Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

February 11, 1999

Hamilton S. Oven, Administrator
Siting Coordination Office
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Seminole Electric Cooperative, Inc.;
Hardee Power Station Unit 3 (Payne Creek Generating Station);
PPSA No. 89-25SA,
Request for Modification of Certification.

Dear Mr. Oven:

Seminole Electric Cooperative, Inc. (Seminole) hereby requests a modification of the Site Certification for the Hardee Power Station Unit 3, pursuant to Section 403.516(l)(b), Florida Statutes (F. S.). That certification was issued by the Siting Board in August, 1995, authorizing the construction and operation of a 440 MW combined cycle unit at the Hardee Power Station site in Hardee County, Florida. Seminole is in the process of commencing construction of the Hardee Power Station Unit 3. Based upon the Siemens-Westinghouse combustion turbine (CT) finally selected for this facility, Seminole has identified several necessary modifications to the existing certification to conform to the selected combustion turbine.

Several changes to the separate Prevention of Significant Deterioration (PSD) permit are needed to address the selected CT and related equipment. Pursuant to Condition of Certification XXVIII.C., Modification of Conditions (at page 59 of the Conditions), the "Certification shall be automatically modified to conform to any subsequent DEP-issued amendments, modifications, or renewals of the separately-issued Prevention of Significant Deterioration (PSD) permit ... for the project and the conditions of such permit shall be controlling over these Conditions of Certification." Therefore, once the Department modifies the separate PSD permit to address the selected CT, the PPSA conditions of certification would be modified accordingly. Attached as Exhibit A are proposed revisions to the Conditions of Certification to reflect the requested changes to the PSD permit and the other matters discussed herein.

Second, the selected Siemens-Westinghouse combustion turbines and the associated heat recovery steam generators and steam turbine will result in an increase in electrical output of approximately 48 MW above the initially identified 440 MW of capacity for the Hardee Power Station Unit 3. This increase in electrical output is the result of improvements and refinements to the Siemens-Westinghouse combustion turbine and the heat recovery steam generator since the original 501F CT was identified in the Site Certification Application for this facility. The increase in megawatts

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from 440 MW to 488 MW necessitates a modification of the certification for an increase in both the capacity of Unit 3 and the ultimate site capacity for the Hardee Power Station site. The additional 48 MW in Unit 3 will increase the capacity of Unit 3 from 440 MW to 488 MW. It also increases the ultimate site capacity from 880 MW to 928 MW. All of the increase in megawatts is attributed to Unit 3. The increase in ultimate site capacity to 928 MW will preserve the previously-identified 145 MW of capacity for the buildout of Hardee Power Station Unit 2.

However, the increase in megawatts will not result in any increase in environmental impacts from the operation of any of the existing or planned units at the site. The increase in megawatts for Unit 3 will not result in any increase in air emissions or air quality impacts from the facility. All of the existing permit limits for the Hardee Unit 3 will be met, even with the increase in electrical output. Seminole has determined that the existing cooling pond is adequate to accommodate any increase in thermal load resulting from the increase in megawatts. There will be no change in the quality of the discharges from the cooling pond, either to surface waters or ground waters. There will be no increase in water use for cooling or process water needs beyond the currently-approved allocation. The construction and operation of Unit 3 will comply with all other Conditions of Certification. The 928 MW of ultimate capacity, therefore, would still fall within the envelope of environmental impacts contemplated for the 880 MW ultimate site capacity.

Based on final design information provided by Siemens-Westinghouse, Seminole has determined that it will be necessary to install a selected catalytic reduction system to meet the existing permit limits for nitrogen oxide (NOx) emissions. To date, Siemens-Westinghouse has not been successful in providing a dry-low NOx combustor system adequate to meet the 15 ppm limits established under the certification and PSD permit. Thus, consistent with Conditions of Certification II.B.3. Seminole "will install a dry-low NOx combustor system or an equivalent system on each CT", with SCR being that equivalent system. Seminole therefore proposes that this Condition of Certification be clarified to reflect that SCR will be used as the equivalent system, in addition to the dry-low NOx combustors that Siemens-Westinghouse will also supply for this facility. A similar change has been requested for the PSD permit. Seminole further has agreed to operate the SCR system at 12 ppm or less during an initial 12 month evaluation period following unit startup, after which the system will be operated in order to achieve an emission rate of 9 ppm. A modification to reflect this commitment is set forth in Attachment A.

Third, due to the passage of time, it is appropriate to revise several of the Conditions of Certification that establish deadlines for post-certification submittals and other reports on the project. These conditions relate to water conservation and water reuse feasibility studies and to traffic monitoring for the project. Because the project will commence actual onsite construction at the Hardee Power Station site around March, 2000[1] and the new unit will go into service in the summer of 2002, Seminole suggests that several reporting dates in the conditions be revised to reflect these dates. Specifically, Condition of Certification IV.M.3. (at page 28 of the Conditions) provides that "by January 1, 2002, SECI shall submit for approval by the [SWFWMD] permitting department director, resource regulation, a water conservation plan for the purposes of documenting the current groundwater use for Hardee Unit 3's water use operations, and the

[1]Final engineering and design of the project will begin in late summer 1999, and major equipment will be ordered in the same time period.

existing and proposed water conservation programs which are, or will be implemented to conserve groundwater at the plant." Because the unit will not begin actual commercial operation until June, 2002, Seminole proposes that the January 1, 2002 date be revised to June 1, 2004. This would allow two years of plant operation to establish the groundwater use for the facility and the water conservation programs the facility will implement. We believe the two year time frame is consistent with the original date for this Condition. In addition, Condition of Certification IV.Q. (at page 3) provides that "SECI shall continue to investigate the feasibility of using reclaimed water as a water source and submit an updated report describing the feasibility to the Permits Data Section of the District [SWFWMD] by January 1, 2002." Seminole similarly requests that the date for this report be extended to June 1, 2004 to allow two years of operation before this report is submitted. The third condition with a monitoring or reporting date is Condition of Certification XXXV., Transportation (at page 62), providing that "monitoring of the intersection of State Road 37/County Road 630 is to commence at such time as the total number of construction employees reaches 344 persons or June 1, 1997, whichever occurs first. Monitoring on an annual basis shall continue to February 1998, or until the number of employees is again below 344, whichever occurs last." Again, because of the later start of construction of the facility, Seminole suggests that the June 1, 1997 date be revised to June 1, 2000 and the February 1998 date be revised to February 2001.

Fourth, Seminole is in the process of seeking a dredge and fill permit from the U.S. Army Corps of Engineers (USACE) for the wetland impacts associated with onsite construction. Seminole anticipates that the USACE may require additional mitigation for wetland impacts beyond those previously identified in the Certification. This may occur because the USACE's wetland jurisdiction at the Project site exceeds that of FDEP and SFWMD. Seminole may therefore need FDEP approval for additional onsite wetland mitigation beyond that identified in the plans submitted during the PPSA certification proceeding.

Condition V.B. provides, in part, that "any alterations to the construction design that impacts wetlands or any alterations to the mitigation design shall require prior approval from the department." (e.a.) Seminole believes that this condition already authorizes the Department to approve any necessary alterations to the mitigation plan to address any increased -mitigation required by the USACE. However, Seminole wishes to advise the Department and the other parties to this certification of this possible need to revise or expand the current wetland mitigation plans. Seminole expects that it will undertake the original mitigation design, and will either expand that existing plan or develop additional mitigation as may be required by the USACE.

Last, Seminole has formally named its Hardee Station Unit 3 the "Payne Creek Generating Station". Seminole therefore requests that the Department reflect this name in future formal actions concerning this generating plant.

Therefore, Seminole requests that the Department revise the Conditions of Certification for the Payne Creek Generating Station (or the Hardee Power Station Unit 3) as described above and as identified specifically in Attachment A to this request. Enclosed with this's request is a check in the amount of $ 10,000 made payable to the Department as the required modification fee under Section 403.516, F.S., and Rule 62-17.293(c), F.A.C. Copies of this modification request are being distributed to all parties to the original certification concurrent with this submittal.

Should you, any other Department staff, or any other parties have any questions concerning this modification, please contact either Mike Roddy or myself at 813-963-0994. We will be happy to provide any further information which you may find necessary.

Sincerely,

M. P. Opalinski

Michael P. Opalinski
Director of Environmental Affairs

cc: Scott Goorland, FDEP
All parties of record (list attached)

Attachment

cc: S. Arif, BAR

Payne Creek Generating Station
Certification Parties of Record

Mr. Scott A. Goorland
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SEMINOLE ELECTRIC COOPERATIVE INCORPORATED

P.O. Box 273000
Tampa, FL 33688

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YEARS
1948-1998
SERVING OUR MEMBER SYSTEMS

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DATE	CHECK NO.	NET AMOUNT
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TEN THOUSAND AND 00/100 DOLLARS

TO THE ORDER OF

FLORIDA DEPT OF ENVIRONMENTAL
PROTECTION
BUREAU OF FINANCE & ACCOUNTING
P O BOX 3070
TALLAHASSEE, FL 32315-3070

"036266" :061112788: 010 117 6163"

State of Florida Department of Environmental Protection
Seminole Electric Cooperative, Inc.
Hardee Power Station Unit #3
PA 89-25SA

CONDITIONS OF CERTIFICATION

April 18, 1995

II. AIR

The construction and operation of the project shall be in accordance with all applicable provisions of Chapters 62-210 thru 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~~ 315 megawatts (MW; two ~~150~~ 157.5 MW (nominal) combined cycle combustion turbines) of generating capacity. Each combustion turbine (CT) will be connected to a heat recovery steam generator (HRSG), which will recover the waste heat to produce steam for utilization in a single 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~~ 488 MW ~~(net)~~ (nominal). In addition to the foregoing, the project shall comply with the following conditions of certification as indicated.

A. General Requirements

1. Pursuant to Rule 62-212.200(56), F.A.C., Potential to Emit (PTE), the maximum heat input to each combustion turbine at an ambient temperature of 32°F, shall neither exceed ~~1,862~~ 1,962 MMBtu/hr while firing natural gas nor ~~1,965~~ 1,888 MMBtu/hr while firing fuel oil.

2. Pursuant to Rule 62-212.200(56), F.A.C., PTE, the CTs may operate continuously, i.e., 8,760 hrs/year.

3. Pursuant to Rule 62-212.200(56), F.A.C., PTE, only natural gas or No. 2 fuel oil is allowed to be fired in the CTs. The maximum sulfur content limit of the No. 2 fuel oil shall not exceed 0.05 percent, by weight.

4. Pursuant to Rule 62-212.200(56), F.A.C., PTE, the maximum No. 2 fuel oil consumption allowed to be burned is 41,751,000 gallons per year, which is equivalent to 1500 hours per CT per year of operation at full-load (not to exceed 3,000 hrs/yr between the two CTs). The No. 2 fuel oil is to be used as a back-up fuel only.

5. Pursuant to Rule 62-296.310(3),F.A.C., Unconfined Emissions of Particulate Matter (PM), the emissions of unconfined PM shall be minimized during the construction period by covering or watering dust generating areas.

B. Emission Limits

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

MAXIMUM ALLOWABLE EMISSION LIMITATIONS

POLLUTANT	FUEL	CONCENTRATION	lbs/hr[a]	TPY[b]	TPY(TOTAL)[c]
NOx	Gas	~~15~~ 12ppmvd[d]	~~106~~ 91	~~931~~ 797	~~1212~~ 1066
	Oil	42 ppmvd[e]	336	504	
CO	Gas	20 ppmvd	71	622	618
	Oil	25 ppmvd	91	136	
PM/PM_{10}	Gas		7	65	147
	Oil		67	100	
SO_2	Gas		5	47	182
	Oil		101	152	
VOC	Gas	5 ppmvd	10	88	99
	Oil	10 ppmvd	21	31	
Sulfuric Acid Mist	Gas		1	6	39
	Oil		22	34	
Beryllium	Oil		0.0049	0.007	0.007
Arsenic	Oil		0.0097	0.014	0.014
Visible Emissions	Gas	≤ 10 percent opacity			
	Oil	≤ 10 percent opacity			

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

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

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

(d) The natural gas NOx allowable emission limitation of 15 ppmvd is corrected to 15 percent 02. Compliance shall be determined through the initial and annual compliance tests.

(e) The fuel oil NOx allowable emission limitation of 42 ppmvd is corrected to 15 percent oxygen. Compliance shall

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

ESTIMATED EMISSIONS		
POLLUTANT	FUEL	TPY
Lead	Oil[a,b]	0.16
Fluoride	Oil[a,b]	0.090
Mercury	Gas[c]	0.0003
	Oil[a,b]	0.024

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

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

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

3. The permittee will install a dry low-NOx combustor system or an equivalent system (i.e., selective catalytic reduction) on each CT. The permittee shall make every practicable effort to achieve the lowest possible NOx emission rate, but must not exceed ~~15~~ 12 ppmvd at 15 percent O_2 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 NOx 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~~ 12 months after the initial compliance test, the permittee shall prepare and submit for the Department's review an engineering report regarding the collection and the analysis of the data gathered from the monitor. In addition, this report shall include a conclusion regarding the lowest NOx 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 or 40 CFR 75 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 NOx emission limitation and will base it on the engineering data report submitted by the permittee. If the data demonstrate that a NOx emission rate of less than ~~15~~ 12 ppmvd at 15 percent O2 is consistently achievable, the NOx emission limit may be adjusted accordingly, but not lower than 9 ppmvd at 15 percent 02.

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 emissions limitation table.

C. Performance Testing

1. Initial (I) compliance tests shall be performed on each CT using both fuels. Testing of emissions shall be conducted at 95-100% of the manufacturer's rated heat input based on the average ambient air temperature for the CT during the test. Annual (A) compliance tests shall be performed on the CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests at permit renewal shall also be performed on the non-PSD pollutants in condition B above. 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

certificate or may require SECI to submit water samples when SWFWMD determines there is a potential for adverse impacts to water quality.

L. SWFWMD Access

SECI shall provide access to an authorized SWFWMD representative to enter the property at any reasonable time to inspect the facility and make environmental or hydrologic assessments. SECI shall either accompany SWFWMD staff onto the property or make provision for access onto the property.

M. Conservation

1. SECI shall cease or reduce withdrawal as directed by SWFWMD if water levels in aquifers fall below the minimum levels established by the SWFWMD Governing Board.

   SECI shall practice water conservation to increase the efficiency of transport, application, and use, as well as to decrease waste and to minimize runoff from the property. At such time as the SWFWMD Governing Board adopts specific conservation requirements for SECI's water use classification, SECI shall be subject to those requirements upon notice and after a reasonable period for compliance.

2. Any wells not in use, and in which pumping equipment is not installed shall be capped or valved in a water tight manner in accordance with Rule 62-532.500(3) (a)4, F.A.C.

3. By ~~January 1, 2002~~ June 1, 2004, SECI shall submit for approval by the Permitting Department Director, Resource Regulation, a water conservation plan for the purposes of documenting the current groundwater use for Hardee Unit 3's water use operations, and the existing and proposed water conservation programs which are, or will be implemented to conserve groundwater at the plant. The plan shall address the following:

   a. Current Plant Operation

      1) For groundwater and recycled surface water sources, document the processes which use water, and the magnitude of the use.

Permitting Department Director, Resource Regulation, designed to demonstrate that water table drawdown does not exceed one foot under on-site wetlands that will not be disturbed.

2) Collection of water table level data after construction of the approved monitoring well network for at least six months prior to the initiation of dewatering in the area, to obtain background data. During this time period, water level data shall be recorded on a weekly basis and submitted monthly.

3) If a rim-ditch system is proposed to recharge the water table near on- site wetlands that will not be disturbed, design and operation details must be submitted to demonstrate that the water table will be maintained at appropriate levels based on the background data collected. Rim-ditch systems must also be accompanied by a monitoring well network to verify water table maintenance.

4) At least one month prior to the anticipated date of dewatering an area within the setback distance, water level data shall be recorded and submitted on a weekly basis.

5) Data collection shall continue for six months following completion of dewatering and reclamation or until SWFWMD staff determine that background or steady-state levels are attained. During this time period, water level data shall be recorded on a weekly basis and reported monthly. Water levels shall be reported in feet relative to the National Geodetic Vertical Datum (N.G.V.D.)

Q. Alternative Source Investigation

SECI shall continue to investigate the feasibility of using reclaimed water as a water source and submit an updated report describing the feasibility to the Permits Data Section of the District by ~~January 1, 2002~~ June 1, 2004. The report shall contain an analysis of reclaimed water sources for the area, including the relative location of these sources to SECI's property, the quantity of reclaimed water available, the projected date(s) of availability, costs associated with obtaining the reclaimed water, and an implementation schedule for reuse, if feasible. Infeasibility shall be supported with a detailed explanation.

XXXV. TRANSPORTATION

Monitoring of the intersection of State Road 37/County Road 630 is to commence at such time as the total number of construction employees reaches 344 persons or June 1, ~~1997~~2000, whichever occurs first. Monitoring on an annual basis shall continue to February ~~1998~~2001, or until the number of employees is again below 344, whichever occurs last. Should the monitoring identify needed improvements to maintain an acceptable level of service, SECI shall be responsible for the proportion of the improvements which can be attributed to the impact of the Hardee Unit 3 facility (Section 9J-5.0055, F.A.C.).

XXXVI. EMERGENCY RESPONSE

A. Violent Weather

The Permittee shall prepare a violent weather component of the Facility's emergency response plan and submit it to Hardee and Polk Counties, DEP, and DCA for approval prior to start of commercial operation. This plan shall include measures to coordinate with local emergency management authorities in the event of violent weather or a berm breach. Hardee and Polk County emergency response personnel shall be invited to participate in safety drills and exercises conducted by the plant operator.

B. Fire

The Permittee shall prepare a fire emergency component of the emergency response plan and submit it to Hardee and Polk Counties for approval prior to the start of commercial operation. This plan shall include measures to coordinate with local fire, police and emergency management authorities in the event of a fire.

C. Spill Response

The facility's emergency response plan and spill prevention, containment and contingency plan shall be reviewed and updated regularly by the Permittee to include the names and telephone numbers of state and local emergency response contact persons.