has tripped, the startup cycle must be repeated. Once the STG is on line, the thermal growth of the STG rotor is much more rapid than the thermal growth of the STG casing since the outer casing is solid and not separated by an inner and outer casing. The STG casing growth (i.e., expansion) is very slow. This prevents the CT from increasing in load until the STG casing warms up.

Based on the above, the preferred STG startup approach is with both CT's at approximately 30 MW. This keeps the HRSG steam temperature low so that the STG can be warmed more evenly. This approach also allows the STG to synchronize to the grid faster. However, CT load must be maintained relatively low as the STG rotor growth does not proceed at the same rate as the STG casing. Accordingly, CT load is slowly increased until the STG casing reaches its normal temperature in order to avoid damaging the STG. Once this condition is reached, CT load is increased to the levels that result in compliance with permit limits. A summary of excess emissions based on NOx CEMS data for 2002-2004 is provided in Table 1.

The proposed changes will affect the following emission units.

EU No.	Emissions Unit Description
001	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator: Unit 1
002	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator: Unit 2

The applicant requests the following changes to Permit No. PSD-FL-214A for Unit's 001 and 002 combined cycle gas turbine.

- Cold Startup:** Authorize up to 6 hours of excess emissions from any combustion turbine (CT)/heat recovery steam generator (HRSG) unit in any 24-hour period from cold startups. Cold startup is defined as startup following a CT/HRSG shutdown of 48 hours or more. NOx emissions from such periods would still be included to demonstrate compliance with the annual facility-wide emission cap of 906 tpy.
- Hot and Warm Startup:** Authorize up to 2 hours of excess emissions per startup event and no more than three startup events in any 24-hour period from any CT/HRSG unit resulting from hot and warm startups. Hot and warm startup is defined as a startup following a CT/HRSG shutdown of less than 48 hours. NOx emissions from such periods would still be included to demonstrate compliance with the annual facility-wide emission cap of 906 tpy.
- Shutdown:** Authorize up to 2 hours of excess emissions per shutdown event and no more than three shutdown events in any 24-hour period from any CT/HRSG. NOx emissions from such periods would still

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

be included to demonstrate compliance with the annual facility-wide emission cap of 906 tpy.

The applicant also requests the following changes to Air Permit No. 0490340-002-AV.

4. Title V Revision: Simultaneous revision of the Title V Permit to incorporate the above changes.

### 3. DEPARTMENT REVIEW

#### Startup (Permit No. PSD-FL-214A)

PSD permit 214A for Unit's 001 and 002 included the following condition (B.4):

"Excess emissions from a turbine resulting from startup, 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 procedure to be followed during periods of startup, 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."

For a day with a cold startup, the applicant requests up to 6 hours of excess emissions from any CT/HRSG units. Similarly, the applicant requests 2 hours of excess emissions per startup event and no more than three startup events in any 24-hour period from any CT/HRSG units resulting from a hot and warm startups. Additionally, applicant requests 2 hours of excess emissions per shutdown event and no more than three shutdown events in any 24-hour period from any CT/HRSG units. Although the likelihood of such multiple occurrences is relatively low, the Department does recognize the possibility. The Department approves the request and will modify the PSD air permit accordingly, provided the applicant meets the following three provisions:

- NO<sub>x</sub> excess emissions data shall not be excluded from the annual NO<sub>x</sub> emissions cap. This is necessary to maintain an enforceable emissions cap.
- The permittee shall submit quarterly reports that identify the amount of NO<sub>x</sub> emission data excluded from compliance determination with the short-term limit due to startups, shutdowns, documented malfunctions and fuel switches.
- Excess emissions greater than 6 hours in any 24-hour period shall be reported to the Department's Southwest District Office within 24 hours.

Accordingly Specific Condition B.4 of PSD Permit 214A will be modified to read as follows:

"Excess emissions from a turbine resulting from startup, 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~~ except for the following specific cases:

- For cold startups, excess emissions from any CT/heat recovery steam generator (HRSG) unit shall not exceed six hours in any 24-hour period. "Cold startup" is defined as a startup following a CT/HRSG shutdown of 48 hours or more.
- For hot and warm startups, excess emissions from any CT/HRSG unit shall not exceed two hours per startup event, and no more than three startup events in any 24-hour period. "Hot and warm startup" is defined as a startup following a CT/HRSG shutdown of less than 48 hours.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- c. For shutdowns, excess emissions from any CT/HRSG unit shall not exceed two hours per shutdown event, and no more than three shutdown events in any 24-hour period.

All quality-assured hourly NOx emissions data shall be used when demonstrating compliance with the emissions cap. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75).

The permittee shall provide a general description of the procedure to be followed during periods of startup, 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.”

Additionally new Specific Conditions E.5, E.6 and E.7 are added to read as follows:

5. The permittee shall notify the Department’s Southwest District Office by telephone, facsimile transmittal or electronic mail within 24 hours if the NOx excess emissions exceed six hours in any 24-hour period.

[Applicant Request]

6. The permittee shall include the NOx excess emissions data in determining compliance with the annual facility-wide emission cap of 906 tpy.

[Rule 62-4.070(3), F.A.C.]

7. “Quarterly NOx Monitoring Report. Within 30 days following each calendar quarter, the permittee shall submit a report to the Department’s Southwest District Office that summarizes the following information for the quarter.

- a. Identify the hours of NOx emission data excluded from compliance determination with the short-term limit due to each of the following: startups, shutdowns, documented malfunctions and fuel switches.
- b. For each malfunction, identify the: date; approximate time range; duration (hours) of the malfunction; NOx emission levels during the malfunction; problem and cause of the problem (if known); and corrective action taken (if any).
- c. Identify the hours of NOx monitoring system down time due to each of the following: monitor malfunctions; non-monitor malfunctions; quality assurance calibrations; other known causes; and unknown causes. Identify the monitor availability.

[Rules 62-4.070(3), 62-4.130, 62-4.160(14)(b), and Rule 62-210.700(6), F.A.C.]

Permit Project No. 0490340-005-AV (Revision to Title V Permit Air Operation Permit No. 0490340-002-AV)

The applicant requests a simultaneous revision of the Title V operating permit to incorporate the above changes. The Department approves the request and will provide a single public notice package for the revised permits. The public notice will allow 30 days for public comment. If no administrative hearing is requested and no comments are received that would result in substantial changes, the two air construction permits (PSD-FL-214C and 0490340-004-AC) will be issued as final permitting actions. The Title V revision will continue to the “proposed permit” phase of the Title V permitting process.

**4. PRELIMINARY DETERMINATION**

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permits. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the specific conditions of the draft permits. Syed Arif is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Table 1. Payne Creek Generating Station (Revised 3/17/05)  
Excess Emissions Summary - Startup/Shutdown/Malfunction

No. of Days	Duration and NO <sub>x</sub> Concentrations of Daily Excess Emission Events											
	2002				2003				2004			
	CT1		CT2		CT1		CT2		CT1		CT2	
	(hrs)	(ppmvd NO <sub>x</sub> )	(hrs)	(ppmvd NO <sub>x</sub> )	(hrs)	(ppmvd NO <sub>x</sub> )	(hrs)	(ppmvd NO <sub>x</sub> )	(hrs)	(ppmvd NO <sub>x</sub> )	(hrs)	(ppmvd NO <sub>x</sub> )
1	3.0	13	3.0	13	4.0	37	5.8	23	2.3	28	2.6	29
2	5.0	26	4.0	26	3.0	12	4.0	20	2.8	31	2.4	21
3	3.0	29	3.0	37	8.2	23	9.8	24	2.7	15	3.9	19
4	3.0	20	3.0	19	3.0	10	2.0		3.4	22	2.6	23
5	3.0	40	4.0	37	4.3	45	2.1	28	2.4	25	3.0	22
6	9.0	13	3.0	21	4.8	46	3.0	37	2.2	16	2.6	20
7	3.0	32	6.0	56	3.4	25	8.0	12	2.0	14	2.5	26
8	3.0	25	3.0	28	2.5	29	3.0	9	2.7	14	2.1	27
9	4.0	36	3.0	28	2.2	29	2.1	17	11.8	41	3.3	22
10	3.0	18	3.0	28	2.6	19	2.0	24	6.4	30	3.0	23
11	3.0	27	3.0	22	2.2	23	2.7	17			2.8	19
12	3.0	24	7.0	31	4.1	24	3.6	17			2.9	18
13	3.0	28	4.0	45	5.2	30	4.4	20			3.4	12
14	4.0	21	5.0	26	2.2	21	2.8	17			3.1	18
15	4.0	24	12.0	35	2.2	21	2.9	17			3.3	16
16	5.0	19	3.0	40	2.3	16	2.8	48			4.5	39
17	3.0	27	3.0	38	3.0	13	3.0	44			4.0	16
18	3.0	20	3.0	30	3.0	11	3.0	58			2.4	15
19	6.0	22	3.0	24	5.6	22	3.1	22			8.1	30
20	3.0	21	4.0	25	2.4	26	5.0	10			2.4	28
21	3.0	25	4.0	47			10.0	10				
22	3.0	28	3.0	40			3.0	27				
23	4.0	25	4.0	22			3.0	12				
24	3.0	34	3.0	24			2.1	20				
25	3.0	26	6.0	23			3.6	13				
26	3.0	26	3.0	23								
27	4.0	22	3.0	30								
28	3.0	91	3.0	22								
29	3.0	26	3.0	20								
30	3.0	12	3.0	14								
31	3.0	24	4.0	18								
32	3.0	28	3.0	20								
33	4.0	24	3.0	20								
34	3.0	21	4.0	24								
35	3.0	25	3.0	20								
36	3.0	23	3.0	25								
37	4.8	39	3.0	20								
38	3.5	28	3.0	18								
39	2.9	43	2.3	25								
40			4.5	30								

2002 - 2004		
Frequency of Excess Emission Events		
(hrs/day)	Events	%
0 - 3	99	64.3
>3 - 4	28	18.2
>4 - 5	11	7.1
>5 - 6	6	3.9
>6	10	6.5
<b>Totals</b>	<b>154</b>	<b>100.0</b>

Notes:  
Malfunction events shown in bold type.  
NO<sub>x</sub> concentrations are corrected to 15% oxygen.

Sources: ECT, 2005.  
BECI, 2005.

May xx, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Michael P. Opalinski, Vice President of Technical Services  
Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33688-2000

Re: Payne Creek Generating Station  
Project No. 0490340-004-AC / PSD-FL 214C  
Modification of Permit No. PSD-FL-214A, Unit's 1 and 2 Excess Emissions Conditions

Dear Mr. Opalinski:

On November 2, 2004, the Department received your request to make several changes to the PSD air construction permit 214A for Unit's 1 and 2. Based on your application, the Department makes the following determinations and modifies this permit accordingly.

**MODIFICATION OF PERMIT NO. PSD-FL-214A (UNIT'S 1 AND 2)**

**Applicant Request:** For a day with a cold startup, the applicant requests up to 6 hours of excess emissions from any Combustion Turbine (CT)/Heat Recovery Steam Generator (HRSG) units. Similarly, the applicant requests 2 hours of excess emissions per startup event and no more than three startup events in any 24-hour period from any CT/HRSG units resulting from a hot and warm startups. Additionally, applicant requests 2 hours of excess emissions per shutdown event and no more than three shutdown events in any 24-hour period from any CT/HRSG units.

**Determination:** The request is approved provided the applicant meets the following three provisions:

- NOx excess emissions data shall not be excluded from the annual NOx emissions cap. This is necessary to maintain an enforceable emissions cap.
- The permittee shall submit quarterly reports that identify the amount of NOx emission data excluded from compliance determination with the short-term limit due to startups, shutdowns, documented malfunctions and fuel switches.
- Excess emissions greater than 6 hours in any 24-hour period shall be reported to the Department's Southwest District Office within 24 hours.

Accordingly, the following revisions of Permit No. PSD-FL-214A will be made.

Revise Condition No. B.4 as follows:

"Excess emissions from a turbine resulting from startup, 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 except for the following specific cases:

- a. For cold startups, excess emissions from any CT/heat recovery steam generator (HRSG) unit shall not exceed six hours in any 24-hour period. "Cold startup" is defined as a startup following a CT/HRSG shutdown of 48 hours or more.



- b. For hot and warm startups, excess emissions from any CT/HRSG unit shall not exceed two hours per startup event, and no more than three startup events in any 24-hour period. "Hot and warm startup" is defined as a startup following a CT/HRSG shutdown of less than 48 hours.
- c. For shutdowns, excess emissions from any CT/HRSG unit shall not exceed two hours per shutdown event, and no more than three shutdown events in any 24-hour period.

All quality-assured hourly NOx emissions data shall be used when demonstrating compliance with the emissions cap. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75).

New Condition Nos. E.5, E.6 and E.7 are added as follows:

- 5. The permittee shall notify the Department's Southwest District Office by telephone, facsimile transmittal or electronic mail within 24 hours if the NOx excess emissions exceed six hours in any 24-hour period.  
[Applicant Request]
- 6. The permittee shall include the NOx excess emissions data in determining compliance with the annual facility-wide emission cap of 906 tpy.  
[Rule 62-4.070(3), F.A.C.]
- 7. Quarterly NOx Monitoring Report. Within 30 days following each calendar quarter, the permittee shall submit a report to the Department's Southwest District Office that summarizes the following information for the quarter.
  - a. Identify the hours of NOx emission data excluded from compliance determination with the short-term limit due to each of the following: startups, shutdowns, documented malfunctions and fuel switches.
  - b. For each malfunction, identify the date, approximate time range, duration (hours) of the malfunction; NOx emission levels during the malfunction; problem and cause of the problem (if known); and corrective action taken (if any).
  - c. Identify the hours of NOx monitoring system down time due to each of the following: monitor malfunctions; non-monitor malfunctions; quality assurance calibrations; other known causes; and unknown causes. Identify the monitor availability.  
[Rules 62-4.070(3), 62-4.130, 62-4.160(14)(b), and Rule 62-210.700(6), F.A.C.]

Details of the Department's review are available in the Technical Evaluation and Preliminary Determination that accompanied the Draft Permit modification package. This permit modification is issued pursuant to Chapter 403 of the Florida Statutes. Attached are copies of air construction permit No. PSD-FL-214A. A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Sincerely,

(DRAFT)

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Michael G. Cooke, Director  
Division of Air Resource Management

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit Modification was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on \_\_\_\_\_ to the persons listed:

- Mr. Michael P. Opalinski, Seminole Electric Cooperative, Inc.\*
- Mr. Tom Davis, P.E., Environmental Consulting & Technology, Inc.
- Mr. Jerry Kissel, DEP-SWD
- Mr. Gregg Worley, EPA Region 4

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

\_\_\_\_\_  
(Clerk)

\_\_\_\_\_  
(Date)