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AIR REGULATION

December 21, 1998

Mr. Syed Arif  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Dear Syed:

This letter is written in order to clarify our recent discussions concerning the use and operation of SCR at the Hardee Unit 3 facility. Seminole Electric Cooperative, Inc. (SECI) will be installing an SCR system in order to meet the NO<sub>x</sub> limits contained in our existing PSD Permit ( PSD-FL-214 ). SECI will operate this system to achieve a NO<sub>x</sub> level of 12 ppmvd or less for a period of 18 months from the initial compliance test. Within this 18 month evaluation period, an engineering report will be prepared and submitted for the Department's review. This report will include a conclusion regarding the lowest NO<sub>x</sub> 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. If the data demonstrates that a NO<sub>x</sub> emission rate of less than 12 ppmvd at 15 percent O<sub>2</sub> is consistently achievable, the NO<sub>x</sub> emission limit will be adjusted accordingly, but not lower than 9 ppmvd at 15 percent O<sub>2</sub>.

In addition to the operating scenario described above, SECI will furnish the Department with certification documentation that the SCR system is designed to achieve a NO<sub>x</sub> emission rate of at least 9 ppmvd at 15 percent O<sub>2</sub>.

In order to facilitate the required changes to the existing PSD Permit, we have attached a marked-up version of the current permit, indicating the appropriate changes to reflect the selected Siemens-Westinghouse combustion turbine. Thank you very much for your assistance in handling this matter and if you have any questions please do not hesitate to call.

Sincerely,

Mike Roddy  
Environmental Engineer

cc: SWD  
EPA  
NPS  
Pat Comer, DEC

cc: Al Linero (FDEP)  
Hamilton Oven (FDEP)  
Mike Opalinski (SECI)



# Department of Environmental Protection

12-21-98  
wmj

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

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

**Permit Number:** PSD-FL-214  
(PA-89-25SA)  
**Expiration Date:** January 1, 2000  
**County:** Polk & Hardee  
**Latitude/Longitude:** 27°38'30"N  
488 81°57'45"W  
**Project:** 440 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:

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For a <sup>488 (nominal)</sup> ~~440~~ MW <sup>(nominal)</sup> combined cycle power plant consisting of two <sup>157.5</sup> ~~150~~ MW (nominal) combustion turbines (CTs), two heat recovery steam generators (HRSGs), a ~~140~~ MW steam turbine generator and a 4.4 million gallon fuel oil storage tank. The maximum heat input at 32°F is ~~1,862~~ <sup>1,888</sup> 1962 MMBtu/hr/CT (natural gas) and ~~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 or equivalent and equipped with dry low NO<sub>x</sub> combustors or an equivalent system, <sup>(re: SCA)</sup> 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.

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.

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.

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**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 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.

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**GENERAL CONDITIONS:**

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.

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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 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.

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**GENERAL CONDITIONS:**

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.

**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 300 megawatts (MW; two 150 MW 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 140 MW (net) steam generator. There is no fuel firing in the associated HRSG. The facility will have a total nominal generating capacity of 440 MW (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 CT, or equivalent, at an ambient temperature of 32°F, shall neither exceed 1,862 MMBtu/hr while firing natural gas nor 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.

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**SPECIFIC CONDITIONS:**

**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:

**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 <sub>x</sub>		12	91	797	1066
	Gas	<del>15</del> ppmvd(d)	<del>106</del>	<del>931</del>	<del>1212</del>
	Oil	42 ppmvd(e)	336	504	
CO	Gas	20 ppmvd	71	622	618
	Oil	25 ppmvd	91	136	
PM/PM <sub>10</sub>	Gas		7	65	147
	Oil		67	100	
SO <sub>2</sub>	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.

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- (d) The natural gas NO<sub>x</sub> allowable emission limitation of 15 ppmvd is corrected to 15 percent O<sub>2</sub>. Compliance shall be determined through the initial and annual compliance tests.
- (e) The fuel oil NO<sub>x</sub> allowable emission limitation of 42 ppmvd is corrected to 15 percent oxygen. Compliance shall be determined through the initial and 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<sub>x</sub> emissions of 42 ppmvd @ 15 percent O<sub>2</sub> 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<sub>x</sub> concentrations due to increased fuel NO<sub>x</sub> formation. When FBN levels are above 0.015 percent, the operator shall employ all reasonable measures to maintain the NO<sub>x</sub> concentrations below 42 ppmvd. However, NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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 <sub>x</sub> LEVELS (ppmvd @ 15% O <sub>2</sub> )	NO <sub>x</sub> EMISSIONS (lb/hr/CT) <sup>1</sup>	NO <sub>x</sub> EMISSIONS INCREASE (TPY) <sup>1</sup>
0.015 or less	42	336.2	0
0.020	44	352.1	0
0.020	46	368.2	0
0.030	48	384.2	0

1 - From 336.2 lb/hr/CT at 32<sup>0</sup>F basis.

For intermediate values of FBN use the formula:

$$STD = 0.0042 + F$$

where,

STD = allowable NO<sub>x</sub> emissions (ppmvd @ 15% O<sub>2</sub>)

F = NO<sub>x</sub> emission allowance for fuel bound nitrogen

and

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



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N (% by weight)	F (NO <sub>x</sub> % 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**

<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 <sup>(i.e. SCR)</sup> will install a dry low-NO<sub>x</sub> combustor system or an equivalent system on each CT. The permittee shall make every practicable effort to achieve the lowest possible NO<sub>x</sub> emission rate, but must not exceed 15 ppmvd at 15 percent O<sub>2</sub> per CT on a continuous basis when firing natural gas.

4. After the initial compliance tests on the CTs, the permittee shall operate a certified continuous emissions monitor for NO<sub>x</sub> 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 18 months after the initial compliance test, the permittee shall prepare and submit

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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<sub>x</sub> 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<sub>x</sub> emission limitation and will base it on the engineering data report submitted by the permittee. If the data demonstrate that a NO<sub>x</sub> emission rate of less than ~~15~~ ppmvd at 15 percent O<sub>2</sub> is consistently achievable, the NO<sub>x</sub> emission limit may be adjusted accordingly, but not lower than 9 ppmvd at 15 percent O<sub>2</sub>.

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

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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 PM<sub>10</sub>).
- b. Reference Method 9 for VE (I, A).
- c. Reference Method 10 for CO (I, A).
- d. Reference Method 20 for NO<sub>x</sub> (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 H<sub>2</sub>SO<sub>4</sub> 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 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 SO<sub>2</sub> 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 U.S. EPA 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.

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**SPECIFIC CONDITIONS:**

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 (CO<sub>2</sub> or O<sub>2</sub>). 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 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.

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**SPECIFIC CONDITIONS:**

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 <sup>and SCR system</sup> 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.

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**Expiration Date: January 1, 2000**

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

**SPECIFIC CONDITIONS:**

- 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.
- 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 corrections to other temperatures shall be provided to the Department. 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.

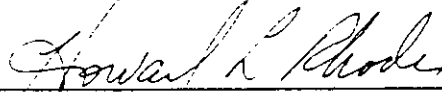
PERMITTEE:  
Seminole Electric Cooperative Inc.  
Expiration Date: January 1, 2000

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

**SPECIFIC CONDITIONS:**

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.

**STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION**



---

Howard L. Rhodes, Director  
Division of Air Resources  
Management





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SERVING OUR MEMBER SYSTEMS

December 9, 1998

Mr. Al Linero  
Bureau of Air Regulation  
Florida Department of Environmental  
Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Seminole Electric Cooperative, Inc.  
Hardee Unit 3  
PSD-FL-214

Dear Mr. Linero:

Pursuant to our discussions on November 12, 1998 and to the provisions of the PSD permit for Hardee Unit 3, Seminole Electric Cooperative, Inc., hereby submits to the Department information on the combustion turbines and related equipment that are being installed as part of this project in Hardee County, Florida.

As you recall, Specific Condition E.3.a. of the facility's PSD Permit, PSD-FL-214, provides that:

The following information shall be submitted to the Department's Bureau of Air Regulation . . .

- a. Description of the final selection of the turbines 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.

Seminole has selected the Westinghouse 501F(D) Combustion Turbine for this project. Westinghouse (now known as Siemens/Westinghouse Power Corporation) is the same manufacturer and the selected CT is the same class of Westinghouse combustion turbine originally selected for the project. The Westinghouse 501F(D) Combustion Turbine is the specific make and model number of the selected CT. Seminole does not expect there to be any changes either in the proposed method of operation of the combustion turbines or in the project itself. Fuels burned in the facility will continue to be limited to natural gas and low-sulfur fuel oil (equivalent to a Jet A-quality or

better grade No. 2 fuel oil.). The selected combustion turbine will operate within all emission limits established under the PSD Permit.

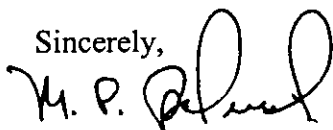
The combustion turbines will be "equipped with dry low NOx combustors or an equivalent system for natural gas firing and wet injection for fuel oil firing" as provided for in the permit. (See page 1 of 15, and page 8 of 15, Specific Condition B.3.) In addition to the dry low NOx combustors, the facility will also include an adequately sized selective catalytic reduction system which is an equivalent NOx control system to the combustors and which will achieve all of the NOx emission limits in the existing PSD permit. Pursuant to Specific Conditions B.4. and 5. of the permit, Seminole will collect twelve months of monitoring data from the facility from the operational date and will submit an engineering report to the Department, which will include our conclusions regarding the lowest NOx emission rate that can be consistently and reasonably achieved for the facility. Based upon this monitoring and report, the Department may amend the facility's permitted NOx emission limit to as low as 9ppm. Each combustion turbine will also be equipped with a carbon monoxide oxidation catalyst control system to meet the established CO limits in the existing PSD Permit.

The provision for heat recovery steam generator (HRSG) by-pass stacks has been eliminated and therefore, the Hardee Unit 3 combustion turbines will only operate in combined cycle mode. In addition, the HRSG stacks have been increased in height from 90 to 175 feet above ground level. Because allowable emission rates remain unchanged and stack heights have increased, maximum air quality impacts will be below the maximum impact levels originally projected for the Hardee Unit 3 Project.

The maximum heat input to each of the two CTs at an ambient temperature of 32° F will increase from 1,862 million Btu per hour to 1,964 million Btu per hour while firing natural gas and decrease from 1,965 million Btu per hour to 1,889 million Btu per hour while firing fuel oil. This slight increase in heat input, while firing gas, from that originally expected will not affect project emissions as all emissions will be at or below current permitted levels for both short-term and long-term periods. Similarly, the electrical output of the plant will be 488 megawatts (nominal) compared to the originally expected 440 megawatt electrical output from the combined cycle power plant. In all respects, the project will comply with all of the other established permit limits and conditions for the Hardee Unit 3 Project.

Seminole will submit the other required notices for the project as we proceed, including those under Specific Condition E.2. Should you have any questions concerning this matter, please do not hesitate to contact either Mike Roddy or myself at (813) 963-0994.

Sincerely,



Michael P. Opalinski  
Director of Environmental Affairs

CC: Mr. H. S. Oven (FDEP)



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C O V E R

FAX

S H E E T

To: Syed Arif  
Company: FDEP  
Fax #: (850) 922-6979  
Subject: Hardee Unit 3  
Date: December 9, 1998  
Pages: 3, including this cover sheet.  
From: Mike Roddy

If you do not receive all of the pages, please call the Copy Room x1282.

COMMENTS:

Syed: I just noticed that in the letter we sent you on Dec. 1, 1998 had part of a sentence missing on the last line of the 1st page where it carries over to the second page. Attached is a corrected version ( with a complete sentence ). Sorry about the typo. An original will follow. Thanks, Mike Roddy.

**Seminole Electric Cooperative, Inc.**  
P.O. BOX 272000 ♦ Tampa, Florida 33688-2000 ♦ (813) 963-0994  
♦ Fax (813) 264-7906 ♦



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December 9, 1998

Mr. Al Linero  
Bureau of Air Regulation  
Florida Department of Environmental  
Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Seminole Electric Cooperative, Inc.  
Hardee Unit 3  
PSD-FL-214

Dear Mr. Linero:

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As you recall, Specific Condition E.3.a. of the facility's PSD Permit, PSD-FL-214, provides that:

The following information shall be submitted to the Department's Bureau of Air Regulation . . .

- a. Description of the final selection of the turbines 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.

Seminole has selected the Westinghouse 501F(D) Combustion Turbine for this project. Westinghouse (now known as Siemens/Westinghouse Power Corporation) is the same manufacturer and the selected CT is the same class of Westinghouse combustion turbine originally selected for the project. The Westinghouse 501F(D) Combustion Turbine is the specific make and model number of the selected CT. Seminole does not expect there to be any changes either in the proposed method of operation of the combustion turbines or in the project itself. Fuels burned in the facility will continue to be limited to natural gas and low-sulfur fuel oil (equivalent to a Jet A-quality or

better grade No. 2 fuel oil.). The selected combustion turbine will operate within all emission limits established under the PSD Permit.

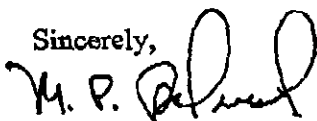
The combustion turbines will be "equipped with dry low NOx combustors or an equivalent system for natural gas firing and wet injection for fuel oil firing" as provided for in the permit. (See page 1 of 15, and page 8 of 15, Specific Condition B.3.) In addition to the dry low NOx combustors, the facility will also include an adequately sized selective catalytic reduction system which is an equivalent NOx control system to the combustors and which will achieve all of the NOx emission limits in the existing PSD permit. Pursuant to Specific Conditions B.4. and 5. of the permit, Seminole will collect twelve months of monitoring data from the facility from the operational date and will submit an engineering report to the Department, which will include our conclusions regarding the lowest NOx emission rate that can be consistently and reasonably achieved for the facility. Based upon this monitoring and report, the Department may amend the facility's permitted NOx emission limit to as low as 9ppm. Each combustion turbine will also be equipped with a carbon monoxide oxidation catalyst control system to meet the established CO limits in the existing PSD Permit.

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Seminole will submit the other required notices for the project as we proceed, including those under Specific Condition E.2. Should you have any questions concerning this matter, please do not hesitate to contact either Mike Roddy or myself at (813) 963-0994.

Sincerely,



Michael P. Opalinski  
Director of Environmental Affairs

CC: Mr. H. S. Oven (FDEP)



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DEC 03 1998

BUREAU OF  
AIR REGULATION

December 1, 1998

Mr. Al Linero  
Bureau of Air Regulation  
Florida Department of Environmental  
Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Seminole Electric Cooperative, Inc.  
Hardee Unit 3  
PSD-FL-214

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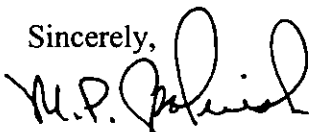
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Sincerely,



Michael P. Opalinski  
Director of Environmental Affairs

CC: Mr. H. S. Oven (FDEP)

cc: Syed Aarif, BAR  
Buck Owen, PPS  
Scott Auerland, OGC  
Pat Comer, OGC  
EPA  
NPS  
SWD



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C O V E R

FAX

S H E E T

To: Mr. Al Linero  
Company: FDEP  
Fax #: (850) 922-6979  
Subject: Hardee Unit 3  
Date: December 1, 1998  
Pages: 5, including this cover sheet.  
From: Mike Roddy

If you do not receive all of the pages, please call the Copy Room x1282.

COMMENTS:

Al : Attached is a draft letter based on our recent meeting concerning the Hardee Unit 3 Project. Would you please review and get back with me or Mike Roddy this week concerning any changes / corrections. Thanks for your help in this matter - it's been greatly appreciated.

Mike Opalinski

Seminole Electric Cooperative, Inc.

P.O. BOX 272000 ♦ Tampa, Florida 33688-2000 ♦ (813) 963-0994

♦ Fax (813) 264-7906 ♦



December 1, 1998

Mr. Al Linero  
Bureau of Air Regulation  
Florida Department of Environmental  
Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Seminole Electric Cooperative, Inc.  
Hardee Unit 3  
PSD-FL-214

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As you recall, Specific Condition E.3.a. of the facility's PSD Permit, PSD-FL-214, provides that:

The following information shall be submitted to the Department's Bureau of Air  
Regulation

12/01/08  
 14:29 FAX 813 264 7906
 
 Description of the final selection of the turbines 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.

Seminole has selected the Westinghouse 501F(D) Combustion Turbine for this project. Westinghouse (now known as Siemens/Westinghouse Power Corporation) is the same manufacturer and the selected CT is the same class of Westinghouse combustion turbine originally selected for the project. The Westinghouse 501F(D) Combustion Turbine is the specific make and model number of the selected CT. Seminole does not expect there to be any changes either in the proposed method of operation of the combustion turbines or in the project itself. Fuels burned in the facility will continue to be limited to natural gas and low-sulfur fuel oil (equivalent to a Jet A-quality or better grade No. 2 fuel oil). The selected combustion turbine will operate within all emission limits established under the PSD Permit.

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regarding the lowest NOx emission rate that can be consistently and reasonably achieved for the facility. Based upon this monitoring and report, the Department may amend the facility's permitted NOx emission limit to as low as 9ppm. Each combustion turbine will also be equipped with a carbon monoxide oxidation catalyst control system to meet the established CO limits in the existing PSD Permit.

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[Handwritten: 12/01/98 14:30 FAX 813 264 7906]  
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 Specific Condition E.2. Should you have any questions concerning this matter, please do not  
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Sincerely,

Michael P. Opalinski

Director of Environmental Affairs

[Handwritten: 12/01/98 14:30 FAX 813 264 7906]  
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 [Handwritten: 12/01/98 14:30 FAX 813 264 7906]

**HOPPING GREEN SAMS & SMITH**

PROFESSIONAL ASSOCIATION  
ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET  
POST OFFICE BOX 6526  
TALLAHASSEE, FLORIDA 32314

(850) 222-7500

FAX (850) 224-8551

FAX (850) 425-3415

ANGELA R. MORRISON  
GABRIEL E. NIETO  
GARY V. PERKO  
MICHAEL P. PETROVICH  
DAVID L. POWELL  
WILLIAM D. PRESTON  
CAROLYN S. RAEPPEL  
DOUGLAS S. ROBERTS  
GARY P. SAMS  
TIMOTHY G. SCHOENWALDER  
ROBERT P. SMITH  
CHERYL G. STUART  
W. STEVE SYKES  
T. KENT WETHERELL, II

OF COUNSEL  
ELIZABETH C. BOWMAN

JAMES S. ALVES  
BRIAN H. BIBEAU  
KATHLEEN BLIZZARD  
RICHARD S. BRIGHTMAN  
KEVIN B. COVINGTON  
PETER C. CUNNINGHAM  
RALPH A. DEMEO  
THOMAS M. DEROSE  
RANDOLPH M. GIDDINGS  
WILLIAM H. GREEN  
KIMBERLY A. GRIPPA  
WADE L. HOPPING  
GARY K. HUNTER, JR.  
JONATHAN T. JOHNSON  
ROBERT A. MANNING  
FRANK E. MATTHEWS  
RICHARD D. MELSON

Writer's Direct Dial No.  
(850) 425-2329

November 11, 1998

Michael P. Opalinski  
Director, Environmental Affairs  
Seminole Electric Cooperative  
Post Office Box 272000  
Tampa, Florida 33688

RE: Seminole Electric Cooperative Hardee Unit 3;  
PSD Permit Validity

Dear Mike:

The FDEP Bureau of Air Regulation has recently suggested that Seminole Electric Cooperative's authority to commence construction of the Hardee Unit 3 Project has expired due to the passage of eighteen (18) months since the issuance of the PSD permit for that power plant. In effect, this means the PSD permit has expired, under his view. As the basis for this conclusion, FDEP has cited to a federal regulation found at 40 CFR §52.21(r)(2), which provides that the approval to construct under a PSD permit issued under the federal PSD permitting rules expires after 18 months, unless the permittee requests an extension of that expiration date.

As discussed below, research and review of the FDEP's rules indicate that this particular federal rule has not been adopted by FDEP for application in Florida to FDEP-issued PSD permits. Nor is this rule or its provisions referenced in the Hardee Unit 3 PSD permit. Further, Seminole Electric Cooperative has received no formal notice from either FDEP or USEPA, and has had no reason to be on notice, that this federal provision applied to the state-issued PSD permit for Hardee Unit 3. Accordingly, the PSD permit for Hardee Unit 3 remains in full force and effect today.

PERMIT VALIDITY

As you recall, on September 28, 1995, FDEP issued a PSD permit to Seminole for the construction of Hardee Unit 3. The first page of that permit indicates an expiration date of January 1, 2000.

Mike Opalinski  
November 11, 1998  
Page 2

The permit contains no separate indication that the permit, the BACT determination or any other portion of the PSD permit would expire before that date. Nor is there any statement in the permit that construction must commence within a specified period of time.

The first page of the permit indicates that "this permit is issued under the provisions of Chapter 403, Florida Statutes, and Administrative Code Chapters 62-212 and 62-4," which are the Florida PSD rules. There is no reference or indication that the permit was being issued pursuant to the federal PSD permitting rules under 40 CFR §52.21, that would put Seminole on notice that the approval to construct would become invalid in 18 months under the federal rule.<sup>1</sup> The permit contains no express reference to that federal rule or recitation of the rule's substantive provisions that construction must commence within 18 months of the permit's issuance.

Quite to the contrary of this federal rule, Specific Condition H-1 of the Hardee Unit 3 PSD permit provides that "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 sixty (60) days before the expiration of the permit," which would be approximately November 1, 1999. See page 14 of 15 of PSD Permit. By its terms, the PSD permit sets a much later expiration date than FDEP now claims applies. The permit expressly establishes the deadline for requesting an extension of the "construction permit" which is 60 days before January 1, 2000. This express language of the permit controls over any other authority which FDEP may now wish to cite. If FDEP had intended that the federal rules applied to this PSD permit, then this provision on extending the permit should not have been included in the Hardee Unit 3 permit.

There is no statement in the permit that this permit was also a state air construction permit (in addition to a PSD permit.) The separate PPSA certification for the Hardee Unit 3 Project also serves as the state-required air construction and operation permit under FDEP rules. Thus, there is no basis to suggest that the PSD permit's expiration date only applied to any state-only portion of that permit.

---

<sup>1</sup> Compare the March 1, 1994, FDEP PSD permit for the FPC Polk County Project, which contains express language that construction must commence within 18 months, or an extension must be requested, to preserve the BACT determination, and which expressly cites 40 CFR 52.21(r)(2). PSD-FL-195, Specific Condition A.8, (at page 7 of 20). Also a similar provision appears in the recent FDEP PSD permit for the City of Tallahassee's Purdom Repowering Project.

Mike Opalinski  
November 11, 1998  
Page 3

A review of the FDEP's air regulations contained in Chapters 62-204 to 62-297, F.A.C. does not reveal any provision stating that a PSD permit or a BACT determination issued by FDEP would expire within eighteen (18) months if the project's construction has not commenced.

FDEP is apparently basing this conclusion that the BACT has expired upon the recent conclusion by USEPA Region IV that the Florida PSD permit program for power plants certified under the Florida Power Plant Siting Act is a "delegated" PSD permit program as opposed to an "approved" PSD permit program. For this group of PSD permits, the federal PSD permitting rules in 40 CFR 52.21 would presumably control the issuance of PSD permits for plants such as the Hardee Unit 3 if they are also permitted under the Power Plant Siting Act. Under this theory, since the permit is a "delegated" permit issued by FDEP, then apparently the 18 month deadline to commence construction for PSD permits in 40 CFR 52.21(r) applies as well (which requires disregarding the express expiration date set forth by FDEP on the face of the Hardee Unit 3 permit.)

However, USEPA Region IV reviewed and commented on the preliminary BACT determination and draft PSD permit for Hardee Unit 3 which contained the January 1, 2000 expiration date. USEPA did not comment that this expiration date was incorrect. USEPA did not indicate that the PSD permit for Hardee Unit 3 was to be issued pursuant to the federal PSD rules in 40 CFR §52.21, and not pursuant to the FDEP rules cited by FDEP on the permit's first page. FDEP sent USEPA a copy of the final PSD permit. To my knowledge, USEPA did not advise FDEP that the permit's expiration date was incorrect, based upon this now-cited federal rule, or that the federal PSD permitting rules controlled the permit.

Thus, both FDEP and USEPA by their actions have led Seminole to believe that the PSD permit and the authority to commence construction was valid at least until January 1, 2000. They have given no prior indication to Seminole of their belief that the permit or any portion of it expired at any earlier date. Those agencies cannot now take a contrary position to Seminole's disadvantage, after Seminole has acted in reliance on the expiration date set forth in the permit. If Seminole had been aware of this belief and if the PSD permit and applicable rules indicated such an earlier expiration date, Seminole would have requested an extension of the commence construction date. Ever since this unit was initially deferred, Seminole has advised the agencies that it still intend to construct the unit. Preservation of valid permits for the Project was an integral part of Seminole's plans for this facility.

Thus, for these reasons the PSD permit for Hardee Unit 3 remains valid and in effect today. Further, the authority to

Mike Opalinski  
November 11, 1998  
Page 4

commence construction under that permit lasts until January 1, 2000.

#### PERMIT REVISIONS

Since the PSD permit for Hardee Unit 3 remains valid, Seminole need not apply for an entirely new PSD permit for the facility, and undertake a detailed PSD permitting analysis. Instead, an amendment or revision of the current and valid PSD permit is the required permit action.

First, the expected need to install SCR, in addition to how Nox burners, to potentially meet the established NOx emission rates requires a permit revision to reflect this possible change in the method of operation, pursuant to Specific Conditions E.3 and F of the PSD permit. FDEP made a similar change to the PSD permit for Florida Power Corporation's (FPC) initial 470 MW unit in Polk County. FPC obtained a PSD permit modification for its facility on the premise that SCR would be used, on either an interim or permanent basis, to meet the permitted NOx emission limits in place of the originally-proposed dry low-NOx combustors. This was characterized as an alternative compliance method to achieve the NOx emission limits in the PSD permit. Other permit changes were made to reflect the final unit selected for FPC's Polk County facility. In its August 4, 1998 Technical Evaluation for FPC's permit change, FDEP determined the "adjustments to emission limits [of the FPC unit] have been less than PSD significant amounts." Since there was no significant increase in emissions, FDEP did not conduct an updated BACT evaluation or other PSD review. The permit modification did not highlight or even cite to the fact the FPC unit had been constructed and placed in operation as a basis for the FDEP's permit modification.

This action in the FPC permit is consistent with a USEPA PSD permitting guidance memorandum addressing a facility which was constructed but unable to meet its NOx and several other emission limits. In USEPA Office of Air Quality Planning and Standards, Memorandum from Gary McCutchen, Request for Determination of Best Available Control Technology (BACT) Issues--Ogden Martin Tulsa Municipal Waste Incinerator Facility (Nov. 19, 1987.), it was concluded, when a facility could not meet its emission limits at startup, that:

prior to any attempt to revise or readjust any existing BACT limit, the source has an initial obligation to comply with the permit. At a minimum the source should be required to investigate and report to the permitting agency all available options to reduce emissions to a lower (if not the permitted) level. If compliance with the permit can be reasonably achieved, the source should



Mike Opalinski  
November 11, 1998  
Page 5

be required to take steps to reduce emissions. If sufficient emission reductions down to the permitted level cannot be reasonably achieved, then a reevaluation of the permit may be warranted.

Memorandum, at p. 2. (emphasis added). A significant factor in this Memorandum was the finding that the initial BACT determination was found later to be erroneous, but without any misrepresentations or concealment by the permittee. This clearly suggests that a permittee, unsuccessful in meeting emission limits with the original equipment or methods, may chose other methods to achieve the BACT emission limits (i.e, SCR) without triggering PSD review including renewed BACT evaluation, where there is no significant increase in those emissions.

If, as it appears from the Westinghouse data, that all or most of the permitted emission limits for the Hardee Unit 3 can be achieved or even lowered in part by using SCR, then as in the case of FPC and the Ogden Martin facility discussed in the USEPA guidance memorandum, Seminole should be allowed to install SCR as an alternative method to achieve the permitted emission limits, consistent with the provisions of the PSD permit.

If there will be no increase in permitted emissions using SCR, then FDEP should be prepared to revise the PSD permit to reflect the alternative control equipment without subjecting the plant to further or detailed PSD review. (Public notice and opportunities for agency and public consent may be necessary for the permit revision.) If however, regulated emissions will increase by significant amounts, then FDEP can be expected to undertake some degree of PSD review, including possibly a reconsideration of BACT, for those increased emissions only.

In sum, the PSD permit for Hardee Unit 3 remains valid, and the authorization to commence construction extends until January 1, 2000, as expressly provided in the FDEP-issued permit. Changes to the project based on the final selection of the generating equipment and to address alternate emission control methods will necessitate revision of the PSD permit as provided by the permit conditions. However, only if there are significant increases in regulated emissions will the need to conduct detailed PSD review for those emission increases be justified.

Should you have any questions concerning this matter, please contact me.

Sincerely,



Douglas S. Roberts



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

August 10, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike Opalinski  
Director of Environmental Affairs  
Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33618

Re: Permit Expiration - Commencement of Construction

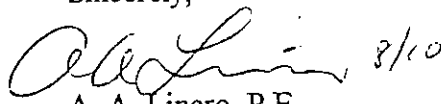
Dear Mr. Opalinski:

Per our discussion, attached is a memorandum summarizing EPA's policy regarding extension of the 18-month commencement of construction deadline given in 40 CFR 52.21(r)(2). For reference, it has been approximately 36 months since the permit for the Hardee Unit 3 was issued. It will expire on January 1, 2000.

Both the Federal rules in 40 CFR 52.21 and the State rules in 62-212.400, F.A.C. apply to PSD permits issued to projects reviewed under the Florida Power Plant Siting Act.

If you have any questions regarding this matter, please call me at (850)921-9523.

Sincerely,

  
A. A. Linero, P.E.  
Administrator  
New Source Review Section

AAL/kt

cc: B. Oven, PPS

Is your RETURN ADDRESS completed on the reverse side?

<b>SENDER:</b> ■ 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: Mike Opalinski Director of Env. affairs Seminole Electric Corp 16313 N. Dale Mabry Tampa, FL 33618	4a. Article Number P265 659 405	
	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 8-13-98	
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. [Signature]</i>		

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P 265 659 405

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Restricted Delivery Fee			
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Return Receipt Showing to Whom, Date, & Addressee's Address			
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PS Form 3800, April 1995

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11.12

TRANSMITTAL NOTICE: 2-88

September 8, 1988

MEMORANDUM  
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SUBJECT: EPA Region IX Policy on PSD Permit Extensions

FROM: Wayne Blackard, Chief  
New Source Section

TO: Region IX States and Districts  
NSR/PSD Permitting Contacts

Attached for your information is a copy of a guidance document prepared by my staff addressing EPA Region IX's policy on PSD permit extensions. The purpose of this document is to clarify the criteria EPA examines prior to extending the 18-month commencement of construction deadline found in 40 CFR 52.21 (r) (2). At the heart of these requirements are assurances of current BACT determinations and continued public participation when permits are extended. Our hope is that this policy will enhance agreement among permitting agencies in implementing PSD regulations.

We hope you will find this document helpful. If you have any questions, please contact me at (415) 974-8249.

EPA Region IX  
New Source Section  
Guidance Document: 1-88  
Date: 3/23/88 (PMF)  
Revised: 7/6/88

EPA REGION IX POLICY

ON

PSD PERMIT EXTENSIONS

The following is EPA Region IX's policy regarding Prevention of Significant Deterioration (PSD) permit extensions. This policy clarifies the subject of extensions of the 18-month commencement of construction deadline found in 40 CFR 52.21 (r) (2).

The intent of this policy is to grant a permit extension of the 18-month deadline to any good faith application, provided the following requirements are met. If these requirements are not met or if the extension request is denied, the permit will become invalid after its expiration date. The applicant,

however, may choose to file a project application for consideration as a new permit. In general, the import of this policy is to ensure that the proposed permit meets the current EPA requirements, and that the public is kept apprised of the proposed action (i.e. through the 30-day public comment period).

#### I. ADMINISTRATIVE REQUIREMENTS

##### (1) Submittal

An extension request must be submitted and received by EPA- Region IX prior to the expiration date of the permit.

##### (2) Justification

The extension request must include an acceptable justification why the commencement of construction did not commence as scheduled. The request must also include a revised construction schedule which assures that construction will be initiated during the extension period and that construction will be continuous.

##### (3) Certification

The extension request must be signed by a responsible representative of the company proposing the project.

#### II. TECHNICAL REQUIREMENTS

##### (1) BACT Analysis

A BACT reanalysis is required in all permit extension requests, as in an application for a new PSD

permit. It should also be noted that, according to a recent EPA policy, any new BACT determination being prescribed for any regulated pollutant must also consider the impact of the proposed BACT on the emissions of unregulated or toxic pollutants.

##### (2) Additional PSD Review Requirement

A reanalysis of the PSD increment consumption and air quality impacts is required. Interim source growth in the area may have occurred and caused significant degradation of air quality. Therefore, the review agency is responsible for ensuring that the source requesting an extension would not cause or contribute to a PSD increment or NAAQS exceedances.

##### (3) New PSD Regulations or Requirements

It is not the intent of this policy to exempt projects from meeting new requirements. Therefore, all new or interim PSD requirements will be applied as in an application for a new PSD permit

#### III. PROCEDURAL ISSUES

##### (1) Duration of Extensions

Due to concerns of growth rights and public participation, EPA may limit an extension to 12 months, or less, from the initial date the permit was to expire. This allows for an extension, if necessary, while ensuring that impacted States, Districts and the public have control of their own air resources and growth rights and that state-of-the-art BACT will be employed.

##### (2) Public Comment

EPA will require the same public comment procedure for extension requests as for permit modifications including a 30-day public comment period. Requests for public hearings and petitions for permit appeals shall follow the applicable procedures of 40 CFR Part 124.

##### (3) Extensions of Later Units of Phased Multi-Unit Projects

Determinations for phased multi-unit projects are very complex involving the independence or dependence of a project and often different construction dates. Therefore, please consult with EPA regarding any questions addressing phased construction projects.

EPA Staff Contact:

Peter Fickenscher (415) 974-8226 (FTS 454-8226)

Section Chief:

Wayne Blackard (415) 974-8249 (FTS 454-8249)

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## Memorandum

# Florida Department of Environmental Protection

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TO: Clair Fancy

FROM: A. A. Linero, P.E. *AA Linero 7/30*

DATE: July 30, 1998

SUBJECT: Seminole Electric Hardee Unit 3  
PSD-FL-214

The subject permit issued in 1995 will expire on January 1, 2000. According to the ten year Site Plan filed by Seminole Electric with the Public Service Commission, field construction will begin on January 2000 with a planned in-service date of January 2002.

The permit NO<sub>x</sub> conditions require achievement of a lb/hr limit based on 15 ppm by Dry Low NO<sub>x</sub> technology. There is a provision requiring that the BACT be reset to a level as low as 9 ppm based on the result of initial testing of the Dry Low NO<sub>x</sub> combustors.

Seminole originally planned to purchase the unit from Westinghouse and is still negotiating with them on various technical issues. I originally sealed the technical evaluation on this permit. I no longer have reasonable assurance that the facility as designed will comply with our permit conditions, rules and regulations based on Westinghouse projects in Florida, Georgia and Missouri. I am concerned that if the facility resorts to SCR, they will specify a system capable of achieving a NO<sub>x</sub> rate of 15 ppm at full capacity and a limit as high as 30 ppm at low load. This would not represent the limits I would have required had SCR been considered feasible when the unit was permitted.

Because construction was discontinued for at least 18 months, the approval to construct has become invalid according to the EPA Rules for delegated PSD programs at 40CFR52.21(r)(1), Source Obligation. This period can be extended by the "Administrator" upon a satisfactory showing that an extension is justified.

I believe there is good reason to require (by a permit modification) the facility to achieve a lower NO<sub>x</sub> limit through SCR if it cannot achieve 15 ppm by Dry Low NO<sub>x</sub>. Our most recent evaluation of NO<sub>x</sub> removal costs by SCR are approximately \$2,500 per ton when installed following Westinghouse's commercially demonstrated Dry Low NO<sub>x</sub> combustors capable of reducing NO<sub>x</sub> to about 40 ppm.

A project with a completion date of 2002 would have typically been permitted in 1998 or 1999. At this time SCR technology for such projects should be 7.5 ppm as specified for the Lakeland project upon conversion to combined cycle.

I plan to call Seminole and advise them of the matter so that Westinghouse can design a proper SCR system should they be awarded the final contract for the project.

AAI/aal

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

Permit Number: PSD-FL-214  
 (PA-89-255A)

SPECIFIC CONDITIONS:

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:

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 <sub>x</sub>	Gas	15 ppmvd (d)	106	931	1212
	Oil	42 ppmvd (e)	336	504	
CO	Gas	20 ppmvd	71	622	618
	Oil	25 ppmvd	91	136	
PM/PM <sub>10</sub>	Gas		7	65	147
	Oil		67	100	
SO <sub>2</sub>	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.



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

Permit Number: PSD-FL-214  
(PA-89-255A)

**SPECIFIC CONDITIONS:**

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<sub>x</sub> 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<sub>x</sub> emission limitation and will base it on the engineering data report submitted by the permittee. If the data demonstrate that a NO<sub>x</sub> emission rate of less than 15 ppmvd at 15 percent O<sub>2</sub> is consistently achievable, the NO<sub>x</sub> emission limit may be adjusted accordingly, but not lower than 9 ppmvd at 15 percent O<sub>2</sub>.

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

DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

1998 15

SITING COORDINATION

**SEMINOLE ELECTRIC COOPERATIVE, INC.**

**1998 TEN YEAR SITE PLAN**

**APRIL 1998**

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- |   |  |
|---|--|
| (1) Plant Name & Unit Number:                 | Hardee Power Station Unit 3  |
| (2) Capacity                                  |  |
| a. Summer:                                    | 451 MW   |
| b. Winter:                                    | 527 MW   |
| (3) Technology Type:                          | Advanced Combined Cycle  |
| (4) Anticipated Construction Timing           |  |
| a. Field construction start-date:             | Jan. 2000  |
| b. Commercial in-service date:                | Jan. 2002  |
| (5) Fuel                                      |  |
| a. Primary fuel:                              | Natural Gas  |
| b. Alternate fuel:                            | Distillate Oil   |
| (6) Air Pollution Control Strategy:           | Dry Low NOx Combustors, Natural Gas, Low Sulfur #2 Oil                         |
| (7) Cooling Method:                           | Cooling Reservoir  |
| (8) Total Site Area:                          | 1,280 Acres  |
| (9) Construction Status:                      | N/A  |
| (10) Certification Status:                    | Certification received 08/15/1995  |
| (11) Status With Federal Agencies             | EPA: Approval received 9/11/1995<br>RUS: Record of Decision received 9/14/1995 |
| (12) Projected Unit Performance Data          |  |
| Planned Outage Factor (POF):                  | 5.75%  |
| Forced Outage Factor (FOF):                   | 6.50%  |
| Equivalent Availability Factor (EAF):         | 87.75%   |
| Resulting Capacity Factor (%):                | 31% - 54%  |
| Average Net Operating Heat Rate (ANOHR):      | 7,430  |
| (13) Projected Unit Financial Data            |  |
| Book Life (Years):                            | 30   |
| Total Installed Cost (In-Service Year \$/kW): | 723.71   |
| Direct Construction Cost (\$/kW):             | 518.81   |
| AFUDC Amount (\$/kW):                         | 74.43  |
| Escalation (\$/kW):                           | 57.43  |
| Fixed O&M (\$/kW-Yr):                         | 13.20  |
| Variable O&M (\$/MWH):                        | 1.23   |
| K Factor:                                     | N/A  |



→ On point and applicable for delegated programs.

modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality related values of any such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal land manager concurs with such demonstration and he so certifies, the State may authorize the Administrator: *Provided*, That the applicable requirements of this section are otherwise met, to issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, particulate matter, and nitrogen oxides would not exceed the following maximum allowable increases over minor source baseline concentration for such pollutants:

allowable increase. If such variance is granted, the Administrator shall issue a permit to such source or modification pursuant to the requirements of paragraph (q)(7) of this section: *Provided*, That the applicable requirements of this section are otherwise met.

(7) *Variance by the Governor with the President's concurrence.* In any case where the Governor recommends a variance in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that the variance is in the national interest. If the variance is approved, the Administrator shall issue a permit pursuant to the requirements of paragraph (q)(7) of this section: *Provided*, That the applicable requirements of this section are otherwise met.

(8) *Emission limitations for Presidential or gubernatorial variance.* In the case of a permit issued pursuant to paragraph (q) (5) or (6) of this section the source or modification shall comply with such emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less for more than 18 days, not necessarily consecutive, during any annual period:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
Particulate matter:	
PM-10, annual arithmetic mean .....	17
PM-10, 24-hr maximum .....	30
Sulfur dioxide:	
Annual arithmetic mean .....	20
24-hr maximum .....	91
3-hr maximum .....	325
Nitrogen dioxide:	
Annual arithmetic mean .....	25

(6) *Sulfur dioxide variance by Governor with Federal Land Manager's concurrence.* The owner or operator of a proposed source or modification which cannot be approved under paragraph (q)(4) of this section may demonstrate to the Governor that the source cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for a period of twenty-four hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility). The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may, after notice and public hearing, grant a variance from such maximum

Administrator shall follow the procedures at 40 CFR 52.21(r) as in effect on June 19, 1979, to the extent that the procedures of 40 CFR part 124 do not apply.

~~Source obligation.~~ (1) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this section or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this section who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

(2) Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Administrator may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

(3) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State implementation plan and any other requirements under local, State, or Federal law.

(4) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements or paragraphs (j) through (s) of this section shall apply to the source or modification as though construction had not yet commenced on the source or modification.

MAXIMUM ALLOWABLE INCREASE  
(Micrograms per cubic meter)

Period of exposure	Terrain areas	
	Low	High
24-hr maximum .....	36	62
3-hr maximum .....	130	221

(q) *Public participation:* The Administrator shall follow the applicable procedures of 40 CFR part 124 in processing applications under this section. The

52.21 as in effect on June 19, 1978, if the owner or operator of the source or modification submits an application for a permit under this section on or before June 8, 1981, and the Administrator subsequently determines that the application as submitted before that date was complete with respect to the requirements of this section other than those in paragraphs (m)(1) (ii) through (iv) of this section, and with respect to the requirements for such analyses at 40 CFR 52.21(m)(2) as in effect on June 19, 1978. Instead, the latter requirements shall apply to any such source or modification.

(ii) The requirements for air quality monitoring in paragraphs (m)(1) (ii) through (iv) of this section shall not apply to a particular source or modification that was not subject to 40 CFR 52.21 as in effect on June 19, 1978, if the owner or operator of the source or modification submits an application for a permit under this section on or before June 8, 1981, and the Administrator subsequently determines that the application as submitted before that date was complete, except with respect to the requirements in paragraphs (m)(1) (ii) through (iv).

(11)(i) At the discretion of the Administrator, the requirements for air quality monitoring of  $PM_{10}$  in paragraphs (m)(1) (i)-(iv) of this section may not apply to a particular source or modification when the owner or operator of the source or modification submits an application for a permit under this section on or before June 1, 1988 and the Administrator subsequently determines that the application as submitted before that date was complete, except with respect to the requirements for monitoring particulate matter in paragraphs (m)(1) (i)-(iv).

(ii) The requirements for air quality monitoring of  $PM_{10}$  in paragraphs (m)(1), (ii) and (iv) and (m)(3) of this section shall apply to a particular source or modification if the owner or operator of the source or modification submits an application for a permit under this section after June 1, 1988 and no later than December 1, 1988. The data shall have been gathered over at least the period from February 1, 1988 to the date the application becomes otherwise complete in accordance with

the provisions set forth under paragraph (m)(1)(viii) of this section, except that if the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that paragraph (m)(1)(iii) requires shall have been gathered over a shorter period.

(12) The requirements of paragraph (k)(2) of this section shall not apply to a stationary source or modification with respect to any maximum allowable increase for nitrogen oxides if the owner or operator of the source or modification submitted an application for a permit under this section before the provisions embodying the maximum allowable increase took effect as part of the applicable implementation plan and the Administrator subsequently determined that the application as submitted before that date was complete.

(13) The requirements in paragraph (k)(2) of this section shall not apply to a stationary source or modification with respect to any maximum allowable increase for  $PM_{10}$  if (i) the owner or operator of the source or modification submitted an application for a permit under this section before the provisions embodying the maximum allowable increases for  $PM_{10}$  took effect in an implementation plan to which this section applies, and (ii) the Administrator subsequently determined that the application as submitted before that date was otherwise complete. Instead, the requirements in paragraph (k)(2) shall apply with respect to the maximum allowable increases for TSP as in effect on the date the application was submitted.

~~(14) Control technology review.~~ (1) A major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emissions standard and standard of performance under 40 CFR parts 60 and 61.

(2) A new major stationary source shall apply best available control technology for each pollutant subject to regulation under the Act that it would have the potential to emit in significant amounts.

Related but no precisely applicable

(3) A major modification shall apply best available control technology for each pollutant subject to regulation under the Act for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

(4) For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

~~(k) Source impact analysis.~~ The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

(1) Any national ambient air quality standard in any air quality control region; or

(2) Any applicable maximum allowable increase over the baseline concentration in any area.

(1) ~~Air quality models.~~ (i) All estimates of ambient concentrations required under this paragraph shall be based on applicable air quality models, data bases, and other requirements specified in appendix W of part 51 of this chapter (Guideline on Air Quality Models).

(2) Where an air quality model specified in appendix W of part 51 of this chapter (Guideline on Air Quality Models) is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis for a specific state program. Written approval of the Administrator must be obtained for any modification