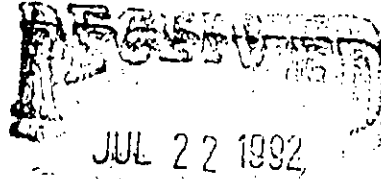


Clair Fancy

MEMORANDUM

July 22, 1992

Office of General Counsel
Environmental Division

TO: Mr. Greg Radlinski, OGC

FROM: Alton Yates, Director
Regulatory & Environmental Services

RE: AES Modifications of Conditions of Certification
PA-88-24

RECEIVED

AUG 04 1992

Division of Air
Resources Management

Pursuant to your memo of June 18, 1992, AQD has reviewed the proposed AES modifications to conditions of certification, as well as the original site certification order, and offers the following comments:

- A. As Wayne Tutt noted in his comments to you dated June 15, 1992, the original site certification needs to be more specific in detailing how compliance with various air pollution provisions will be demonstrated. This is especially important because the conditions of certification give to AQD the responsibility to enter the facility, conduct inspections and verify compliance with applicable rules and regulations. Comments on specific sections follow, together with proposed new language to accomplish the needed specificity;
1. Section II.A.1.d. - Places an annual and train load limit on the sulfur content of the coal, but no compliance method is given for the annual limit. Compliance with the annual limit should be based upon the arithmetic mean of the train load results required by Section II C.6. Section II, C.6. should specify that a representative sample of each coal shipment be taken, and be analyzed for sulfur content in accordance with EPA Reference Method 19, Section 5.2.1, 40 CFR 60, Appendix A. An "as fired" fuel monitoring system, as specified in 40 CFR 60.47a, may not provide data on the sulfur content of each coal shipment.
 2. Section II.A.1.e., and Section II. C.5. limit the sulfur content of the No. 2 fuel oil used by the auxiliary boilers and limestone dryers, but no test method is specified. Sulfur content and heating value should be determined in accordance with EPA Reference Method 19, Section 5.2.2.
 3. Sections II.A. 3 through 8. It is not clear how compliance with the flue gas emission limits under Section II A.3. will be demonstrated. Section II A.5. states that "Compliance with the emissions limits shall be determined by EPA reference method tests," however Section II A.8. requires continuous emission monitors (CEMs) for opacity, SO₂, NO_x, CO and O₂ or CO₂, and further states that "AESCB shall use CEMs to determine compliance." Further, Section II A.6. specifies that the "CFBs are subject to 40 CFR Part 60, Subpart Da; except that

where requirements within this certification are more restrictive, the requirements of this certification shall apply." These sections taken together lead to some confusion as follows:

SO₂ - proposed emission limits:
0.60 #/MMBtu - 3 hour average
0.24 #/MMBtu - 12 month rolling average

Subpart Da requires compliance for SO₂ using CEMs data on a 30 day rolling average. It seems obvious that compliance with the 12 month rolling average must be done using CEMs data, but how about the 3 hour average? Will any 3 hour average in excess of 0.6 #/MMBtu recorded by CEMs constitute an exceedance, or will compliance with the short term (i.e., 3 hour) average be determined solely based on an annual 3 hour stack test? It is not clear. If the latter case is true, this leaves only a 12 month average to be demonstrated using CEMs. Potentially high short term excursions could occur, and not constitute violations. Also, it would require waiting a full year between stack tests before any violation of an emission limit could be demonstrated. This is a less stringent standard than the Subpart Da requirement of a 30 day rolling average, despite the lower required concentration. The certification should be modified to explicitly require that compliance with all limits be demonstrated using CEMs data.

40 CFR 60, subpart Da, Section 60.43a requires that at least a 70% reduction from the potential combustion concentration for SO₂ be achieved and demonstrated, when burning solid fuels, and when emissions are less than 0.60 #/MMBtu heat input. This percent reduction requirement is in addition to demonstrating compliance with the numerical emission concentration. The site certification makes no specific mention of the percent reduction requirement, but based upon Section II A.6., it does apply. To avoid any possible future misunderstanding, the percent reduction requirement should be explicitly stated, along with an averaging period (Subpart Da requires a 30 day-rolling average, same as for the emission concentration), and an appropriate compliance method. Potential SO₂ emissions should be determined using "as fired" fuel sampling and analysis pursuant to 40 CFR 60.47(a)(3).

NO_x interim limit - 0.29 #/MMBtu
final limit - 0.17 #/MMBtu

The same confusion exists as to how compliance is demonstrated, as in the case of SO₂. Subpart Da requires that compliance with NO_x limits be demonstrated using CEMs, and based upon a 30 day rolling average. Section II A.8. of the conditions of certification requires that CEMs be used to demonstrate compliance, and yet the proposed NO_x limits have no averaging period. If compliance is to be determined using CEMs data, it must be averaged over some expressed time interval, as in the case of SO₂. Any intention of not demonstrating compliance using CEMs data, but rather to base compliance only on a once-a-year stack test is

less stringent than Subpart Da, regardless of a lower allowable concentration. Section II A.8.b. specifies that CEMS data be recorded and reported in accordance with Chapter 17-2, FAC and 40 CFR 60. 40 CFR 60 required that quarterly excess emissions reports be filed. In order to know how to calculate an excessive emission, an averaging period must be stated. The conditions of certification should be modified to explicitly require that compliance with the NO_x limits be demonstrated using CEMs data and indicating over what time period the CEMs data is to be averaged.

Relative to the CO-proposed emission limit 0.175 #/MMBtu - all of the concerns expressed above for NO_x apply. How will compliance with the CO emission limit be demonstrated? A CO CEM is required, but no averaging period is expressed in the certification. How will excess emission reports for CO be calculated? In the case of CO, Section II A.7. requires an initial compliance test for CO, but no subsequent annual stack tests. Without a requirement for annual stack tests, and with no averaging period for CEMs data, there appears to be no clear-cut requirement to demonstrate continuous compliance for CO, short of using CEMs data, and considering the proposed emission limit to be applied as an instantaneous, never to be exceeded limit. It is unlikely that the permitting agency or the permittee intended this to be the case. The conditions of certification should be amended to explicitly require that compliance with the CO limit being demonstrated using CEMs data, and indicating over what time period the CEMs data is to be averaged.

Suggested language to effect the above recommended requirements is found in Attachment A.

- B. The AQD staff has developed the following questions/comments relative to emissions and natural gas utilization as proposed by the modification.
1. AES has stated that "substantial improvement in environmental impacts..." will be achieved by this modification for the pollutants SO₂, NO_x and CO. AES has not specified a mechanism, control technique or operational practice by which to evaluate the probability, or possibility of fulfilling such claims. AES must detail how they have arrived at these specific reductions, in order for AQD to fully evaluate this proposal.
 2. AES has committed to reducing their NO_x emissions (page 9) by 40%, but then states that if control equipment is necessary to achieve their stated reduction, AES would then have 18 months to install appropriate control equipment. If AES is unclear as to whether they can actually obtain the NO_x reduction at this time, how can AES project a reduction in NO_x emissions? Further what assurance does AES have that 18 months will be sufficient to obtain, install, and demonstrate compliance? Since this is a voluntary reduction, would AES upon failure to achieve the stated NO_x reduction seek a higher limit using the fact that the "voluntary" limit is not substantiated by law?

3. AES has specified that during startup additional quantities of natural gas are to be used (also SKC is to obtain three package boilers to run on natural gas) is such (natural gas) available at the site? Who is to be the supplier of natural gas for AES/SKC? Please have AES/SKC specifically specify the amounts of natural gas to be used by AES/SKC (at this point it is the amount to be used by SKC).

Is there a transmission line to supply such an amount of natural gas already in place, or will one need to be constructed?

4. AES on Page 14 states they will "voluntarily" reduce their permitted mercury emissions by 90%. How does AES intend to achieve this reduction?

After a 90% reduction AES will look at an innovative technique to reduce mercury emissions even further, via carbon injection prior to the baghouse. Why has AES arbitrarily established a cut point of 50% reduction. Is there a relation between the resulting ambient concentration and health impacts?

5. AES has added "short fiber rejects" a component of their fuel to the CFBs. Also AES has specified a MMBtu/hr and annual limitation for firing this "fuel". AES has not specified a record tracking mechanism to ensure compliance with their own imposed limits, such must be made part of the certification, in order to ensure compliance.

Also, it is unclear (page 19, (h)) as to whether AES plans to burn "short fiber rejects" for an entire year, after the initial compliance test, before performing a 30 day test burn. If it is indeed AES's intent to do so, such is not acceptable. If "short fiber rejects" are to be a fuel component, then initial compliance testing must include this component or compliance has not been demonstrated.

6. AES states on page 22 (b.) that fuel components will be recorded on a 24-hour basis. Since limits exist on specific firing rates (short fiber rejects) such is inappropriate, AES must have an hourly record of fuel usage in order to be in concert with the limitations specified elsewhere in this certification (1.A.1.b.).
7. AES needs to specifically define "commercial operation as used on Page 21.
8. Seminole Kraft, on page 23, seems to be attempting to establish "creditable emissions reductions" for any future permitting action. It appears that Seminole Kraft by placing this type of language in the certification would argue the credits are available when existing rule may no longer allow the credit, due to time. This language needs clarification.
9. AES and Seminole Kraft both specify an increase in the use of natural gas relative to this modification, and actions separate to the certification (i.e., three natural gas boilers by SKC).


AES Modification of Conditions of Certification

July 22, 1992

Page 5

Resolution of the above comments and questions should be achievable.

If AQD can be of further assistance please advise.

for 
Alton Yates, Director
Regulatory & Environmental Services

AY/nic

Bruce

HOLLAND & KNIGHT

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Tallahassee
July 22, 1992

The Honorable Robert Benton
Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550

Re: DOAH Case No.: 88-5740

Dear Mr. Benton:

Enclosed for filing is an Amended Petition for Modification of Certification in the referenced proceeding. The amendments involve changes to make clear that AES Cedar Bay, Inc., rather than AESCB Limited Partnership is the Petitioner in this instance. An application to transfer the Site Certification from AES Cedar Bay, Inc. to AESCB Limited Partnership, dated April 17, 1991, was filed with the Department of Environmental Regulation. They have advised that the transfer can only be effected through a formal modification. We therefore amended the petition to insert the correct name of the Petitioner and have included a request to modify the certification to transfer it to AESCB Limited Partnership. The amendments do not affect any other provisions of the request for modification.

Please let me know if you have any questions or require additional information.

RECEIVED

JUL 22 1992

Dept. of Environmental Reg.
Office of General Counsel

Sincerely,

HOLLAND & KNIGHT

for Lawrence N. Curtin

Enclosure
cc w/enc: Service List

LNC/mre
TAL-11701

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

RECEIVED
JUL 22 1992

In Re: AES Cedar Bay Cogeneration
Project, Power Plant Site
Certification Application
PA-88-24

Dept. of Environmental Reg.
Office of General Counsel

DOAH CASE NO. 92-_____

AMENDED PETITION FOR MODIFICATION OF CERTIFICATION

Petitioners, AES CEDAR BAY, INC. ("AESCB") and SEMINOLE KRAFT CORPORATION ("SEMINOLE KRAFT"), by and through the undersigned attorneys and pursuant to Section 403.516(c), Fla. Stat., request that the Governor and Cabinet, sitting as the Electrical Power Plant Siting Board, approve the modifications proposed herein amending the Order Approving Certification in this case dated February 11, 1991, a copy of which is attached as Exhibit 1. In support of their petition, petitioners aver as follows:

SUMMARY OF CHANGES

This petition for modification is submitted to resolve concerns about the AESCB cogeneration project that have been raised subsequent to the certification of the site and to bring the site certification into conformance with design changes that have developed since certification. The overall effect of the requested modifications will be a substantial improvement in the environmental impacts of the project.

Two major changes are addressed in this petition for modification. First, modifications are proposed that would provide for more than 640,000 lbs./hr. of steam for use at the Seminole

Kraft paper mill, with overall emissions even less than those specified in the site certification. The AESCB cogeneration plant will provide up to 380,000 lbs./hr. of 600 psig steam to Seminole Kraft. In addition, Seminole Kraft may install its own new steam generating equipment, but sulfur dioxide, nitrogen oxide and carbon monoxide emissions from Seminole Kraft's production of up to 375,000 lbs./hr. steam will be offset by reductions at the AESCB cogeneration plant over the previous certification. Moreover, AESCB will reduce its nitrogen oxide emissions even lower, to correspond with more recent nitrogen oxide emission limitations imposed on Florida power plants.

Second, AESCB proposes to respond to concerns about consumptive use of groundwater and about impacts of wastewater discharges by installing an innovative system that uses reclaimed wastewater from the Seminole Kraft paper mill for cooling water makeup and then treats and evaporates the cooling tower blowdown rather than discharging it. These proposed changes would eliminate concerns about use of groundwater for cooling and would eliminate the need for any discharge from the AESCB cogeneration plant during normal operations. Additionally, this reuse and treatment of paper mill wastewater will also produce enough high-quality treated water to supply all of the condenser cooling water for Seminole Kraft's electric generating turbine, reducing consumptive use of groundwater by an estimated 400-500 gpm. In the future, if U. S. EPA approval can be obtained and DER determines that an incremental net environmental benefit would result, AESCB would seek

modification of the Conditions of Certification, to allow it to provide further treatment of all of Seminole Kraft's wastewater and to discharge that portion not evaporated in the AESCB and Seminole Kraft cooling systems.

Both the new air emissions limitations for AESCB and Seminole Kraft and the new plan for using Seminole Kraft wastewater as makeup for a closed-loop cooling water system will result in substantial environmental improvement as compared to the project described in the site certification application and the Conditions of Certification.

PROCEDURAL BASIS FOR PROPOSED MODIFICATIONS

On February 11, 1991, the Governor and Cabinet sitting as the Siting Board issued an Order Approving Certification in this proceeding to applicant/petitioners AES Cedar Bay, Inc. and Seminole Kraft Corporation. Subsequently, for reasons related to lender financing of the project, AES Cedar Bay, Inc. became general partner of a limited partnership, AESCB Limited Partnership, a limited partnership with offices located at 1001 N. 19th Street, Suite 2000, Arlington, Virginia 22209. Pursuant to an Application of Transfer of Site Certification dated April 17, 1991, the site certification for the Cedar Bay cogeneration project was requested to be transferred to AESCB Limited Partnership. DER has advised that a modification is required for that purpose. Petitioner Seminole Kraft Corporation is an original applicant/petitioner in this proceeding, and is a petitioner with respect to the modifications described herein only to the extent that they

expressly refer to the activities of or impose a duty upon Seminole Kraft.

On August 26, 1991, petitioners filed an application for modification of the Conditions of Certification related to cooling water supply and discharge, and on February 26, 1992 petitioners filed sufficiency responses, in the form of an amendment to the application for modification, in response to the Department of Environmental Regulation's finding of insufficiency and request for additional information dated October 4, 1991. The Department has not yet acted on that application for modification. Thus, the suggested modifications set forth in this petition include modifications that were also requested and justified in that August 26, 1991 application for modification. This petition for modification supersedes the August 26, 1991 application for modification that dealt with an anticipated discharge of cooling tower blowdown, which AESCB now proposes to handle in a closed-loop system.

Modification of the February 11, 1991 certification is hereby sought pursuant to Section 403.516(1)(c), Fla. Stat. (of the Florida Electrical Power Plant Siting Act (the "Act")), which provides that, "a petition for modification may be filed by the applicant" at any time "after issuance." Such petition must set forth:

1. The proposed modification,
2. The factual reasons asserted for the modification; and

3. The anticipated effects of the proposed modification on the applicant, the public, and the environment.

§ 403.516(1)(c)(1-3), Fla. Stat.

Section 403.516(2) of the Act provides that the requested modification "must be in accordance with the terms" of the Act and prohibits approval of any modification which "constitutes a variance from standards or regulations of the department applicable under any federally delegated or approved permit program, except as expressly allowed in such program." The modifications requested herein are entirely consistent with the requirements and standards of the Act and would not constitute a variance of any applicable standards or regulations of the Department of Environmental Regulation ("DER"). In particular, as described below, the requested modifications "will produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife and the ecology of state waters and their aquatic life," as required under Section 403.502 of the Act. Moreover, the information set forth in this petition complies with the procedural requirements of the DER as set forth in Section 17-17.211(3) of the DER's regulations.

The modifications implement the provisions of the a proposal made by AES and addressed by the Siting Board on June 16, 1992. At that meeting, the Siting Board directed the DER to proceed with the modifications that are contained in this petition.

FACTUAL BASIS FOR PROPOSED MODIFICATIONS

The proposed modifications to the site certification are offered for three purposes: to address issues that were specifically reserved in the Siting Board's February 11, 1991 Order Approving Certification, related to supply and discharge of cooling water; to resolve issues arising out of recent allegations of misrepresentation concerning the retirement of existing boilers at the Seminole Kraft paper mill; and to make a number of minor corrections and changes to better describe the cogeneration plant as its design and operation plans have been further refined since certification.

1. AESCB Relationship with Seminole Kraft

Seminole Kraft is currently making fundamental changes in its manufacturing process from that which formed the basis of the original joint application for certification of the cogeneration project. While those changes were described in general terms in hearings during February and October of 1990, the details of Seminole Kraft's future operations have now become more definite. Although activities at the Seminole Kraft paper mill are not covered by the site certification and are not within the Siting Board's jurisdiction (except for the five old Seminole Kraft bark and power boilers to be shut down so that their emission credits can be transferred to AESCB), these changes are nevertheless described below to clear up any confusion.

Seminole Kraft is converting its mill to eliminate the Kraft pulping operation and to create the ability to make paper entirely from recycled fiber. This change to recycled fiber means

that Seminole Kraft will no longer be building a new chemical recovery boiler (which was part of the original site certification application but was subsequently deleted in a site certification application amendment dated January 4, 1990 and permitted by a separate construction permit issued by DER on January 5, 1990). The three old recovery boilers that the proposed new Seminole Kraft recovery boiler was to replace are being eliminated, along with all of the other kraft pulp mill sources, such as digesters, lime kilns, slaker, and smelt dissolving tank. The three oil-fired power boilers and two bark boilers described in Condition II.D. of the Conditions of Certification also will be eliminated from use, as will the once-through river water cooling system Seminole Kraft uses for turbine condenser cooling.

The processing of recycled fiber also generates short fiber "rejects," consisting of fibers too short to be used in making paper and small amounts of unwanted material that find their way into the recycled fiber supply. Those rejects will have to be disposed of. To avoid using up scarce landfill capacity and to recover useful energy that would otherwise be lost, AES plans to burn these rejects, replacing a small amount of the coal that would otherwise be burned in its CFBs. Seminole Kraft's fiber rejects are a carbonaceous fuel that is very similar to the wood waste that AESCB has already been certified to burn. Available data indicate that the rejects will constitute less than six percent of the annual heat input to the AESCB cogeneration plant. Seminole Kraft intends to burn the fiber rejects in its two existing bark boilers

during the interim period between when the mill is converted to recycled fiber and when the AESCB cogeneration plant completes initial testing of its boilers. At that time Seminole Kraft is required to permanently shut those boilers down pursuant to Condition of Certification II.D. (Seminole Kraft believes that the burning of fiber rejects in its bark boilers is consistent with existing permits. However, at the request of DER, Seminole Kraft has filed a request to modify its existing bark boiler permits with the DER. The DER has not yet acted on the modification request.) Thereafter, until AESCB has demonstrated to DER the ability to burn rejects consistent with the emission limitations in the site certification, Seminole Kraft plans to dispose of the rejects in its on-site landfill.

As described in the original site certification application, Seminole Kraft planned to use steam from its new recovery boiler to power a 42 MW turbine generator to generate electricity for internal mill use. Because the converted mill will no longer have recovery boilers, Seminole Kraft desires to purchase and to generate itself the high-pressure steam needed to power its existing electric generating turbine. Thus, AESCB will supply steam to Seminole Kraft at 600 psig (rather than the 175 psig steam described in the site certification application) in quantities of up to 380,000 lbs./hr. AESCB will stay within the present Conditions of Certification concerning total fuel usage and maximum heat input, and will actually reduce its permitted maximum air emissions.

In addition, to meet the steam needs of its reconfigured paper mill, Seminole Kraft plans to construct and operate new boilers. Seminole Kraft's current plans are to install up to three gas-fired package boilers (with distillate oil backup in case of gas interruption) with the capacity to generate up to a total of 375,000 lbs./hr. of 600 psig steam. Of course, as Seminole Kraft's steam needs or its needs for other air-pollutant-emitting equipment develop or increase in the future as a result of further changes at the Seminole Kraft mill, any associated increased emissions would not be subject to the site certification, but would have to be approved under applicable environmental permitting laws.

AESCB has voluntarily committed to reduce its annual emissions of sulfur dioxide, nitrogen oxides, and carbon monoxide to completely offset the maximum allowable or expected emissions from the generation of up to 375,000 lbs./hr. of steam by Seminole Kraft from the new boilers described above (in addition to providing up to 380,000 lbs./hr. of steam directly to the mill from the AESCB cogeneration plant). In this manner, AESCB has provided assurances that emissions of these pollutants in the Jacksonville area will not increase as a result of boilers that Seminole Kraft plans to install in conjunction with the cogeneration project. Even beyond this, AESCB has agreed to further reductions in nitrogen oxides, below the level allowed in its current PSD permit and also below the level needed to offset the three new package boilers that Seminole Kraft plans to install. AESCB's permitted emissions of NO_x will be reduced by over 40%, bringing it to the

level that has been required in the more recent permits in Florida. (AESCIB would have 18 months to determine if additional NO_x control equipment is needed to meet this limitation and to install and begin using any such equipment.)

2. Water Usage and Discharge

In response to the Siting Board's concerns regarding consumptive use of groundwater for cooling, AESCIB has developed a plan to use a portion of Seminole Kraft's treated wastewater, which otherwise would have been discharged to the St. Johns River, for cooling water makeup. This will require some pretreatment before the Seminole Kraft wastewater is used in the AESCIB's cooling water system. The water will then be cycled through a forced-draft cooling tower (as groundwater would have been under the original application).

That plan for using reclaimed Seminole Kraft wastewater for cooling was described in the application for modification of the site certification filed on August 26, 1991. In addition, however, AESCIB has now developed this proposal, which is not required by any regulatory restriction, to virtually eliminate discharges from the cogeneration plant. Blowdown from the cooling tower will be softened, filtered, treated in a reverse osmosis system, then evaporated in evaporator/crystallizer process. Under normal operating conditions, this treatment system will allow AESCIB to operate a closed-loop cooling water system, with no cooling water discharge to surface waters or groundwater. "Zero discharge"

cooling water systems are in existence in Florida, in Gainesville and Orlando.

The reclaimed water pretreatment process prior to its use in the cooling system will generate a dewatered pretreatment sludge, and treatment of cooling tower blowdown in the reverse osmosis and evaporator/crystallizer will produce a "salt cake." Both of these solid wastes will be hauled off-site for disposal. The materials removed by these treatment systems would, of course, otherwise have been discharged lawfully to the St. Johns River as part of Seminole Kraft's permitted wastewater discharge.

Boiler blowdown, stormwater runoff and other low-volume wastewaters will be routed to the closed-loop cooling water system (although it may still be necessary to discharge the stormwater runoff through Seminole Kraft's wastewater system, as authorized in Condition III.B.3. of the Conditions of Certification, during extreme rainfall events or when the CFBs are not operating). Chemical cleaning waste will be hauled off-site to a licensed waste treatment or disposal facility (or, if practicable, treated in the cooling tower blowdown closed-loop system). Stormwater runoff from other parts of the plant site will continue to be managed as described in the site certification application, although AESCB may be able to capture some of the stormwater runoff and use it in lieu of some Seminole Kraft wastewater in its cooling water system.

Because of the new cooling water treatment system, AESCB will also be able to supply Seminole Kraft with makeup for the cooling water system it will use for condenser cooling for its

turbine generator. This will allow Seminole Kraft to avoid consumptive use of 400-500 gpm of groundwater. In addition, AESCB is committing to continue to seek an NPDES permit from U. S. EPA, which would allow discharge of treated Seminole Kraft wastewater, combined with AESCB cooling tower blowdown. AESCB would provide further treatment of all of Seminole Kraft's currently anticipated wastewater, through a chemically assisted clarification unit, even though only a portion of the Seminole Kraft wastewater is needed for AESCB and Seminole Kraft cooling tower makeup. Treated Seminole Kraft wastewater and cooling tower blowdown from the cogeneration plant would be discharged in compliance with technology-based treatment requirements and with applicable water quality standards. If a federal NPDES permit can be obtained, and if AESCB demonstrates to DER a net environmental benefit over the closed-loop cooling water system, AESCB will seek modification of the Conditions of Certification to allow it to operate such a wastewater treatment system for Seminole Kraft wastewater.

3. Miscellaneous Other Changes

A. On December 20, 1991, the Florida Public Service Commission issued Order No. 23907, approving a contract between AESCB and Florida Power & Light. That contract provides for AESCB to sell up to 250 MW of electricity to FP&L, and concludes that sales of 250 MW are consistent with the PSC's determination of need. Under Section 403.519, F.S., the Public Service Commission is the sole forum for determining the need for an electrical power plant subject to the Florida Electrical Power

Plant Siting Act. Thus, the site certification should be modified to indicate that the AESCB cogeneration plant has a nominal generating capacity of 250 MW. AESCB is not asking for any increase in the maximum fuel usage or heat input currently specified in the site certification, however.

B. AESCB is also requesting an increase in the amount of oil or gas that can be used for start-ups. Additional experience at facilities similar to AESCB has led to revisions in the calculations related to start-up fuel use. Bringing a relatively new technology on-line has proven to result in a higher number of shutdowns during early operation to correct design and construction flaws than would be expected from a well-known traditional technology. Accordingly, the amount of fuel oil or natural gas used for start-ups is expected to be higher in the first two years of commercial operation than was previously certified. Since the maximum number of annual hours burning fuel oil or gas is being increased, a reduction in the annual hours burning coal occurs. As modeling was done on coal and coal has higher emission levels than either fuel oil or natural gas, the increased start-up fuel allocation will only potentially decrease the annual emissions and thus does not impact the "worst case" air modeling already conducted. No further air modeling is necessary. (In addition, it should be noted that, while the site is certified to use either oil or gas for start-up fuel, AESCB is not currently installing the equipment needed to burn natural gas, as a natural gas pipeline only recently commenced operation in the area and

AESCB has not yet determined whether capacity is available to supply AESCB with natural gas with acceptable reliability and cost.)

C. A Condition of Certification concerning maintaining boiler load between 70% and 100% of the design rated heat load capacity is proposed to be removed because it is unnecessary. While the AESCB cogeneration plant will ordinarily be run as a baseload facility due to its low cost of generating electricity, it will now be a dispatchable plant for Florida Power & Light, so that this condition's restriction regarding the cogeneration plant's capacity factor is no longer appropriate. Based on the experience of The AES Corporation with other CFB plants, AESCB is confident that it can meet its permit limitations even at relatively low loads. The Administrator of DER's Office of Siting Coordination has previously indicated in writing that DER would not object to the removal of this condition.

D. In response to questions about the potential for reductions in emissions of mercury (which is an unwanted contaminant in coal), AESCB has reviewed available data on mercury capture in existing CFBs with baghouse controls and information on the Lee County Resource Recovery Facility. Based on this review, AESCB has agreed to reduce voluntarily its permitted mercury emissions by almost 90 percent. AESCB also proposes to test an innovative technique for possible further reduction of mercury through injection of carbon into the exhaust gas stream prior to the baghouse. If this technique produces an incremental reduction

in mercury emissions of at least 50 percent, then AESCB commits to install and operate equipment to inject carbon into the gas stream of all three CFBs on a continuing basis. (The system AESCB proposes to test involves reagent handling and injection equipment, but it will not require AESCB to make any other additions or modifications to the CFBs or their control equipment, such as, for example, spray dryers, grids, baffling, or other gas dispersion devices.)

E. The span values for continuous monitors suggested by applicable federal New Source Performance Standards are inappropriate for the Cedar Bay Cogeneration Plant. This is because the plant's extremely low emissions rates would cause a typical analyzer designed in accordance with NSPS to operate in the lower extreme of the full scale range, possibly compromising relative accuracy. With this concern for relative accuracy in mind, the design engineer, Black & Veatch, has already requested that the DER allow modified span values for the continuous monitors for oxides of nitrogen and sulfur dioxide. Florida has the authority to permit modified span values under 40 C.F.R. Part 51 Appendix P. Appendix P provides that states may approve deviations from NSPS monitoring requirements where, for example, "a device specified . . . would not provide accurate determinations of emissions." Therefore, the plant's site certification should be amended to reflect an analyzer span of zero to 400 parts per million for nitrogen oxides and zero to 500 parts per million for sulfur dioxide.

F. The list in Condition II.B.4. of minor emission sources from material handling and treatment, where baghouses were to be used as controls, is no longer accurate. As the cogeneration plant materials handling and treatment facilities have been designed in greater detail, AESCB has been able to identify additional emission controls that will actually improve fugitive emissions from these materials handling and treatment operations. Some of this new pollution control equipment has been described in quarterly engineering reports submitted to DER. In one case -- coal car unloading -- dust will now be suppressed at the source using wet dust suppression techniques, rather than attempting to collect the dust and then remove it in a baghouse. Other sources, including the coal belt feeder, coal belt transfer, fly ash hopper, ash silo, and common feed hopper, have been replaced by additional or different dust collection points. Total fugitive dust emissions have not been increased, because no additional material is being handled beyond that described in the site certification application. Rather, the increased number of emission points merely indicates that additional control equipment has been designed into the system. All of these new baghouses will still meet current requirements in the site certification that visible emissions not exceed 5% opacity and that particulate emissions not exceed 0.03 gr/dscf. This design change should optimize the control of fugitive dust emissions from materials handling and treatment activities.

G. AESCB is also looking at ways to improve the potential for beneficial use of bottom ash and fly ash. For that reason, a modification of Condition XI is being requested to clarify that bottom ash and fly ash may not only be pelletized, but may also be made into an aggregate form, for use by companies specializing in the marketing and utilization of combustion by-products as, for example, construction materials. This alternative processing of bottom ash and fly ash will not result in increased fugitive dust emissions.

H. Conditions V.D. and XXVIII, which both arose out of the anticipated need for construction dewatering, can be deleted. AESCB, in response to concerns expressed during the siting process regarding discharge of dewatering waters and the effects of dewatering on groundwater flow, has been able to modify construction details and techniques for the project to avoid the need for installing any dewatering systems. Thus, the plant excavations and construction of subsurface facilities were completed without the need for dewatering discharges, eliminating the need for site certification provisions related to that discharge. Also, since there were no dewatering systems installed to present the potential for causing migration of a contamination plume associated with prior underground fuel storage tanks, there is no need for the condition requiring AES to develop plans for cleaning up contaminated groundwater.

I. Finally, while not covered by this petition for modification, AESCB should also note that it has been

considering the possibility of installing equipment at the cogeneration plant site to recover carbon dioxide for sale from a portion of the CFB flue gases. AESCB would produce carbon dioxide at the site only if it could be done within the limitations on fuel use and emissions contained in the current site certification (including the more stringent limitations requested in this petition) and only after it obtained all necessary permits for the carbon dioxide manufacturing equipment. AESCB is not seeking approval for the carbon dioxide manufacturing equipment at this time, but is merely noting that this is an additional activity at the site which AESCB may decide to pursue at some point in the future.

REQUESTED MODIFICATIONS

Petitioners AESCB and Seminole Kraft Corporation request that the Conditions of Certification attached to the Siting Board's February 11, 1991 order approving certification be amended as follows:

1. Condition II.A.1. should read as follows:

A. Emission Limitations for AES Boilers

1. Fluidized Bed Coal Fired Boilers (CFB)

a. The maximum coal charging rate of each CFB shall neither exceed 104,000 lbs./hr., 39,000 tons per month (30 consecutive days), nor 390,000 tons per year (TPY). This reflects a combined total of 312,000 lbs./hr., 117,000 tons per month, and 1,170,000 TPY for all three CFBs.

b. The maximum wood waste (primarily bark) charging rate to the No. 1 and No. 2 CFBs each shall neither exceed 15,653 lbs./hr. nor 63,760 TPY. This reflects a combined total of 31,306 lbs./hr., and 127,521 TPY for the No. 1 and No. 2 CFBs. The No. 3 CFB will not utilize woodwaste, nor will it be equipped with wood waste handling and firing equipment. The

maximum charging rate to each CFB of short fiber rejects from the Seminole Kraft recycling process shall not exceed 180 MMBtu/hr., nor shall such rejects exceed 6 percent of the annual fuel consumption of the AESCB facility on a Btu basis.

c. The maximum heat input to each CFB shall not exceed 1063 MMBtu/hr. This reflects a combined total of 3189 MMBtu/hr for all three units.

d. The sulfur content of the coal shall not exceed 1.7% by weight on an annual basis. The sulfur content shall not exceed 3.3% by weight on a shipment (train load) basis.

e. Auxiliary fuel burners shall be fueled only with natural gas or No. 2 fuel oil with a maximum sulfur content of 0.3% by weight. The fuel oil or natural gas shall be used only for startups. During the first year of commercial operation the maximum annual oil usage shall not exceed 350,000 gals./year, nor shall the maximum annual natural gas usage exceed 49 MMCF per year. During the second year of commercial operation, the maximum annual oil usage shall not exceed 250,000 gals./year, nor shall the maximum annual natural gas usage exceed 35 MMCF per year. During the third and subsequent years of commercial operation, the maximum annual oil usage shall not exceed 160,000 gals./year, nor shall the maximum annual natural gas usage exceed 22.4 MMCF per year. The maximum heat input from the fuel oil or natural gas shall not exceed 1120 MMBtu/hr. for the CFBs.

f. The CFBs shall be fueled only with the fuels permitted in Conditions 1a, 1b, and 1e above. Other fuels or wastes shall not be burned without prior specific written approval of the Secretary of DER pursuant to Condition XXI, Modification of Conditions.

g. The CFBs may operate continuously, i.e., 8760 hrs./yr.

h. To the extent that it is consistent with Condition II.A.1.b. and the following, AESCB shall burn all of the short fiber rejects generated by Seminole Kraft in processing recycled paper. No less than ninety (90) days prior to completion of construction, AESCB shall submit a plan to DER for conducting a 30-day test burn within one year after initial compliance testing. That test burn shall be designed to demonstrate that the CFBs can burn the rejects as a supplemental fuel without exceeding any of the limitations on emissions and fuel usage contained in Condition II.A. and without causing any operational problems which would affect the reliable operation (with customary maintenance) of the CFBs. AESCB shall notify DER and the Regulatory and Environmental Services Division (RESD) at least thirty (30) days prior to initiation of the test burn. The results of the test burn and AESCB's analysis shall be reported to DER and to the RESD within

forty-five (45) days of completion of the test burn. DER shall notify AESCB within thirty (30) days thereafter of its approval or disapproval of any conclusion by AESCB that the test burn demonstrated that the rejects can be burned in compliance with this Condition of Certification. If AESCB determines after the test burn that the rejects cannot be burned in the CFBs consistent with this Condition of Certification without modification of the CFBs, it shall submit with its analysis of the initial test burn a plan for completing such modifications and conducting another test burn as described above within one year after the initial test burn. Within forty-five (45) days of the second test burn, AESCB shall submit a report to DER demonstrating that the rejects can be burned in compliance with this Condition of Certification.

2. Condition II.A.2. should read as follows:

2. Coal Fired Boiler Controls

The emissions from each CFB shall be controlled using the following systems:

a. Limestone injection, for control of sulfur dioxide.

b. Baghouse, for control of particulate.

c. Baghouse, for control of metals, except that AESCB shall conduct a test to determine whether substantial additional removal of mercury can be obtained through an activated carbon injection system for mercury removal, as described in Exhibit 74 of the administrative record for the Lee County Resource Recovery Facility, which feeds carbon reagent into the CFB exhaust stream prior to the baghouse. Within one hundred eighty (180) days after initial compliance testing, AESCB shall conduct a test on one CFB to compare mercury emissions to the atmosphere with and without carbon injection. If the mercury emissions from one CFB are reduced by fifty (50) percent or more over final emissions without carbon injection, then AESCB shall install and operate a system to inject carbon into the exhaust gas stream of each CFB, prior to the baghouse. If the test demonstrates a reduction in actual mercury emissions from carbon injection of less than fifty (50) percent, then AESCB shall not be required to install and operate a carbon injection system for any of its CFBs, nor to conduct further testing of carbon injection.

3. Condition II.A.3. should read as follows:

3. Flue gas emissions from each CFB shall not exceed the following:

Pollutant	Lbs/MMBtu	Emission lbs/hr	Limitations		
			TPY	TPY for 3 CFBs	
CO	0.19 <u>0.175</u>	202	186 <u>186</u>	823 <u>758</u>	2468 <u>2273</u>
NO _x (interim)	0.29		308.3	1256	3767
NO _x (final)*	0.17		180.7	736.1	2208
SO ₂	0.60 (3-hr avg.)		637.8	--	--
	0.31 <u>0.24</u> (12 MRA)	329.5 <u>255.1</u>	1338 <u>1039</u>	4015 <u>3118</u>	
VOC	0.015		16.0	65	195
PM	0.020		21.3	87	260
PM ₁₀	0.020		21.3	86	257
H ₂ SO ₄ mist	0.024		25.5	103	308
Fluorides	0.086		91.4	374	1122
Lead	0.007		7.4	30	91
Mercury	0.00026 <u>0.0000304</u>	0.276 <u>0.0323</u>	1.13 <u>0.1316</u>	3.4 <u>0.3949</u>	
Beryllium	0.00011		0.117	0.5	1.5

Note: TPY represents a 93% capacity factor. MRA refers to a twelve month rolling average.

*The interim limit shall apply during the first 18 months of commercial operation to allow installation of control equipment needed to meet the final limitation (if any).

4. The first paragraph of Condition II.A.8. should read as follows:

8. Continuous Emission Monitoring for each CFB

AESCB shall use Continuous Emission Monitors (CEMS) to determine compliance. CEMS for opacity, SO₂, NO_x, CO and O₂ or CO₂, shall be installed, calibrated, maintained and operated for each unit, in accordance with 40 CFR 60.47a and 40 CFR 60 Appendix F, except that the span range of the NO_x analyzer shall have a span range from 0 to 400 ppm, and the SO₂ analyzer shall have a span range of 0 to 500 ppm.

5. Condition II.A.9. should read as follows:

9. Operations Monitoring for each CFB

a. Devices shall be installed to continuously monitor and record steam production, and flue gas temperature at the exit of the control equipment.

~~b. The furnace heat load shall be maintained between 70% and 100 % of the design rated capacity during normal operations.~~

~~b.e.~~ The coal, rejects, bark, natural gas and No. 2 fuel oil usage shall be recorded on a 24-hr (daily) basis for each CFB.

6. Condition II.B.4. should read as follows:

~~4. The maximum emissions from the material handling and treatment area, whose baghouses are used as controls for specific sources, shall not exceed those listed below (based on AP-42 factors):~~

Source	Particulate Emissions	
	lbs/hr	tpy
Coal Rail Unloading	neg	neg
Coal Belt Feeder	neg	neg
Coal Crusher	0.41	1.78
Coal Belt transfer	neg	neg
Coal Silo	neg	neg
Limestone Crusher	0.06	0.28
Limestone Hopper	0.01	0.03
Fly Ash Bin	0.02	0.10
Bed Ash Hopper	0.06	0.25
Ash Silo	0.03	0.25
Common Feed Hopper	0.03	0.13
Ash Unloader	0.01	0.06

4. The following material handling and treatment area emission points shall be controlled by baghouses:

Coal Crusher Building Dust Collector
Coal Silo Area Dust Collector
Limestone Pulverizer Dust Collectors (2)
Limestone Hopper Vent Filters (2)
Limestone Feeder Vent Filters (6)
Ash Silo Unloaders (2)
Bed Ash Hopper Bin Filter
Bed Ash Silo Bag Filter
Fly Ash Silo Bag Filters (2)
Bed Ash Silo Bin Vent
Fly Ash Silo Bin Vent
Pelletizing Bed Ash Receiver Filter
Pelletizing Fly Ash Receiver Filter
Pelletizing Vibratory Screen Filter
Pelletizing Ash Recycle Tank Filter
Pelletizing Recycle Hopper Filter
Pelletizing Cured Pellet Conveyor Filter
Pelletizing Curing Silo Outlet Conveyor Dust

The following material handling and treatment area sources shall be controlled using wet dust suppression techniques:

Coal Car Unloading Wet Suppression
Pelletizing Hydrator Venturi Scrubber
Pelletizing Curing Silo Impingement Scrubber
Pelletizing Pan Impingement Scrubber

The emissions from the above listed sources and the limestone dryers are subject to the particulate emission limitation requirement of 0.03 gr/dscf. However, neither DER nor BESD will require particulate tests in accordance with EPA Method 5 unless the VE limit of 5% opacity is exceeded for a given source, or unless DER or BESD, based on other information, has reason to believe the particulate emission limits are being violated.

7. Condition II.D. should read as follows:

D. Contemporaneous Emission Reductions

This certification and any individual air permits issued subsequent to the final order of the Board certifying the power plant site under 403.509, F.S., shall require, that the following Seminole Kraft Corporation sources be permanently shut down and made incapable of operation, and shall turn in their operation permits to the Division of Air Resources Management's Bureau of Air Regulation, upon completion of the initial compliance tests on the AESCB boilers: the No. 1 PB (power boiler), the No. 2 PB, the No. 3 PB, the No. 1 BB (bark boiler), and the No. 2 BB. BESD shall be specifically informed in writing within thirty days after each individual shut down of the above referenced equipment. This requirement shall operate as a joint and individual requirement to assure common control for purpose of ensuring that all commitments relied on are in fact fulfilled. This requirement does not prevent, and Siting Board approval is not required for, Seminole Kraft burning fiber rejects from its wastepaper recycling in the No. 1 BB and the No. 2 BB until they are required to be shut down under this provision.

Any applications for new steam generating equipment or for any other new emission sources filed by Seminole Kraft shall be processed and approved by DER outside of the AESCB site certification and in accordance with all applicable state and federal laws and regulations. Seminole Kraft may use any creditable emissions reductions, other than reductions associated with the shutdown of its three existing power boilers and two existing bark boilers described above, that may be associated with elimination or reduced utilization of other emissions sources at the Seminole Kraft mill, in any future permitting of any new steam generating equipment or other emissions sources not located on the AESCB site. Emissions from the generation of the first 375,000

lbs./hr. of steam generated by Seminole Kraft for its own use shall not exceed the following on an annual basis:

Tons Per Year

<u>CO</u>	<u>157</u>
<u>NO_x</u>	<u>449</u>
<u>SO₂</u>	<u>765</u>

8. All Conditions appearing in Part III.A. of the Conditions should be removed, except for Conditions III.A.7.d., (related to shutdown of Seminole Kraft's once-through condenser cooling system), III.A.10. (related to stormwater runoff), and III.A.15. (related to sanitary wastewater). All of the other conditions are no longer applicable to the cogeneration plant due to the elimination of wastewater discharges, except for stormwater runoff and sanitary wastewater. In place of the deleted conditions, the following new Conditions III.A.1. and III.A.2. should be inserted:

III. WATER DISCHARGES

A. Plant Effluents and Receiving Body of Water

1. AESCB shall not discharge any cooling system, demineralizer regeneration, floor drainage or similar wastewaters from the operation of the AESCB facility into any waters of the State. AESCB shall install a closed-loop cooling water system in accordance with technical specifications set forth in the Zero Discharge System Plan submitted by AESCB to the Department during the hearing and attached as Exhibit ___ to these Conditions of Certification. Pursuant to that Zero Discharge Plan, AESCB shall make available to Seminole Kraft up to 500 gpm of reclaimed water that has been treated to a quality satisfactory for use in condenser cooling for Seminole Kraft's turbine generator.
2. AESCB shall continue to seek a permit from U. S. EPA for the discharge of cooling water and process wastewater to the St. Johns or the Broward River. If an NPDES permit can be obtained, and if DER determines that it will result in a net environmental improvement over the Zero Discharge Plan, AESCB shall apply for a modification of these Conditions of Certification to allow it to install and operate equipment to treat all of the

process wastewater and cooling water generated by Seminole Kraft, up to 12 mgd, in a chemically assisted clarification unit. A portion of the effluent from that unit shall be used for the makeup to the AESCB and Seminole Kraft cooling towers, with the remainder discharged to surface waters. The modified Conditions of Certification may include a compliance schedule to allow the installation of any necessary wastewater conveyance and treatment equipment.

9. Condition V.D. can be deleted, as construction dewatering systems or discharges will not be needed for the project.

10. Condition IX. should read as follows:

IX. SOLID WASTE STORAGE AND DISPOSAL

AESCB shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the AESCB facility. Solid waste produced by the operation of the AESCB facility shall be removed from the site and disposed of in a permitted disposal facility, with the exception of bottom ash and fly ash. Bottom ash and fly ash will be pelletized, or made into aggregate form, and either shipped back to the mine utilizing the trains to deliver the coal, or sold as an additive to concrete, or utilized by companies specializing in the marketing and utilization of combustion by-products. The bottom ash and fly ash shall not be disposed of in a landfill within Duval County. If the permittees decide to dispose of the bottom ash or fly ash by other than returning it to the mine, they shall notify BESD and DER. Prior to removal and disposal of spent lime mud and pond tailings, the permittees shall determine whether those wastes are hazardous under 40 CFR 26 and 17-730, F.A.C. If wastes are determined to be hazardous, they shall be disposed of in accordance with Chapter 17-730, F.A.C., after consultation with the DER and BESD. If not hazardous, disposal shall be to a landfill designed to ensure compliance with groundwater quality criteria as contained in Chapters 17-3, and 17-730 F.A.C. All solid wastes disposed of on site shall comply with the provisions of Chapter 17-7, F.A.C. Ground water monitoring in accordance with 17-4, and 17-28, F.A.C. shall be implemented at the lime mud disposal site.

At least ninety (90) days prior to disposal of any sludge generated by pretreatment of reclaimed Seminole Kraft wastewater or by the cooling water blowdown treatment system, AESCB shall report to DER and RESD concerning the chemical characterization of any such sludge. DER reserves the right to

require additional sampling and analysis as necessary to ensure that the above-cited regulations are complied with. Prior to any such sludge disposal, AESCB shall obtain a letter of acceptance from a permitted disposal site. On or before the last day of the first year of commercial operation, and each year of commercial operation thereafter, AESCB shall report to DER and RESD concerning the composition and quantity of sludge generated by the cooling tower blowdown treatment system and the method of disposal, including name and location of facilities handling, treating, storing, and/or disposing of said sludge waste.

11. Condition XXV. should read as follows:

XXV. USE OF WATER FOR COOLING PURPOSES

The AESCB shall use reclaimed wastewater from the Seminole Kraft paper mill (in addition to any wastewater generated by the AESCB that is suitable for reuse for that purpose) for cooling water supply.

At least six months prior to beginning commercial operation, AESCB shall submit to the Department a report concerning the actual measured pollutant characteristics of reclaimed water to be obtained from the Seminole Kraft paper mill. Such report shall be based on approved analytical results from four monthly samples obtained directly from the Seminole Kraft waste stream to be tied in with the AESCB cooling system, and shall include the concentrations of BOD₅, COD, total organic carbon, total suspended solids, ammonia, pH, oil and grease, calcium, magnesium, sodium, potassium, alkalinity as mg of CaCO₃, sulfate, chloride, nitrate, fluoride, silica, chlorine, phosphate (total) as P, cyanide, iron, manganese, aluminum, nickel, zinc, copper, cadmium, chromium, beryllium, arsenic, selenium, antimony, mercury, barium, silver, lead, thallium, phosphorus, and TKN. Where applicable, wastewater sampling and analyses conducted by SKC under the terms of operation permit number I016-200147 may be used to meet the terms of this condition. Any other sampling and analyses submitted under the terms of this permit shall be in accordance with a Department-approved Quality Assurance Plan. Results of all testing and sampling specified above shall be submitted to the Department within 30 days of their occurrence.

Seminole Kraft's generation, treatment, or discharge of its wastewater is not covered by this site certification, and the permitting of Seminole Kraft's generation, treatment, or discharge of its wastewater does not require Siting Board approval.

13. Condition XXVIII. should be deleted because the AESCB project has been able to avoid installation of dewatering

systems and the associated potential migration of a groundwater contamination plume from prior activities in the area.

14. A new condition embodying the terms of the land donation should be added, as follows:

AESCB has agreed to provide funding for acquisition of environmentally sensitive land in or near Duval County, Florida. The funding will be in the form of donations to the Nature Conservancy. The sum of \$2,000,000 will be paid to the Nature Conservancy on the date this Petition for Modification is filed with the Siting Board for processing. The sum of \$2,500,000 will be paid to the Nature Conservancy on the date that the cogeneration facility begins commercial operations. Beginning one year after the start of commercial operation of the cogeneration facility and continuing annually for 30 years, the sum of \$300,000 will be paid to the Nature Conservancy. The annual payment will be used for bio-resource management and research.

In addition to the foregoing, AESCB requests that the Certification be transferred from AESCB to AESCB Limited Partnership.

AESCB believes that all of the modifications to the site certification described above can be made by the Secretary of the DER, after notice and opportunity for hearing, pursuant to the delegation of authority contained in Condition XXI.A.

ANTICIPATED EFFECTS OF PROPOSED MODIFICATIONS

The modifications proposed herein are not anticipated to have negative impacts on the public or the environment. As set forth above, the proposed modifications to Condition II.D. recognize that Seminole Kraft may construct additional boilers to provide the steam it needs to support the processes at its recycled

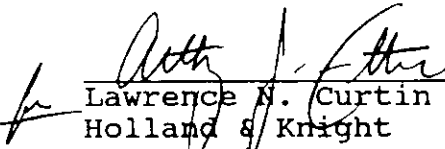
fiber mill. The proposed modification also contains a requirement, however, that will ensure that emissions from new boilers installed by Seminole Kraft to meet the first 375,000 lbs./hr. of the mill's steam needs (beyond the steam supplied by AESCB) will be more than offset by more stringent limitations on SO₂, CO, and NO_x emissions from the AESCB cogeneration plant.

In addition, AESCB has voluntarily proposed significant reductions in its permitted emissions of NO_x and mercury. AESCB has also agreed to test an innovative control technique for mercury, which could produce even further reductions. These changes will result in improved air quality in the area impacted by the AESCB plant.

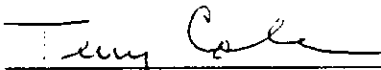
Moreover, the proposed modification requiring AESCB to utilize reclaimed Seminole Kraft wastewater for cooling and install a closed-loop system for its cooling water will ensure that operation of the power plant does not use groundwater for cooling and does not directly result in any deterioration in water quality of the St. Johns River or the Broward River or any other waters of the State. In fact, since some of Seminole Kraft's permitted discharge will now be treated and used by AESCB, the discharge of pollutants reaching the river will actually be reduced from what it otherwise would have been. Finally, the requested modifications of various other Conditions of Certification relating to air pollution will not result in any air emission increases from the cogeneration plant and, therefore, will also not impact air quality.

WHEREFORE, petitioners AESCB Limited Partnership and Seminole Kraft Corporation request that the proposed modifications to the February 11, 1991 Siting Board's Conditions of Certification be approved by the Governor and Cabinet for the reasons set forth above.

Respectfully submitted,


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Counsel for Petitioner Seminole Kraft Corporation

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of this PETITION FOR
MODIFICATION OF CERTIFICATION has been furnished by United States

Mail on this 22nd day of July, 1992, to:

Honorable Lawton Chiles
Governor
The Capitol
Tallahassee, Florida 32399

Honorable Robert A. Butterworth
Attorney General
The Capitol
Tallahassee, Florida 32399

Honorable Bob Crawford
Commissioner of Agriculture
The Capitol
Tallahassee, Florida 32399

Honorable Betty Castor
Commissioner of Education
The Capitol
Tallahassee, Florida 32399

Honorable Jim Smith
Secretary of State
The Capitol, PL-02
Tallahassee, Florida 32399-0250

Honorable Tom Gallagher
Treasurer and Insurance Commissioner
The Capitol
Tallahassee, Florida 32399-0300

Honorable Gerald A. Lewis
Comptroller
The Capitol, Plaza Level
Tallahassee, Florida 32399-0350

Sharyn L. Smith, Director
Ann Cole, Clerk
Division of Administrative Hearings
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Tallahassee, Florida 32399-3000

Jim Antista, General Counsel
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Mike Palecki, Chief, Bureau of Electric and Gas
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Kathryn L. Mennella, Esquire
St. Johns River Water
Management District
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Palatka, Florida 32178-1429

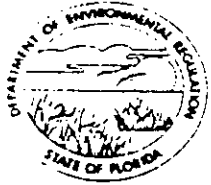
David Maloney, Esquire
Governor's Office of Legal Counsel
The Capitol, Room 210
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Jacksonville, Florida 32202

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Jacksonville, Florida 32202


Lawrence N. Curtin

37836-1:311:TAL-8124



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

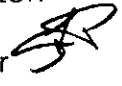
Interoffice Memorandum

RECEIVED

JUL 13 1992

Division of Air
Resources Management

TO: Al Bishop
Phil Coram
Richard Drew
Jim Pennington

FROM: Steve Palmer 
Siting Coordination Office

DATE: July 13, 1992

SUBJECT: AES/Cedar Bay Petition for Modification of Certification

The attached Petition for Modification of Certification needs to be reviewed by your staff for compliance with all requirements under your jurisdiction. We will have an internal meeting to discuss this petition on July 17, 1992 at 10:00 am in Room 238B. Please have the appropriate staff attend.

If you have any questions, please call me at 487-0472.

attachment

cc: -- w/o attachment --
Dana Minerva
Richard Donelan
Al Rushanan
Daryll Joyner
Craig Diltz
Jan Mandrup-Polsen
Cindy Phillips ✓
Preston Lewis

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

In Re: AES Cedar Bay Cogeneration
Project, Power Plant Site
Certification Application
PA-88-24

DOAH CASE NO. 92-_____

PETITION FOR MODIFICATION OF CERTIFICATION

Petitioners, AESCB LIMITED PARTNERSHIP ("AESCB") and SEMINOLE KRAFT CORPORATION ("SEMINOLE KRAFT"), by and through the undersigned attorneys and pursuant to Section 403.516(c), Fla. Stat., request that the Governor and Cabinet, sitting as the Electrical Power Plant Siting Board, approve the modifications proposed herein amending the Order Approving Certification in this case dated February 11, 1991, a copy of which is attached as Exhibit 1. In support of their petition, petitioners aver as follows:

SUMMARY OF CHANGES

This petition for modification is submitted to resolve concerns about the AESCB cogeneration project that have been raised subsequent to the certification of the site and to bring the site certification into conformance with design changes that have developed since certification. The overall effect of the requested modifications will be a substantial improvement in the environmental impacts of the project.

Two major changes are addressed in this petition for modification. First, modifications are proposed that would provide for more than 640,000 lbs./hr. of steam for use at the Seminole

Kraft paper mill, with overall emissions even less than those specified in the site certification. The AESCB cogeneration plant will provide up to 380,000 lbs./hr. of 600 psig steam to Seminole Kraft. In addition, Seminole Kraft may install its own new steam generating equipment, but sulfur dioxide, nitrogen oxide and carbon monoxide emissions from Seminole Kraft's production of up to 375,000 lbs./hr. steam will be offset by reductions at the AESCB cogeneration plant over the previous certification. Moreover, AESCB will reduce its nitrogen oxide emissions even lower, to correspond with more recent nitrogen oxide emission limitations imposed on Florida power plants.

Second, AESCB proposes to respond to concerns about consumptive use of groundwater and about impacts of wastewater discharges by installing an innovative system that uses reclaimed wastewater from the Seminole Kraft paper mill for cooling water makeup and then treats and evaporates the cooling tower blowdown rather than discharging it. These proposed changes would eliminate concerns about use of groundwater for cooling and would eliminate the need for any discharge from the AESCB cogeneration plant during normal operations. Additionally, this reuse and treatment of paper mill wastewater will also produce enough high-quality treated water to supply all of the condenser cooling water for Seminole Kraft's electric generating turbine, reducing consumptive use of groundwater by an estimated 400-500 gpm. In the future, if U. S. EPA approval can be obtained and DER determines that an incremental net environmental benefit would result, AESCB would seek

modification of the Conditions of Certification, to allow it to provide further treatment of all of Seminole Kraft's wastewater and to discharge that portion not evaporated in the AESCB and Seminole Kraft cooling systems.

Both the new air emissions limitations for AESCB and Seminole Kraft and the new plan for using Seminole Kraft wastewater as makeup for a closed-loop cooling water system will result in substantial environmental improvement as compared to the project described in the site certification application and the Conditions of Certification.

PROCEDURAL BASIS FOR PROPOSED MODIFICATIONS

On February 11, 1991, the Governor and Cabinet sitting as the Siting Board issued an Order Approving Certification in this proceeding to applicant/petitioners AES Cedar Bay, Inc. and Seminole Kraft Corporation. Subsequently, for reasons related to lender financing of the project, AES Cedar Bay, Inc. became general partner of a limited partnership, AESCB Limited Partnership, a limited partnership with offices located at 1001 N. 19th Street, Suite 2000, Arlington, Virginia 22209. Pursuant to an Application of Transfer of Site Certification dated April 17, 1991, the site certification for the Cedar Bay cogeneration project was transferred to AESCB. Petitioner Seminole Kraft Corporation is an original applicant/petitioner in this proceeding, and is a petitioner with respect to the modifications described herein only to the extent that they expressly refer to the activities of or impose a duty upon Seminole Kraft.

On August 26, 1991, petitioners filed an application for modification of the Conditions of Certification related to cooling water supply and discharge, and on February 26, 1992 petitioners filed sufficiency responses, in the form of an amendment to the application for modification, in response to the Department of Environmental Regulation's finding of insufficiency and request for additional information dated October 4, 1991. The Department has not yet acted on that application for modification. Thus, the suggested modifications set forth in this petition include modifications that were also requested and justified in that August 26, 1991 application for modification. This petition for modification supersedes the August 26, 1991 application for modification that dealt with an anticipated discharge of cooling tower blowdown, which AESCB now proposes to handle in a closed-loop system.

Modification of the February 11, 1991 certification is hereby sought pursuant to Section 403.516(1)(c), Fla. Stat. (of the Florida Electrical Power Plant Siting Act (the "Act")), which provides that, "a petition for modification may be filed by the applicant" at any time "after issuance." Such petition must set forth:

1. The proposed modification,
2. The factual reasons asserted for the modification; and
3. The anticipated effects of the proposed modification on the applicant, the public, and the environment.

§ 403.516(1)(c)(1-3), Fla. Stat.

Section 403.516(2) of the Act provides that the requested modification "must be in accordance with the terms" of the Act and prohibits approval of any modification which "constitutes a variance from standards or regulations of the department applicable under any federally delegated or approved permit program, except as expressly allowed in such program." The modifications requested herein are entirely consistent with the requirements and standards of the Act and would not constitute a variance of any applicable standards or regulations of the Department of Environmental Regulation ("DER"). In particular, as described below, the requested modifications "will produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife and the ecology of state waters and their aquatic life," as required under Section 403.502 of the Act. Moreover, the information set forth in this petition complies with the procedural requirements of the DER as set forth in Section 17-17.211(3) of the DER's regulations.

The modifications implement the provisions of the a proposal made by AES and addressed by the Siting Board on June 16, 1992. At that meeting, the Siting Board directed the DER to proceed with the modifications that are contained in this petition.

FACTUAL BASIS FOR PROPOSED MODIFICATIONS

The proposed modifications to the site certification are offered for three purposes: to address issues that were specifically reserved in the Siting Board's February 11, 1991 Order Approving Certification, related to supply and discharge of cooling

water; to resolve issues arising out of recent allegations of misrepresentation concerning the retirement of existing boilers at the Seminole Kraft paper mill; and to make a number of minor corrections and changes to better describe the cogeneration plant as its design and operation plans have been further refined since certification.

1. AESCB Relationship with Seminole Kraft

Seminole Kraft is currently making fundamental changes in its manufacturing process from that which formed the basis of the original joint application for certification of the cogeneration project. While those changes were described in general terms in hearings during February and October of 1990, the details of Seminole Kraft's future operations have now become more definite. Although activities at the Seminole Kraft paper mill are not covered by the site certification and are not within the Siting Board's jurisdiction (except for the five old Seminole Kraft bark and power boilers to be shut down so that their emission credits can be transferred to AESCB), these changes are nevertheless described below to clear up any confusion.

Seminole Kraft is converting its mill to eliminate the Kraft pulping operation and to create the ability to make paper entirely from recycled fiber. This change to recycled fiber means that Seminole Kraft will no longer be building a new chemical recovery boiler (which was part of the original site certification application but was subsequently deleted in a site certification application amendment dated January 4, 1990 and permitted by a

separate construction permit issued by DER on January 5, 1990). The three old recovery boilers that the proposed new Seminole Kraft recovery boiler was to replace are being eliminated, along with all of the other kraft pulp mill sources, such as digesters, lime kilns, slaker, and smelt dissolving tank. The three oil-fired power boilers and two bark boilers described in Condition II.D. of the Conditions of Certification also will be eliminated from use, as will the once-through river water cooling system Seminole Kraft uses for turbine condenser cooling.

The processing of recycled fiber also generates short fiber "rejects," consisting of fibers too short to be used in making paper and small amounts of unwanted material that find their way into the recycled fiber supply. Those rejects will have to be disposed of. To avoid using up scarce landfill capacity and to recover useful energy that would otherwise be lost, AES plans to burn these rejects, replacing a small amount of the coal that would otherwise be burned in its CFBs. Seminole Kraft's fiber rejects are a carbonaceous fuel that is very similar to the wood waste that AESCB has already been certified to burn. Available data indicate that the rejects will constitute less than six percent of the annual heat input to the AESCB cogeneration plant. Seminole Kraft intends to burn the fiber rejects in its two existing bark boilers during the interim period between when the mill is converted to recycled fiber and when the AESCB cogeneration plant completes initial testing of its boilers. At that time Seminole Kraft is required to permanently shut those boilers down pursuant to

Condition of Certification II.D. (Seminole Kraft believes that the burning of fiber rejects in its bark boilers is consistent with existing permits. However, at the request of DER, Seminole Kraft has filed a request to modify its existing bark boiler permits with the DER. The DER has not yet acted on the modification request.) Thereafter, until AESCB has demonstrated to DER the ability to burn rejects consistent with the emission limitations in the site certification, Seminole Kraft plans to dispose of the rejects in its on-site landfill.

As described in the original site certification application, Seminole Kraft planned to use steam from its new recovery boiler to power a 42 MW turbine generator to generate electricity for internal mill use. Because the converted mill will no longer have recovery boilers, Seminole Kraft desires to purchase and to generate itself the high-pressure steam needed to power its existing electric generating turbine. Thus, AESCB will supply steam to Seminole Kraft at 600 psig (rather than the 175 psig steam described in the site certification application) in quantities of up to 380,000 lbs./hr. AESCB will stay within the present Conditions of Certification concerning total fuel usage and maximum heat input, and will actually reduce its permitted maximum air emissions.

In addition, to meet the steam needs of its reconfigured paper mill, Seminole Kraft plans to construct and operate new boilers. Seminole Kraft's current plans are to install up to three gas-fired package boilers (with distillate oil backup in case of

gas interruption) with the capacity to generate up to a total of 375,000 lbs./hr. of 600 psig steam. Of course, as Seminole Kraft's steam needs or its needs for other air-pollutant-emitting equipment develop or increase in the future as a result of further changes at the Seminole Kraft mill, any associated increased emissions would not be subject to the site certification, but would have to be approved under applicable environmental permitting laws.

AESCB has voluntarily committed to reduce its annual emissions of sulfur dioxide, nitrogen oxides, and carbon monoxide to completely offset the maximum allowable or expected emissions from the generation of up to 375,000 lbs./hr. of steam by Seminole Kraft from the new boilers described above (in addition to providing up to 380,000 lbs./hr. of steam directly to the mill from the AESCB cogeneration plant). In this manner, AESCB has provided assurances that emissions of these pollutants in the Jacksonville area will not increase as a result of boilers that Seminole Kraft plans to install in conjunction with the cogeneration project. Even beyond this, AESCB has agreed to further reductions in nitrogen oxides, below the level allowed in its current PSD permit and also below the level needed to offset the three new package boilers that Seminole Kraft plans to install. AESCB's permitted emissions of NO_x will be reduced by over 40%, bringing it to the level that has been required in the more recent permits in Florida. (AESCB would have 18 months to determine if additional NO_x control equipment is needed to meet this limitation and to install and begin using any such equipment.)

2. Water Usage and Discharge

In response to the Siting Board's concerns regarding consumptive use of groundwater for cooling, AESCB has developed a plan to use a portion of Seminole Kraft's treated wastewater, which otherwise would have been discharged to the St. Johns River, for cooling water makeup. This will require some pretreatment before the Seminole Kraft wastewater is used in the AESCB's cooling water system. The water will then be cycled through a forced-draft cooling tower (as groundwater would have been under the original application).

That plan for using reclaimed Seminole Kraft wastewater for cooling was described in the application for modification of the site certification filed on August 26, 1991. In addition, however, AESCB has now developed this proposal, which is not required by any regulatory restriction, to virtually eliminate discharges from the cogeneration plant. Blowdown from the cooling tower will be softened, filtered, treated in a reverse osmosis system, then evaporated in evaporator/crystallizer process. Under normal operating conditions, this treatment system will allow AESCB to operate a closed-loop cooling water system, with no cooling water discharge to surface waters or groundwater. "Zero discharge" cooling water systems are in existence in Florida, in Gainesville and Orlando.

The reclaimed water pretreatment process prior to its use in the cooling system will generate a dewatered pretreatment sludge, and treatment of cooling tower blowdown in the reverse

osmosis and evaporator/crystallizer will produce a "salt cake." Both of these solid wastes will be hauled off-site for disposal. The materials removed by these treatment systems would, of course, otherwise have been discharged lawfully to the St. Johns River as part of Seminole Kraft's permitted wastewater discharge.

Boiler blowdown, stormwater runoff and other low-volume wastewaters will be routed to the closed-loop cooling water system (although it may still be necessary to discharge the stormwater runoff through Seminole Kraft's wastewater system, as authorized in Condition III.B.3. of the Conditions of Certification, during extreme rainfall events or when the CFBs are not operating). Chemical cleaning waste will be hauled off-site to a licensed waste treatment or disposal facility (or, if practicable, treated in the cooling tower blowdown closed-loop system). Stormwater runoff from other parts of the plant site will continue to be managed as described in the site certification application, although AESCB may be able to capture some of the stormwater runoff and use it in lieu of some Seminole Kraft wastewater in its cooling water system.

Because of the new cooling water treatment system, AESCB will also be able to supply Seminole Kraft with makeup for the cooling water system it will use for condenser cooling for its turbine generator. This will allow Seminole Kraft to avoid consumptive use of 400-500 gpm of groundwater. In addition, AESCB is committing to continue to seek an NPDES permit from U. S. EPA, which would allow discharge of treated Seminole Kraft wastewater, combined with AESCB cooling tower blowdown. AESCB would provide

further treatment of all of Seminole Kraft's currently anticipated wastewater, through a chemically assisted clarification unit, even though only a portion of the Seminole Kraft wastewater is needed for AESCB and Seminole Kraft cooling tower makeup. Treated Seminole Kraft wastewater and cooling tower blowdown from the cogeneration plant would be discharged in compliance with technology-based treatment requirements and with applicable water quality standards. If a federal NPDES permit can be obtained, and if AESCB demonstrates to DER a net environmental benefit over the closed-loop cooling water system, AESCB will seek modification of the Conditions of Certification to allow it to operate such a wastewater treatment system for Seminole Kraft wastewater.

3. Miscellaneous Other Changes

A. On December 20, 1991, the Florida Public Service Commission issued Order No. 23907, approving a contract between AESCB and Florida Power & Light. That contract provides for AESCB to sell up to 250 MW of electricity to FP&L, and concludes that sales of 250 MW are consistent with the PSC's determination of need. Under Section 403.519, F.S., the Public Service Commission is the sole forum for determining the need for an electrical power plant subject to the Florida Electrical Power Plant Siting Act. Thus, the site certification should be modified to indicate that the AESCB cogeneration plant has a nominal generating capacity of 250 MW. AESCB is not asking for any increase in the maximum fuel usage or heat input currently specified in the site certification, however.

B. AESCB is also requesting an increase in the amount of oil or gas that can be used for start-ups. Additional experience at facilities similar to AESCB has led to revisions in the calculations related to start-up fuel use. Bringing a relatively new technology on-line has proven to result in a higher number of shutdowns during early operation to correct design and construction flaws than would be expected from a well-known traditional technology. Accordingly, the amount of fuel oil or natural gas used for start-ups is expected to be higher in the first two years of commercial operation than was previously certified. Since the maximum number of annual hours burning fuel oil or gas is being increased, a reduction in the annual hours burning coal occurs. As modeling was done on coal and coal has higher emission levels than either fuel oil or natural gas, the increased start-up fuel allocation will only potentially decrease the annual emissions and thus does not impact the "worst case" air modeling already conducted. No further air modeling is necessary. (In addition, it should be noted that, while the site is certified to use either oil or gas for start-up fuel, AESCB is not currently installing the equipment needed to burn natural gas, as a natural gas pipeline only recently commenced operation in the area and AESCB has not yet determined whether capacity is available to supply AESCB with natural gas with acceptable reliability and cost.)

C. A Condition of Certification concerning maintaining boiler load between 70% and 100% of the design rated

heat load capacity is proposed to be removed because it is unnecessary. While the AESCB cogeneration plant will ordinarily be run as a baseload facility due to its low cost of generating electricity, it will now be a dispatchable plant for Florida Power & Light, so that this condition's restriction regarding the cogeneration plant's capacity factor is no longer appropriate. Based on the experience of The AES Corporation with other CFB plants, AESCB is confident that it can meet its permit limitations even at relatively low loads. The Administrator of DER's Office of Siting Coordination has previously indicated in writing that DER would not object to the removal of this condition.

D. In response to questions about the potential for reductions in emissions of mercury (which is an unwanted contaminant in coal), AESCB has reviewed available data on mercury capture in existing CFBs with baghouse controls and information on the Lee County Resource Recovery Facility. Based on this review, AESCB has agreed to reduce voluntarily its permitted mercury emissions by almost 90 percent. AESCB also proposes to test an innovative technique for possible further reduction of mercury through injection of carbon into the exhaust gas stream prior to the baghouse. If this technique produces an incremental reduction in mercury emissions of at least 50 percent, then AESCB commits to install and operate equipment to inject carbon into the gas stream of all three CFBs on a continuing basis. (The system AESCB proposes to test involves reagent handling and injection equipment, but it will not require AESCB to make any other additions or

modifications to the CFBs or their control equipment, such as, for example, spray dryers, grids, baffling, or other gas dispersion devices.)

E. The span values for continuous monitors suggested by applicable federal New Source Performance Standards are inappropriate for the Cedar Bay Cogeneration Plant. This is because the plant's extremely low emissions rates would cause a typical analyzer designed in accordance with NSPS to operate in the lower extreme of the full scale range, possibly compromising relative accuracy. With this concern for relative accuracy in mind, the design engineer, Black & Veatch, has already requested that the DER allow modified span values for the continuous monitors for oxides of nitrogen and sulfur dioxide. Florida has the authority to permit modified span values under 40 C.F.R. Part 51 Appendix P. Appendix P provides that states may approve deviations from NSPS monitoring requirements where, for example, "a device specified . . . would not provide accurate determinations of emissions." Therefore, the plant's site certification should be amended to reflect an analyzer span of zero to 400 parts per million for nitrogen oxides and zero to 500 parts per million for sulfur dioxide.

F. The list in Condition II.B.4. of minor emission sources from material handling and treatment, where baghouses were to be used as controls, is no longer accurate. As the cogeneration plant materials handling and treatment facilities have been designed in greater detail, AESCB has been able to

identify additional emission controls that will actually improve fugitive emissions from these materials handling and treatment operations. Some of this new pollution control equipment has been described in quarterly engineering reports submitted to DER. In one case -- coal car unloading -- dust will now be suppressed at the source using wet dust suppression techniques, rather than attempting to collect the dust and then remove it in a baghouse. Other sources, including the coal belt feeder, coal belt transfer, fly ash hopper, ash silo, and common feed hopper, have been replaced by additional or different dust collection points. Total fugitive dust emissions have not been increased, because no additional material is being handled beyond that described in the site certification application. Rather, the increased number of emission points merely indicates that additional control equipment has been designed into the system. All of these new baghouses will still meet current requirements in the site certification that visible emissions not exceed 5% opacity and that particulate emissions not exceed 0.03 gr/dscf. This design change should optimize the control of fugitive dust emissions from materials handling and treatment activities.

G. AESCB is also looking at ways to improve the potential for beneficial use of bottom ash and fly ash. For that reason, a modification of Condition XI is being requested to clarify that bottom ash and fly ash may not only be pelletized, but may also be made into an aggregate form, for use by companies specializing in the marketing and utilization of combustion

by-products as, for example, construction materials. This alternative processing of bottom ash and fly ash will not result in increased fugitive dust emissions.

H. Conditions V.D. and XXVIII, which both arose out of the anticipated need for construction dewatering, can be deleted. AESCB, in response to concerns expressed during the siting process regarding discharge of dewatering waters and the effects of dewatering on groundwater flow, has been able to modify construction details and techniques for the project to avoid the need for installing any dewatering systems. Thus, the plant excavations and construction of subsurface facilities were completed without the need for dewatering discharges, eliminating the need for site certification provisions related to that discharge. Also, since there were no dewatering systems installed to present the potential for causing migration of a contamination plume associated with prior underground fuel storage tanks, there is no need for the condition requiring AES to develop plans for cleaning up contaminated groundwater.

I. Finally, while not covered by this petition for modification, AESCB should also note that it has been considering the possibility of installing equipment at the cogeneration plant site to recover carbon dioxide for sale from a portion of the CFB flue gases. AESCB would produce carbon dioxide at the site only if it could be done within the limitations on fuel use and emissions contained in the current site certification (including the more stringent limitations requested in this

petition) and only after it obtained all necessary permits for the carbon dioxide manufacturing equipment. AESCB is not seeking approval for the carbon dioxide manufacturing equipment at this time, but is merely noting that this is an additional activity at the site which AESCB may decide to pursue at some point in the future.

REQUESTED MODIFICATIONS

Petitioners AESCB and Seminole Kraft Corporation request that the Conditions of Certification attached to the Siting Board's February 11, 1991 order approving certification be amended as follows:

1. Condition II.A.1. should read as follows:

A. Emission Limitations for AES Boilers

1. Fluidized Bed Coal Fired Boilers (CFB)

a. The maximum coal charging rate of each CFB shall neither exceed 104,000 lbs./hr., 39,000 tons per month (30 consecutive days), nor 390,000 tons per year (TPY). This reflects a combined total of 312,000 lbs./hr., 117,000 tons per month, and 1,170,000 TPY for all three CFBs.

b. The maximum wood waste (primarily bark) charging rate to the No. 1 and No. 2 CFBs each shall neither exceed 15,653 lbs./hr. nor 63,760 TPY. This reflects a combined total of 31,306 lbs./hr., and 127,521 TPY for the No. 1 and No. 2 CFBs. The No. 3 CFB will not utilize woodwaste, nor will it be equipped with wood waste handling and firing equipment. The maximum charging rate to each CFB of short fiber rejects from the Seminole Kraft recycling process shall not exceed 180 MMBtu/hr., nor shall such rejects exceed 6 percent of the annual fuel consumption of the AESCB facility on a Btu basis.

c. The maximum heat input to each CFB shall not exceed 1063 MMBtu/hr. This reflects a combined total of 3189 MMBtu/hr for all three units.

d. The sulfur content of the coal shall not exceed 1.7% by weight on an annual basis. The sulfur content shall not exceed 3.3% by weight on a shipment (train load) basis.

0.03%
Tributylamine

e. Auxiliary fuel burners shall be fueled only with natural gas or No. 2 fuel oil with a maximum sulfur content of 0.3% by weight. The fuel oil or natural gas shall be used only for startups. During the first year of commercial operation the maximum annual oil usage shall not exceed 350,000 gals./year, nor shall the maximum annual natural gas usage exceed 49 MMCF per year. During the second year of commercial operation, the maximum annual oil usage shall not exceed 250,000 gals./year, nor shall the maximum annual natural gas usage exceed 35 MMCF per year. During the third and subsequent years of commercial operation, the maximum annual oil usage shall not exceed 160,000 gals./year, nor shall the maximum annual natural gas usage exceed 22.4 MMCF per year. The maximum heat input from the fuel oil or natural gas shall not exceed 1120 MMBtu/hr. for the CFBs.

f. The CFBs shall be fueled only with the fuels permitted in Conditions 1a, 1b, and 1e above. Other fuels or wastes shall not be burned without prior specific written approval of the Secretary of DER pursuant to Condition XXI, Modification of Conditions.

g. The CFBs may operate continuously, i.e., 8760 hrs./yr.

h. To the extent that it is consistent with Condition II.A.1.b. and the following, AESCB shall burn all of the short fiber rejects generated by Seminole Kraft in processing recycled paper. No less than ninety (90) days prior to completion of construction, AESCB shall submit a plan to DER for conducting a 30-day test burn within one year after initial compliance testing. That test burn shall be designed to demonstrate that the CFBs can burn the rejects as a supplemental fuel without exceeding any of the limitations on emissions and fuel usage contained in Condition II.A. and without causing any operational problems which would affect the reliable operation (with customary maintenance) of the CFBs. AESCB shall notify DER and the Regulatory and Environmental Services Division (RESD) at least thirty (30) days prior to initiation of the test burn. The results of the test burn and AESCB's analysis shall be reported to DER and to the RESD within forty-five (45) days of completion of the test burn. DER shall notify AESCB within thirty (30) days thereafter of its approval or disapproval of any conclusion by AESCB that the test burn demonstrated that the rejects can be burned in compliance with this Condition of Certification. If AESCB determines after the test burn that the rejects cannot be burned in the CFBs consistent with this Condition of Certification without modification of the CFBs, it shall submit with its analysis of the initial test burn a plan for completing such modifications and conducting another test burn as described above within one year after the initial test burn. Within forty-five (45) days of the second test burn, AESCB shall submit a report to DER demonstrating that the rejects can be burned in compliance with this Condition of Certification.

2. Condition II.A.2. should read as follows:

2. Coal Fired Boiler Controls

The emissions from each CFB shall be controlled using the following systems:

a. Limestone injection, for control of sulfur dioxide.

b. Baghouse, for control of particulate.

c. Baghouse, for control of metals, except that AESCB shall conduct a test to determine whether substantial additional removal of mercury can be obtained through an activated carbon injection system for mercury removal, as described in Exhibit 74 of the administrative record for the Lee County Resource Recovery Facility, which feeds carbon reagent into the CFB exhaust stream prior to the baghouse. Within one hundred eighty (180) days after initial compliance testing, AESCB shall conduct a test on one CFB to compare mercury emissions to the atmosphere with and without carbon injection. If the mercury emissions from one CFB are reduced by fifty (50) percent or more over final emissions without carbon injection, then AESCB shall install and operate a system to inject carbon into the exhaust gas stream of each CFB, prior to the baghouse. If the test demonstrates a reduction in actual mercury emissions from carbon injection of less than fifty (50) percent, then AESCB shall not be required to install and operate a carbon injection system for any of its CFBs, nor to conduct further testing of carbon injection.

3. Condition II.A.3. should read as follows:

3. Flue gas emissions from each CFB shall not exceed the following:

Pollutant	Lbs/MMBtu	Emission		Limitations			
		lbs/hr		TPY	TPY for 3 CFBs		
CO	0.19 0.175	202	186	823 758	2468	2273	
NO _x (interim)	0.29	308.3		1256	3767		
NO _x (final)*	0.17	180.7		736.1	2208		
SO ₂	0.60 (3-hr avg.)	637.8		--	--		
	0.31 0.24 (12 MRA)	329.5 255.1	1338	1039	4015	3118	
VOC	0.015	16.0		65	195		
PM	0.020	21.3		87	260		
PM ₁₀	0.020	21.3		86	257		
H ₂ SO ₄ mist	0.024	25.5		103	308		
Fluorides	0.086	91.4		374 (25)	1122		
Lead	0.007	7.4		30	91		
Mercury	0.00026 0.0000304	0.276 0.0323	1.13 0.1316	3.4 0.3949	0.3949		
Beryllium	0.00011	0.117		0.5	1.5		

Note: TPY represents a 93% capacity factor. MRA refers to a twelve month rolling average.

*The interim limit shall apply during the first 18 months of commercial operation to allow installation of control equipment needed to meet the final limitation (if any).

4. The first paragraph of Condition II.A.8. should read as follows:

8. Continuous Emission Monitoring for each CFB

AESCB shall use Continuous Emission Monitors (CEMS) to determine compliance. CEMS for opacity, SO₂, NO_x, CO and O₂ or CO₂, shall be installed, calibrated, maintained and operated for each unit, in accordance with 40 CFR 60.47a and 40 CFR 60 Appendix F, except that the span range of the NO_x analyzer shall have a span range from 0 to 400 ppm, and the SO₂ analyzer shall have a span range of 0 to 500 ppm.

5. Condition II.A.9. should read as follows:

9. Operations Monitoring for each CFB

a. Devices shall be installed to continuously monitor and record steam production, and flue gas temperature at the exit of the control equipment.

~~b. The furnace heat load shall be maintained between 70% and 100 % of the design rated capacity during normal operations.~~

~~b.e. The coal, rejects, bark, natural gas and No. 2 fuel oil usage shall be recorded on a 24-hr (daily) basis for each CFB.~~

6. Condition II.B.4. should read as follows:

~~4. The maximum emissions from the material handling and treatment area, whose baghouses are used as controls for specific sources, shall not exceed those listed below (based on AP-42 factors):~~

Source	Particulate lbs/hr	Emissions TPY
Coal Rail Unloading	neg	neg
Coal Belt Feeder	neg	neg
Coal Crusher	0.41	1.78
Coal Belt transfer	neg	neg
Coal Silo	neg	neg
Limestone Crusher	0.06	0.28
Limestone Hopper	0.01	0.03
Fly Ash Bin	0.02	0.10
Bed Ash Hopper	0.06	0.25
Ash Silo	0.03	0.25
Common Feed Hopper	0.03	0.13
Ash Unloader	0.01	0.06

4. The following material handling and treatment area emission points shall be controlled by baghouses:

Coal Crusher Building Dust Collector
Coal Silo Area Dust Collector
Limestone Pulverizer Dust Collectors (2)
Limestone Hopper Vent Filters (2)
Limestone Feeder Vent Filters (6)
Ash Silo Unloaders (2)
Bed Ash Hopper Bin Filter
Bed Ash Silo Bag Filter
Fly Ash Silo Bag Filters (2)
Bed Ash Silo Bin Vent
Fly Ash Silo Bin Vent
Pelletizing Bed Ash Receiver Filter
Pelletizing Fly Ash Receiver Filter
Pelletizing Vibratory Screen Filter
Pelletizing Ash Recycle Tank Filter
Pelletizing Recycle Hopper Filter
Pelletizing Cured Pellet Conveyor Filter
Pelletizing Curing Silo Outlet Conveyor Dust

The following material handling and treatment area sources shall be controlled using wet dust suppression techniques:

Coal Car Unloading Wet Suppression
Pelletizing Hydrator Venturi Scrubber
Pelletizing Curing Silo Impingement Scrubber
Pelletizing Pan Impingement Scrubber

The emissions from the above listed sources and the limestone dryers are subject to the particulate emission limitation requirement of 0.03 gr/dscf. However, neither DER nor BESD will require particulate tests in accordance with EPA Method 5 unless the VE limit of 5% opacity is exceeded for a given source, or unless DER or BESD, based on other information, has reason to believe the particulate emission limits are being violated.

7. Condition II.D. should read as follows:

D. Contemporaneous Emission Reductions

This certification and any individual air permits issued subsequent to the final order of the Board certifying the power plant site under 403.509, F.S., shall require, that the following Seminole Kraft Corporation sources be permanently shut down and made incapable of operation, and shall turn in their operation permits to the Division of Air Resources Management's Bureau of Air Regulation, upon completion of the initial compliance tests on the AESCB boilers: the No. 1 PB (power boiler), the No. 2 PB, the No. 3 PB, the No. 1 BB (bark boiler), and the No. 2 BB. BESD shall be specifically informed in writing within thirty days after each individual shut down of the above referenced equipment. This requirement shall operate as a joint and individual requirement to assure common control for purpose of ensuring that all commitments relied on are in fact fulfilled. This requirement does not prevent, and Siting Board approval is not required for, Seminole Kraft burning fiber rejects from its wastepaper recycling in the No. 1 BB and the No. 2 BB until they are required to be shut down under this provision.

Any applications for new steam generating equipment or for any other new emission sources filed by Seminole Kraft shall be processed and approved by DER outside of the AESCB site certification and in accordance with all applicable state and federal laws and regulations. Seminole Kraft may use any creditable emissions reductions, other than reductions associated with the shutdown of its three existing power boilers and two existing bark boilers described above, that may be associated with elimination or reduced utilization of other emissions sources at the Seminole Kraft mill, in any future permitting of any new steam generating equipment or other emissions sources not located on the AESCB site. Emissions from the generation of the first 375,000

lbs./hr. of steam generated by Seminole Kraft for its own use shall not exceed the following on an annual basis:

Tons Per Year

<u>CO</u>	<u>157</u>
<u>NO_x</u>	<u>449</u>
<u>SO₂</u>	<u>765</u>

8. All Conditions appearing in Part III.A. of the Conditions should be removed, except for Conditions III.A.7.d., (related to shutdown of Seminole Kraft's once-through condenser cooling system), III.A.10. (related to stormwater runoff), and III.A.15. (related to sanitary wastewater). All of the other conditions are no longer applicable to the cogeneration plant due to the elimination of wastewater discharges, except for stormwater runoff and sanitary wastewater. In place of the deleted conditions, the following new Conditions III.A.1. and III.A.2. should be inserted:

III. WATER DISCHARGES

A. Plant Effluents and Receiving Body of Water

1. AESCB shall not discharge any cooling system, demineralizer regeneration, floor drainage or similar wastewaters from the operation of the AESCB facility into any waters of the State. AESCB shall install a closed-loop cooling water system in accordance with technical specifications set forth in the Zero Discharge System Plan submitted by AESCB to the Department during the hearing and attached as Exhibit ___ to these Conditions of Certification. Pursuant to that Zero Discharge Plan, AESCB shall make available to Seminole Kraft up to 500 gpm of reclaimed water that has been treated to a quality satisfactory for use in condenser cooling for Seminole Kraft's turbine generator.
2. AESCB shall continue to seek a permit from U. S. EPA for the discharge of cooling water and process wastewater to the St. Johns or the Broward River. If an NPDES permit can be obtained, and if DER determines that it will result in a net environmental improvement over the Zero Discharge Plan, AESCB shall apply for a modification of these Conditions of Certification to allow it to install and operate equipment to treat all of the

process wastewater and cooling water generated by Seminole Kraft, up to 12 mgd, in a chemically assisted clarification unit. A portion of the effluent from that unit shall be used for the makeup to the AESCB and Seminole Kraft cooling towers, with the remainder discharged to surface waters. The modified Conditions of Certification may include a compliance schedule to allow the installation of any necessary wastewater conveyance and treatment equipment.

9. Condition V.D. can be deleted, as construction dewatering systems or discharges will not be needed for the project.

10. Condition IX. should read as follows:

IX. SOLID WASTE STORAGE AND DISPOSAL

AESCB shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the AESCB facility. Solid waste produced by the operation of the AESCB facility shall be removed from the site and disposed of in a permitted disposal facility, with the exception of bottom ash and fly ash. Bottom ash and fly ash will be pelletized, or made into aggregate form, and either shipped back to the mine utilizing the trains to deliver the coal, or sold as an additive to concrete, or utilized by companies specializing in the marketing and utilization of combustion by-products. The bottom ash and fly ash shall not be disposed of in a landfill within Duval County. If the permittees decide to dispose of the bottom ash or fly ash by other than returning it to the mine, they shall notify BESD and DER. Prior to removal and disposal of spent lime mud and pond tailings, the permittees shall determine whether those wastes are hazardous under 40 CFR 26 and 17-730, F.A.C. If wastes are determined to be hazardous, they shall be disposed of in accordance with Chapter 17-730, F.A.C., after consultation with the DER and BESD. If not hazardous, disposal shall be to a landfill designed to ensure compliance with groundwater quality criteria as contained in Chapters 17-3, and 17-730 F.A.C. All solid wastes disposed of on site shall comply with the provisions of Chapter 17-7, F.A.C. Ground water monitoring in accordance with 17-4, and 17-28, F.A.C. shall be implemented at the lime mud disposal site.

At least ninety (90) days prior to disposal of any sludge generated by pretreatment of reclaimed Seminole Kraft wastewater or by the cooling water blowdown treatment system, AESCB shall report to DER and RESD concerning the chemical characterization of any such sludge. DER reserves the right to

require additional sampling and analysis as necessary to ensure that the above-cited regulations are complied with. Prior to any such sludge disposal, AESCB shall obtain a letter of acceptance from a permitted disposal site. On or before the last day of the first year of commercial operation, and each year of commercial operation thereafter, AESCB shall report to DER and RESD concerning the composition and quantity of sludge generated by the cooling tower blowdown treatment system and the method of disposal, including name and location of facilities handling, treating, storing, and/or disposing of said sludge waste.

11. Condition XXV. should read as follows:

XXV. USE OF WATER FOR COOLING PURPOSES

The AESCB shall use reclaimed wastewater from the Seminole Kraft paper mill (in addition to any wastewater generated by the AESCB that is suitable for reuse for that purpose) for cooling water supply.

At least six months prior to beginning commercial operation, AESCB shall submit to the Department a report concerning the actual measured pollutant characteristics of reclaimed water to be obtained from the Seminole Kraft paper mill. Such report shall be based on approved analytical results from four monthly samples obtained directly from the Seminole Kraft waste stream to be tied in with the AESCB cooling system, and shall include the concentrations of BOD₅, COD, total organic carbon, total suspended solids, ammonia, pH, oil and grease, calcium, magnesium, sodium, potassium, alkalinity as mg of CaCO₃, sulfate, chloride, nitrate, fluoride, silica, chlorine, phosphate (total) as P, cyanide, iron, manganese, aluminum, nickel, zinc, copper, cadmium, chromium, beryllium, arsenic, selenium, antimony, mercury, barium, silver, lead, thallium, phosphorus, and TKN. Where applicable, wastewater sampling and analyses conducted by SKC under the terms of operation permit number I016-200147 may be used to meet the terms of this condition. Any other sampling and analyses submitted under the terms of this permit shall be in accordance with a Department-approved Quality Assurance Plan. Results of all testing and sampling specified above shall be submitted to the Department within 30 days of their occurrence.

Seminole Kraft's generation, treatment, or discharge of its wastewater is not covered by this site certification, and the permitting of Seminole Kraft's generation, treatment, or discharge of its wastewater does not require Siting Board approval.

13. Condition XXVIII. should be deleted because the AESCB project has been able to avoid installation of dewatering

systems and the associated potential migration of a groundwater contamination plume from prior activities in the area.

14. A new condition embodying the terms of the land donation should be added, as follows:

AESCB has agreed to provide funding for acquisition of environmentally sensitive land in or near Duval County, Florida. The funding will be in the form of donations to the Nature Conservancy. The sum of \$2,000,000 will be paid to the Nature Conservancy on the date this Petition for Modification is filed with the Siting Board for processing. The sum of \$2,500,000 will be paid to the Nature Conservancy on the date that the cogeneration facility begins commercial operations. Beginning one year after the start of commercial operation of the cogeneration facility and continuing annually for 30 years, the sum of \$300,000 will be paid to the Nature Conservancy. The annual payment will be used for bio-resource management and research.

AESCB believes that all of the modifications to the site certification described above can be made by the Secretary of the DER, after notice and opportunity for hearing, pursuant to the delegation of authority contained in Condition XXI.A.

ANTICIPATED EFFECTS OF PROPOSED MODIFICATIONS

The modifications proposed herein are not anticipated to have negative impacts on the public or the environment. As set forth above, the proposed modifications to Condition II.D. recognize that Seminole Kraft may construct additional boilers to provide the steam it needs to support the processes at its recycled fiber mill. The proposed modification also contains a requirement, however, that will ensure that emissions from new boilers installed by Seminole Kraft to meet the first 375,000 lbs./hr. of the mill's

steam needs (beyond the steam supplied by AESCB) will be more than offset by more stringent limitations on SO₂, CO, and NO_x emissions from the AESCB cogeneration plant.

In addition, AESCB has voluntarily proposed significant reductions in its permitted emissions of NO_x and mercury. AESCB has also agreed to test an innovative control technique for mercury, which could produce even further reductions. These changes will result in improved air quality in the area impacted by the AESCB plant.

Moreover, the proposed modification requiring AESCB to utilize reclaimed Seminole Kraft wastewater for cooling and install a closed-loop system for its cooling water will ensure that operation of the power plant does not use groundwater for cooling and does not directly result in any deterioration in water quality of the St. Johns River or the Broward River or any other waters of the State. In fact, since some of Seminole Kraft's permitted discharge will now be treated and used by AESCB, the discharge of pollutants reaching the river will actually be reduced from what it otherwise would have been. Finally, the requested modifications of various other Conditions of Certification relating to air pollution will not result in any air emission increases from the cogeneration plant and, therefore, will also not impact air quality.

WHEREFORE, petitioners AESCB Limited Partnership and Seminole Kraft Corporation request that the proposed modifications to the February 11, 1991 Siting Board's Conditions of Certification

be approved by the Governor and Cabinet for the reasons set forth above.

Respectfully submitted,



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37836-1:311:TAL-8124

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of this PETITION FOR
MODIFICATION OF CERTIFICATION has been furnished by United States

Mail on this 7th day of July, 1992, to:

Honorable Lawton Chiles
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The Capitol
Tallahassee, Florida 32399

Honorable Robert A. Butterworth
Attorney General
The Capitol
Tallahassee, Florida 32399

Honorable Bob Crawford
Commissioner of Agriculture
The Capitol
Tallahassee, Florida 32399

Honorable Betty Castor
Commissioner of Education
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Honorable Jim Smith
Secretary of State
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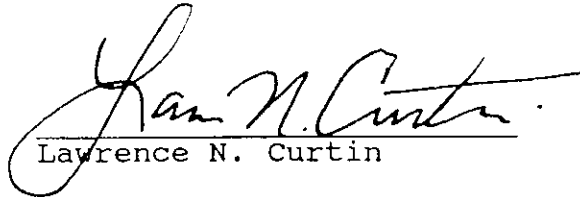
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