

R. File

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 8, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Generating Company, L.P.
7500 Old Georgetown Road - 13th Floor
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Request for Permit Amendment
Cedar Bay Cogeneration Project
PSD-FL-137(B); Duval County

The Department received your request of May 12, 1995, to make minor amendments to the material handling systems for ash pelletization, coal unloading, dry ash loading and removal, and limestone pulverizer/conveyor for the above referenced PSD permit. The permit's specific conditions are amended as shown:

II. B. 4. Material handling sources shall be regulated as follows:

- a. The material handling and treatment area sources with either fabric filter or baghouse controls are as follows:

Coal Crusher Building
Coal Silo Conveyor
Limestone Pulverizers (2) /Conveyors
Limestone Storage Bins (2)
Bed Ash Hopper
Bed Ash Separator
Bed Ash Silo Vent
Fly Ash Silo Vent
Fly Ash Separators (2)
Bed Ash Receiver Bin
Fly Ash Receiver Bin
Pellet Vibratory Screen System
Pelletizing-Ash Recycle Tank
Pelletizing-Recycle-Hopper
Cured Pellet Screening Recycle Conveyor System
Pellet Recycle Conveyor
Pelletizing Rail Loadout

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

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The emissions from the above listed sources are subject to the particulate emission limitation requirement of 0.003 gr/dscf (applicant-requested limitation which is more stringent than what is allowed by Rule 62 17-296.711, F.A.C.). Since these sources are RACT standard type then a one-time verification test on each source shall be required for PM mass emissions to demonstrate that the baghouse control systems can achieve the 0.003 gr/dscf. The performance tests shall be conducted using EPA Method 5 pursuant to Rule 62 17-297, F.A.C., and 40 CFR 60, Appendix A (July, 1992 version).

- b. The PM emissions from the following process equipment, and/or facility equipment, in the material handling and treatment area sources shall be controlled using-wet suppression/removal-techniques as follows:

Coal-Car-Unloading
Ash Pellet Hydrator: Scrubber
Ash Pellet Curing Silos: Scrubber
Ash Pelletizing Pan: Scrubber

The above listed sources are subject to a visible emissions (VE) and a particulate matter (PM) emissions limitation requirement of 5 percent % opacity and 0.01 gr/dscf (applicant requested limitation, which is more stringent than what is allowed by rule), respectively, in accordance with Rule 62 17-296.711, F.A.C. Initial and subsequent compliance tests shall be conducted for VE and PM emissions using EPA Methods 9 and 5, respectively, in accordance with Rule 62 17-297, F.A.C., and 40 CFR 60, Appendix A (July, 1992 version).

- c. Fugitive emissions from the following material handling and transport sources shall be controlled as follows:

Coal Car Unloading: Wet Suppression using continuous water sprays during unloading.

Dry Ash Rail Car Loadout: Using closed or covered containers under negative air pressures during ash loadout; and using water sprays prior to removal of rail car loadout cap when loading open rail cars.

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The above listed sources are subject to a visible emission (VE) limitation requirement of five percent (5%) opacity in accordance with Rule 62-296.711, F.A.C. Initial and subsequent compliance tests shall be conducted for VE using EPA Method 9 or other FDEP approved methods in accordance with Rule 62-297, F.A.C., and 40 CFR 60, Appendix A (July, 1992 version). Initial visible emission testing shall be conducted within 90 days after final DEP approval of these facilities or within 90 days after completion of construction of the source, whichever occurs last. Ash shipped in open rail cars will either be pelletized or be sprayed with water to create a crust on the top layer of non-pelletized ash. Removal of bottom and fly ash from the Project site by any means other than by rail shall require the prior approval of DEP and RESD of the method(s) of fugitive emissions control.

7. The maximum emissions from each of the Limestone Pulverizers/Conveyors (including limestone dryer) limestone dryers shall not exceed the following: while-using-oil-shall-not exceed-the-following-(based-on-AP-42-factor, Table 1, 3-1, Industrial-Distillate, 10/86)

Estimated Limitations

<u>Pollutant</u>	<u>lbs/hr</u>	<u>TPY</u>	<u>TPY for 2 Pulverizers/Conveyors</u>
	<u>Dryers</u>		
PM/PM ₁₀	<u>1.26*</u> 0-24	<u>1.68</u> 0-32	<u>3.36</u> 0-64
SO ₂	0.85	1.15	2.3
CO	0.60	0.81	1.62
NO _x	2.40	3.25	6.5
VOC	0.05	0.06	0.12

The emissions for SO₂, CO, NO_x, and VOC are based on AP-42 factor, Table 1, 3-1, Industrial Distillate, 10/86.

* This reflects the emission limitation for the limestone pulverizers/conveyor in Condition II.B.4.a. and limits the emission for the Limestone Pulverizers/Conveyors and the dryer.

Visible emissions from the limestone pulverizers/conveyors dryers shall not exceed 5% opacity.

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A copy of this letter shall be attached to the above mentioned permit, No. PSD-FL-137(B), and shall become a part of the permit.

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sa/t

cc: C. Kirts, NED
S. Pace, RESD
H. Oven, PPS
J. Harper, EPA
J. Bunyak, NPS
D. Roberts, HGS&S

Final Determination

The permit amendment to the material handling systems for ash pelletization, coal unloading, dry ash loading and removal, and limestone pulverizers/conveyors for Cedar Bay Cogeneration, located in Duval County, Florida, was distributed on July 5, 1995. The Notice of Intent to Issue was published in the Florida Times Union on July 17, 1995. Copies of the amendment were available for public inspection at the Department Offices in Jacksonville and Tallahassee.

No comments were submitted by the National Park Service and the U.S. Environmental Protection Agency. Comments were submitted by the applicant relating to typographical errors in the draft permit amendment. The Department agrees with those findings by the applicant, and appropriate changes were made.

The final action of the Department will be to issue the PSD permit (PSD-FL-137B) with the changes noted above.

THE ENTROPY QUARTERLY

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Testing for Multiple Metals

The 1990 Clean Air Act Amendments include many compounds in the Title III list of hazardous air pollutants (HAPs), which were not previously regulated. In addition, metals are also included in the BIF (Boilers and Industrial Furnaces) regulations. Therefore, many more facilities will be testing for heavy metals.

In 1989, Entropy conducted a study for EPA's Atmospheric Research and Exposure Assessment Laboratory (AREAL) for the measurement of multiple metals in emissions from combustion sources. Entropy submitted a draft emission test protocol to AREAL and the draft method was included in the Methods Manual for Compliance with BIF Regulations in 1990. This test method has been included in SW-846 (RCRA Test Methods) as Method 0012 and at this writing is available in draft form as EPA Draft Method 29.

SW-846 Method 0012/EPA Draft Method 29 can be used for the determination of 16 trace metals: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), phosphorus (P), selenium (Se), silver (Ag), thallium (Tl), and zinc (Zn). The method can be modified to collect particulate matter.

The sampling train for this method is based on the EPA Method 5 sampling train. The nozzle and probe are made of glass. A quartz or glass fiber filter in a Teflon™ filter

(see *Multiple Methods* on page 5)

Entropy Supplies National Stone Association and EPA with Emissions Factor Data

Entropy's Control Equipment Testing and Optimization (CETO) division has been conducting a series of emissions tests on process units within three stone crushing plants in North Carolina and Virginia. These tests are sponsored by the National Stone Association and by the US Environmental Protection Agency.

The purpose of the tests is to develop more accurate PM10 emission factor data for process equipment within stone crushing plants. PM10 emissions are those emissions less than 10 microns. This test data was needed because little previous emission test data exists for stone crushing plants. Previously available data was applicable only to total particulate, not particulate characterized as less than 10 microns. Annual permit fees based on this pre-existing data would have been substantial.

Testing at the stonecrushing facilities was difficult because the process units of interest were not enclosed. The challenge to Entropy was to develop unique testing procedures in order to accurately measure the PM10 emissions without affecting the emission rates from these open sources. In developing these emission test procedures, Entropy adhered to the following five criteria:

- The test procedure should not affect the rate of PM10 particulate emission;
- The test procedure should isolate the unit being tested from the adjacent sources of PM10;
- The test equipment should not obstruct routine access to the

process equipment by plant personnel;

- Overall test procedures must be economical, practical, and readily adaptable to other plants so that these tests can be repeated by organizations wishing to confirm or challenge the emission factor data developed in this project; and,
- The testing equipment should not create safety hazards for the emission test crew or for plant personnel; nor should it create risks to the plant process equipment.

One of the main PM10 sources at stonecrushing facilities are open top, triple deck, vibrating screens. For this source, Entropy developed a traversing hood sampling system. This unique arrangement allowed the capture of the emissions without influencing the rate at which crosswinds entrained PM10. This ensured that the measured emissions were accurate.

Gas flow rate into the traversing hood assembly was adjusted using a variable-speed, SCR-driven axial flow fan. Testing was done upstream of the fan using EPA Reference Method 201A. The results indicated that the

(see *Stone Association* on page 2)

Inside this Issue...

- Growing Concerns for Indoor Air Quality
- EPA Methods and Procedures
- Upcoming Workshops
- Three Dimensional Flow Profile Studies

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Multiple Metals *continued*

holder is attached to the probe. After the filter, there are seven chilled impingers. The first impinger is empty, the second and third impingers each contain 100 mL of 5% nitric acid (HNO_3), the fourth impinger contains 10% hydrogen peroxide (H_2O_2), the fifth impinger is empty, the sixth and seventh impingers each contain 100 mL of 4% potassium permanganate (KMnO_4) to 10% sulfuric acid (H_2SO_4), and the seventh impinger contains pre-weighed silica gel. The sample components are recovered separately, digested, and analyzed by inductively coupled argon plasma spectroscopy (ICAP) and/or atomic absorption spectroscopy (AAS). Mercury can only be quantified by cold vapor atomic absorption spectroscopy (CVAAS).

If particulate matter is to be collected using the multiple metals train, it is recommended that a separate EPA Method 101A sampling train be used for determining mercury to prevent front-half mercury bias. If EPA Method 101A is used to determine mercury, the fifth and sixth impingers may be eliminated from the multiple metals sampling train.

To quantify emissions reliably, the sampling method must be precise and the analytical method must be sensitive. Based on quad-train testing performed during method development, the precision expressed as the relative standard deviation of the sampling method ranges from 5% to 15%. Analytical sensitivity is measured by the analytical detection limits. The ICAP analytical detection limits (based on SW-846 Method 6010) range from 0.3 ng/mL for beryllium to 75 ng/mL for phosphorus and selenium. Several interferences may affect the sensitivity of ICAP analysis. Iron is an interferent in the analysis of arsenic, chromium, and cadmium; aluminum is an interferent in the analysis of arsenic and lead. The AAS analytical detection limits (based on SW-846 Method 7000) range from 5 ng/mL for beryllium, cadmium, and zinc to 200 ng/mL for antimony. The use of

(see Multiple Methods on page 6)

Three-Dimensional (3-D) Flow Profile Studies

The Acid Rain monitoring regulations of 40 CFR Part 75 require the installation, certification, operation, and maintenance of a continuous flow rate monitor in conjunction with a gas continuous emissions monitoring system (CEMS). Installation and certification of this equipment is required by November 15, 1993 for 110 Phase I affected sources and by January 1, 1995 for 2000 Phase II affected sources. Many sources, particularly those not previously regulated under 40 CFR Part 60, may have difficulties in selecting suitable sites for monitoring flow rates. A poor measurement location may adversely affect the accuracy of data from both continuous flow rate monitors and from manual flow rate determinations during relative accuracy tests.

The accuracy of a flow rate monitor depends on the flow vectors at the monitoring location and on the operating principles of the specific monitoring device being considered, (i.e., how the instrument responds to non-axial flow vectors). In the ideal situation, all flow will be axial, that is, the flow will be parallel to the longitudinal axis of the duct. A flow profile study can determine actual flow conditions at a proposed measurement location. Such studies are required as supporting information for justifying alternative flow monitoring locations or for justifying alternative flow monitoring methods.

The principal device for determining the severity of non-axial flow is the three-dimensional (3-D) pitot probe. This probe, when operated properly, provides the resultant angle of the actual flow vectors at individual points within the flow stream. In addition, it provides the velocity head corresponding to the axial flow vector. Hence, volumetric flow rates can be calculated even when non-axial flow conditions exist.

EPA Method 1 (40 CFR Part 60, Appendix A) contains procedures and guidelines on the use of 3-D pitot tubes. According to EPA Method 1, an acceptable measurement location is one with an average resultant angle of $\leq 20^\circ$ and a standard deviation $\leq 10^\circ$. These criteria were established to insure acceptable measurements of isokinetic sampling rates and accept-

able particulate matter concentrations using the combination of EPA Method 5/Method 2 (particulate probe with attached Type S pitot tube). Obviously, the Method 1 criteria were not designed for the Acid Rain regulation where high accuracy is essential because of its market-based emissions allowance system (i.e., a system where allowances are transferred or traded). Therefore, knowing when and how to use 3-D pitot tubes and Type S pitot tubes is essential to obtaining accurate information.

Entropy conducted studies that were instrumental in the early revisions of EPA Method 1 to include the procedures for justifying alternative locations. In addition, Entropy has conducted 3-D studies, both in the lab and in the field, for the Environmental Protection Agency and numerous industrial clients. This experience has provided Entropy with an unmatched background and understanding of the 3-D's principle of operation. It is critical that a testing firm understand the adequacy of the calibration procedures in EPA Method 1, Section 2.5, for acid rain applications. When conducting 3-D testing the significance of errors in pitch and yaw angle measurements and the significance of errors in pitch and yaw angle measurements on resultant and axial velocity vectors are important. The adequacy of test section velocities for calibration and physical characteristics of 3-D pitot tubes affect accuracy. The transferability of a calibration curve to other 3-D pitot tubes, and interpretation of the flow profile studies are areas of Entropy expertise.

Entropy has been providing CEM services required in 40 CFR Part 75 since 1976. Entropy is capable of helping affected sources, during the planning process, in conducting flow profile studies, selecting installation sites, selecting monitoring equipment, and conducting performance certification tests. For more information on our CEM services, call Tony Mastrianni at 1-800-486-3550. For technical information on 3-D pitot tubes, call Wayne E. Reynolds or Roger T. Shigehara at the same number. □

*Roger Shigehara
Director, Research Division*

EPA Methods and Procedures

Method 18 *Revised*
Measurement of Gaseous Organic Compound Emissions by
Gas Chromatography

Method 26 *Revised*
Determination of Hydrogen Halide and Halogen Emissions
from Stationary Sources – Midget Impinger Method

Method 26A *Proposed*
Determination of Hydrogen Halide and Halogen Emissions
from Stationary Sources – Isokinetic Method

Method 30-30F *Draft*

30: Criteria for and Verification of a Permanent or
Temporary Total Enclosure

30A: Volatile Organic Compounds Content in Liquid Stream

30B: Volatile Organic Compounds Emissions in Captured
Stream

30C: Volatile Organic Compounds Emissions in Captured
Stream (Dilution Technique)

30D: Volatile Organic Compounds Emissions in Fugitive
Stream from Temporary Total Enclosure

30E: Volatile Organic Compounds Emissions in Fugitive
Stream from Building Enclosure

30F: Volatile Organic Compounds Content in Liquid Input
Stream (Distillation Approach)

Method 301 *Final Rule*
Field Validation of Pollutant Measurement Methods from
Various Waste Media

Method 304 *Proposed*
Method for the Determination of Biodegradation Rates of
Organic Compounds

Method 305 *Proposed*
Method for the Measurement of Individual Volatile Organics
in Wastewater

Part 75 Continuous Emission Monitoring *Final Rule*

Appendix A: Specifications and Test Procedures

Appendix B: QA/ QC Procedures

Appendix G: Determination of CO₂ Emissions

Appendix H: Revised Traceability Protocol No. 1

U.S. Generating Company

Fax Message

DATE: March 9, 1993

TO: Mr. Hamilton S. Oven FACSIMILE NO.: (504) 523-5431

COMPANY: c/o Land Market French Quarter NO. OF PAGES: 11
(including this one)

CITY/STATE: New Orleans, LA

FROM: Kent Fickett PHONE NO.: 301/718-6860

SPECIAL INSTRUCTIONS: Please deliver to Mr. Oven upon arrival

If transmittal is incomplete or illegible, please call Cindy Burgess at 301-718-6898.

Messages:

ASSESSMENT OF CARBON INJECTION MERCURY EMISSION CONTROL
FOR CEDAR BAY

1.0 GENERAL

A carbon injection test for reduction of mercury emissions from the Cedar Bay project has been proposed. The proposed test is believed to be the result of two factors: (1) increasing concern about the adverse health and environmental impacts of mercury and mercury compounds in the area of the project and (2) interest in carbon injection control on the Lee County waste-to-energy (WTE) facility and the potential use on coal fired boilers with flue gas desulfurization. The Cedar Bay project uses coal fired circulating fluidized bed boiler (CFB) technology in which the mercury emissions are an order of magnitude lower than in municipal waste combustion. The technology was reviewed and vendors contacted to develop a test plan concept. Findings generally discourage testing of carbon injection at the Cedar Bay plant. The combustion conditions, sulfur removal process, and operational features of CFB, unlike those in municipal solid waste (MSW) combustion facilities and coal fired systems with flue gas desulfurization (FGD), do not appear favorable for effective carbon injection control. The results of the review and inquiry work performed to date is summarized below with our assessment of the proposed test.

1.1 Fuel Characteristics

Type of fuel, its chemical composition including mercury content and chemical form in which it occurs determines, along with other factors, the uncontrolled and controllable rate of emission of mercury from combustion devices. Municipal solid waste (MSW) contains elemental mercury in discarded items such as batteries, thermometers, and mercury switches, and chemical compounds of mercury in items such as paints, pigments, plastics, laboratory wastes. Since a substantial fraction of the total mercury in MSW exists as elemental mercury, it vaporizes easily during MSW combustion (@2000° - 2500°F) and forms elemental mercury vapor. Mercury in the gaseous state is difficult to remove unless it is changed to a particulate form. It is to be noted that coal contains mercury in chemically combined form (as mercury compounds) and not as elemental mercury. Because of the high proportion of elemental mercury in MSW and its gaseous state in the combustion/flue gases (EPA, 1990), the uncontrolled emission rate of mercury from MSW combustion is much higher than from coal combustion. Concentration of mercury in MSW flue gases is reported to be in the range of 200 - 1400 $\mu\text{g}/\text{Nm}^3$ or more (EPA 1989a), whereas in bituminous coal flue gases the mercury concentration is an order of magnitude lower 20 -135 $\mu\text{g}/\text{Nm}^3$ (EPA 1989b).

Due to the lower heating value of MSW, almost 4 - 5 times more MSW has to be combusted per million Btu compared to coal which results in higher uncontrolled mercury emissions per million Btu compared to coal. Other important differences exist between MSW and coal such as higher chlorine in MSW which promotes the formation of HgCl_2 .

1.2 Combustion Conditions

Besides fuel mercury content and its chemical form, the combustor design and operating conditions determine the emission rate of mercury. MSW combustors have mass-burn (large particle size) grates with average combustion zone temperature of 2000 -2500°F and local hot spots which volatilize mercury as well as its compounds. The CFBs have relatively low temperature (1550 - 1650°F) circulating fluidized beds. Also, CFBs have limestone in the combustion zone where heat is released and throughout the steam generation gas path. This limestone is calcined ($\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$) in the CFB to generate highly porous quick lime, CaO. Sulfur dioxide in the flue gas diffuses into and attaches to the surfaces of the lime particles. Mercury vapor and some of its compounds will also diffuse into the lime pores and be adsorbed or condensed as temperature reduces along the flue gas path.

Because of the circulating bed of lime and ash, the dense particulate loading in the CFB flue gas provides a large surface area for adsorption/condensation of mercury compared to MSW combustors which are designed to limit elutriation of solids during combustion.

Distribution of ash between fly ash (exiting boiler with flue gas) and bottom or bed ash is also different for the MSW and CFB combustors. Mercury retention and removal with bottom ash may be greater in the CFB than MSW combustor.

1.3 Effect of Existing Air Pollution Control Devices

A combustor is followed by one or more pollution control systems such as selective noncatalytic reduction (SNCR) for NO_x control, spray dryer FGD for acid gas control, and an electrostatic precipitator (ESP) or fabric filter (FF) for particulate control. Ammonia injection for SNCR can generate small amounts of hygroscopic (sticky) ammonia-sulfur compounds which could affect condensation of mercury vapors or agglomeration of fine solid mercury compounds. There are uncertainties regarding the effect of excess ammonia on chlorine compounds which react with mercury to form solid HgCl₂.

Particulate control devices such as ESP or FF remove mercury adsorbed on the ash particulates or mercury present as fine solids compounds (HgCl₂, HgO or HgSO₄). Since fabric filters are generally known to be more efficient in filtering out fine (as well as coarse) particulates compared to ESP, emissions of mercury after FF are expected to be lower than from ESP. Note that flue gas temperature (cooling) and mercury concentration levels determine how much mercury will condense as particulate so it can be filtered out.

Lime slurry spray-dryer (dry FGD) systems and wet FGD systems cool the flue gases and enhance mercury condensation on particulate. For coal firing the spray dry systems are designed to optimize sulfur dioxide removal. The scrubber residence times and gas temperatures are favorable for the removal of trace metals including mercury. In circulating fluid bed coal combustion the sulfur capture occurs during combustion at the temperature for optional formation of calcium sulfate. Residence time in the CFB is selected to maximize carbon burn out and sulfur capture.

To summarize, there are numerous factors affecting mercury emission and subsequent control within the combustor and the associated air pollution control system. With very limited data on the interaction and relative significance of these factors, the process design and test results for carbon injection control of mercury emissions on MSW can not be extrapolated to coal fired CFB. With low mercury concentration in the flue gas and without the benefit of residence time at lower temperature as in spray dryers, the effect of carbon injection on the CFB process is expected to be minimal. Quantitative effects of specific design parameters needed to design a test are not available since neither benchscale nor pilot testing has been performed on CFB. Adding to this uncertainty and unavailability of data is the lack of a suitable generally agreed mercury sampling and measurement technique. This problem has been recognized by the U.S. Congress which while enacting the Clean Air Act Amendments of 1990, asked EPA to conduct a 4-year study on mercury and other air toxics and report to Congress by December 1994.

2.0 REGULATORY ASPECTS

There are currently no mercury emission limits for coal fired CFB. Under the federal PSD regulations (40 CFR 52.21), best available control technology analysis and limits apply if mercury emission exceeds 0.1 ton/year.

For MSW combustors, EPA plans to propose a mercury emission limit in the range of 100 to 200 $\mu\text{g}/\text{dscm}$, or 60 to 90 percent removal, by weight (EPA, 1993).

The state of Florida DER has recently (2-25-93) proposed more stringent draft standards limiting mercury emission limiting standards for MSW combustors. These are not applicable to the Cedar Bay Cogeneration Project which utilizes coal fired CFBs. However, since comparisons and assessments of new Hg control technologies are often made with this more advanced application category, it is interesting to compare the two (CFB Vs MSW) combustors.

The proposed Florida mercury emission limits are set at 70 $\mu\text{g}/\text{dscm}$ corrected to 7% O_2 . The importance of flue gas temperature is recognized by proposing a not-to-exceed limit of 300°F at the inlet to the fabric filter.

It is to be noted that the Cedar Bay emissions will be lower than both of these limits for short as well as long averaging periods without the need to install an add-on mercury removal system. The controlled emissions (with CFB/FF system) are estimated as approximately 64.1 $\mu\text{g}/\text{dscm}$ short term average, 39.3 $\mu\text{g}/\text{dscm}$ annual average and 9.2 $\mu\text{g}/\text{dscm}$ as long term average. Also, these emission levels from the Cedar Bay project have been shown to meet (Cedar Bay Cogeneration Project Air Quality Analysis, Feb. 1993) all ambient air quality and health criteria.

Recent literature review and vendor contacts (Joy Env. Tech, 1993, Flakt, Inc, 1993) indicate that coal fired combustors do not have mercury emission limits imposed nor requirements for add-on controls anywhere in the world.

3.0 MERCURY REMOVAL/CONTROL TECHNOLOGIES

As stated earlier, the extent of mercury removal is dependent on numerous factors including fuel mercury content and form in which it occurs, combustion conditions, and air pollution control system design. From a process design standpoint, these factors determine concentration, temperature, residence time and gas to solids interaction. The currently available mercury control methods and the emerging technologies with potential application to coal fired combustors are reviewed in consideration of the process differences.

3.1 Current Mercury Removal Methods

One obvious method of limiting emissions is to select a fuel with low mercury content and high heating value. However, fuels are selected based on numerous reasons other than trace metal content. Hence, fuel selection is generally not a sufficient approach to Hg emission reduction. Note, however, that selecting a higher heating value fuel (e.g., 12,500 Btu/lb coal versus about 4,000 Btu/lb MSW) reduces the mercury emissions by a factor of three for the same mercury content (1 ppm). In addition, since coal contains at least 3 to 4 times lower mercury per unit mass than MSW, its uncontrolled emission rate is about an order of magnitude lower than for MSW.

Selection of the combustion system can also limit mercury emissions. The lower temperature in a CFB boiler limits the release of volatile trace metals. The presence of large amounts of limestone and porous lime in the CFB help to trap a portion of the mercury and its compounds. To the extent mercury is retained with the CFB solids, the air emission is correspondingly reduced.

Selection and design of the air pollution control system also limits mercury emissions. Gaseous mercury or its compounds can be collected in particulate control devices by change of phase to solid form by absorption or condensation. The lower the flue gas temperature the better the removal (or, collection) of mercury/compounds by adsorption or condensation on particulate. Figure 1 illustrates this condition. Lowering flue gas temperature from 350 to 250°F reduces mercury saturation concentration from 39,700 mg/m³ to 7,860 mg/m³. The Hg vapor in the flue gas above its saturation level at the lower (cooler) temperatures is then condensed and deposited on solid surfaces close to the flue gas. Besides equipment surface, a large condensation/adsorption surface area is offered by fine particulates (and, if porous, its internal void surfaces). Once adsorbed or condensed on particulates, a more efficient removal of particulates results in lower mercury emissions.

MSW combustors have higher mercury concentrations, a greater proportion of which is elemental mercury, and higher combustion temperature so almost all mercury/compounds vaporize and stay in the gaseous form. Also in MSW combustion there is less surface available for condensation/adsorption of mercury/compounds when the flue gases cool as they move through the system. The higher gaseous mercury concentration and lower particulate concentration in MSW combustors favor injection of additives and spray dryer cooling to reduce mercury emission rates.

3.2 Emerging Add-on Control Technologies

Municipal waste combustors release more mercury/compounds as well as other organics than coal fired CFBs. Because of the greater number of MSW combustors in Europe and proximity of population centers, research and development efforts were initiated to limit these mercury and organics emissions. After several years experimentation, activated carbon injection has emerged as an add-on technique to reduce mercury and organic emissions. Since there are several undesirable technical and cost impacts of this technology, R & D continues to focus on other methods such as sodium sulfide (Na₂S) injection, other absorbents such as lignite coke, sodium hypochlorite (NaOCl) and wet scrubbers. A brief overview of the status and features of these emerging processes is provided below.

3.2.1 Activated Carbon Injection

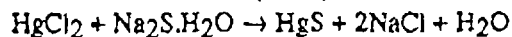
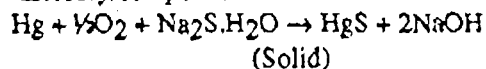
When flue gases containing mercury vapor or its compounds in vapor form are contacted by the high porosity/high surface area activated carbon particles injected into the flue gas they are adsorbed (residual surface forces attract and retain the vaporized mercury and mercury compounds onto these extensive surfaces. The amount of carbon injected depends, among other factors, on the amount of mercury to be removed and its vapor phase concentration (Freundlich's Isotherm: $x/m = k C^{1/n}$ where x is the amount of mercury adsorbed on mass m of carbon when in contact with concentration C of mercury).

Carbon injection is a relatively new technique. There are no known applications of this technology on coal fired combustors either in USA or other countries in the world. There are no currently operating pilot test facility using this technique in USA or abroad. (An EPA sponsored test was conducted on a municipal waste combustor in Stanislaus County, California in July-August 1991.)

However, a few MSW-fired facilities (Zurich, Switzerland; Amager, Denmark; Kassel and Geiselbullach, Germany; and Burnaby, B.C., Canada) are using or plan to use this technique. Several of these facilities use carbon injection in conjunction with a lime spray-dryer absorber. Tests on large scale MSW combustors yielded mercury removal efficiencies in the range of 48-97%. However, with no carbon injection, these systems showed 15 to 92% mercury removal. Thus the mercury removal attributable to carbon injection alone is very unclear.

3.2.2 Sodium Sulfide (Na₂S) Injection

This concept involves injection of a dilute aqueous solution of Na₂S in the combustion gases to react with its mercury/compounds as follows:



Both reactions produce mercuric sulfide as a stable solid so it can be removed in a fabric filter or precipitator. A few MSW combustion plants in Europe are using this process in conjunction with dry sorbent injection process. One Canadian MSW combustion plant (Burnaby, B.C.) used this process for two years but switched to activated carbon process recently. There are no commercial U.S. applications of this Na₂S process. There are several problems and uncertainties associated with this process such as corrosion, hazardous nature of Na₂S, potential for inactivation by lime or other chemicals in the flue gas, inadequate mixing, unwanted side reactions, potential hazard from Na₂S generating toxic H₂S gas, etc. This technique, therefore, requires further investigation at the pilot plant level under U.S. conditions before the potential for application to coal firing can be considered.

3.2.3 Wet Scrubbers

It is generally believed that wet scrubbers (e.g. flue gas desulfurization spray tower absorbers), where flue gases are cooled and saturated with water vapor from aqueous slurry of lime/limestone or other alkali, may be more advantageous for mercury condensation and removal than dry scrubber systems. Experimentation at pilot and commercial facilities (including a recent one at Fort Dix MSW combustor plant in N.J.) yielded mercury removal efficiencies between 17 and 75% (average of 43%). Wet scrubbers produce difficult to disperse wet stack plumes, corrosion and scaling problems, and wet sludges that are difficult to dispose of in landfills.

4.0 Assessment

Activated carbon injection in conjunction with a spray-dry absorber (SDA)/scrubber has been utilized in a few MSW-fired combustors in Europe and Canada. This relatively new technology has demonstrated Hg removal efficiencies in the 48-97% range with 6 to 70 mg/m³ carbon injection and 15-92% removal without additive injection. There are no commercial MSW combustors in U.S. utilizing this technology. Only one MSW-fired energy recovery facility in U.S. has planned to use this technology by late 1994. Carbon will be injected as a slurry in the spray-dryer. Fabric filter will be used for particulate collection. About 70% mercury removal is expected for the total system (activated carbon/SDA/FF). There is as yet, no commercial design nor operating experience with activated carbon injection system in the USA either on MSW or CFB combustion systems to draw upon for application to CFB.

Finely powered activated carbon presents fire, explosion, and health hazards. Storage, handling and process activities in closed vessels and ducts in the presence of air present opportunities for fire and explosion. Design of systems to minimize these risks is necessary, even for short term testing.

Activated carbon is an expensive material at about \$1/lb (or \$2,000/ton). One of the vendors has estimated about \$3 million per year as direct carbon cost for the Cedar Bay facility (Joy Env. Tech., Inc. 1993). Other direct and indirect costs include power consumption, equipment depreciation, and disposal costs. Budgetary estimates of capital costs of the carbon injection system are approximately \$1 million and \$21 million without and with spray dryer absorber respectively.

Presence of activated carbon in the CFB ash and limestone-SO₂ reaction products could adversely affect the agglomeration and eventual recycle/reuse of the CFB waste solids.

With no directly applicable design or operating data, design of a full scale system test would be difficult. To predict Hg removal with any degree of certainty will be impossible. As stated above there are large differences between MSW and CFB fuels, combustion conditions, and air pollution controls. Even well established experienced equipment vendors of activated carbon systems could not predict (Joy Env. Tech. Inc., 1993) with any certainty the percentage Hg removal with carbon injection in a coal fired CFB with no spray dryer absorber. In fact, the vendors do not expect much mercury removal with carbon injection without a spray-dryer. All of their R & D work has been in association with spray dryers.

While the carbon injection process may have potential to reduce mercury emissions under the right conditions, the best facilities for testing the concept are engineering research centers where process variables can be controlled to evaluate the potential of this process. Commercial plants such as Cedar Bay do not provide the right conditions and facilities to conduct a test for which no benchscale nor pilot scale work has been performed.

As outlined earlier, there are significant process differences between MSW combustors and CFBs which affect the application of activated carbon injection for mercury control. The influence of these factors is summarized below:

1. CFBs have limestone/lime in the combustion zone where mercury is released. Temperatures and residence time profiles are different in the two processes so the extent of flue gas cooling and mercury condensation/adsorption on the particulates in the flue gas is different. With lower CFB combustion temperatures and larger amounts of solids (including unburned carbon) mercury removal due to carbon injection is expected to be very low.

2. All of the MSW combustors utilizing carbon injection also have some type of spray-dry scrubber. The scrubbers cool the flue gases so that mercury can condense/adsorb onto the carbon and other particles present. Spray-dry scrubbers provide residence time and promote gas solids contacting. Without a spray dry scrubber, carbon injection for mercury control in CFB is not expected to be effective.

3. Since the MSW combustors have a high initial Hg concentration level, there is adequate driving force for adsorption and condensation on the injected activated carbon particles when temperature conditions are favorable. With CFBs operating generally at an order of magnitude lower Hg concentration, it is unlikely that significant removal can take place. Most of the carbon injection tests have been with high initial Hg concentration of typical MSW combustors.

5.0 CONCLUSIONS

Based on an extensive review of all available data and discussions with carbon injection system vendors and independent engineering consultants, the following conclusions can be drawn:

- a. The activated carbon injection process is being utilized on a few European MSW-combustors and planned for one Canadian MSW combustor. These plants use the carbon injection in conjunction with the spray-dryer absorber and a particulate control device. Total mercury removal efficiency of 48 to 97% has been reported with carbon injection and 15 to 92% without carbon injection. There are many uncertainties associated with mercury removal sampling and measurement techniques. The percentage removal attributable to carbon injection is thus unclear.
- b. The effectiveness of the carbon injection without a spray-dryer absorbers is not known because no such data exists for coal-fired boilers, CFBs or even MSW combustors. In fact, carbon injection system vendors expressed serious doubts about significant mercury removal without spray-dryers.
- c. Coal mercury content is much lower than in MSW. Chemical forms (combined versus elemental) of mercury are also different in the two fuels. Combustion conditions are also different in MSW versus CFB combustors. Combustion zone temperature, unburned carbon levels, chlorine levels are all different for the two fuel combustors. With all these differences, much uncertainty exists relating to suitability and effectiveness of carbon injection technology on Cedar Bay CFBs.
- d. The low temperature CFB boilers, low mercury content coal, high particulates (porous lime, fine ash and acid gas removal byproducts) loading and resulting surface area for mercury capture by adsorption and/or condensation in a high efficiency baghouse, all combine to enhance mercury removal so that the emission rate is estimated as 9 ug/dscm as a long-term average. This emission rate is significantly lower than the Federal or Florida limit (70 ug/dscm) proposed for MSW combustors. Further reduction of this already low mercury level, with an uncertain technique (carbon injection in coal-fired CFB with no spray-dryer absorber) is not expected to be effective.
- e. For the Cedar Bay plant, approximate costs of carbon injection system operation are estimated as \$3 million per year for just the carbon consumption. This equates to more than fifteen million dollars per ton removed if the system reduced the mercury emissions by fifty percent. In addition the capital costs for a mercury injection system with and without spray-dryer absorber are about \$21 million and \$1-million respectively.
- f. Injection of carbon in the CFB flue gas may adversely affect the bag filters because of its fine particle size. Other unidentified operational problems may result.
- g. Activated carbon presents a fire and explosion hazard in storage and handling at the plant.
- h. CFB solid wastes may be processed for recycle/reuse in various applications. An increase in carbon content is likely to adversely affect processing and the potential for recycle/reuse.
- i. Effectiveness of carbon injection can be best tested at pilot plant facilities with trained staff and appropriate support facilities. A commercial plant such as Cedar Bay is not a desirable facility for obtaining reliable test results.

6.0 REFERENCES

EPA, 1989a: EPA air Docket A-90-45, item 11-M-37, September 1991.

EPA, 1989b: "Estimating Air Toxics Emission From Coal and Oil Combustion Sources", EPA Report No. EPA 450/2-89-001, April 1989. (Calculated values from mercury content of coal).

EPA, 1990: "The Impacts of Particulate Emissions Control On the Control of Other MWC Air Emissions", Brna and J. Kilgroc, U.S. EPA, Journal AWMA, pp. 1324-1330, 1990.

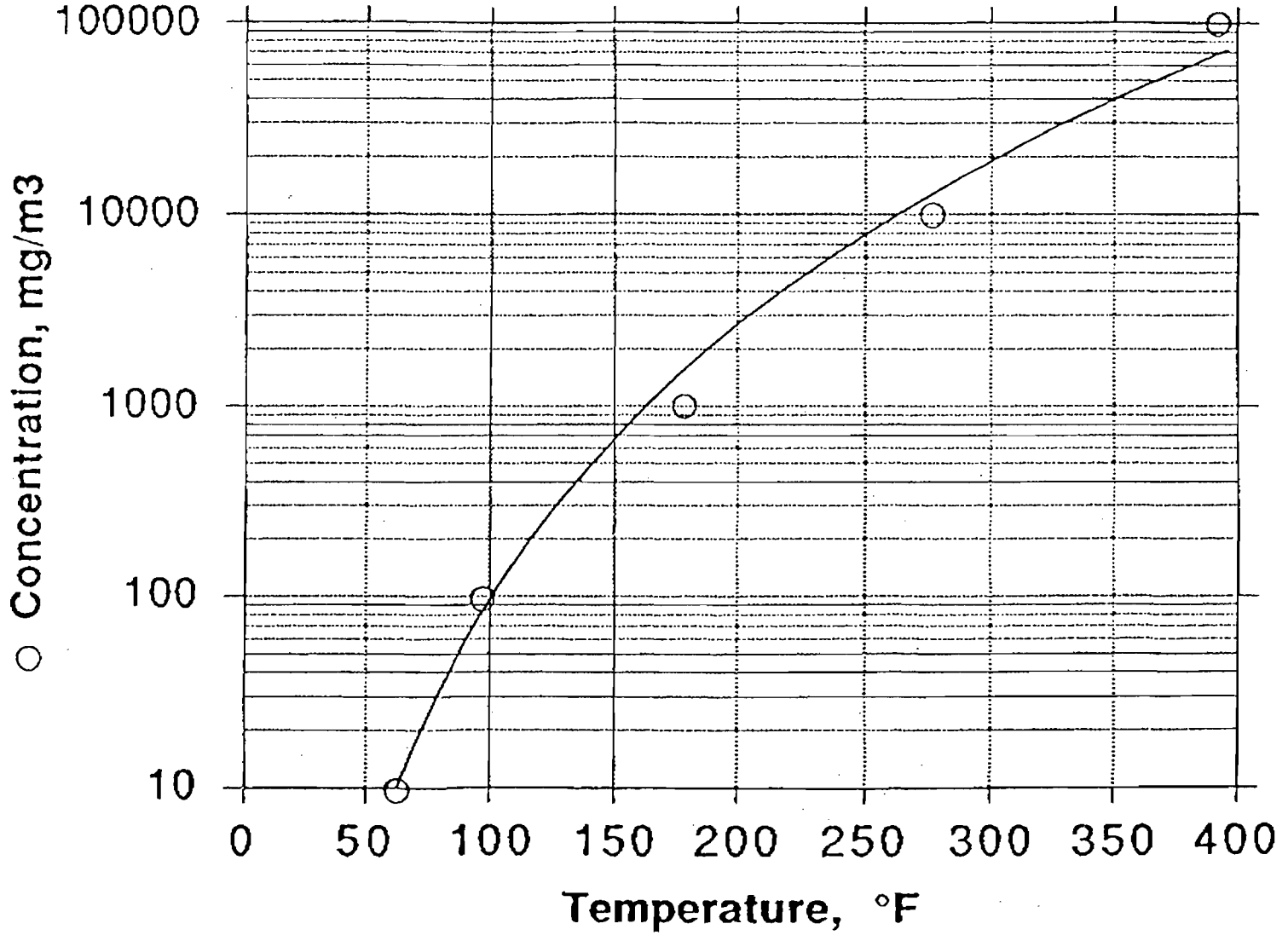
Flakt, Inc. 1993: Budgetary Quotation for activated Carbon System, January 1993.

Joy Env. Tech, 1993: Budgetary Quotation for activated Carbon System, January 1993.

EPA, 1993: Telecon with EPA Triangle Research Park Office March 3, 1993.

FIGURE 1: SATURATION VAPOR CONCENTRATION
OF MERCURY VS TEMPERATURE

○ $y = 2.2619e-08 * x^{(4.8129)}$ R= 0.99648





State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Buck Oven
FROM: Bruce Mitchell
THRU: Clair Fancy
Date: March 8, 1993
SUBJ: Proposed Amendment to the CBCP Proposed Certification
Specific Condition No. II.A.9. Introduction

Buck:

We have looked at the proposed amendment to the No. II.A.9. introduction. Based on 40 CFR 60.46a(g), CEMs are used for demonstrating compliance once the initial performance test is completed in accordance with 40 CFR 60.8. Therefore, the suggested language is inappropriate and should not be added to the existing language. Also, Clair was involved with the discussion on this and concurs.

If there are any questions, please give me a call or E-mail me a response. Thanks.

Bruce Mitchell

- (15) Method 101A or EPA Method 29 for mercury.
- (16) Method 104 for beryllium.
- (17) Method 201 or 201A for PM10 emissions.
- (18) Ammonia (NH₃) Method to be determined by the Department.

9. Continuous Emission Monitoring for each CFB

CBCP shall install, certify, calibrate, operate, and maintain continuous emission monitoring systems (CEMS) for opacity, SO₂, NO_x, CO, and O₂ or CO₂, pursuant to all applicable requirements of Rule 17-296.800, F.A.C., Chapter 17-297, F.A.C., 40 CFR 60 Subpart A, 40 CFR 60 Subpart Da, 40 CFR 60 Appendix B, and 40 CFR 60 Appendix F. The permittee may elect to install, certify, calibrate, operate, and maintain multiple span continuous emission monitoring systems for sulfur dioxide and nitrogen oxides providing certification tests and calibrations are performed for each span. Each of the continuous emission monitoring systems for sulfur dioxide and nitrogen oxides shall continuously record data on a span that satisfies the requirements of 40 CFR 60.47a. Any exception to the above must be specifically authorized by DER in writing and in accordance with state and federal regulations. Where appropriate, DER may authorize use of CEMS for the purpose of determining compliance with emission limitations.

40 CFR 60.46a (g) Compliance Provisions

- a. CEMS data shall be recorded and reported in accordance with Chapter 17-297, F.A.C., and 40 CFR 60.49a and 60.7. A record shall be kept for periods of startup, shutdown and malfunction.
- b. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.
- c. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation and operation of all CEMS.
- d. Opacity monitoring system data shall be reduced to 6-minute averages, based on 36 or more data points, and gaseous CEMS data shall be reduced to 1-hour averages, based on 4 or more data points, in accordance with 40 CFR 60.13(h).
- e. For purposes of reports required under this certification, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. 10 11 herein, which exceeds the applicable emission limit in Condition No. 3.

I N T E R O F F I C E M E M O R A N D U M

Date: 07-Apr-1993 04:45pm EST
From: Sue Sullivan TAL
SULLIVAN S
Dept: Office of Secretary
Tel No: 904/487-0472
SUNCOM:

TO: Bruce Mitchell TAL

(MITCHELL_B)

Subject: CEMS condition

Please review the proposed change and indicate concurrence.

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(904) 222-7500
FAX (904) 224-8551
FAX (904) 681-2964

C. ALLEN CULP, JR.
JONATHAN S. FOX
JAMES C. GOODLETT
GARY K. HUNTER, JR.
DALANA W. JOHNSON
RICHARD W. MOORE
ANGELA R. MORRISON
MARIBEL N. NICHOLSON
LAURA BOYD PEARCE
GARY V. PERKO
MICHAEL P. PETROVICH
DOUGLAS S. ROBERTS
JULIE B. ROME
KRISTIN C. RUBIN
CECELIA C. SMITH

OF COUNSEL
W. ROBERT FOKES

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
KATHLEEN BLIZZARD
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
RALPH A. DEMEO
THOMAS M. DEROSE
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPEL
GARY P. SAMS
ROBERT P. SMITH
CHERYL G. STUART

MEMORANDUM

TO: Buck Oven
FROM: Doug Roberts *DR*
RE: Cedar Bay Conditions of Certification
DATE: March 5, 1993

Attached are revised conditions of certification for the Cedar Bay Cogeneration Project as proposed by the US Generating Co. The suggested changes from the DER's draft conditions are shown in shaded text. We have undescored suggested new language and struck through language that should be deleted. Several conditions proposed by SJRWMD have also been incorporated with suggested revisions.

DSR/mee
Attachment.

cc: Nancy Barnard, SJRWMD

*3-24-93
edited a version
and took to Buck- went
over each edit. Bm*

*3-19-93
contact Mark on CO and other concerns
3-19-93
Bm*

*3-16-93
4/10-510*

*met w Mark Carney
and went item by item
over the /my suggested changes/edits.
2 x conditions to be looked at:
① H's protocol level/valuation
② recycle quantification*

*11:51-12:01
Spoke w Mark.
CO to 3-hr rolling avg; CEM
cent. is a 1-hr test; also, annual
test is 1-hr test; to submit
language on 5k recycle -> to go to
voluntarily meaning because of
capability; H's language - he
is to contact Buck and
notify me Bm*

*p.s. spoke w CCF briefly.
Bm*

March 5, 1993

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
AES CEDAR BAY, INC./SEMINOLE KRAFT CORP.
CEDAR BAY COGENERATION PROJECT
PA 88-24

CONDITIONS OF CERTIFICATION

When a condition is intended to refer to both either both AES Cedar Bay, Inc. or U.S. Generating Company Cedar Bay Cogeneration, Inc. and Seminole Kraft Corp.; the term "Cedar Bay Cogeneration Project" or the abbreviation "CBCP"; or the term "CBC/SK" or "permittees" will be used. When a condition is intended to refer to the "Cedar Bay Cogeneration Project" the terms "Cedar Bay Cogeneration Project", "CBCP", or "Project" will be used.

Where a condition applies only to AES Cedar Bay Cogeneration, Inc. or U.S. Generating Company (USG) the term "AES Cedar Bay Cogeneration, Inc." or the abbreviation "AESCB" "USG" "CBC" or the term "permittee," where it is clear that AESCB USG "CBC" is the intended responsible party, will be used. Similarly, where a condition applies only to Seminole Kraft Corp., the term "Seminole Kraft Corp." or the abbreviation "SK" or the term "permittee," where it is clear that SK is the intended responsible party, will be used. The Department of Environmental Regulation may be referred to as DER or the Department: BESD ~~RESD~~ represents the City of Jacksonville, Bio-Environmental Regulatory and Environmental Services Division Department. SJRWMD represents the St. Johns River Water Management District.

I. GENERAL

The construction and operation of CBCP shall be in accordance with all applicable provisions of at least the following regulations of the Department: Chapters 17-2, 17-210, 17-296, 17-297, 17-302, 17-4, 17-5276, 17-601, 17-702, 17-312, 17-21532, 17-22550, 17-555, 17-25, and 17-610, 17-660, and 17-772, Florida Administrative Code (F.A.C.) or their successors as they are renumbered.

II. AIR

The construction and operation of AESCB CBCP shall be in accordance with all applicable provisions of Chapters 17-296, and 17-297, F.A.C.. In addition to the foregoing, AESCB CBCP shall comply with the following conditions of certification as indicated.

PCAQD (Duval County Air Quality Division)
17-210 thru 297
17-210-297

A. Emission Limitations for AES CBCP 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 wood waste, nor will it be equipped with wood waste handling and firing equipment. The maximum charging rate to each of two CFBs of short-fiber recycle rejects from the SK recycling process shall not exceed 180 MMBtu/hr. 150 dry TPD, nor shall such rejects exceed six (6) percent of the annual fuel consumption of the AESCB facility on a Btu basis 54,750 dry TPY. This reflects a combined total of 300 dry TPD, and 109,500 dry TPY for the two CFBs that fire recycle rejects. The third CFB will not utilize recycle rejects, nor will it be equipped with handling and firing equipment for recycle rejects.~~

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%~~ 1.2% by weight on an annual basis. The sulfur content shall not exceed ~~3.3%~~ 1.7% 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%~~ 0.05% by weight. The fuel oil ~~or natural gas~~ shall normally only be used ~~only~~ for startups. During the first year of commercial operation the maximum annual oil usage shall not exceed 350,000 1,900,000 gals./year. nor shall the maximum annual natural gas usage exceed 49 MMCF per year. During 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 gas shall not exceed 1120 380 MMBtu/hr. for each the CFB.

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, but not exceed 8147 hrs/yr (93% capacity factor of 8760 hrs/yr).
 ~~27,94 x 10⁶ MMBtu/yr total annual heat input.~~

but not to exceed
3-23-93 25.96
change via Mark Lem
for
(93% capacity factor)

h. To the extent that it is consistent with Condition II.A.1.b. and the following, USG CBC 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, CBC 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 ascertain whether 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 and without violating any other environmental requirements. USG CBC shall notify DER and the Regulatory and Environmental Services Division Department (RESDD) at least thirty (30) days prior to initiation of the test burn. The results of the test burn and USG's CBC's analysis shall be reported to DER and to the RESDD within forty-five (45) days of completion of the test burn. DER shall notify AESCB CBC within thirty (30) days thereafter of its approval or disapproval of any conclusion by USG CBC that the test burn demonstrated that the rejects can be burned in compliance with this Condition of Certification. If CBC 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, CBC shall submit a report to DER demonstrating that the rejects can be burned in compliance with this Condition of Certification.

DCARD

2. Coal Fired Boiler Controls

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

- a. Limestone injection and fuel sulfur limitations, for control of sulfur dioxide, and acid gases. acid mist? 142509
- b. Baghouse, for control of particulate matter, and trace metals.

submic

? why stated?

c. Baghouse, for control of metals, except that USG CBC 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, USG CBC shall conduct a test on one CFB to compare mercury emissions to the atmosphere with and without carbon injection. If the mercury emissions from the tested CFB are reduced by fifty (50) percent or more over final emissions without carbon injection, then USG CBC 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 USG CBC shall not be required to install and or operate a carbon injection system for any of its CFBs, nor to conduct further testing of carbon injection.

d. Selective Non-catalytic Reduction (SNCR)/SCR, for control of NOx

e. Good combustion characteristics, which are an inherent part of the CFB technology, for control of carbon monoxide and volatile organic compounds.

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

-----Emission Limitations-----				
Pollutant	lbs/MMBtu	lbs/hr	TPY	for 3 CFBs
CO	0.19-0.175	202-186	823-758	2468-2273
Nox	0.29	308.3	1256	3767
Nox	0.17	180.7	736.1	2288
SO2	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
PM10	0.020	21.3	86	257
H2SO4 mist	0.024	25.5	103	308
Fluorides	0.086	91.4	374	1122
Lead	0.007	7.4	30	91
Mercury	0.00026-0.000304	0.276-0.323	1.13-0.1316	3.4-0.3949
Beryllium	0.00011	0.117	0.5	1.5

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

10
b. Annual compliance tests shall be performed for PM, SO₂ and NO_x, commencing no later than 12 months from the initial test.

c. Initial and annual visible emissions compliance tests shall be determined in accordance with 40 CFR 60.11(b) and (e).

d. The compliance tests shall be conducted between 90-100% of the maximum licensed capacity and firing rate ~~of~~ for each permitted fuel.

e. The following test methods and procedures of ^{Rule 17-297, F.A.C., and} 40 CFR Parts 60 and 61, or other DER approved methods with prior DER approval shall be used for compliance testing:

in writing
(1)

- (1) Method 1 for selection of sample site and sample traverses.
- (2) Method 2 for determining stack gas flow rate.
- (3) Method 3 or 3A for gas analysis for calculation of percent O₂ and CO₂.
- (4) Method 4 for determining stack gas moisture content to convert the flow rate from actual standard cubic feet to dry standard cubic feet.
- (5) Method 5 or Method 17 for particulate matter.
- (6) Method 6, 6C, or 8 for SO₂.
- (7) Method 7, 7A, 7B, 7C, 7D, or 7E for nitrogen oxides.
- (8) Method 8 for sulfuric acid mist.
- (9) Method 9 for visible emissions, in accordance with 40 CFR 60.11. and Appendix A.
- (10) Method 10 for CO.
- (11) Method 12 ~~or 101A~~ for lead.
- (12) Method ~~13A or~~ 13B for fluorides.
- ~~(13) Method 19 for sulphur dioxide removal efficiency pursuant to 40 CFR 60.48a.~~

~~(13)~~ ~~(14)~~ Method ~~18 or~~ (25~~A~~) for VOCs.

25 not 25A
PIC contam. from
combustion

~~(14)~~ ~~(15)~~ Method 101A ~~or 108~~ for mercury.

(15) (16) Method 104 for beryllium.

(17) Method 201 or 201A for PM10 emissions.

~~(18) Method 206 for SO2 emissions.~~

8. 9. Continuous Emission Monitoring for each CFB AESCB USG CBC shall use Continuous Emission Monitoring Systems (CEMS) to determine compliance. CEMS for opacity, SO2, NOx, 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 as may be specifically authorized by DER. ~~that the span range of the NOx 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.~~

a. Each continuous emission monitoring system (CEMS) shall meet performance specifications of 40 CFR 60, Appendix B.

b. CEMS data shall be recorded and reported in accordance with Chapter 17-297, ⁵⁰⁰ F.A.C., and 40 CFR 60.49a and 60.7. A record shall be kept for periods of startup, shutdown and malfunction.

c. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

d. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation and operation of all CEMS.

e. Opacity monitoring system data shall be reduced to 6-minute averages, based on 36 or more data points, and gaseous CEMS data shall be reduced to 1-hour averages, based on 4 or more data points, in accordance with 40 CFR 60.13(h).

f. For purposes of reports required under this certification, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. 10 wherein, which exceeds the applicable emission limit in Condition No. 3.

g. The permittee is subject to all applicable provisions of 17-4.130, Plant Operation-Problems.

15295-1
h. All records ^{of documentation} shall be kept on file for a minimum of 3 years ~~as required~~ pursuant to Rule 17-4.160(14) F.A.C.

and 17-297.500, F.A.C.

9: 10. 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. Recycle rejects usage on a volumetric basis shall be estimated for each 24-hour period in which rejects are burned. *quantified*

10: 11. Reporting for each CFB

a. A minimum of thirty (30) days prior notification of compliance test shall be given to DER's N.E. District office and to the BRES (Bio-Environmental-Services Division) office, in accordance with 40 CFR 60.8. *written*

In accordance with Rule 17-297.580, F.A.C.

b. The results of compliance tests shall be submitted to the BRES office within 45 days after completion of the test runs. *DCAQD*

last

c. The owner or operator shall submit excess emission reports to BRES, in accordance with 40 CFR 60.7. The reports shall include the following: *Rule 17-210.700, F.A.C., and 7(c) and (d).*

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions (40 CFR 60.7(c)(1)).

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measure adopted (40 CFR 60.7(c)(2)).

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments (40 CFR 60.7(c)(3)).

(4) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report (40 CFR 60.7(c)(4)).

(5) The owner or operator shall maintain a file of all measurements, including continuous monitoring systems performance evaluations; monitoring systems or monitoring device calibration; checks; adjustments and maintenance performed on these systems or devices; and all other information required by this permit recorded in a permanent form suitable for inspection (40 CFR 60.7(d)(e)).

DCAQD d. Annual and quarterly reports shall be submitted to BRES as per B.A.C.C. Rule 17-2-700(7) 297,450.

11-12. Any change in the method of operation, fuels utilized, equipment, or operating hours or any other changes pursuant to F.A.C. Rule 17-212.200, defining modification, shall be submitted for approval to DER's Bureau of Air Regulation.

13. All records of documentation shall be kept on file for a minimum of 3 years pursuant to Rule 17-4.160(14), F.A.C. B. AES CBCP - Material Handling and Treatment

1. The material handling and treatment operations including coal and limestone unloading buildings, coal and limestone reclaim hoppers, coal crusher house, limestone dryer, fly and bed ash silos, ash pelletizer, pellet curing silo, coal and limestone day silos, conveyors, storage areas and related equipment. These facilities may be operated continuously, i.e. 8760 hrs/yr, except that the limestone crushers/dryers may be operated for an average of 8 hours per day at maximum capacity.

2. The material handling/usage rates for coal, limestone, fly ash, and bed ash shall not exceed the following:

Material	Handling/Usage Rate	
	TPM	TPY
Coal	117,000	1,170,000
Limestone	27,000	320,000
Fly Ash	28,000	336,000
Bed Ash	8,000	88,000

Note: TPM is tons per month based on 30 consecutive days, TPY is tons per year.

3. The VOC emissions from the maximum No. 2 fuel oil utilization rate of 240 gals/hr., 2,100,000 and 750,000 gals/year

15995.1

14. The permittee is subject to all applicable provisions of Rule 17-210.700, F.A.C., Excess Emissions.

15. The permittee is subject to all applicable provisions of Rule 17-210.650, F.A.C., Circumvention.

16. The permittee is subject to all applicable provisions of Rule 17-4.160, Permit Conditions.

for the limestone dryers; and, 8000 gals/hr., 160,000 and 1,900,000 gals/year for the three boilers are not expected to be significant.

4. The maximum emissions from the material handling and treatment area, where 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	0.06	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:

a. The material handling and treatment area sources with either fabric filter or baghouse controls are as follows:

- Coal Crusher Building Dust Collector
- Coal Silo Conveyor Area Dust Collector
- Limestone Pulverizer/Conveyor Dust Collectors (2)
- Limestone Storage Bin 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 Recycle Conveyor Filter
- Pelletizing Curing Silo Outlet Recycle Conveyor Dust

0.003

The emissions from the above listed sources are subject to the particulate emission limitation requirement of 0.003 gr/cfm ~~in accordance with Rule 17-296.711, F.A.C.~~

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

b. The PM emissions from the following process, equipment, and/or facility in the material handling and treatment area sources shall be controlled using wet suppression/removal techniques as follows:

- Coal Car Unloading ^{repeatedly, in accordance with Rule 296.711, F.A.C.} Wet Suppression
- Ash Pelletizing Hydrator Venturi Scrubber
- Ash Pelletizing Curing Silo Impingement Scrubber
- Ash 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 BRESO 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 BRESO, based on other information, has reason to believe the particulate emission limits are being violated.

5. Visible Emissions (VE) shall not exceed 5% opacity from any source in the material handling and treatment area listed in Condition II, B.4a., in accordance with F.A.C. Chapter 17-296.711, F.A.C. Neither DER nor BRESO 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 BRESO, based on other information, has reason to believe the particulate emission limits are being violated. ^{in accordance with Rule 17-297.620(4).}

6. The maximum emissions from each of the limestone dryers while using oil shall not exceed the following (based on AP-42 factors, Table 1, 3-1, Industrial Distillate, 10/86):

DCAQD

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Estimated Limitations

Pollutant	lbs/hr.	TPY	TPY for 2 dryers
PM/PM10	0.25 <u>0.24</u>	1.1 <u>0.32</u>	2.2 <u>0.64</u>
SO2	5.00 <u>0.85</u>	21.9 <u>1.15</u>	43.8 <u>2.3</u>
CO	0.60	2.6 <u>0.81</u>	5.2 <u>1.62</u>
NOx	2.40	10.5 <u>3.25</u>	21.0 <u>6.5</u>
VOC	0.05	0.2 <u>0.06</u>	0.4 <u>0.12</u>

Particulate matter emissions shall not exceed ^{from the dryers} ~~0.03~~ 0.03 ~~sr/dscf~~ ^{or} ~~any~~ ^{greater than} ~~any~~ ^{in mass of} ~~Visible emissions from the dryers shall not exceed 5%~~ opacity. If natural gas is used, emissions limits shall be determined by factors contained in AP-42 Table 1-4-1, Industrial 10/86, pursuant to Rule 17-296.712, F.A.C.

7. The maximum No. 2 fuel oil with maximum sulfur content of .05% by weight firing rate for each limestone dryer shall not exceed 120 gals/hr., or ~~1,050,000~~ 350,400 gals/year. This reflects a combined total fuel oil firing rate of 240 gals/hr., and ~~2,100,000~~ 700,800 gals/year, for the two dryers. The maximum natural gas firing rate for each limestone dryer shall not exceed ~~16,800 CF per hour, or 147 MCF per year.~~

8. Initial and annual ^{Particulate matter and} Visible Emission compliance tests for all the emission points in the material handling and treatment area, including but not limited to the sources specified in this permit, shall be conducted, in accordance with the July 1, ~~1988~~ ¹⁹⁹¹ version of 40 CFR 60, ^{using} EPA Method ⁹, respectively.

9. ^{In accordance with Rule 17-297.570, F.A.C.,} Compliance test reports shall be submitted to ^{DCA QD} ~~BRESB~~ within 45 days of test completion in accordance with Chapter 17-2.700(7) ~~297.450~~ ^{of the} F.A.C. ^{Rule}

10. Any changes in the method of operation, raw materials processed, equipment, or operating hours or any other changes pursuant to F.A.C. Rule 17-212.100, defining modification, shall be submitted for approval to DER's ²⁰⁰ Bureau of Air Regulation (BAR).

C. Requirements For the Permittees

1. ^{DCA QD} Beginning one month after certification, AESCB ~~CBC~~ shall submit to ~~BRESB~~ and DER's BAR, a quarterly status report briefly outlining progress made on engineering design and purchase of major equipment, including copies of technical data pertaining

to the selected emission control devices. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of any such device. Such disapproval shall be issued within 30 days of receipt of the technical data.

2. The permittees shall report any delays in construction and completion of the project which would delay commercial operation by more than 90 days to the BRESO office.

3. Reasonable precautions to prevent fugitive particulate emissions during construction, such as coating of roads and construction sites used by contractors, regrassing or watering areas of disturbed soils, will be taken by the permittees. ~~Uncontrolled emissions of particulate matter shall be~~ ^{DCAQD} The permittee is subject to the provisions of Rule 17-206.310(3), Uncontrolled Emissions of Particulate Matter.

4. Fuel shall not be burned in any unit unless the control devices are operating properly, pursuant to 40 CFR Part 60 Subpart Da.

5. The maximum sulfur content of the No. 2 fuel oil utilized in the CFBs and the two unit limestone dryers shall not exceed ~~0.3~~ 0.05 percent by weight. Samples shall be taken of each fuel oil shipment received and shall be analyzed for sulfur content and heating value. Records of the analyses shall be kept a minimum of ~~two~~ ^{three} years to be available for DER and BRESO inspection.

6. Coal fired in the CFBs shall have a sulfur content not to exceed ~~3.3~~ 1.7 percent by weight on a shipment (train load) basis. Coal sulfur content shall be determined and recorded in accordance with 40 CFR 60.47a.

7. AESCB CBC shall maintain a daily log of the amounts and types of fuel used and copies of fuel analyses containing information on sulfur content and heating values. ~~and keep a record for 3 years a minimum of 3 years for~~

8. The permittees shall provide stack sampling facilities as required by Rule 17-2-700(4) 297.345 FAC.

9. Prior to commercial operation of each source CFB, the permittees shall each submit to the BAR a standardized plan or procedure that will allow that permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible.

10. All records and documentation shall be kept on file for a minimum of 3 years pursuant to Rule 17-4.160(14), F.A.C.
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

and, the construction permits for the ~~proposed~~ new Kraft recovery boiler, smelt dissolving tank, and multiple effect evaporator set shall be surrendered also [i.e. PSD-FL-141]; AC 16-168607, -168608 and -168609].

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, within 30 days of written confirmation by DER of the successful upon completion of the initial compliance tests on the AESCB CBCP 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; ~~BRES~~ 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.

DAAD

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 CBCP 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 CBCP 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

CO 157
NO 449
SO₂ 765

[NOTE: This condition should be reviewed by SK.]

III. WATER DISCHARGES

Any discharges into any waters of the State during construction and operation of AESCB shall be in accordance with all applicable provisions of Chapters 17-3, and 17-6, F.A.C., and 40 CFR, Part 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category, except as provided herein. Also, AESCB CBCP shall comply with the following conditions of certification:

A. Plant Effluents and Receiving Body of Water

For discharges made from the AESCB CBCP power plant the following conditions shall apply:

1. CBCP shall not discharge any cooling system, demineralizer regeneration, floor drainage or similar wastewaters from the operation of the CBCP facility into any waters of the State. CBCP shall install a closed-loop cooling water system in accordance with technical specifications set forth in the Zero Discharge System Plan submitted by CBCP to the Department during the hearing and attached as Exhibit **** to these Conditions of Certification. Pursuant to that Zero Discharge Plan, CBCP shall make available to Seminole Kraft up to 500 gpm of reclaimed water that has been treated to a quality satisfactory for use in condensing-cooling for Seminole Kraft's cooling tower turbine generator.

2. --- CBCP shall continue to seek a permit from U.S. EPA for the discharge of cooling water and process wastewater to the St. John's 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, USG 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 USG 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.

[NOTE: Condition deleted as a discharge from CBCP will not be able to meet state water standards.]

3. Receiving Body of Water (RBW) - The receiving body of water has been determined by the Department to be those waters of the St. John's River or Broward River and any other waters affected which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

4. Point of Discharge (POD) - The point of discharge has been determined by the Department to be where the storm water effluent physically enters the waters of the State in the St. John's River (during construction) via Outfall OSN001 and Broward River (during construction and operation) via Outfall OSN 003 and OSN 008, via Outfalls the SKC discharge outfall-001, which is the existing main outfall from the paper mill emergency overflow to the Broward River via outfall-003.

3. -- Thermal-Mixing-Zones -- The instantaneous zone of thermal-mixing for the ABSCB cooling system shall not exceed an area of 0.25 acres. -- The temperature at the point of discharge into the St. John's River shall not be greater than 95 degrees F. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of Section 17-3.05(1)(d), F.A.C. Cooling-tower blowdown shall not exceed 95° F as a 24-hour average; nor 96° F as an instantaneous maximum.

4. -- Chemical Wastes from ABSCB -- All discharges of low-volume wastes (demineralizer regeneration, floor drainage, labs drains, and similar wastes) and chemical-metal cleaning wastes shall comply with Chapter 17-6, F.A.C. at OSN-006 and 007 respectively. -- If violations of Chapter 17-6, F.A.C. occur, corrective action shall be taken by ABSCB. -- These wastewaters shall be directed to an adequately sized and constructed treatment facility.

5. -- pH -- The pH of the combined discharges shall be such that the pH will fall within the range of 6.0 to 9.0 at the POD to the St. Johns River and shall not exceed 6.5 to 8.5 at the boundary of a 0.25-acre mixing zone.

6. -- Polychlorinated Biphenyl Compounds -- There shall be no discharge of Polychlorinated biphenyl compounds.

7. -- Cooling-Tower-Blowdown -- ABSCB's discharge from Outfall-Serial-Number-002 -- Cooling-Tower-Blowdown shall be limited and monitored as specified below:

<u>Parameter</u>	<u>Discharge Limit</u>	<u>Monitoring</u>	<u>Requirement</u>
		<u>Frequency</u>	<u>Type</u>
Discharge-Flow (mgd)	Report	1/day	Totalizer
Discharge-Temp: (°F)	Instantaneous	Continuous	Recorder
	Maximum		
Total-Residual	Instantaneous	Continuous	Recorder
Oxidants	Maximum: .05 mg/l		
Time-of-Total	120 minutes	Continuous	Recorder
Residual-Oxidant	per-day		
Discharge (TRO)			
Iron	Instantaneous	1/week	grab
	Maximum 0.5 mg/l		
pH	6-9	1/week	grab

b. - There shall be no detectable discharge of the 125 priority pollutants contained in chemicals added for cooling tower maintenance. - - - Notice of any proposed use of compounds containing priority pollutants shall be made to the DER Northeast District Office not later than 180 days prior to proposed use.

c. - Samples taken in compliance with the monitoring requirements specified above shall be taken at OSN 002 prior to mixing with any other waste stream.

d. 5. Seminole Kraft Corporation (SKC) shall shut down the mill's once thru cooling system within 30 days after written notification by DER of the successful upon completion of the initial compliance tests on the AESCB CBCP boilers conducted pursuant to Condition II.A.7. SKC shall inform the DER NE District Office of the shutdown and surrender all applicable operating permits for that facility within 30 days of such shutdown.

8. - - Combined Low-Volume Wastes shall be monitored at OSN 006 with weekly grab samples. - - Discharge limitations are as follows:

	<u>Daily-Max</u>	<u>Daily-Avg</u>
Oil-and-Grease	20.0 mg/l	15.0
Copper-dissolved	1.0 mg/l*	N/A
Iron-dissolved	1.0 mg/l*	N/A
Flow	Report	N/A
Heavy-Metals	Report	{See-Below}

a. - - The pH of the discharge shall not be less than 7.0* standard units and shall be monitored once per shift; - unless more frequent monitoring is necessary to quantify types of nonchemical metal cleaning waste discharged.

b. - - - Serial - - - number - - - assigned - - - for identification and monitoring purposes. - - Heavy metal analyses shall include total copper, - iron, - nickel, - selenium, - and zinc. *Limits applicable only to periods in which nonchemical metal cleaning waste is being discharged via this OSN. - - - Length of composite samples shall be during the periods (s) of nonchemical metal cleaning waste generation and discharge and shall be adequate to quantify differences in sources of waste generated - - (air preheater vs. boiler fireside, - etc.);

9. - - - Chemical-Metal-Cleaning

AESCB's discharge from outfall serial number 007 - - metal cleaning wastes discharged to the Seminole Kraft treatment

system. -- Such discharges shall be limited and monitored by the permittee as specified below:

a.

Effluent	Discharge Limits	Monitoring
Characteristic		Requirements

	Instantaneous	Measurement	Sample
	Max	Frequency	Type

Flow	m3/day (MGD)	1/batch	Pump-log
Copper, Total	1.0 mg/l	1/	grab
Iron, Total	1.0 mg/l	1/	grab
Batches	Report	1/batch	logs

-----b.--- Chemical metal cleaning wastes shall mean process equipment cleaning including, but not limited to, boiler tube cleaning:

-----c.--- Waste treated and discharged via this OSN shall not include any stream for which an effluent guideline has not been established (40 CFR Part 423) for total copper and total iron at the above levels:

-----d.--- Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the metal cleaning waste treatment facility(s) prior to mixing with any other waste stream:

10: 6. Storm Water Runoff - During construction ~~and operation~~ discharge from the storm water runoff collection system from a storm event less than the once in ten year twenty-four hour storm shall meet the following limits and shall be monitored at OSN 003 by a grab sample once per discharge, but not more often than once per week:

Effluent Characteristic	Discharge Limits
	Instantaneous Maximum
Flow (MGD)	Report
TSS (mg/l)	50
pH	6.0-9.0

a. During ~~normal~~ plant operation, necessary measures shall be used to settle, filter, treat or absorb silt-containing or pollutant-laden storm water runoff to limit the suspended solids to 50 mg/l or less at OSN 003 during rainfall

periods less greater than the 10 25-year, 24-hour rainfall. During periods of operation when the CBCP is offline, these necessary measures, as specified above, shall be used during rainfall periods greater than a 10-year, 24-hour storm.

b. Any underdrains must be checked annually and measures must be taken to insure that the underdrain operates as designed. Permittees will have to modify the underdrain system should maintenance measures be insufficient to achieve operation of the underdrains as designed. AES-Cedar-Bay USG CBC must back flush the exfiltration/underdrain system at least once during the first six months of calendar each year. These backflushings must occur no closer than four calendar months from each other. In advance of backflushing the exfiltration/underdrain systems, the permittees must notify BRESO and SJRWMD of the date and time of the backflushing.

c. Control measures shall consist at the minimum of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt, and sediment-laden runoff. The pH shall be kept within the range of 6.0 to 9.0 in the discharge to the St. Johns River and 6.5 to 8.5 in the Broward River.

d. Special consideration must be given to the control of sediment laden runoff resulting from storm events during the construction phase. Best management practices erosion controls should be installed early during the construction period so as to prevent the transport of sediment into surface waters which could result in water quality violations and Departmental enforcement action. Revegetation and stabilization of disturbed areas should be accomplished as soon as possible to reduce the potential for further soil erosion. Should construction phase runoff pose a threat to the water quality of state waters, additional measures such as treatment of impounded runoff or the use of turbidity curtains (screens) in on-site impoundments shall be immediately implemented with any releases to state waters to be controlled.

e. It is necessary that there be an entity responsible for maintenance of the system pursuant to Section 17-25.027, FAC.

f. Correctional action or modification of the system will be necessary should mosquito problems occur.

g. AES-Cedar-Bay USG CBC shall submit to DER with copy to BRESO, erosion control plans for the entire construction project (or discrete phrases of the project) detailing measures to be taken to prevent the offsite discharge of turbid waters during construction. These plans must also be provided to

the construction contractor prior to the initiation of construction.

h. All swale and retention basin side slopes shall be seeded and mulched within thirty days following their completion and a substantial vegetative cover must be established within ninety days of seeding.

11.---Boiler-Blowdown-

-----Discharge-from-boiler-blowdown-to-the-cooling-tower-from-outfall-serial-Number-004-shall-be-limited-and-monitored-as-specified-below:

--Effluent-----Discharge-Limits-----Monitoring-Characteristic-----Requirements

-----Daily-----Sample-----Measurement-----Maximum-----Type-----Frequency

TSS-----30.0-----grab-----1/Quarter

Oil-and-Grease-----15.0-----grab-----1/Quarter
Flow-----Calculation---1/Month

-----12.---Construction-Dewatering-

-----a.---Discharge-of-construction-dewatering-to-the-SKC-once-through-cooling-system-from-outfall-serial-number-005-shall-be-limited-and-monitored-as-specified-below:

Effluent-----Discharge-----Monitoring-Characteristic-----Limits-----Requirements

-----Instantaneous--Measurement---Sample-----Maximum-----Frequency-----Type--

Flow---(MGD)-----:288-----daily-----Totalizer
Turbidity-(NTU)-----29-----1/week-composite/grab
Aluminum-mg/L-----1.5-----1/week-composite/grab
Copper-mg/L-----0.015-----1/week-composite/grab
Iron-mg/L-----0.3-----1/week-composite/grab
Lead-mg/L-----0.05-----1/week-composite/grab
Mercury-ug/l-----0.1-----1/week-composite/grab
Phenol-ug/l-----1.0-----1/week-composite/grab
TSS-mg/l-----50.0-----1/week-composite/grab
pH-----6.0-9.0-----1/week-composite/grab

Report N.D. - if below detection limit, - giving method used and detection limit. - If the discharge limit is below the detection limit, - then N.D. - signifies compliance.

AES/CB shall take composite samples of dewatering effluent once a week for one month following the start of dewatering, - then if no violations are found, - grab samples may be taken for the remainder of dewatering.

AES - Cedar - Bay - shall - treat - the - construction - dewatering discharge - so as not to exceed the above effluent limits. - AES/CB shall - utilize - the - advanced - treatment - systems - consisting - of - sand filter, - carbon - filter, - and - selective - ion - exchange, - as - shown - in their - letter - of - October - 26, - 1990, - to - Hamilton - S. - Owen, - unless - testing - demonstrates - that - the - above - limits - can - be - met - without - such - treatment. - Prior - to - discontinuing - such - treatment, - AES/CB shall - notify - both - DER - and - BESC, - and - provide - them - with - an opportunity - for - consultation.

AES - Cedar - Bay - shall - do - sufficient - bench - testing - to demonstrate - that - it - can - meet - the - above - limit - for - copper. - AES Cedar - Bay - shall - notify - DER - and - BESC - of - the - bench - testing, - and allow - DER - and - BESC - to - be - present - if - they - so - desire - to - observe - the bench - testing.

In addition, - AES - Cedar - Bay - shall - determine - the - amount - of treatment - and - removal - provided - for - iron, - aluminum - and - lead - by - the method - of - treatment - selected - for - copper.

A report - shall - be - submitted - to - DER - and - BESC - summarizing the - results - of - the - bench - testing - of - the - proposed - treatment technique.

-----b.-----Project discharge descriptions --
Dewatering - water, - outfall - 005, - includes - all - surficial groundwater - extracted - during - all - excavation - construction - on - site for - the - purpose - of - installing - structures, - equipment, - etc. discharges - to - the - SKC - once - through - cooling - water - system - at - a location - to - be - depicted - on - an - appropriate - engineering - drawing - to be - submitted - to - DER - and - BESC. - Final - discharge - after - treatment - is to - the - St. - Johns - River. - The - permittee - shall - report - to - BESC - the date - that - construction - dewatering - is - expected - to - begin - at - least one - week - prior - to - the - commencement - of - dewatering.

-----13.-----Mixing - Zones -- The discharge - of the - following - pollutants - shall - not - violate - the - Water - Quality Standards - of - Chapter - 17-3, - F.A.C., - beyond - the - edge - of - the designated - instantaneous - mixing - zones - as - described - herein. - Such mixing - zones - shall - apply - when - the - St. - Johns - River - is - in - compliance with - the - applicable - water - quality - standard.

The permittee shall report the date construction dewatering commences to the BESD:

a. During operation of CBCP for the life of the facility:

Iron-----125,600-m2-(31-acre)-mixing-zone
Chlorine--0---not-measurable-in-river
Temp:-----1,013-m2-(0.25-acre)
Ph-----1,013-m2-(0.25-acre)

14. Variance to Water Quality Standards--In accordance with the provisions of Sections 403.201 and 403.511(2), F.S., permittees are hereby granted a variance to the water Quality Standard of Chapter 17-3.121, F.A.C. for iron during operation:

Such variance shall apply only as the natural background level of the St. John's River approach or exceed the standards. In any event, the discharge from the CBCP shall comply with the effluent limitations set forth in Paragraph III.A.12. At least 90 days prior to start of construction, AES shall submit a bioassay program to assess the toxicity of construction dewatering effluent to the DER for approval. Such program shall be approved prior to start of construction dewatering:

15. 7. Sanitary wastes from AESCB CBC CBCP shall be collected and discharged routed for treatment to the SKC domestic wastewater treatment plant.

B. Water Monitoring Programs

1. Necessity and extent of continuation of monitoring programs, and may be modified in accordance with Condition No. XXI, Modification of Conditions.

2. Chemical Monitoring - The parameters described in Condition III.A. shall be monitored during discharge as described in Condition III.A., commencing with the start of construction or operation of the CFBS and reported quarterly to the Northeast District Office.

3. Coal, Ash, and Limestone Storage Areas - Runoff from the coal pile, ash and lime stone storage areas shall be retained on-site during normal operations up to the 25-year, 24-hour storm event, directed to the SK waste water treatment facility for discharge under its existing waste water permit. Monitoring of metals, such as iron, copper, zinc, mercury silver, and aluminum, shall be done once a month during any month when a discharge occurs at OSN 008 or once per month from the collection pond.

4. The ground water levels shall be monitored continuously at selected wells as approved by the SJRWMD. Chemical analyses shall be made on samples from all monitored wells identified in Condition IV.F. and IV.G. below. The location, frequency and selected chemical analyses shall be as given in Condition IV.F and IV.G. The ground water monitoring program shall be implemented at least one year prior to commercial operation of the CFBs. The chemical analyses shall be in accord with the latest edition of Standard Methods for the Analysis of Water and Wastewater. The data shall be submitted within 30 days of collection/analysis to the SJRWMD.

IV. GROUND WATER

A. Water Well Construction Permit

Prior to the construction, modification, or abandonment of a production well for the SK paper mill, the Seminole Kraft must obtain a Water Well Construction Permit from the SJRWMD pursuant to Chapter 40C-3, F.A.C. Construction, modification, or abandonment of a production well will require modification of the SK consumptive use permit when such construction, modification or abandonment is other than that specified and described on SK's consumptive use permit application form. The construction, modification, or abandonment of a monitor well specified in Condition IV.H. will require the prior approval of the Department. All monitor wells intended for use over thirty days must be noticed to BRESO prior to construction or change of status from temporary to permanent.

B. Well Criteria, Tagging and Wellfield Operating Plan

Leaking or inoperative well casings, valves, or controls must be repaired or replaced as required to eliminate the leak or make the system fully operational put the system back in an operative condition acceptable to the SJRWMD. Failure to make such repairs will be cause for deeming the well abandoned in accordance with Chapter 17.21.02(5), F.A.C., Chapter 373.309, Florida Statutes and Chapter 366.301 (b), and .307 (a), Jacksonville ordinance Code. Wells deemed abandoned will require plugging according to state and local regulations.

A SJRWMD-issued identification tag must be prominently displayed at each CBCP withdrawal site by permanently affixing such tag to the pump, headgate, valve or other withdrawal facility as provided by Section 40C-2.401, Florida Administrative Code. The SK must notify the SJRWMD in the event that a replacement tag is needed.

The permittees must develop and implement a Wellfield Operating Program within six (6) months after of construction of wells or start-up of the CBCP certification. This program must describe which wells are primary, secondary, and standby (reserve); the order of preference for using the wells; criteria for shutting down and restarting wells; describe AES Cedar-Bay USG CBC and SKC responsibilities in the operation of the well field, and any other aspects of well field management operation, such as who the well field operator is and any other aspects of wellfield management operation. This program must be submitted to the SJRWMD and a copy to BRESO within six (6) months of certification and receive District SJRWMD approval before the wells may be used to supply water for the AES-Cedar-Bay CBCP cogeneration plant.

C. Maximum Annual Withdrawals

AESCB's CBCP's maximum annual withdrawals from the Floridan aquifer may not exceed 530.7 million gallons. Maximum daily withdrawals from the Floridan aquifer may not exceed 1.45 million gallons. The use of potable water from the Floridan aquifer for cooling purposes is prohibited. The use of potable water from the Floridan aquifer for control of fugitive dust emissions is prohibited when alternative water sources are available, such as treated wastewater, shallow aquifer wells or stormwater. The use of Floridan aquifer potable water for the sole purpose of waste stream dilution is prohibited.

D. --- Water Use Transfer

-----The SJRWMD must be notified, in writing, within 90-30 days of the transfer of this certification. All transfers are subject to the provisions of Section 40C-2.351, F.A.C., which state that all terms and conditions of the permit shall be binding of the transferee. any sale, conveyance, or other transfer of a well or facility from which the certified consumptive use is made or within 30 days of any transfer of ownership or control of the real property at which the certified consumptive use is located. All transfers of ownership or transfers of consumptive use certification are subject to the provisions of Section 40-C-1.612, F.A.C.

E. Emergency Shortages

Nothing in this certification is to be construed to limit the authority of the SJRWMD to declare a water shortage and issue orders pursuant to Section 373.175, Florida Statutes, or to formulate a plan for implementation during periods of water shortage, pursuant to Section 373.246, Florida Statutes. In the event of a water shortage, as is declared by the District Governing Board, the AESCB USG CBC shall adhere to reductions in water withdrawals as specified by the SJRWMD. water shortage

restrictions, as specified by SJRWMD to the extent the restrictions apply to all other similar users.

F. Monitoring and Reporting

1. a. The permittee shall maintain records of total daily withdrawals for the AESCB CBCP on a monthly basis for each year ending on December 31st. These records shall be submitted to the SJRWMD on Form EN-3 by January 31st of each year.

b. Prior to beginning water usage, all points where water is delivered to the SKC water supply or wastewater system for use at AESCB CBCP must be equipped with totalizing flow meters. Such meters must maintain a 95% accuracy, be verifiable and be installed according to the manufacturer's specifications.

c. AESCB CBC must maintain the required flow meter(s). In case of failure or breakdown of any meter or other flow measuring device, the SJRWMD must be notified in writing within 5 days of its discovery. A defective meter must be repaired or replaced within 30 days of its discovery.

d. Total withdrawals from each monitored source must be recorded continuously, totalled monthly, and reported to the SJRWMD at least every six months from the initiation of the monitoring using SJRWMD Form No. EN-50.

e. AESCB CBC must have all flow meters checked for accuracy once every 3 years within 30 days of the anniversary date of commencement of operation of the CBCP, and recalibrated if the difference between the actual flow and the meter reading is greater than 5%. SJRWMD Form No. EN-51 must be submitted to the SJRWMD within 10 days of meter inspection and calibration.

2. Water quality samples shall be taken in May and October of each year from each production well. The samples shall be analyzed by an HRS DER certified laboratory for the following parameters:

Magnesium	Sulfate
Sodium	Carbonate
Potassium	Bi-Carbonate (or alkalinity if pH is 6.9 or lower)
Chloride	Calcium

All major ion analyses shall be checked for anion/cation balance and must balance within 5 percent prior to submission. It is recommended that duplicates be taken to allow for laboratory

problems or loss. The sample analyses shall be submitted to the SJRWMD by May 30 and October 30 of each year.

3.---AESCB-USG shall mitigate any adverse impact caused by withdrawals permitted herein on legal uses of water existing at the time of permit application.---The SJRWMD has the right to curtail permitted withdrawal rates or water allocations if the withdrawals of water cause an adverse impact on legal uses of water which existed at the time of permit application.---Adverse impacts are exemplified but not limited to:---

-----a.---Reduction of well water levels resulting in a reduction of 10 percent in the ability of an adjacent well to produce water;---

-----b.---Reduction of water levels in an adjacent surface water body resulting in a significant impairment of the use of water in that water body;---

-----c.---Saline water intrusion or introduction of pollutants into the water supply of an adjacent water use resulting in a significant reduction of water quality; or

-----d.---Change in water quality resulting in either impairment or loss of use of a well or water body.

e. Legal uses of water existing at the time of certification application may not be significantly adversely impacted by the consumptive use for the CBCP. If unanticipated significant adverse impacts occur, the consumptive use shall be subject to modification in whole or in part to curtail or abate the adverse impacts, unless the impacts can be mitigated by the AESCB CBC.

4.---The AESCB-USG-CBC shall mitigate any adverse impact caused by withdrawals permitted herein on adjacent land uses which existed at the time of permit application.---The SJRWMD has the right to curtail permitted withdrawal rates of water allocations if withdrawals of water cause any adverse impact on adjacent land use which existed at the time of permit application. Adverse impacts are exemplified by but not limited to:---

-----a.---Significant reduction in water levels in an adjacent surface water body;---

-----b.---Land collapse or subsidence caused by a reduction in water levels; or

-----c.---Damage to crops and other types of vegetation.---

~~-----d. Significant increases in Chloride levels such that it is likely that wells from the plant or those being impacted from the plant, will exceed 250 mg/l.~~

~~Off-site land uses existing at the time of certification application may not be significantly adversely impacted as a result of the consumptive use for the CBCP. If unanticipated significant adverse impacts occur, the consumptive use shall be subject to revocation modification in whole or in part to curtail or abate the adverse impacts, unless the impacts can be mitigated by the AESCB CBC.~~

5. During the seventh year following issuance of this certification order, AES-Cedar-Bay USG CBC shall submit a report to SJRWMD, DER, and BRES D demonstrating compliance with these conditions of certification, Chapter 373, Florida Statutes, and the Rules of SJRWMD and DER, applicable to the consumptive use of water. Compliance shall be demonstrated with rules and statutory provisions in effect at that time.

SJRWMD shall evaluate the report and notify DER in a report of any issues regarding compliance with this certification and applicable rules and statutory provisions, including whether the consumptive use of water for the CBCP complies with those provisions of Chapter ~~of~~ 272, Florida Statutes, and DER's and SJRWMD's rules applicable to consumptive use and whether any conditions of certification must be amended, added or deleted in order insure that the referenced rules and statutory provisions. SJRWMD shall respond within 30 days of receipt of AESCB's CBCP's report as to whether or not it contains information sufficient to make a determination as to compliance with the referenced rules and statutory provisions. Thereafter, DER shall notify AESCB USG CBC and BRES D within ninety (90) days after DER's determination that AESCB's USG's CBC's report is sufficient. Section 40C-1.610, F.A.C., shall apply. An opportunity for hearing pursuant to Section 120.57, Florida Statutes, shall be afforded any party. In any hearing requested pursuant to this condition of certification, the burden of demonstrating compliance shall be on AESCB USG CBC. The continued consumptive use of water for the CBCP shall be dependent upon AESCB USG CBC demonstrating and presenting sufficient data to establish that its consumptive use meets the referenced rules on statutory provisions. The Board hereby delegates to the Secretary the authority to enter final orders regarding this condition in the event an administrative hearing is requested.

G. Ground Water Monitoring Requirements

After consultation with the DER, BRES D, and SJRWMD, AESCB CBCP shall install a monitoring well network to monitor ground water quality horizontally and vertically through the

aquifer above the Hawthorn Formation. Ground water quantity and flow directions will be determined seasonally at the site through the preparation of seasonal water table contour maps, based upon water level data obtained during the applicant's proportional monitoring program. From these maps and the results of the detailed subsurface investigation of site stratigraphy, the water quality monitoring well network will be located. A ground water monitoring plan that meets the requirements of Section 17-28.700(6)(d), F.A.C., shall be submitted to the Department's Northeast District Office for review. Approval or disapproval of the ground water monitoring plan shall be given within 60 days of receipt. Ground water monitoring shall be required at AESCB's CBCP pelletized ash storage area, each sedimentation pond, the lime mud storage area, and each coal pile storage area. Insofar as possible, the monitoring wells may be selected from the existing wells and piezometers used in the permittees preoperational monitoring program, provided that the wells construction will not preclude their use. Existing wells will be properly sealed in accordance with Chapter 17-21, F.A.C., whenever they are abandoned due to construction of facilities. The water samples collected from each of the monitor wells shall be collected immediately after removal by pumping of a quantity of water equal to at least three casing volumes. The water quality analyses shall be performed monthly during the year prior to commercial operation and quarterly thereafter. No sampling or analysis is to be initiated until receipt of written approval of a site-specific quality assurance project plan (QAPP) by the Department. Results shall be submitted to the BRESO by the fifteenth (15th) day of the month following the month during which such analyses were performed. Testing for the following constituents is required around unlined ponds or storage areas:

TDS	Cadmium
Conductance	Zinc
pH	Copper
Redox	Nickel
Sulfate	Selenium
Sulfite	Chromium
Color	Arsenic
Chloride	Beryllium
Iron	Mercury
Aluminum	Lead
	Gross Alpha

Conductivity shall be monitored in wells around all lined solid waste disposal sites, coal piles, and wastewater treatment and sedimentation ponds.

H. Leachate

1. Zone of Discharge

Leachate from AESCB's CBCP's coal storage piles, lime mud storage area or sedimentation ponds shall not cause or contribute to contamination of waters of the State (including both surface and ground waters) in excess of the limitations of Chapter 17-3, F.A.C., beyond the boundary of a zone of discharge extending to the top of the Hawthorn Formation below the waste landfill cell or pond rising to a depth of 50 feet at a horizontal distance of 200 feet from the edge of the landfill or ponds.

2. Corrective Action

When the ground water monitoring system shows a potential for this facility to cause or contribute to a violation of the ground water quality standards of Chapter 17-3, F.A.C., at the boundary of the zone of discharge, the appropriate ponds or coal pile shall be bottom sealed, relocated, or the operation of the affected facility shall be altered in such a manner as to assure the Department that no violation of the ground water standards will occur beyond the boundary of the zone of discharge.

V. CONTROL MEASURES DURING CONSTRUCTION

A. Storm Water Runoff

During construction, appropriate measures shall be used to settle, filter, treat or absorb silt-containing or pollutant-laden storm water runoff to limit the total suspended solids to 50 mg/l or less and pH to 6.0 to 9.0 at OSN 003 during rainfall events that are lesser in intensity than the 10-year, 24-hour rainfall, and to prevent an increase in turbidity of more than 29 NTU above background in waters of the State.

Control measures shall consist at the minimum of sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt- and sediment-laden runoff. The pH shall be kept within the range of 6.0 to 9.0 at OSN.003. Stormwater drainage to the Broward River ~~or St. Johns River~~ shall be monitored as indicated below:

<u>Monitoring Point</u>	<u>Parameters</u>	<u>Frequency</u>	<u>Sample Type</u>
*Storm water drainage to the Broward River from the runoff treatment pond	BOD5, TOC, suspended solids, turbidity, dissolved oxygen, pH, TKN, Total phosphorus, Fecal Coliform, Total Coliform	**	**
	Oil and grease	**	**

*Monitoring shall be conducted at suitable points for allowing a comparison of the characteristics of reconstruction and construction phase drainage and receiving waters.

**The frequency and sample type shall be as outlined in a sampling program prepared by the applicant and submitted at least ninety days prior to start of construction for review and approval by the DER Northeast District Office. The District Office will furnish copies of the sampling program to the BRESO and SJRWMD and shall indicate approval or disapproval within 60 days of submittal.

B. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the Department and the BRESO.

C. Environmental Control Program

Each permittee shall establish an environmental control program under the supervision of a qualified person to assure that all construction activities conform to good environmental practices and the applicable conditions of certification. A written plan for controlling pollution during construction shall be submitted to DER and BRESO within sixty days of issuance of the Certification. The plan shall identify and describe all pollutants and waste generated during construction and the methods for control, treatment and disposal. Each permittee shall notify the Department's Northeast District Office and BRESO by telephone within 24 hours if possible if unexpected harmful effects or evidence of irreversible environmental damage are detected by it during construction, shall immediately report in writing to the Department, and shall within two weeks provide an analysis of the problem and a plan to eliminate or significantly reduce the harmful effects or damage and a plan to prevent reoccurrence.

D. --- Construction Dewatering Effluent

-----Maximum daily withdrawals for dewatering for the construction of the railcar unloading facility must not exceed 0.288 million gallons.---

-----Dewatering for the construction of the railcar unloading facility shall terminate no later than nine months from the start of dewatering.---

-----Should the permittee's dewatering operation create shoaling in adjacent water bodies, the permittee is responsible for removing such shoaling.---

-----All offsite discharges resulting from dewatering activities must be in compliance with water quality standards required by DER Chapters 17-3 and 17-4, F.A.C.---

VI. SAFETY

The overall design, layout, and operation of the facilities shall be such as to minimize hazards to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions.

The Federal Occupational Safety and Health Standards will be complied with during construction and operation. The Safety Standards specified under Section 440.56, F.S., by the Industrial Safety Section of the Florida Department of Commerce will also be complied with.

VII. SCREENING

The AESCB (CBCP) shall provide screening of the site to the extent feasible through the use of aesthetically acceptable structures, vegetated earthen walls and/or existing or planted vegetation.

VIII. TOXIC, DELETERIOUS, OR HAZARDOUS MATERIALS

The spill of any toxic, deleterious, or hazardous materials shall be reported in the manner specified by Condition XI, Noncompliance Notification.

IX. SOLID WASTE STORAGE AND DISPOSAL

CBC shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the CBC facility. Solid waste produced by the

operation of the AESCB ~~HSG~~ CBC facility shall be removed from 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 BRESO 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 BRESO. 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 or use of any sludge generated by pretreatment of reclaimed Seminole Kraft wastewater or by the cooling water blowdown treatment or zero wastewater discharge system, AESCB CBC 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 CBC 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 CBC shall report to DER and RESD concerning the composition and quantity of sludge generated by the ~~cooling tower blowdown treatment zero water discharge system~~ and the method of disposal, including name and location of facilities handling, treating, storing, and/or disposing of said sludge waste.

X. CHANGE IN DISCHARGE

All discharges or emissions authorized herein to AESCB CBCP shall be consistent with the terms and conditions of this certification. The discharge of any pollutant not identified in the application or any discharge more frequent than, or at a level in excess of, that authorized herein shall constitute a violation of this certification. Any anticipated facility expansions, production increases, or process modification which will result in new, different or increased discharges or expansion in steam generating capacity will require a submission of new or

supplemental application to DER's Siting Coordination Office pursuant to Chapter 403, F.S.

XI. NONCOMPLIANCE NOTIFICATION

If, for any reason, either permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the Deputy Assistant Secretary of DER's Northeast District and BRESO office by telephone as soon as possible but not later than the first DER working day after the permittee becomes aware of said noncompliance, and shall confirm the reported situation in writing within seventy-two (72) hours supplying the following information:

A. A description and cause of noncompliance; and

B. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying event.

XII. FACILITIES OPERATION

Each permittee shall at all times maintain good working order and operate as efficiently as possible all of its treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification. Such systems are not to be bypassed without prior Department (Northeast District) approval and after notice to BRESO except where otherwise authorized by applicable regulations.

XIII. ADVERSE IMPACT

The permittees shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

XIV. RIGHT OF ENTRY

The permittees shall allow the Secretary of the Florida Department of Environmental Regulation and/or authorized

DER representatives, and representatives of the BRESO and SJRWMD, upon the presentation of credentials:

A. To enter upon the permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this permit; and

B. To have access to and copy all records required to be kept under the conditions of this certification; and

C. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or emissional pollutants; and

D. To assess any damage to the environment or violation of ambient standards.

E. SJRWMD authorized staff, upon proper identification, will have permission to enter, inspect, and observe permitted and related CUP CBCP facilities in order to determine compliance with the approved plans, specifications, and conditions of this certification.

F. BRESO authorized staff, upon proper identification, will have permission to enter, inspect, sample any discharge, and observe permitted and related facilities in order to determine compliance with the approved plans, specifications, and conditions of this certification.

XV. REVOCATION OR SUSPENSION

This certification may be suspended, or revoked pursuant to Section 403.512, Florida Statutes, or for violations of any Condition of Certification.

XVI. CIVIL AND CRIMINAL LIABILITY

This certification does not relieve either permittee from civil or criminal responsibility or liability for noncompliance with any conditions of this certification, applicable rules or regulations of the Department, or Chapter 403, Florida Statutes, or regulations thereunder. Subject to Section 403.511, Florida Statutes, this certification shall not preclude the institution of any legal action or relieve either permittee from any responsibilities or penalties established pursuant to any other applicable State Statutes or regulations.

XVII. PROPERTY RIGHTS

The issuance of this certification does not convey any property rights in either real or personal property, tangible or intangible, nor any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. The permittees shall obtain title, lease or right of use to any sovereign submerged lands occupied by the plant, transmission line structures, or appurtenant facilities from the State of Florida.

XVIII. SEVERABILITY

The provisions of this certification are severable, and, if any provision of this certification or the application of any provision of this certification to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of the certification shall not be affected thereby.

XIX. DEFINITIONS

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes, and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these general or special conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative, by the use of the commonly accepted meaning as determined by the Department.

XX. REVIEW OF SITE CERTIFICATION

The certification shall be final unless revised, revoked, or suspended pursuant to law. At least every five years from the date of issuance of this certification or any National Pollutant Discharge Elimination Control Act Amendments of 1972 for the plant units, the Department shall review all monitoring data that has been submitted to it or its agent(s) during the preceding five-year period for the purpose of determining the extent of the permittee's compliance with the conditions of this certification of the environmental impact of this facility. The Department shall submit the results of its review and recommendations to the permittees. Such review will be repeated at least every five years thereafter.

XXI. MODIFICATION OF CONDITIONS

The conditions of this certification may be modified in the following manner:

A. The Board hereby delegates to the Secretary the authority to modify, after notice and opportunity for hearing, any conditions pertaining to consumptive use of water, reclaimed water, monitoring, sampling, ground water, surface water, mixing zones, or variances to water quality standards, zones of discharge, leachate control programs, effluent limitations, air emission limitations, fuel, or solid waste disposal, right of entry, railroad spur transmission line, access road, pipelines, or designation of agents for the purpose of enforcing the conditions of this certification.

B. All other modifications shall be made in accordance with Section 403.516, Florida Statutes.

XXII. FLOOD CONTROL PROTECTION

The plant and associated facilities shall be constructed in such a manner as to comply with the Duval County flood protection requirements.

XXIII. EFFECT OF CERTIFICATION

Certification and conditions of certification are predicated upon design and performance criteria indicated in the application. Thus, conformance to those criteria, unless specifically amended, modified, or as the Department and parties are otherwise notified, is binding upon the applicants in the preparation, construction, and maintenance of the certified project. In those instances where a conflict occurs between the application's design criteria and the conditions of certification, the conditions shall prevail.

XXIV. NOISE

To mitigate the effects of noise produced by the steam blowout of steam boiler tubes, the permittees shall conduct public awareness campaigns prior to such activities to forewarn the public of the estimated time and duration of the noise. The permittees shall comply with the applicable noise limitations specified in Environmental Protection Board Rules or The City of Jacksonville Noise Ordinance.

~~11. Condition XXV. should read as follows:~~

XXV. USE OF WATER FOR COOLING PURPOSES

The AESCB CBCP shall use reclaimed wastewater from the Seminole Kraft paper mill (in addition to any wastewater generated by the AESCB CBCP that is suitable for reuse for that purpose) for cooling water supply. In the event of disruption of SKC reclaimed wastewater as the cooling water makeup source for Cedar Bay, Inc., Cedar Bay, Inc. will utilize the water retained in SKC's holding basins or other non-potable sources of water as cooling water makeup.

At least ~~six months~~ 90 days prior to beginning commercial operation, AESCB Cedar Bay Cogeneration, Inc. 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 CBCP 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 testing 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:~~

XXVI

June 22.
1992

Cedar Bay Cogeneration, Inc. 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 has been paid to the Nature Conservancy on (DATE) the date this Petition for Modification is was 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.

XXVII-----USE OF WATER FOR COOLING PURPOSES-----

-----The CBCP may use either surface water from the Broward or St. Johns River or reclaimed water provided either by the City of Jacksonville or by the Seminole Kraft Papermill as its source of cooling water makeup.

-----Within six months after issuance of certification, AESCB shall submit to DER an application for a modification containing information concerning the design and operation of the plant cooling system as appropriate for the cooling water source selected. The application shall also be submitted to SJRWMD and BRESO, who may report concerning the AESCB cooling water application modification. The AESCB application shall contain all information necessary to demonstrate that operation of the cooling system using either reclaimed or surface water for the preferred cooling water source selected will comply with all relevant non-procedural agency standards, or that AESCB qualifies for a variance. The AESCB application shall also include an analysis of the reasons for the selection of the requested cooling water source over the other preferred alternate sources referred to in the above paragraph. The participating agencies shall respond within 30 days of the receipt of the application modification as to whether or not it contains information sufficient to make a determination as to compliance with non-procedural agency standards. Thereafter, DER shall notify AESCB, BRESO, and SJRWMD as to its determination concerning sufficiency. SJRWMD and BRESO shall file any reports concerning the application with DER and provide a copy to AESCB within 60 days after DER's determination that the application is sufficient. DER shall indicate its approval or disapproval of the selected cooling water system proposal within 90 days of its determination that the application is sufficient. Any modifications of the certification or the conditions of certification including variances, exceptions, or mixing zones

shall be made pursuant to the procedures set forth in Section 403.516, Fla. Stat., and/or Fla. Admin. Code Rule 17-17.211.

Reclaimed water used in the AESCB cooling tower shall be disinfected prior to use. Disinfectant levels in the cooling tower makeup water shall be continuously monitored, prior to insertion in the cooling tower. The reclaimed water shall be treated so as to obtain no less than a 1.0 mg/l free chlorine residual after fifteen (15) minutes' contact time or its equivalent. Chlorination shall occur at a turbidity of 5 Nephelometric Turbidity Units (NTU) or less, unless a lesser degree of disinfection is approved by the Department upon demonstration of successful viral kill.

XXVII. ENFORCEMENT

A. The Secretary may take any and all lawful actions as he or she deems appropriate to enforce any condition of this certification.

B. Any participating agency (federal, state, local) may take any and all lawful actions to enforce any condition of this certification that is based on the rules of that agency. Prior to initiating such action the agency head shall notify the Secretary of that agency's proposed action.

C. BRESO may initiate any and all lawful actions to enforce the conditions of this certification that are based on the Department's rules, after obtaining the Secretary's written permission to so process on behalf of the Department.

XXVIII. ENDANGERED AND THREATENED SPECIES

Prior to start of construction, AESCB CBC shall survey the site for endangered and threatened species of animal and plant life. Plant species on the endangered or threatened list shall be transplanted to an appropriate area if practicable. Gopher Tortoises and any commensals on the rare or endangered species list shall be relocated after consultation with the Florida Game and Fresh Water Fish Commission. A relocation program, as approved by the FGFWFC, shall be followed.

XXVIII. PETROLEUM STORAGE TANKS

A. AES Cedar Bay shall provide clean up of the #1 underground diesel fuel storage tank site, which is listed under the EDI program, in accordance with F.A.C. Chapter 17-770. AES shall complete an Initial Remedial Action (IRA) in accordance with

Rule 17-770.300, F.A.C., prior to construction dewatering. DER and BRESO will receive written notification ten working days prior to initiation of the IRA. AES shall determine the extent of contamination. AES Cedar Bay shall then design and install a pump and treatment system at the site, which will create a reverse hydraulic gradient that will prevent the further spread of the contamination by the dewatering operation. This plan shall be submitted to DER and BRESO for approval thirty days prior to the start of construction dewatering, and shall be implemented prior to

commencement of the dewatering operation. Furthermore, AES Cedar Bay shall submit a Quality Assurance Project Plan (QAPP), a Contamination Assessment Report (CAR) and a Remedial Action Plan (RAP), in accordance with F.A.C. Chapter 17-770 to DER for approval with copies to BRESO thirty days prior to the start of construction dewatering. AES Cedar Bay shall provide complete site rehabilitation in accordance with F.A.C. Chapter 17-770.

B. AES Cedar Bay shall develop a QAPP, CAR, and RAP as required and in accordance with Chapter 17-1700, F.A.C. for the site listed in XXVIII, C and D below, and submit these plan to DER for approval with copies to BRESO thirty days prior to the start of construction dewatering.

C. Prior to construction dewatering, at the underground diesel fuel storage tank #2 site, AES Cedar Bay shall:

1. Perform an IRA with F.A.C. Rule 17-770.300.

2. Determine the extent of down-gradient contamination and submit that information to BRESO, and DER prior to installation of the well described in paragraph C.4 below.

3. Establish a series of groundwater level monitoring wells at intervals of approximately 250 feet from the coal unloading site to the #2 tank for determination of the groundwater dewatering cone of influence. Daily groundwater levels shall be recorded for each of these wells during construction dewatering. A background well with a continuous water level recorder shall be installed, at a site that would not be influenced by the dewatering operations, to determine ambient conditions at the site.

4. Install a monitoring well with a continuous water level recorder which will be used to trigger implementation of the RAP. The well will be located 150 feet down gradient from the boundary of the plume of contamination determined above in XXVII C.2. If the piezometric head in the trigger well drops 6 inches below ambient conditions as compared to the background well, then AES Cedar Bay shall notify DER and BRESO of a verified drop of 6 inches or more in the trigger well within three working days and

the appropriate portion of the RAP shall be implemented by AES Cedar Bay:

-----5.-----AES Cedar Bay shall submit a plan for the location and construction of the monitoring wells described above in paragraph C.3 and C.4 to DER and BRESO for approval. AES Cedar Bay shall submit monthly reports of the groundwater level recordings to DER and BRESO:

-----D.-----Prior to construction dewatering, at each of the following tank sites: underground diesel fuel storage tank #3; underground #6 fuel oil storage tank #5; above ground #6 fuel oil storage tank #2; "pitch tank" located North of the lime kilns; AES Cedar Bay shall:

-----1.-----Install 2 down gradient monitoring wells. AES Cedar Bay shall submit a plan for location and construction of these 8 wells to DER and BRESO for approval. BRESO shall have the opportunity to observe the construction of these wells:

-----2.-----Sample the above referenced wells for parameters listed in 17-770.600(8)-F.A.C. In addition, AES Cedar Bay shall sample the monitoring wells at the above ground tank sites for acetone and carbon disulfide. AES Cedar Bay shall split samples with BRESO if BRESO so requests and submit a report of the analytical results to DER and BRESO within ten days of receipt of analyses by AES Cedar Bay:

-----3.-----If contamination is found in the above referenced wells in excess of the clean up criteria referenced in 17-770.730(5)(a)2.; F.A.C.; a QAPP, CAR and an RAP will be developed and, DER and BRESO shall be provided with that information prior to the installation of the well described in paragraph D.4 below:

-----4.-----Install a trigger well with a continuous water level recorder which will be located 150 feet down gradient from the boundary of the plume of contamination determined above in XXVIII.D.3. If the piezometric head in the trigger well drops 6 inches below ambient conditions as compared to the background well then AES Cedar Bay shall notify DER and BRESO of a verified drop of 6 inches or more in the trigger well within three working days and the appropriate portion of the RAP shall be implemented by AES Cedar Bay:

-----5.-----AES Cedar Bay shall submit a plan for the location and construction of the monitoring wells described above in paragraph D.4.; to DER and BRESO for approval. AES Cedar Bay shall submit monthly reports of the groundwater level recordings to DER and BRESO:

-----E.-----Implementation of the appropriate portion of the RAP shall commence within 14 days of the determination that the construction dewaterings cone of depression will reach any of contaminated sites.

-----F.-----AES Cedar Bay shall monitor the construction dewatering effluent from their treatment system, once a week during dewatering, for the following criteria: Benzene 1 ug/l; Total VOA 50 ug/l; Total Naphthalenes (Total naphthalenes + methyl naphthalenes) 100 ug/l; and Total Residual Hydrocarbons 5 mg/l; and polynuclear aromatic hydrocarbons, 10 ug/l.-----If the concentrations of contaminants in the effluent rise above those in the above list, AES Cedar Bay shall take corrective actions to return concentrations to acceptable levels.-----In monitoring the dewatering effluent for the above contaminants, AES Cedar Bay shall use the methods prescribed in Chapter 17-770.600(8)(b); F.A.C.

-----G.-----If any disagreement arises regarding this condition, the parties agree to submit the matter for an expedited hearing to the DOAH and shall request assignment of the Hearing Officer who has heard this case, if possible, pursuant to 403.5064; F.S.-----The informal dispute resolution process shall be used.

-----H.-----Nothing in this condition shall affect the eligibility of reimbursement for clean up of any site under EDI program.

-----I.-----Reinjection or infiltration of groundwater meeting the petroleum contamination clean up criteria into the same zone from which it was extracted pursuant to any of the approved remedial action plans shall be permitted and is hereby authorized by this condition.-----The proposed location of the recharge system shall be upgradient of the site and included in the plans for remedial action referenced in

-XXVIII-A.- and -B.-

-----XXIX.-----Environmentally Endangered Lands

-----AESCB/USG 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 was paid to the Nature Conservancy on June 22, 1992.-----The sum of \$2,500,000 will be paid to the Nature Conservancy on the date that the CBCP begins commercial operations.-----Beginning one year after the start of commercial operation of the CBCP 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.-----

XXIX. TRANSFER OF CERTIFICATION

If the Cedar Bay Cogeneration Project is sold or legally transferred to another owner, notice of such sale or transfer shall immediately be submitted to the Florida Department of Environmental Regulation and the agency parties to this certification by the previous certification holder (permittee) and the assignee. Included in the notice shall be the identification of the entity responsible for compliance with the Certification. Any assignment or transfer shall carry with it the full responsibility for the limitations and conditions of this Certification.

U.S. Generating Company

March 4, 1993

Mr. Hamilton S. Oven, Jr.
Siting Coordination Office
Department of Environmental Regulation
2600 Blair Stone Road, Room 612
Tallahassee, FL 32399

RECEIVED

MAR 05 1993

Division of Air
Resources Management

Re: Cedar Bay Cogeneration Project, PA-88-24
Doah Case No. 88-5740

Dear Buck:

Attached are additional analyses which supplement the Control Technology Assessment (Section 4 of ENSR Consulting and Engineering's February, 1993, Air Quality Analysis). This supplementary information covers two issues:

Attachment 1: Derating effect of controlling nitrogen oxides (NO_x) emission to 0.11 lb/mmBtu: The first attachment addresses the cost effectiveness of derating the boiler to augment the effort to obtain lower NO_x emission rates from the CBCP by increasing the amount of ammonia injected to the SNCR system. Section 4 of the ENSR report indicated that the increased ammonia alone would impose a cost penalty of about \$3,500 per ton under the assumption that this could reduce the NO_x emissions rate to 0.11 lb/MMbtu. As the attached memo indicated, 0.12 lb/MMbtu is the lowest emission rate expected to be achievable at the CBCP, even after derating the boiler, given the nitrogen content of fuel. As a result, the \$3,500 per ton number may understate the cost associated with increased ammonia levels. In any event, when this figure is combined with the cost of about \$6,500 per ton of NO_x removed through derating of the boiler, the total cost of achieving this reduced level of emissions is greater than \$10,000 per ton. Even assuming that reductions of this magnitude could be achieved, they would not be cost-effective.

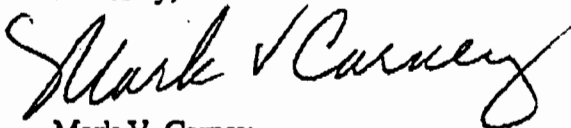
Attachment 2: Economics of using a lower sulfur coal to achieve lower sulfur dioxide (SO₂) emissions: The second attachment summarizes our evaluation of various alternative coal supplies for the CBCP. As you will note, two of these—Columbian and Eastern Kentucky—would result in a net increase in SO₂ emissions compared with the Costain Kentucky coal currently planned for the CBCP. For the others, the incremental costs per ton of potential SO₂ reductions range from about \$9,000 to \$34,000. This

Mr. Hamilton S. Oven, Jr.
March 4, 1993
Page 2

analysis shows that, aside from the potential logistical and operation difficulties the use of these coals might pose for the CBCP, none of them offers a cost effective means of reducing SO₂ emissions. [In light of DER's prior determinations regarding the cost-effectiveness of efforts to reduce SO₂ emissions, none of these values is low enough to warrant a change to the CBCP coal supply.]

Please call me if you have any questions about this additional information.

Sincerely,



Mark V. Carney
Manager, Environmental Permitting

MVC/dbr

cc: K. Fickett
G. Sams



U.S. Generating Company

Memorandum

To: M. V. Carney
Date: March 4, 1993
Subject: Cedar Bay - NO_x Emissions
From: Gary F. Weidinger
Copies: S. Jelinek, ENSR
M. Teague, Hunton & Williams
A. Nawaz, BPC
G. P. Sams
File:

The Cedar Bay Cogeneration Project currently has emissions guarantees of 0.17 #/10⁶ Btu. I have evaluated an alternate that reduces our capacity to an equivalent level as Barbers Point and employs anhydrous ammonia to achieve a potential emission rate of 0.12 #/10⁶ Btu. Cedar Bay is expected to be limited to 0.12 #/10⁶ Btu NO_x emissions at the reduced output due to differences in the fuel nitrogen content between Barbers Point and Cedar Bay.

The results indicate that the cost of achieving this reduction is estimated to be at least \$6,581 per ton removed.

In addition, it is important to note that our contractor has not been willing to offer guarantees at this level and that the conversion from aqueous to anhydrous ammonia would involve several public safety issues.

GFW:cmb

ATTACHMENT 2

CEDAR BAY PROJECT
COAL COST COMPARISON

		Powder River	Utah	Green River	Columbian	Eastern Kentucky	Eastern Kentucky	Costain Alabama	Costain Kentucky
Moisture	%	30.00	7.00	10.00	12.00	9.00	9.00	8.00	9.00
Ash	%	8.00	11.00	10.00	15.00	12.00	12.00	9.00	12.00
Sulfur	%	0.60	0.70	0.80	1.20	1.20	0.75	1.00	1.20
SO2	Lbs/mmBtu	1.48	1.27	1.52	2.12	2.00	1.25	1.60	1.87
Heat Cont.	Btu/lb	8200	11000	10500	11310	12000	12000	12500	12200
V.M.	%	35.00	40.00	40.00	23.00	35.00	35.00	31.00	-
Price	\$/Ton	41.00	60.00	63.00	51.58	47.75	50.75	49.75	42.96
Price	\$/mmBtu	2.50	2.73	2.62	2.28	1.99	2.11	1.99	1.79
Coal	T/hr	194.45	144.95	151.88	140.98	132.88	132.88	127.68	130.70
Ash	T/hr	15.66	15.95	15.19	21.16	15.85	15.95	11.48	15.88
Ca/S Ratio		6.00	4.80	4.60	3.50	3.50	4.70	3.70	3.50
Limestone	T/hr	21.28	18.41	18.82	19.96	18.80	15.78	15.90	18.49
SO2	T/hr	2.10	1.83	2.19	3.05	2.87	1.79	2.30	2.82
Total Waste	T/hr	30.42	27.61	28.67	36.16	30.09	27.21	23.32	28.80
Coal	\$/hr	7972.50	8697.27	8048.43	7271.82	6344.78	8743.41	6346.11	6614.73
Limestone	\$/hr	258.99	199.86	229.09	242.73	228.78	192.01	193.48	225.03
Waste	\$/hr	773.70	702.26	729.00	819.54	765.29	691.83	692.81	752.75
Total	\$/hr	9005.18	8599.18	9006.51	8434.09	7338.85	7627.24	7132.50	6592.60
Evaluated	\$/mmBtu	2.82	3.01	2.82	2.64	2.30	2.39	2.24	2.07
SO2 Emissions	T/hr	0.233	0.203	0.243	0.338	0.319	0.199	0.255	0.314
Emission Reduction	T/hr	0.080	0.111	0.071	-0.025	-0.005	0.114	0.069	0.000
Reduction Cost	\$/Ton	30,034	27,152	34,144	-	-	9,048	9,222	-

Notes:

Ash disposal costs for Columbian coal assumed to be \$31/Ton - no back-haul saving
 Columbian analysis is the Suspension Analysis
 Cost for Columbian coal = Average price for 1/92 - 6/92 per FERC Form 423(\$36.58/ton)
 plus \$15/ton transportation to Cedar Bay
 Alabaman coal analysis assumed to be same as Indiantown contract
 Alabaman coal price based on separate contract, not Costain back-up
 Costain Kentucky price assumed to be the same as SJRPP = \$1.79/mmBtu per pro forma (\$42.96/ton)
 Ash disposal cost = \$25.43/Ton per pro forma
 Limestone cost = \$12.17/Ton per pro forma
 Prices as of end 1992
 Actual average SJRPP price for 1/92 - 6/92 was \$41.45/ton which includes foreign deliveries
 SO2 removal = 90%

I. GENERAL

The construction and operation of CBCP shall be in accordance with all applicable provisions of at least the following regulations of the Department: Chapters ~~17-27~~, 17-210, 17-296, 17-297, 17-302, 17-4, 17-5276, 17-601, 17-702, 17-312, 17-21532, 17-22550, 17-555, 17-25, and 17-610, 17-660, and 17-772, Florida Administrative Code (F.A.C.) or their successors as they are renumbered.

II. AIR

The construction and operation of AESCB shall be in accordance with all applicable provisions of Chapters 17-296, and 17-297, F.A.C.. In addition to the foregoing, AESCB shall comply with the following conditions of certification as indicated.

A. Emission Limitations for AES CBCP 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 wood waste, nor will it be equipped with wood waste handling and firing equipment.~~ The maximum charging rate to each of two CFBs of short-fiber recycle rejects from the SK recycling process shall not exceed 150 dry TPD, 54,750 dry TPY. This reflects a combined total of 300 dry TPD, and 109,500 dry TPY for the two CFBs that fire recycle rejects. The third CFB will not utilize recycle rejects, nor will it be equipped with handling and firing equipment for recycle rejects.

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%~~ 1.2% by weight on an annual basis. The sulfur content shall not exceed ~~3.3%~~ 1.7% 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%~~ 0.05% by weight. The fuel oil ~~or natural gas~~ shall normally only be used only for startups. During the first-year-of commercial operation the maximum annual oil usage shall not exceed ~~350,000~~ 1,900,000 gals./year, ~~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 gas shall not exceed ~~±±20~~ 380 MMBtu/hr. for each 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, CBCP 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, USG 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 ascertain whether the CFBs can burn the rejects as as 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 and without violating any other environmental requirements. CBCP shall notify DER and the Regulatory and Environmental Services Department (RESD) at least thirty (30) days prior to initiation

of the test burn. The results of the test burn and CBCP'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 CBCP within thirty (30) days thereafter of its approval or disapproval of any conclusion by CBCP that the test burn demonstrated that the rejects can be burned in compliance with this Condition of Certification.

2. Coal Fired Boiler Controls

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

- a. Limestone injection and fuel sulfur limitations, for control of sulfur dioxide and acid gases.
- b. Baghouse, for control of particulate matter and trace metals.
- c. CBCP 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, HSG CBCP shall conduct a test on one CFB to compare mercury emissions to the atmosphere with and without carbon injection. If the mercury emissions

from the tested CFB are reduced by fifty (50) percent or more over final emissions without carbon injection, then USG CBCP 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 CBCP shall not be required to install or operate a carbon injection system for any of its CFBs, nor to conduct further testing of carbon injection.

d. Selective Non-catalytic Reduction (SNCR) for control of NOx

e. Good combustion characteristics, which are an inherent part of the CFB technology, for control of carbon monoxide and volatile organic compounds.

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	202	823	2468
NOx	0.29	308.3	1256	3767
SO ₂	0.60 (3-hr-avg.)	637.8	--	--
	0.31	329.5	1338	4015
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	0-276	-1-13	3-4
Beryllium	0-00011	0-117	0-5	1-5

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

<u>Pollutant</u>	<u>lbs/MMBtu</u>	<u>Emission Limitations</u>		
		<u>lbs/hr.</u>	<u>TPY</u>	<u>TPY for 3 CFBS</u>
<u>CO</u>	<u>0.175¹</u>	<u>186¹</u>	<u>758</u>	<u>2273</u>
<u>NOx</u>	<u>0.171</u>	<u>180.7¹</u>	<u>736.1</u>	<u>2208</u>
<u>SO₂</u>	<u>0.24²</u>	<u>255.1²</u>	<u>--</u>	<u>--</u>
	<u>0.20³</u>		<u>866</u>	<u>2598</u>
<u>VOC</u>	<u>0.015</u>	<u>16.0</u>	<u>65</u>	<u>195</u>
<u>PM</u>	<u>0.018</u>	<u>19.1</u>	<u>78</u>	<u>234</u>
<u>PM₁₀</u>	<u>0.018</u>	<u>19.1</u>	<u>78</u>	<u>234</u>
<u>H₂SO₄ mist</u>	<u>4.66e-04</u>	<u>0.50</u>	<u>2.0</u>	<u>6.1</u>
<u>Fluorides</u>	<u>7.44e-04</u>	<u>0.79</u>	<u>3.2</u>	<u>9.7</u>
<u>Lead</u>	<u>6.03e-05</u>	<u>0.06</u>	<u>0.26</u>	<u>0.78</u>
<u>Mercury</u>	<u>2.89e-05</u>	<u>0.03</u>	<u>0.13</u>	<u>0.38</u>
<u>Beryllium</u>	<u>8.70e-06</u>	<u>0.027</u>	<u>0.4</u>	<u>0.11</u>

[Note: TPY represents a 93% capacity factor.]

- 1 Eight hour rolling average.
- 2 Three-hour rolling average.
- 3 Twelve-Month rolling average (MRA).

4. Ammonia (NH) slip from exhaust gases shall not exceed 10 ppmvd when burning coal at 100% capacity and 30 ppmvd when burning oil.

~~4~~ 5. Visible emissions (VE) shall not exceed 20% opacity (6 min. average), except for one 6 minute period per hour when VE shall not exceed 27% opacity.

~~5~~ 6. Compliance with the emission limits shall be determined by EPA reference method tests included in the July 1, 1988 version of 40 CFR Parts 60 and 61 and listed in Condition No. 7 of this permit or by equivalent methods after prior DER approval.

~~6~~ 7. 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.

~~7~~ 8. Compliance Tests for each CFB

a. Initial compliance tests for PM/PM₁₀, SO₂, NO_x, CO, VOC, lead, fluorides, ammonia, mercury, beryllium and H₂SO₄ mist shall be conducted in accordance with 40 CFR 60.8 (a), (b), (d), (e), and (f).

b. Annual compliance tests shall be performed for PM, SO₂ and NO_x, commencing no later than 12 months from the initial test.

c. Initial and annual visible emissions compliance tests shall be determined in accordance with 40 CFR 60.11(b) and (e).

d. The compliance tests shall be conducted between 90-100% of the maximum licensed capacity and firing rate of for each permitted fuel.

e. The following test methods and procedures of 40 CFR Parts 60 and 61 or other DER approved methods with prior DER approval shall be used for compliance testing:

- (1) Method 1 for selection of sample site and sample traverses.
- (2) Method 2 for determining stack gas flow rate.
- (3) Method 3 or 3A for gas analysis for calculation of percent O₂ and CO₂.
- (4) Method 4 for determining stack gas moisture content to convert the flow rate from actual standard cubic feet to dry standard cubic feet.
- (5) Method 5 or Method 17 for particulate matter.
- (6) Method 6, 6C, or 8 for SO₂.

- (7) Method 7, 7A, 7B, 7C, 7D, or 7E for nitrogen oxides.
- (8) Method 8 for sulfuric acid mist.
- (9) Method 9 for visible emissions, in accordance with 40 CFR 60.11.
- (10) Method 10 for CO.
- (11) Method 12 or 101A for lead.
- (12) Method 13A or 13B for fluorides.
- (13) Method 19 for sulphur dioxide removal efficiency pursuant to 40 CFR 60.48a.
- ~~(14)~~ (14) Method 18 or 25A for VOCs.
- ~~(15)~~ (15) Method 101A, EPA Method 29 or 108 for mercury.
- ~~(15)~~ (15) Method 104 for beryllium.
- (17) Method 201 or 201A for PM10 emissions.
- ~~(18)~~ Method _____ for NH₃.

8. 9. Continuous Emission Monitoring for each CFB

AESEB CBCP shall use Continuous Emission Monitoring

Systems (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 as may be specifically authorized by DER.

a. Each continuous emission monitoring system (CEMS) shall meet performance specifications of 40 CFR 60, Appendix B.

b. CEMS data shall be recorded and reported in accordance with Chapter 17-297, F.A.C., and 40 CFR 60.49a and 60.7. A record shall be kept for periods of startup, shutdown and malfunction.

c. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

d. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation and operation of all CEMS.

e. Opacity monitoring system data shall be reduced to 6-minute averages, based on 36 or more data points, and gaseous CEMS data shall be reduced to 1-hour averages, based on 4 or more data points, in accordance with 40 CFR 60.13(h).

f. For purposes of reports required under this certification, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. 10 herein, which exceeds the applicable emission limit in Condition No. 3.

~~9~~ 10. 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. Recycle rejects usage on a volumetric basis shall be estimated for each 24-hour period in which rejects are burned.

~~10~~ 11. Reporting for each CFB

a. A minimum of thirty (30) days prior notification of compliance test shall be given to DER's N.E. District office and to the BRESA (Bio-Environmental Services Division) office, in accordance with 40 CFR 60.8.

b. The results of compliance test shall be

submitted to the BRESO office within 45 days after completion of the test.

c. The owner or operator shall submit excess emission reports to BRESO, in accordance with 40 CFR 60. The report shall include the following:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions (40 CFR 60.7(c)(1)).

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted (40 CFR 60.7(c)(2)).

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments (40 CFR 60.7(c)(3)).

(4) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report (40 CFR 60.7(c)(4)).

(5) The owner or operator shall maintain a file of all

measurements, including continuous monitoring systems performance evaluations; monitoring systems or monitoring device calibration; checks; adjustments and maintenance performed on these systems or devices; and all other information required by this permit recorded in a permanent form suitable for inspection (40 CFR 60.7(d) (e)).

d. Annual and quarterly reports shall be submitted to BRESO as per F.A.C. Rule 17-2-700(7) 297.450.

~~11~~ 12. Any change in the method of operation, fuels utilized, equipment, or operating hours or any other changes pursuant to F.A.C. Rule 17-212.100, defining modification, shall be submitted for approval to DER's Bureau of Air Regulation.

B. AES CBCP - Material Handling and Treatment

1. The material handling and treatment operations including coal and limestone unloading buildings, coal and limestone reclaim hoppers, coal crusher house, limestone dryer, fly and bed ash silos, ash pelletizer, pellet curing silo, coal and limestone day silos, conveyors, storage areas and related equipment, may be operated continuously, i.e. 8760 hrs/yr, except that the limestone crushers/dryers may be operated for no more than 8 hours per day at maximum capacity on an annual average.

2. The material handling/usage rates for coal, limestone, fly ash, and bed ash shall not exceed the following:

Material	Handling/Usage Rate	
	TPM	TPY
Coal	117,000	1,170,000
Limestone	27,000	320,000
Fly Ash	28,000	336,000
Bed Ash	8,000	88,000

Note: TPM is tons per month based on 30 consecutive days, TPY is tons per year.

3. The VOC emissions from the maximum No. 2 fuel oil utilization rate of 240 gals/hr., ~~2,100,000~~ and 750,000 gals/year for the limestone dryers; and 8000 gals/hr., ~~160,000~~ and 1,900,000 gals/year for the three boilers are not expected to be significant.

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

Particulate Emissions		
Source	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-----	0.06-----	0.25-----
-----Common-Feed-Hopper-----	0.03-----	0.13-----
----- <u>Ash-Unloader</u> -----	<u>0.01-----</u>	<u>0.06-----</u>

4. Material handling sources shall be regulated as follows:

a. The material handling and treatment area sources with either fabric filter or baghouse controls are as follows:

Coal Crusher Building

Coal Silo Conveyor

Limestone Pulverizer/Conveyor

Limestone Storage Bin

Bed Ash Hopper

Bed Ash Silo

Fly Ash Sil

Bed Ash Bin

Fly Ash Bin

Pellet Vibratory Screen

Pelletizing Ash Recycle Tank

Pelletizing Recycle Hopper

Cured Pellet Recycle Conveyor

Pellet Recycle Conveyor

The emissions from the above listed sources are subject to the particulate emission limitation requirement of 0.03 gr/dscf.

b. The PM emissions from the following process, equipment, and/or facility in the material handling and treatment area sources shall be controlled using wet suppression/removal techniques as follows:

Coal Car Unloading

Ash Pellet Hydrator

Ash Pellet Curing Silo

Ash Pelletizing Pan

~~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 BRESB 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 BRESB, based on other information, has reason to believe the particulate emission limits are being violated.~~

5. Visible Emissions (VE) shall not exceed 5% opacity from any source in the material handling and treatment area listed in Condition II. B.4., in accordance with F.A.C. Chapter 17-296. Neither DER nor RESD 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 RESD, based on other information, has reason to believe the particulate emission limits are being violated.

6. The maximum emissions from each of the limestone dryers while using oil shall not exceed the following (based on AP-42 factors, Table 1, 3-1, Industrial Distillate, 10/86):

Estimated Limitations

Pollutant	lbs/hr.	TPY	TPY for 2 dryers
PM/PM ₁₀	0.25 <u>0.24</u>	1.1 <u>0.32</u>	2.2 <u>0.64</u>
SO ₂	5.00 <u>0.85</u>	21.9 <u>1.15</u>	43.8 <u>2.3</u>
CO	0.60	2.6 <u>0.81</u>	5.2 <u>1.62</u>
NOx	2.40	10.5 <u>3.25</u>	21.0 <u>6.5</u>
VOC	0.05	0.2 <u>0.06</u>	0.4 <u>0.12</u>

Visible emissions from the dryers shall not exceed 5% opacity. ~~If natural gas is used, emissions limits shall be determined by factors contained in AP-42 Table 1-4-1, Industrial 10/86.~~

7. The maximum No. 2 fuel oil with maximum sulfur content of .05% by weight firing rate for each limestone dryer shall not exceed 120 gals/hr., or ~~1,050,000~~ 350,400 gals/year. This reflects a combined total fuel oil firing rate of 240 gals/hr., and ~~2,100,000~~ 700,800 gals/year, for the two dryers. ~~The maximum natural gas firing rate for each limestone dryer shall not exceed 16,800 CF per hour, or 147 MCF per year.~~

8. Initial and annual Visible Emission compliance tests for all the emission points in the material handling and treatment area, including but not limited to the sources specified in this permit, shall be conducted in accordance with the July 1, 1988 version of 40 CFR 60, using EPA Method 9.

9. Compliance test reports shall be submitted to BRESD

within 45 days of test completion in accordance with Chapter 17-2-700(7) 297.450 of the F.A.C.

10. Any changes in the method of operation, raw materials processed, equipment, or operating hours or any other changes pursuant to F.A.C. Rule 17-212.100, defining modification, shall be submitted for approval to DER's Bureau of Air Regulation (BAR).

C. Requirements For the Permittees

1. Beginning one month after certification, AESEB CBCP shall submit to BRESD and DER's BAR, a quarterly status report briefly outlining progress made on engineering design and purchase of major equipment, including copies of technical data pertaining to the selected emission control devices. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of any such device. Such disapproval shall be issued within 30 days of receipt of the technical data.

2. The permittees shall report any delays in construction and completion of the project which would delay commercial operation by more than 90 days to the BRESD office.

3. Reasonable precautions to prevent fugitive particulate emissions during construction, such as coating of roads and construction sites used by contractors, regrassing or watering areas of disturbed soils, will be taken by the permittees.

4. Fuel shall not be burned in any unit unless the control devices are operating properly, pursuant to 40 CFR Part 60 Subpart Da.

5. The maximum sulfur content of the No. 2 fuel oil utilized in the CFBS and the two unit limestone dryers shall not exceed 0.3 percent by weight. Samples shall be taken of each fuel oil shipment received and shall be analyzed for sulfur content and heating value. Records of the analyses shall be kept a minimum of two years to be available for DER and BRESID inspection.

6. Coal fired in the CFBS shall have a sulfur content not to exceed ~~3.3~~ 1.7 percent by weight on a shipment (train load) basis. Coal sulfur content shall be determined and recorded in accordance with 40 CFR 60.47a.

7. AESEB USG shall maintain a daily log of the amounts and types of fuel used and copies of fuel analyses containing information on sulfur content and heating values.

8. The permittees shall provide stack sampling facilities as required by Rule ~~17-2-700(4)~~ 297.345 F.A.C.

9. Prior to commercial operation of each source CFB, the permittees shall each submit to the BAR a standardized plan or procedure that will allow that permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible.

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, ~~within 90 days of written confirmation by DER of the successful~~ ^{upon} completion of the initial compliance tests on the AESEB CBCP 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. BRESO 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.

Seminole Kraft Corporation may construction natural gas-fired steam boilders at the SK mill provided that emissions from the generation of steam generated by Seminole Kraft for its own use shall not exceed the following on an annual basis nor shall steam generation exceed 375,000 lbs./hr. when burning oil:

Tons Per Year

<u>CO</u>	<u>157</u>	563
<u>NO</u>	<u>449</u>	310

SO2 765 41

E. Mercury Control Test Program

USG shall conduct a mercury control test program on one unit of the CBCP. The test program will include the testing of carbon injection between the boiler and the fabric filter. Carbon forms to be tested may include activated carbon with or without additives and pulverized coal with or without additives. USG after consultation with the DER, RESD and EPR¹ shall submit a mercury control test protocol to DER for approval by December 1, 1993. The test shall be conducted within 240 days of achieving commercial operation of the CBCP. Results of the test shall be submitted to the DER within 90 days of completion.

III. WATER DISCHARGES

Any discharges into any waters of the State during construction and operation of AESCB shall be in accordance with all applicable provisions of Chapters 17-301, 17-302 and 17-660, F.A.C., and 40 CFR, Part 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category, except as provided herein. Also, AESEB CBCP shall comply with the following conditions of certification:

A. Plant Effluents and Receiving Body of Water

For discharges made from the AESEB CBCP power plant the following conditions shall apply:

PREFACE

The Air Quality Analysis prepared by ENSR Consulting and Engineering is separated into five sections. The first two sections show that, on balance, the air quality impacts of the CBCP as proposed to be modified and the addition of the three proposed package boilers scheduled for the Seminole Kraft facility necessary to provide 640,000 pounds of steam per hour are less than the air quality impacts of the Seminole Kraft recycling operation without the CBCP and that the air quality impacts of the CBCP as proposed to be modified along with the three proposed package boilers at full capacity will be less than Cedar Bay as certified. The third section demonstrates that the CBCP as proposed to be modified will comply with certain nonprocedural agency standards. The fourth section presents a review of air emission control technologies. The fifth section demonstrates that the CBCP as proposed to be modified will not adversely impact soils, vegetation or visibility.

In Section 1, "Net Emissions Changes," the total annual tons of pollutants emitted are compared. This comparison is presented in terms similar to those used in the presentation before the Siting Board regarding issuance of the Board's Order Instituting Modification Proceedings.

In Section 2, "Net Air Quality Impacts," dispersion modeling of the air quality impacts at multiple receptor points is compared to demonstrate the net air quality improvement associated with the CBCP.

In Section 3, "The CBCP's Compliance with Prevention of Significant Deterioration (PSD) Increments and Ambient Air Quality Standards (AAQS), and Comparison to Draft Air Toxics No Threat Levels (NTLs)," information is presented to demonstrate that the CBCP as proposed to be modified will comply with PSD increments and AAQS, both of which are nonprocedural agency standards. For informational purposes, air quality impacts due to the air toxic emissions of the CBCP are compared to Florida's draft air toxics NTLs.

In Section 4, "Control Technology Assessment," a review of the air emissions control technologies and emission rates proposed for the combustion sources and aggregate materials handling equipment at the CBCP is presented. This section contains technical and economic analyses of the controls for air emission sources for the project. For the circulating fluidized bed boilers, these controls include: boiler design and selective non-catalytic reduction for control of nitrogen oxides, fabric filtration for control of particulate matter and trace metals, boiler design and operation for control of carbon monoxide and volatile organic compounds, and limestone injection for control of sulfur dioxide and acid gases.

TOTAL STEAM CAPACITY OF SKCG 3 NEW PACKAGE BOILERS IS 436,750 LB/HR IF WE ADD THE 380,000 LB FROM CBCP, TOTAL IS 816,750 LB VS. 640,000 LB

HOW WILL THIS AFFECT IMPACT ANALYSIS OF CBCP?

(NOTE: IT MAY BE OFFSET BY THE FACT THAT CBCP WAS PROBABLY MODELED USING THE ASSUMPTION OF OIL FIRING FULL TIME.)

Section 5, "Additional Analyses", demonstrates that the CBCP will not have an adverse impact on soils, vegetation, or visibility in either the area surrounding the facility, the Timucuan Preserve or the two PSD Class I areas: the Okefenokee and Wolf Island Wilderness Areas. This section also demonstrates that the CBCP cooling tower will not cause any significant fogging or icing on nearby transportation routes.

EXECUTIVE SUMMARY

The objective of the information presented in this document is to provide data useful for assessing:

- 1) whether, on balance, the air pollutant emissions and air quality impacts of the Cedar Bay Cogeneration Project (CBCP), as proposed to be modified, and the addition of the three new proposed package boilers scheduled for the Seminole Kraft Corporation (SKC) site necessary to provide 640,000 lb. of steam per hour for SKC's use, will be less than the emissions and air quality impacts of the (future SKC recycling operation,) providing 640,000 lb. of steam per hour for SKC's use without the CBCP.
- 2) whether, on balance, the permitted air pollutant emissions and air quality impacts of the CBCP, as proposed to be modified, and the addition of the three new proposed package boilers scheduled for the SKC site at their permitted capacity, will be less than the emissions and air quality impacts of the CBCP as certified;
- 3) whether, on balance, the permitted air pollutant emissions and air quality impacts of the CBCP, as proposed to be modified, and the addition of the three new proposed package boilers scheduled for the SKC site at their permitted capacity, will be less than the emissions and air quality impacts of the future SKC recycling operation at permitted capacity without the power plant;
- 4) whether the CBCP, as proposed to be modified, would either cause or contribute to a violation of an ambient air quality standard (AAQS) or cause or contribute to a violation of the allowable Prevention of Significant Deterioration (PSD) increments, in either the region surrounding the facility (a PSD Class II area) or the two distant PSD Class I areas. The two PSD Class I areas are the Okefenokee and Wolf Island Wilderness areas in Georgia. In addition, information is presented to provide data useful for assessing whether the CBCP would produce air toxics concentrations above the Draft Florida No Threat Levels (NTLs);
- 5) whether the CBCP, as proposed to be modified, would induce significant indirect pollutant emissions as result of directly related growth, create adverse impacts on soils, vegetation or visibility, and whether the cooling tower vapor plume would cause significant fogging or icing on nearby transportation routes; and



- 6) updated information on air emission controls and emission rates. The lower air pollutant emission rates for the CBCP CFB boilers, and the inclusion of a new add-on technology (selective non-catalytic reduction) may require some changes to the original conditions of certification and air permit. To provide the State and EPA with accurate and updated information on the project for review of the proposed changes, ENSR, on behalf of U.S. Generating Company, developed a technical review of the air emission controls and emission rates.

The "CBCP as certified" refers to the facility as described in the Final Order and Power Plant Site Certification PA 88-24 dated February 11, 1991 and the March 28, 1991 Final Determination by the FDER, Permit No. PSD-FL-137. The "CBCP as proposed to be modified" refers to the facility as described in the Amended Petition for Modification of Certification filed with the Division of Administrative Hearings on July 22, 1992, plus further improvements proposed by the CBCP.

The "future SKC Recycling Operation without the power plant" refers to the two bark and three oil-fired boilers presently at the SKC site as they could be operated should the CBCP not be. In this hypothetical future case, without the CBCP, it is ENSR's understanding that the exhausts of the three power boilers would be combined and exhausted through a newly constructed 125-foot stack to lessen susceptibility to aerodynamic downwash effects caused by nearby structures.

The "addition of the three new proposed package boilers scheduled for the SKC site necessary to provide the 640,000 lb of steam for SKC's use" refers to three package boilers proposed by SKC capable of producing a total of 375,000 lb/hr of steam. For purposes of the technical analyses, it is assumed that the 640,000 lb/hr steam requirement is met by the CBCP supplying 380,000 lb/hr and the SKC package boilers supplying 260,000 lb/hr.

max cap of SKC's 3 PKG boilers is 174,750 = 524,750 lb/hr = 436,750 lb/hr

col 38 26 017

The "addition of the three new proposed package boilers scheduled for the SKC site at their permitted capacity" refers to these same boilers producing a total of 375,000 lb/hr of steam.

The proposed SKC package boilers will be capable of accommodating either fuel oil or natural gas. Not yet permitted, these boilers will, according to the SKC permit application, fire No. 2 distillate fuel oil with a maximum sulfur content of 0.5% and an annual average sulfur content of 0.3%.

NAT. GAS w/ OIL BACKUP (MAX 30 WAYS)

In making the assessments for pollutant emissions, the maximum annual emissions of health criteria pollutants, other regulated pollutants, and non-regulated air toxics pollutants are compared. To compare the air quality impacts, evaluate compliance with the AAQS and PSD increments, compare the air quality impacts to the draft NTLs, evaluate soils, vegetation and

visibility impacts, and characterize cooling tower impacts, comprehensive atmospheric dispersion modeling was performed in accordance with EPA and Florida DER Guidelines.

Table ES-1 illustrates the difference in annual pollutant emissions between CBCP as proposed to be modified plus the SKC package boilers, and the future SKC recycling operation (both cases at 640,000 lb/hr steam usage by SKC). This table demonstrates the decreases or increases in the actual annual emissions of four categories of pollutants by operating the CBCP and the SKC package boilers and shutting down the SKC power and bark boilers. The health criteria and PSD increment pollutants are those for which ambient air quality standards or PSD increments have been established. The total regulated pollutants include the criteria and all PSD regulatory pollutants. Non-regulated air toxics represent twenty different compounds emitted by the sources in question which are included in the list of 751 compounds cited in Florida's Draft Air Toxics Permitting Strategy. In aggregating health criteria, PSD increment and regulated pollutants, TSP and PM-10 are treated as individual pollutants exclusive of one another, although PM-10 are a portion of TSP. Because PM-10 and TSP are also treated exclusively when comparing ambient impacts (the health criteria standards address PM-10 while the PSD increments address TSP), the emissions comparisons treats them as different pollutants for consistency with the standards and PSD increments.

The comparisons of annual emissions shown in Table ES-1 assume that the SKC package boilers always fire fuel oil. To the extent that they fire natural gas on an annual basis, the decreases in emissions would be greater. As shown in Table ES-1 decreases in air pollutant emissions are achieved by the CBCP, as proposed to be modified, in each category, except non-regulated air toxics.

How much would be offset by the new SKC steam capacity of 816,750 lb/hr?

A comparison of air quality impacts between the CBCP, as proposed to be modified plus the SKC package boilers, and the SKC recycling operation without the CBCP (both cases at 640,000 lb/hr steam usage by SKC) is summarized in Table ES-2. The table summarizes the changes due to the CBCP as proposed to be modified and the SKC package boilers for each criteria pollutant as well as total air toxics. Three values are listed for each pollutant: 1) the change to the maximum predicted concentration of the pollutant anywhere (higher, lower or insignificant maximum concentration); 2) the net effect on air quality on a regional basis in terms of the highest predicted pollutant concentrations (improved, insignificant, or degraded); and 3) the percent of locations for which modeling was performed which showed a net benefit in terms of the highest concentrations. A total of 1008 locations, referred to as "model receptors," were addressed. The majority of these fall within 10 kilometers of the CBCP, but a portion extend as far as 20 kilometers. As shown in Table ES-2, the CBCP as proposed to be modified and the SKC package boilers result in either lower or insignificant maximum concentrations of all criteria pollutants and total air toxics, a net

TABLE ES-1

CBCP as Proposed to be Modified Plus SKC Package Boilers
vs.
SKC Recycling
(Both Cases at 640,000 lb/hr Steam for SKC)
Net Change in Annual Emissions Due To
CBCP and SKC Package Boilers Firing Oil

Pollutants Category	Net Change
Health Criteria and PSD Increments	Decrease 343 tons
Total Regulated	Decrease 594 tons
Total Non-Regulated Air Toxics	Increase 29 tons
Total Pollutants	Decrease 565 tons

TABLE ES-2

CBCP as Proposed to be Modified Plus SKC Package Boilers
 vs.
 SKC Recycling
 (Both Cases at 640,000 lb/hr Steam)
 Air Quality Changes Due to CBCP Plus SKC Package Boilers Firing Oil^(a)

Pollutant	Maximum Concentration	Net Regional Air Quality Effect	Percent of Locations with Air Quality Benefit
3-hour SO ₂	Lower	Improved	97.6
24-hour SO ₂	Lower	Improved	98.2
Annual SO ₂	Lower	Improved	99.5
24-hour PM-10	Lower	Improved	98.2
Annual PM-10	Higher	Insignificant	91.4
1-hour CO	Insignificant	Insignificant	Not applicable
8-hour CO	Insignificant	Insignificant	Not applicable
Annual NO ₂	Lower	Improved	99.6
Monthly Pb	Insignificant	Insignificant	Not applicable
Annual Pb	Insignificant	Insignificant	Not applicable
8-hour Air Toxics	Lower	Improved	99.6
24-hour Air Toxics	Lower	Improved	99.6
Annual Air Toxics	Lower	Improved	99.6
^(a) See Section 2			



United States Department of the Interior



FISH AND WILDLIFE SERVICE
75 Spring Street, S.W.
Atlanta, Georgia
30303

December 24, 1992

RECEIVED

DEC 28 1992

Division of Air
Resources Management

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

We have reviewed the November 1992 Cedar Bay Cogeneration Project (CBCP) Air Quality Analysis that ENSR prepared to support the proposed modification of the CBCP Power Plant Site Certification (PPSC) issued on February 11, 1991. We appreciate having an opportunity to comment on this project. As you know, the proposed CBCP would be located near Jacksonville, approximately 45 km southeast of the Okefenokee Wilderness Area (WA) and 90 km southwest of the Wolf Island WA, both Class I air quality areas administered by the Fish and Wildlife Service. We understand that the modification would include the installation of better control technology on the CBCP boilers, resulting in a decrease in proposed emissions from the facility as currently certified.

ENSR's analysis shows that emissions from the CBCP as proposed to be modified, combined with the three recently proposed boilers for the Seminole Kraft Corporation (SKC) in Jacksonville, would be lower than either the CBCP as certified, or the existing SKC boilers and auxiliary equipment as they would be operated if the CBCP were not constructed. We are pleased to see that the proposed modification should result in an environmental benefit for the region. However, we believe that emissions could be reduced even further than those proposed in the modification.

We agree that selective noncatalytic reduction to control nitrogen oxide emissions, and circulating fluidized bed and fabric filtration to control sulfur dioxide (SO₂) emissions represent best available control technology; however, we believe better SO₂ emission rates than those proposed can be achieved. For example, the 0.24 pounds per million Btu (lb/MMBtu) 3-hour average rate proposed in ENSR's analysis is less stringent than the recently permitted Keystone Cogeneration project in New Jersey (0.16 lb/MMBtu, 1-hour average) or the proposed Indiantown Cogeneration project in Florida (0.17 lb/MMBtu, 1-hour average).

Therefore, to be consistent with other recently proposed and permitted projects, we recommend that the SO₂ emission limits for the CBCP be lowered accordingly.

ENSR performed SO₂ and nitrogen dioxide Prevention of Significant Deterioration (PSD) increment analyses for the Okefenokee and Wolf Island WAs, but they failed to assess potential effects of emissions from the CBCP on air quality related values in the Class I areas. Using the information provided in the Air Quality Analysis, we performed a visibility analysis for the closest area, the Okefenokee WA. Our modeling results show that both the CBCP as certified and the CBCP as proposed to be modified fail the conservative Level 1 VISCREEN analysis. However, we also performed a Level 2 analysis on the CBCP as proposed to be modified, and the results indicate that the facility would have low potential to cause visibility impairment due to plumes in the Okefenokee WA.

While we still recommend lower SO₂ emission limits to further reduce emissions from the CBCP, based on the overall emission reductions, ENSR's Class I increment analyses, and our visibility analyses, we support the current proposal to modify the facility as certified. However, because the net environmental benefit described in ENSR's analysis is contingent upon SKC's 5 existing boilers and auxiliary equipment (e.g. recovery boilers, lime kilns, and smelt dissolving tanks) being shut down once the CBCP begins operation, we recommend that the modified PPSC and PSD permit contain permit conditions detailing the required shut down of the existing equipment.

We ask that you send us copies of the State's preliminary determinations for the modified PPSC and PSD permit when they become available. In the meantime, if you have any questions regarding this matter, please contact Tonnie Maniero of our Air Quality office in Denver at 303/969-2071.

Sincerely yours,



James W. Pulliam, Jr.
Regional Director

cc: M. Finn
B. Mitchell
B. Owen
A. Rutledge
R. Robinson
D. Harsh, EPA
R. Conlan

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS
123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314
(904) 222-7500
FAX (904) 224-8551

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
KATHLEEN BLIZZARD
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
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WILLIAM D. PRESTON
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GARY P. SAMS
ROBERT P. SMITH
CHERYL G. STUART

C. ALLEN CULP, JR.
RALPH A. DEMEO
JAMES C. GOODLETT
RICHARD W. MOORE
ANGELA R. MORRISON
MARIBEL N. NICHOLSON
LAURA BOYD PEARCE
GARY V. PERKO
MICHAEL P. PETROVICH
DOUGLAS S. ROBERTS
JULIE B. ROME
KRISTIN C. RUBIN
CECELIA C. SMITH
OF COUNSEL
W. ROBERT FOKES

December 2, 1992

BY FEDERAL EXPRESS

Ms. Jewell A. Harper
Chief, Air Enforcement Branch
U.S. Environmental Protection Agency, Region IV
345 Courtland St. N.E.
Atlanta, GA 30365

RE: Cedar Bay Cogeneration Project
Site Certification No. PA-88-24
Air Permit No. PSD-FL-137

DEC 03 1992


D. E. R.
SITING COORDINATION

Dear Ms. Harper:

As you may be aware, the Florida Power Plant Siting Board recently issued an order instituting modification proceedings for the Cedar Bay Cogeneration Project Site Certification in Jacksonville, Florida. The modification hearing is currently scheduled to begin January 19, 1993. At the request of the Florida Department of Environmental Regulation, we are providing you a copy of the Air Quality Analysis prepared by ENSR Consulting and Engineering in support of the modification proceedings. The Certification Order for the Project was originally issued in February of 1991, and the Prevention of Significant Deterioration permit was issued in March of 1991. A separate request for revision to the PSD permit will be submitted in the near future.

If you have any questions, please do not hesitate to contact us.

Sincerely,


Gary P. Sams
Angela R. Morrison

cc: ✓Hamilton S. Oven, Jr., FDER
Richard T. Donelan, Jr., FDER
Land Manager, Okefenokee Wilderness Area
Land Manager, Wolf Island Wilderness Area
Brian Mitchell, National Park Service, Lakewood, CO
Max Linn, FDER

I N T E R O F F I C E M E M O R A N D U M

Date: 12-Nov-1992 01:38pm EST
From: Hamilton Buck Oven TAL
OVEN_H
Dept: Office of Secretary
Tel No: 904/487-0472
SUNCOM: Room 612-D

TO: See Below

Subject: Cedar Bay Technical Meeting

U.S. Energy has requested a technical meeting to discuss the Cedar Bay project. They would like to meet at 2:00 p.m. on November 16. The meeting will be held in the Secretary's Conference Room. Please advise if you can attend.

Distribution:

TO: Richard Donelan	TAL	(DONELAN_R)
TO: Clair Fancy	TAL	(FANCY_C)
TO: Max Linn	TAL	(LINN_M)
TO: Al Rushanan	TAL	(RUSHANAN_A)
TO: Jan Mandrup-Poulsen	TAL	(MANDRUP_J)
TO: Craig Diltz	TAL	(DILTZ_C)
TO: Daryll Joyner	TAL	(JOYNER_D)
TO: Bruce Mitchell	TAL	(MITCHELL_B)
TO: Bob Leetch	JAX	(LEETCH_B)
TO: Ernie Frey	JAX	(FREY_E)



*Patty ASSIGN TO
BUCK AND MAX LINN*

*ML
11/10/92*

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Clair Fancy
Al Rushanan

FROM: Buck Oven *HBO*

DATE: November 9, 1992

SUBJECT: AES Modification Review PA 88-24
Module 8184

Enclosed please find materials from U.S. Energy concerning the proposed modifications to the Cedar Bay Project. Please have the appropriate staff review and comment. I would appreciate responses by December 1, 1992.

Encl:

*Max Linn may need to see
some of this*

**RESPONSE TO CITY OF JACKSONVILLE REGULATORY
AND ENVIRONMENTAL SERVICES DEPARTMENT (RES D)
MEMORANDUM OF SEPTEMBER 21, 1992
RE: AIR AND WATER ISSUES**

A. Air Issues - Paragraph A of July 22, 1992 RESD Memorandum

1. Method For Testing Coal Sulfur Content In Unit Train Deliveries

Air Permit No. AC PSD-FL-137 specifies in Specific Condition C.6 and the Conditions of Certification specify in Condition II.G.6. that "Coal sulfur content shall be determined and recorded in accordance with 40 CFR 60.47a," which refers to Method 19. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the coal.

2. Method For Testing Sulfur Content of No. 2 Fuel Oil

Although the air permit does not specify a test method, it does require that samples be taken of each fuel oil shipment and that sulfur content and heating value be determined. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the samples.

3. Specification of Averaging Periods and CEM Data Use For Compliance
Demonstration

Sulfur Dioxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, we will determine SO₂ on a short term basis (i.e. 3 hour average) by the CEMs and by the annual compliance test. The CEM system samples the flue gas every few minutes and will calculate the average SO₂ emitted over the averaging time specified, in this case 3

hours. On a long term basis (30 day and 12 month rolling averages), we will use the CEMs and coal sampling data. We will also determine the sulfur content of the coal on a daily basis. This in turn will be used with the data produced by the CEM system to calculate a percent reduction for that day. Each day, the 30 day rolling average will be recalculated by the CEM data management system. In order to calculate a 12 month rolling average, the Cedar Bay Cogeneration Project will have to start with monthly block averages and then calculate the first true "rolling average" in the 13th month of operation.

We do not agree that any future misunderstanding could result from not repeating the requirements of the NSPS. We are aware of the requirements of the NSPS and will comply fully.

Nitrogen Oxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, CEMs will be used to monitor NO_x continuously and determine compliance with the allowable emissions rate on a 30-day rolling average.

In order to comply with the NSPS requirement to determine a 30 day rolling average, NO_x emissions data from the CEM will be combined into a 24 hour average. The 30 day rolling average will be determined from the daily NO_x emissions. The 24 hour average will be determined from 24 one hour averages produced by the CEM system. This is consistent with Specific Condition A.8.e. of the Air Permit and Condition II.A.8.e. of the Conditions of Certification that "gaseous CEM data shall be reduced to 1-hour averages..."

Carbon Monoxide

Although there is no NSPS requirement for CO, we will handle the data and compliance reporting as described above for NO_x.

B. Air Issues - Paragraph B of July 22, 1992 RESD Memorandum

1. (a) Support Documentation For Modified Emissions

The Cedar Bay Cogeneration Facility Air Quality Analysis (November 1992) being prepared by ENSR Consulting and Engineering for the Cedar Bay cogeneration facility will provide the requested information pertaining to the air quality impacts resulting from modification of the facility's emissions. A draft copy of Sections 1 through 3 of the referenced report is being provided with this submittal. Information pertaining to the mechanisms and control technologies by which these emission modifications will be achieved will be presented in the Air Emission Control Review currently being prepared by ENSR.

(b) Air Quality Modeling Submittal

The Cedar Bay Cogeneration Facility Air Quality Analysis will document the modeling conducted of the Cedar Bay operational impacts for combustion sources during normal full power operation. To facilitate the AQD's review of the air quality modeling, computer discs of the analyses conducted will be provided by ENSR. ENSR has been directed by the Cedar Bay Cogeneration Project to work closely with the AQD's scientists during their technical review of Cedar Bay's air impacts.

2. NO_x Emission Rate Backup

An Air Emissions Control Review Report being prepared by ENSR will present data on the NO_x emission rate for other cogeneration plants. The emission data base in the Air Emissions

Control Review Report will include information on other AES operating facilities. The Cedar Bay Cogeneration Project has made a decision to install selective non-catalytic reduction (SNCR) control of NO_x emissions from the start of the project operation.

3. Fuel Use Assumptions Used In Air Quality Modeling

The Cedar Bay Cogeneration Project will combust coal and will use #2 fuel oil or natural gas for Cedar Bay plant startup. Modeling analysis is being conducted based on coal, which is the worst-case fuel. The heat input for #2 fuel oil or natural gas would be less than the heat input for coal, so the higher coal heat input value is being used in the modeling. The Seminole Kraft Corporation (SKC) three package boilers will run on either #2 fuel oil or natural gas. The modeling analysis will evaluate the impacts from both fuel types.

4. Cedar Bay Mercury Emission Rates

The AES Cedar Bay mercury emission rate as certified was 2.6×10^{-4} lb/MMBtu. Bechtel has indicated that the mercury emission rate for the Cedar Bay CFBs as operated by the Cedar Bay Cogeneration Project will be 0.304×10^{-4} lb/MMBtu. The CFB mercury emission rate as proposed by the Cedar Bay Cogeneration Project is 88 percent lower than the AES Cedar Bay previously approved emission rate.

To predict the maximum emission rates, statistical data from a large number of sources was utilized (Ref. EPA-450/2-89). Based on 3527 samples of Eastern Bituminous coal, a predicted uncontrolled mercury concentration was established.

A review of literature and plant-specific boiler/emission control device(s) data was then utilized to establish a value for mercury removal efficiency. Our review indicated that 40 to 70%

mercury is removed in the baghouse. Bechtel utilized a 64% removal rate to establish a 0.304×10^{-4} lb/MMBtu mercury emission.

The original mercury emission rate of 2.6×10^{-4} lb/MMBtu may have been based on a very large percent of mercury in the coal. The current coal supply and the reference quoted previously indicate that the mercury content of the coal is significantly lower. This, coupled with the removal efficiencies expected in the baghouse, allows us to offer an 88 percent reduction in mercury emissions.

The mercury emission rate as proposed by the Cedar Bay Cogeneration Project does not account for possible further reduction of mercury through injection of carbon into the exhaust gas stream prior to the baghouse.

The Cedar Bay Cogeneration Project is currently investigating the basis for the reference to a 50 percent reduction "cut point" for determining the success of the carbon injection control test.

Based on the evaluation included in the draft Air Quality Analysis being provided in this submittal, the Cedar Bay Cogeneration Project has demonstrated that mercury emissions at the proposed levels will not exceed the No Threat Levels established in Florida's draft Air Toxics Permitting Strategy, thus indicating that the public's health will not be adversely impacted.

5. Compliance Testing For Use of Short Fiber Rejects As Fuel Component

The proposed modification is to allow the combustion of short fiber rejects. All compliance testing will be preceded by development of a testing protocol, including operating conditions, test methods and procedures. The protocol will be prepared in accordance with 40 CFR 60.8(b). If any of the proposed methods or procedures are different than EPA approved methods, approval will be obtained in advance.

6. Time Basis For Recording of Facility Fuel Components

The Cedar Bay Cogeneration Project is currently evaluating the specific material handling methods for combustion of short fiber rejects. A full description on how they will be used will be provided to the AQD once this evaluation is completed. Concurrently, an evaluation of the time basis for recording fuel components will also be provided.

7. Unit "Operational" Status

There are different connotations attached to the various milestones of a new power facility such as startup, operation and commercial operation. The definitions of these milestones are of significance only with respect to a regulatory requirement or contract agreement with which the Cedar Bay Cogeneration Project is honoring. Cedar Bay Cogeneration Project is evaluating the historical correspondence on this comment and will respond at a later date.

C. Water Issues

1. The Water Quality Division (WOD) Did Not Receive Exhibit 1 As Referenced

The Cedar Bay Cogeneration Project has contacted AES to determine what the referenced Exhibit 1 consists of. Once this determination has been made, a copy of the Exhibit 1 material will be forwarded to the WOD.

2. (a) WQD Supports Reuse of SKC Wastewater and Cedar Bay Site Stormwater

Appendix A to the Cedar Bay Cogeneration Facility Surface Water and Groundwater Analysis Report (October 1992) prepared by ENSR Consulting and Engineering contains a treatment system water balance prepared by Bechtel. The water balance illustrates how the SKC wastewater will be used for the cooling tower makeup supply. In addition, the Cedar Bay Cogeneration Project will be using site stormwater collected in the two detention ponds for facility water supply. Appendix C to the referenced ENSR Report provides a description of the Cedar Bay site stormwater management plan. The plan specifies the water pumping rate from the detention ponds to the facility.

(b) Proposed Zero Discharge Wastewater System

Appendix B to the ENSR October 1992 Report contains a description of the zero discharge wastewater system for the Cedar Bay facility. The associated environmental benefits of the zero discharge system are discussed in the ENSR Report.

3. Appropriate Monitoring and Reporting Must Still Accompany The Activities of Reuse, Any Wastewater Pre and Post Treatment, Solid Waste Disposal, Chemical Waste Disposal, etc.

Cedar Bay Cogeneration Project will comply with all applicable requirements for monitoring and reporting of wastewater or waste generation, reuse or disposal. Prior to facility startup, the Cedar Bay Cogeneration Project will be preparing an environmental compliance manual to be used during the Cedar Bay cogeneration facility operation. The compliance manual will

include the monitoring and reporting procedures that will be followed to ensure that all environmental regulatory requirements are adhered to.

4. Cedar Bay Phase 2 Wastewater Treatment

The Cedar Bay Cogeneration Project, with the assistance of Bechtel, will be conducting a comprehensive engineering evaluation of the "Phase 2" wastewater treatment system option in which Cedar Bay provides treatment for all of the SKC wastewater and discharges the quantities not used by the cogeneration facility for cooling through a new NPDES permitted outfall. The engineering review will commence once SKC has achieved a stabilized recycle mill operation with both paper machines running and the wastewater has been analyzed. The quality data for the SKC recycle mill wastewater stream is a key parameter upon which the analysis will be based.

The engineering review will include a comparative environmental benefits analysis between the Phase 1 zero discharge closed-loop cooling water system and the Phase 2 plan. The Cedar Bay Cogeneration Project will review the results of the engineering evaluation with both the DER and RESD Water Quality Division. The information provided both agencies will include sufficient detail (i.e. engineering specifications, calculations and environmental comparative criteria results) to facilitate independent assessments of the two alternative treatment systems.

5. Feasibility of Zero Discharge System

Appendix B to the ENSR October 1992 Report provides a concept engineering description prepared by Bechtel of the Cedar Bay zero discharge cooling water system. As referenced previously, Bechtel will be preparing engineering details for the zero discharge system once

the requisite quality data is available for the wastewater produced by the SKC recycle operation.

The Cedar Bay Cogeneration Project is in the process of determining the availability of engineering data for the Gainesville and Orlando operating systems that have been previously referred to by AES Cedar Bay.

Appendix A to the ENSR October 1992 Report contains a water balance for the Cedar Bay facility prepared by Bechtel. The projected stormwater input to the facility's cooling system is contained in the Appendix C Stormwater Management Plan design prepared by Bechtel.

The Cedar Bay Cogeneration Project will be providing information pertaining to disposal of treatment system sludges once the SKC recycle mill wastewater data is available. This will enable a characterization of the treatment plant sludges and a determination of the associated landfill requirements.

6. Zero Discharge System Plan

As referenced in the information provided to review comment 5, Appendix B to the ENSR October 1992 Report provides a concept engineering description of the Cedar Bay zero discharge cooling water system.

7. Treatment and Disposal of Chemical Cleaning Wastes

Condition III A 9 can remain as it is in the February 1991 Site Certification and will be fully complied with by Cedar Bay Cogeneration Project. The discharge which is a subject of this condition will be fully characterized as the project moves closer to becoming operational. The

nature of the chemicals and, ultimately, the discharge will be determined as the Cedar Bay Cogeneration Project chooses chemical suppliers and methods for cleaning and flushing of equipment in preparation for startup. This cleaning is done once in preparation for startup of the boiler. We can provide specific information as to the characteristics and volume of wastewater several months prior to the time of discharge. In addition, the proper method of disposal will be determined by the characteristics and volume of wastewater.

8. Water Treatment System Waste Storage

The Cedar Bay Cogeneration Project, with engineering assistance from Bechtel, is in the process of developing the design, material handling and disposal requirements of the zero discharge system. The engineering information will be provided the WQD once it is prepared.

9. (Previously Provided Response By AES Cedar Bay Was Indicated As Complete By WQD.)

10. Land Acquisition Funding

The Cedar Bay Cogeneration Project will be reviewing the land acquisition options that are available with the Siting Board, DER and City of Jacksonville. The option of using the Jacksonville Environmental Land Acquisition Trust Fund (the RESD identified preferred vehicle) will be included in the discussions.

11. Water Balance Diagrams

Bechtel is planning to pump up to 500 gallons per minute (gpm) from both the storage area runoff pond and yard area runoff pond after rainfall events to the Cedar Bay wastewater treatment facility (Appendix C to ENSR October 1992 Report). After treatment, the water will be used in the cooling tower operation.

J.C. Generating Company

October 23, 1992

VIA FEDERAL EXPRESS

Mr. Curt Barton
Stone Container Corporation
1979 Lakeside Parkway
Suite 300
Tucker, GA 30084

Dear Mr. Barton:

On October 22, 1992, ENSR Consulting and Engineering, received, from David Buff of KBN Engineering, stack and emissions parameters, associated with the Seminole Kraft bark boilers (2), power boilers (3), recovery boilers (3), smelt dissolving tanks (3), lime kilns (3) and the proposed package boilers (3), representative of the operating scenarios discussed at our meeting on Monday, October 19. Specifically, the following information was either obtained from or verified by KBN:

- Table 2-1 Design Parameters for New Package Boilers
- Table 2-3 Future Maximum Emissions of Regulated Pollutants for Each Package Boiler
- Table 2-4 Future Maximum Non-Regulated Pollutant Emissions for Proposed Package Boilers
- Table 1 Design Parameters for New Package Boilers - 70% Load
- Table 2 Future Maximum Emissions of Regulated Pollutants for Each Package Boiler - 70% Load
- Table 3 Future Maximum Non-Regulated Pollutant Emissions for Proposed Package Boilers - 70% Load
- Table 4 Maximum Regulated Pollutant Emissions for SKC Existing Sources - Case 1

Mr. Curt Barton
October 23, 1992
Page 2

- Table 5 Maximum Non-Regulated Pollutant Emissions for SKC Existing Sources - Case 1
- Table 6 Maximum Regulated Pollutant Emissions for SKC Existing Sources - Case 2
- Table 7 Maximum Non-Regulated Pollutant Emissions for SKC Existing Sources - Case 2
- Table 8 Stack Parameters of SKC Existing Sources - Case 1
- Table 9 Stack Parameters for SKC Existing Sources - Case 2

We are requesting, with this correspondence, your written confirmation that the information contained in the attached tables is valid for the operating conditions represented. U.S. Generating Company intends to utilize this data in air quality modeling analyses associated with the Cedar Bay modification certification process.

I appreciate your efforts in responding to our requests for confirmation/verifications of data. If you have any questions, please don't hesitate to call.

Sincerely,



Mark V. Carney
Manager, Environmental Permitting

cc: M. Riddle
L. Stanley
A. Koleff
K. Fickett
CB Team



Table 2-1. Design Parameters for New Package Boilers

Parameter	Units	No. 2 Fuel Oil (per boiler)	Natural Gas (per boiler)
Steam Flow	lb/hr	125,000	125,000
Steam Pressure	psi	650	650
Steam Temperature	°F	709	750
Heat Input	MMBtu/hr	164.5	174.7
Furnace Volume	ft ³	1,674	1,674
Heat Release Rate	Btu/hr-ft ³	98,268	104,361
Fuel Heating Value	Btu/gal	138,960	—
	Btu/lb	19,300 ^a	—
	Btu/scf	—	1,000
Fuel Flow	lb/hr	8,523	—
	gal/hr	1,184	—
	scf/hr	—	174,700
Exhaust Gas:			
Temperature	°F	345	330
Moisture	%	10	10
Flow Rate	lb/hr	158,040	161,570
	acfm	53,366	53,541
	scfm	31,502	31,606
Common Stack ^b			
Diameter	ft	8.00	8.00
Velocity	ft/s	53.08	53.26
Height	ft	200	200

^a Density of No. 2 fuel oil is approximately 7.2 lb/gal.

^b All three boilers will exhaust into a common stack. Velocity shown is total all three boilers.

Table 2-3. Future Maximum Emissions of Regulated Pollutants for Each Package Boiler

Regulated Pollutant	No. 2 Fuel Oil (0.5XS)					Natural Gas					
	Emission Factor	Ref	Activity Factor	Hourly Emissions (lb/hr)	Emission Factor	Ref.	Activity Factor	Hourly Emissions (lb/hr)	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions per Boiler (TPY)	Total Annual Emissions Three Boilers (TPY)
Particulate (TSP)	2 lb/1000-gal	1	1,192 gal/hr	2.4	5 lb/MM scf	1	0.1747 MM scf/hr	0.9	2.4	10.4	31.3
Particulate (PM10)	50 % of PM	1	--	1.2	5 lb/MM scf	1	0.1747 MM scf/hr	0.9	1.2	5.2	15.7
Sulfur dioxide											
Maximum	0.5 lb/MM Btu	2	184.5 MM Btu/hr	82.3	0.6 lb/MM scf	1	0.1747 MM scf/hr	0.1	82.3	--	--
Annual Average	0.3 lb/MM Btu	2	184.5 MM Btu/hr	49.4				--	--	216.2	648.5
Nitrogen oxides	0.2 lb/MM Btu	3	184.5 MM Btu/hr	32.9	0.2 lb/MM Btu	3	174.7 MM Btu/hr	34.9	34.9	153.0	459.1
Carbon monoxide	400 ppm	4	53,386 acfm	61.0	400 ppm	4	53,541 acfm	61.2	61.2	268.2	804.6
Volatile org. compds.	0.2 lb/1000 gal	1	1,192 gal/hr	0.24	1.4 lb/MM scf	1	0.1747 MM scf/hr	0.24	0.24	1.1	3.2
Lead	0.9 lb/10 ¹² Btu	5	184.5 MM Btu/hr	0.0015	--	--	--	--	0.0015	0.0064	0.019
Mercury	3.4 lb/10 ¹² Btu	6	184.5 MM Btu/hr	0.00056	0.014 lb/10 ¹²	6	174.7 MM Btu/hr	2.4E-06	0.00056	0.0024	0.0073
Beryllium	2.5 lb/10 ¹² Btu	5	184.5 MM Btu/hr	0.00041	--	--	--	--	0.00041	0.0018	0.0054
Fluorides	32 lb/10 ¹² Btu	7	184.5 MM Btu/hr	0.0053	--	--	--	--	0.0053	0.023	0.069
Sulfuric acid mist	2.07 lb/1000 gal	1	1,192 gal/hr	2.5	--	--	--	--	2.5	10.8	32.4
Total reduced sulfur	--	--	--	--	--	--	--	--	--	--	--
Asbestos	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--

References:

1. Compilation of Air Pollutant Emission Factors, AP-42, September 1988.
2. Based on sulfur content of No. 2 distillate fuel oil and NSPS.
3. Equivalent to NSPS for Industrial Boilers, 40 CFR 60, Subpart Db.
4. Based on boiler manufacturer's information.
5. Toxic Air Pollutant Emission Factors- A Compilation For Selected Air Toxic Compounds and Sources, Second Edition. EPA-450/2-90-011 (1990).
6. Based on Mercury Emissions to the Atmosphere in Florida (KBW, 1992).
7. Emissions Assessment of Conventional Stationary Combustion Systems; Volume IV: Industrial Combustion Sources. EPA-600/7-81-003 (1981).

Table 2-4. Future Maximum Non-Regulated Pollutant Emissions for Proposed Package Boilers

Non-regulated Pollutants	No. 2 Fuel Oil (0.5%S)					
	Emission Factor (lb/10 ¹² Btu)	Ref	Activity Factor (MMBtu/hr)	Hourly Emissions per boiler (lb/hr)	Maximum Annual Emissions per boiler (TPY)	Total Annual Emissions Three boilers (TPY)
Antimony (Sb)	--		--	--	--	--
Arsenic (As)	4.2	1	164.5	0.0007	0.0030	0.0091
Barium (Ba)	2.7	2	164.5	0.0004	0.0019	0.006
Bromine (Br)	7.0	3	164.5	0.0012	0.0050	0.015
Cadmium (Cd)	10.5	1	164.5	0.0017	0.0076	0.023
Chlorine (Cl)	637.0	3	164.5	0.1048	0.46	1.38
Chromium (Cr)	47.5	1	164.5	0.0078	0.034	0.10
Copper (Cu)	280.0	1	164.5	0.0461	0.20	0.61
Indium (In)	--		--	--	--	--
Manganese (Mn)	9.8	2	164.5	0.0016	0.0071	0.021
Molybdeum (Mo)	48.8	3	164.5	0.0080	0.035	0.11
Nickel (Ni)	170	1	164.5	0.0280	0.12	0.37
Phosphorous (P)	106.0	2	164.5	0.0174	0.076	0.23
Selenium (Se)	11.3	2	164.5	0.0019	0.0081	0.024
Silver (Ag)	--		--	--	--	--
Tin (Sn)	330.0	3	164.5	0.0543	0.24	0.71
Zirconium (Zr)	--		--	--	--	--

Notes: Maximum heat input is 164.5 MMBtu/hr per boiler for No. 2 Distillate Oil.

References:

1. Toxic Air Pollutant Emission Factors- A Compilation For Selected Air Toxic Compounds and Sources, Second Edition. EPA-450/2-90-011 (1990).
2. Emissions Assessment of Conventional Stationary Combustion Systems: Volume V (EPA-600/7-81-003, 1981), based on distillate oil.
3. Emissions Assessment of Conventional Stationary Combustion Systems: Volume V (EPA-600/7-81-003, 1981), based on residual oil.

Table 1. Design Parameters for New Package Boilers - 70% Load

Parameter	Units	No. 2 Fuel Oil (per boiler)	Natural Gas (per boiler)
Steam Flow	lb/hr	86,663	86,663
Steam Pressure	psi	650	650
Steam Temperature	°of	715	758
Heat Input	MMBtu/hr	113.93	121.46
Furnace Volume	ft ³	1,674	1,674
Heat Release Rate	Btu/hr-ft ³	68,060	72,555
Fuel Heating Value	Btu/gal	138,960	--
	Btu/lb	19,300 ^a	--
	Btu/scf	--	1,000
Fuel Flow	lb/hr	5,903	--
	gal/hr	820	--
	scf/hr	--	121,457
Exhaust Gas:			
Temperature	°of	323	317
Moisture	%	10	10
Flow Rate	lb/hr	109,467	112,315
	acfm	35,954	36,606
	scfm	21,224	21,609
Common Stack ^b			
Diameter	ft	8.00	8.00
Velocity	ft/s	35.76	36.41
Height	ft	200	200

^a Density of No. 2 fuel oil is approximately 7.2 lb/gal.

^b All three boilers will exhaust into a common stack.
Velocity shown is total all three boilers.

SK3P870X
10/22/92

Table 2. Future Maximum Emissions of Regulated Pollutants for Each Package Boiler - 70% Load

Regulated Pollutant	No. 2 Fuel Oil (0.5XS)					Natural Gas				Maximum Annual Emissions per Boiler (TPY)	Total Annual Emissions Three Boilers (TPY)
	Emission Factor	Ref	Activity Factor	Hourly Emissions (lb/hr)	Emission Factor	Ref.	Activity Factor	Hourly Emissions (lb/hr)	Maximum Hourly Emissions (lb/hr)		
Particulate (TSP)	2 lb/1000 gal	1	820 gal/hr	1.6	5 lb/MM scf	1	0.1215 MM scf/hr	0.6	1.6	7.2	21.5
Particulate (PM10)	50 % of PM	1	--	0.8	5 lb/MM scf	1	0.1215 MM scf/hr	0.6	0.8	3.6	10.8
Sulfur dioxide											
Maximum	0.5 lb/MM Btu	2	113.9 MM Btu/hr	57.0	0.6 lb/MM scf	1	0.1215 MM scf/hr	0.1	57.0	--	--
Annual Average	0.3 lb/MM Btu	2	113.9 MM Btu/hr	34.2				--	--	149.7	449.0
Nitrogen oxides	0.2 lb/MM Btu	3	113.9 MM Btu/hr	22.8	0.2 lb/MM Btu	3	121.5 MM Btu/hr	24.3	24.3	106.4	319.3
Carbon monoxide	400 ppm	4	35,594 acfm	41.9	400 ppm	4	36,606 acfm	43.4	43.4	190.0	570.0
Volatile org. compds.	0.2 lb/1000 gal	1	820 gal/hr	0.16	1.4 lb/MM scf	1	0.1215 MM scf/hr	0.17	0.17	0.75	2.24
Lead	8.9 lb/10 ¹² Btu	5	113.9 MM Btu/hr	0.0010	--	--	--	--	0.0010	0.0044	0.013
Mercury	3.4 lb/10 ¹² Btu	6	113.9 MM Btu/hr	0.00039	0.014 lb/10 ¹²	6	121.5 MM Btu/hr	1.7E-06	0.00039	0.0017	0.0051
Beryllium	2.5 lb/10 ¹² Btu	5	113.9 MM Btu/hr	0.00028	--	--	--	--	0.00028	0.0012	0.0037
Fluorides	32 lb/10 ¹² Btu	7	113.9 MM Btu/hr	0.0036	--	--	--	--	0.0036	0.016	0.048
Sulfuric acid mist	2.07 lb/1000 gal	1	820 gal/hr	1.7	--	--	--	--	1.7	7.4	22.3
Total reduced sulfur	--	--	--	--	--	--	--	--	--	--	--
Asbestos	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--

References:

1. Compilation of Air Pollutant Emission Factors, AP-42, September 1988.
2. Based on sulfur content of No. 2 distillate fuel oil and NSPS.
3. Equivalent to NSPS for Industrial Boilers, 40 CFR 60, Subpart Db.
4. Based on boiler manufacturer's information.
5. Toxic Air Pollutant Emission Factors- A Compilation For Selected Air Toxic Compounds and Sources, Second Edition. EPA-450/2-90-011 (1990).
6. Based on Mercury Emissions to the Atmosphere in Florida (KBN, 1992).
7. Emissions Assessment of Conventional Stationary Combustion Systems: Volume IV: Industrial Combustion Sources. EPA-600/7-81-003 (1981).

3PBHR70
10/22/92

Table 3. Future Maximum Non-Regulated Pollutant Emissions for Proposed Package Boilers @ 70% Load.

No. 2 Fuel Oil (0.5XS)						
Non-regulated Pollutants	Emission Factor (lb/10 ¹¹ Btu)	Ref	Activity Factor (MMBtu/hr)	Hourly Emissions per boiler (lb/hr)	Maximum Annual Emissions per boiler (TPY)	Total Annual Emissions Three boilers (TPY)
Antimony (Sb)	--	--	--	--	--	--
Arsenic (As)	4.2	1	113.9	0.0005	0.0021	0.0063
Barium (Ba)	2.7	2	113.9	0.0003	0.0013	0.004
Bromine (Br)	7.0	3	113.9	0.0008	0.0035	0.010
Cadmium (Cd)	10.5	1	113.9	0.0012	0.0052	0.016
Chlorine (Cl)	637	3	113.9	0.0726	0.32	0.95
Chromium (Cr)	47.5	1	113.9	0.0054	0.024	0.07
Copper (Cu)	280.0	1	113.9	0.0319	0.14	0.42
Indium (In)	--	--	--	--	--	--
Manganese (Mn)	9.8	2	113.9	0.0011	0.0049	0.015
Molybdenum (Mo)	48.8	3	113.9	0.0056	0.024	0.07
Nickel (Ni)	170.0	1	113.9	0.0194	0.08	0.25
Phosphorous (P)	106.0	2	113.9	0.0121	0.053	0.16
Selenium (Se)	11.3	2	113.9	0.0013	0.0056	0.017
Silver (Ag)	--	--	--	--	--	--
Tin (Sn)	330.0	3	113.9	0.0376	0.16	0.49
Zirconium (Zr)	--	--	--	--	--	--

References:

1. Toxic Air Pollutant Emission Factors- A Compilation For Selected Air Toxic Compounds and Sources, Second Edition. EPA-450/2-90-011 (1990).
2. Emissions Assessment of Conventional Stationary Combustion Systems: Volume V (EPA-600/7-81-003, 1981), based on distillate oil.
3. Emissions Assessment of Conventional Stationary Combustion Systems: Volume V (EPA-600/7-81-003, 1981), based on residual oil.

Table 5. Maximum Non-Regulated Pollutant Emissions for SKC Existing Sources - Case 1

10/22/92
skcemisl

Non-Regulated Pollutant	Emission Factors			PB1	PB2	PB3	BB1	BB2	Totals	
	Oil	Bark								
	Steam Flow (lb/hr)			100,000	145,000	145,000	125,000	125,000	640,000	
	Heat Input (MMBtu/hr)			137	198	198	193	193	919	
	Fuel Type			Oil	Oil	Oil	Bark	Bark		
Non-Regulated Pollutant	Emission Factors			Emissions (lb/hr)					Total Tons/Year ^a	
	Oil	Bark								
	PB	BB								
	(lb/10 ¹² Btu)	(lb/10 ¹² Btu)	(lb/10 ¹² Btu)							
Antimony (Sb)	14.4	14.4	0.0	0.00197	0.00285	0.00285	0.0	0.0	0.008	0.034
Arsenic (As)	19.0	1.9	0.0	0.00260	0.00376	0.00376	0.0	0.0	0.010	0.044
Barium (Ba)	14.4	14.4	102.3	0.00197	0.00285	0.00285	0.01974	0.01974	0.047	0.21
Benzene (Be)	--	--	2,468.3	0.0	0.0	0.0	0.476	0.476	0.953	4.17
Benzo(a)pyrene	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bromine (Br)	4.0	4.0	9,346.6	0.00055	0.00079	0.00079	1.80	1.80	3.61	15.81
Cadmium (Cd)	15.7	3.96	6.8	0.00215	0.00311	0.00311	0.00132	0.00132	0.011	0.048
Hydrogen Chloride (HCl)	--	--	22,750 ^b	0.0	0.0	0.0	4.39	4.39	8.78	38.46
Chromium (Cr)	21.0	1.68	18.2	0.00288	0.00416	0.00416	0.00351	0.00351	0.018	0.080
Cobalt (Co)	--	--	480.7	0.0	0.0	0.0	0.093	0.093	0.19	0.81
Copper (Cu)	278.0	25.2	36.4	0.038	0.055	0.055	0.007	0.007	0.16	0.71
Formaldehyde	405.0	405.0	634.7	0.055	0.080	0.080	0.122	0.122	0.46	2.02
Indium (In)	15.2	15.2	801.1	0.0021	0.0030	0.0030	0.155	0.155	0.32	1.39
Manganese (Mn)	26.0	2.86	59.1	0.0036	0.0051	0.0051	0.011	0.011	0.037	0.16
Molybdenum (Mo)	15.2	15.2	1,602.3	0.0021	0.0030	0.0030	0.3092	0.3092	0.63	2.74
Nickel (Ni)	1,260.0	50.4	71.6	0.173	0.249	0.249	0.014	0.014	0.70	3.06
Phosphorous (P)	252.8	252.8	340.9	0.035	0.050	0.050	0.066	0.066	0.27	1.17
Polycyclic Org. Matter	9.2	9.2	250.0	0.0013	0.0018	0.0018	0.0483	0.0483	0.10	0.44
Selenium (Se)	2.4	2.4	0.0	0.00033	0.00048	0.00048	0.0	0.0	0.001	0.006
Silver (Ag)	0.8	0.8	28.4	0.00011	0.00016	0.00016	0.00548	0.00548	0.011	0.050
Thallium (Tl)	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tin (Sn)	2.4	2.4	1,014.8	0.00033	0.00048	0.00048	0.19585	0.19585	0.39	1.72
Vanadium	3,014.0	602.9	73.9	0.413	0.597	0.597	0.014	0.014	1.63	7.16
Zirconium (Zr)	11.2	11.2	587.5	0.002	0.002	0.002	0.113	0.113	0.23	1.02

^a Based on 8,760 hr/yr operation.

^b Reflects chlorine content of bark and recycled fiber rejects, and 50% scrubber removal efficiency for HCl.

Table 6. Maximum Regulated Pollutant Emissions for SKC Existing Sources - Case 2

10/22/92
skcemis1

Regulated Pollutant	Oil		Bark	PB1	PB2	PB3	BB1	BB2	Totals	Total Tons/Year ^a
	PB (lb/10 ⁶ Btu)	BB (lb/10 ⁶ Btu)	(lb/10 ⁶ Btu)	135,000 185 Oil	180,000 246 Oil	180,000 246 Oil	72,500 112 Bark/Oil ^b	72,500 112 Bark/Oil ^b	640,000 901	
				Emissions (lb/hr)						
Particulate (TSP)	0.1	0.1	0.2	18.5	24.6	24.6	16.8	16.8	101.3	443.7
Particulate (PM10)	0.071	0.1	0.174	13.1	17.5	17.5	15.3	15.3	78.8	344.9
Sulfur Dioxide	1.1	0.55	0.063	203.5	270.6	270.6	34.3	34.3	813.3	3,562.3
Nitrogen oxides	0.447	0.447	0.300	82.6	109.9	109.9	41.8	41.8	386.0	1,690.8
Carbon Monoxide	0.033	0.033	1.250	6.2	8.2	8.2	71.9	71.9	166.3	728.4
Volatile Org. Compds.	0.0051	0.005	0.170	0.9	1.3	1.3	9.8	9.8	23.1	101.2
	(lb/10 ¹² Btu)		(lb/10 ¹² Btu)							
Lead	28.0	28.0	90.0	0.00518	0.00689	0.00689	0.00661	0.00661	0.03	0.14
Mercury	3.2	0.83	3.0	0.00059	0.00079	0.00079	0.00021	0.00021	0.00	0.011
Beryllium	4.2	0.25	0.0	0.00078	0.00103	0.00103	0.00001	0.00001	0.00	0.013
Fluorides	118	118	--	0.0218	0.0290	0.0290	0.0066	0.0066	0.09	0.41
Sulfuric Acid Mist	24000	24000	2.0	4.44	5.90	5.90	1.34	1.34	18.94	82.9
Total reduced sulfur	--	--	--	--	--	--	--	--	--	--
Asbestos	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--

^a Based on 8,760 hr/yr operation.

^b 50/50 Bark/oil on a heat input basis.

Table 7. Maximum Non-Regulated Pollutant Emissions for SKC Existing Sources - Case 2

10/22/92
skcemist

Regulated Pollutant	Steam Flow (lb/hr)	Heat Input (MMBtu/hr)	Fuel Type	PB1	PB2	PB3	BB1	BB2	Totals	
				135,000	180,000	180,000	72,500	72,500	640,000	
				185	246	246	112	112	901	
				Oil	Oil	Oil	Bark/Oil ^{a,b}	Bark/Oil ^{a,b}		
	Emission Factors			Emissions (lb/hr)					Total	
	Oil		Bark						Tons/Year ^a	
	PB	BB								
	(lb/10 ¹² Btu)		(lb/10 ¹² Btu)							
Antimony (Sb)	14.4	14.4	0.0	0.00266	0.00354	0.00354	0.00081	0.00081	0.011	0.050
Arsenic (As)	19.0	1.9	0.0	0.00352	0.00467	0.00467	0.00011	0.00011	0.013	0.057
Barium (Ba)	14.4	14.4	102.3	0.00266	0.00354	0.00354	0.00653	0.00653	0.023	0.100
Benzene (Be)	--	--	2,468.3	0.0	0.0	0.0	0.138	0.138	0.28	1.21
Benzo(a)pyrene	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bromine (Br)	4.0	4.0	9,346.6	0.00074	0.00098	0.00098	0.524	0.524	1.05	4.60
Cadmium (Cd)	15.7	3.96	6.8	0.00290	0.00386	0.00386	0.00060	0.00060	0.012	0.052
Hydrogen Chloride (HCl)	--	--	22,750 ^c	0.0	0.0	0.0	1.27	1.27	2.55	11.16
Chromium (Cr)	21.0	1.68	18.2	0.00389	0.00517	0.00517	0.00111	0.00111	0.016	0.072
Cobalt (Co)	--	--	480.7	0.0	0.0	0.0	0.027	0.027	0.054	0.24
Copper (Cu)	278.0	25.2	36.4	0.0514	0.0684	0.0684	0.0034	0.0034	0.20	0.85
Formaldehyde	405.0	405.0	634.7	0.0749	0.0996	0.0996	0.0582	0.0582	0.39	1.71
Indium (In)	15.2	15.2	801.1	0.0028	0.0037	0.0037	0.0457	0.0457	0.10	0.45
Manganese (Mn)	26.0	2.86	59.1	0.0048	0.0064	0.0064	0.0035	0.0035	0.025	0.11
Molybdeum (Mo)	15.2	15.2	1,602.3	0.0028	0.0037	0.0037	0.0906	0.0906	0.19	0.84
Nickel (Ni)	1260.0	50.4	71.6	0.2331	0.3100	0.3100	0.0068	0.0068	0.87	3.80
Phosphorous (P)	252.8	252.8	340.9	0.0468	0.0622	0.0622	0.0332	0.0332	0.24	1.04
Polycyclic Org. Matter	9.2	9.2	250.0	0.0017	0.0023	0.0023	0.0145	0.0145	0.035	0.15
Selenium (Se)	2.4	2.4	0.0	0.00044	0.00059	0.00059	0.00013	0.00013	0.002	0.008
Silver (Ag)	0.8	0.8	28.4	0.00015	0.00020	0.00020	0.00164	0.00164	0.004	0.017
Thallium (Tl)	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tin (Sn)	2.4	2.4	1,014.8	0.00044	0.00059	0.00059	0.05696	0.05696	0.12	0.51
Vanadium	3014.0	602.9	73.9	0.558	0.741	0.741	0.038	0.038	2.12	9.27
Zirconium (Zr)	11.2	11.2	587.5	0.0021	0.0028	0.0028	0.0335	0.0335	0.07	0.33

^a Based on 8,760 hr/yr operation.

^b 50/50 Bark/Oil on a heat input basis.

^c Reflects chlorine content of bark and recycled fiber rejects, and 50% scrubber removal efficiency for HCl.

Table 8. Stack Parameters for SKC Existing Sources - Case 1

	PB1	PB2	PB3	BB1	BB2	Totals
Steam Flow (lb/hr)	100,000	145,000	145,000	125,000	125,000	640,000
Heat Input (MMBtu/hr)	137	198	198	193	193	919
Fuel Type	Oil	Oil	Oil	Bark	Bark	
Stack height (ft)	106	106	106	136	136	
Stack diameter (ft)	6.00	7.00	7.00	8.08	8.08	
Flow rate (acfm)	57,762	88,537	88,537	132,000	132,000	
Temperature (deg.F)	360	330	330	138	138	
Velocity (fps)	34.05	38.34	38.34	42.91	42.91	
Stack height (m)	32.3	32.3	32.3	41.5	41.5	
Stack diameter (m)	1.83	2.13	2.13	2.46	2.46	
Temperature (deg.K)	455	439	439	332	332	
Velocity (m/s)	10.38	11.69	11.69	13.08	13.08	

Basis: 1991 stack tests

Table 9. Stack Parameters for SKC Existing Sources - Case 2

	PB1	PB2	PB3	BB1	BB2	Totals
Steam Flow (lb/hr)	135,000	180,000	180,000	72,500	72,500	640,000
Heat Input (MMBtu/hr)	185	246	246	112	112	901
Fuel Type	Oil	Oil	Oil	Bark/Oil ^a	Bark/Oil ^b	
Stack height (ft)	106	106	106	136	136	
Stack diameter (ft)	6.00	7.00	7.00	8.08	8.08	
Flow rate (acfm)	78,000	110,000	110,000	76,601	76,601	
Temperature (deg.F)	360	330	330	138	138	
Velocity (fps)	45.98	47.64	47.64	24.90	24.90	
Stack height (m)	32.3	32.3	32.3	41.5	41.5	
Stack diameter (m)	1.83	2.13	2.13	2.46	2.46	
Temperature (deg.K)	455	439	439	332	332	
Velocity (m/s)	14.01	14.52	14.52	7.59	7.59	

Basis: 1991 stack tests

10/22/92
skcstk1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4APT-AEB

OCT 19 1992

RECEIVED

Mr. Clair Fancy, P.E.
Air Resources Management Division
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

OCT 22 1992

Division of Air
Resources Management

RE: Alternative Continuous Emission Monitor Span Values Proposed
for the AES Cedar Bay Cogeneration Plant

Dear Mr. Fancy:

The purpose of this letter is to provide you with our determination regarding the referenced proposal which was submitted for the AES Cedar Bay Cogeneration Plant by Black and Veatch, Inc. A copy of the proposal from Black and Veatch is enclosed, and based upon our review of the proposal, we would have no objection to approval of the alternative NO_x and SO₂ monitor span values. If the Florida Department of Environmental Regulation does approve the alternative monitor span values, the approval should be contingent upon the condition that the AES Cedar Bay Cogeneration Plant will use higher monitor span values if actual NO_x or SO₂ concentrations in the exhaust stack at the facility ever exceed the approved alternative span values.

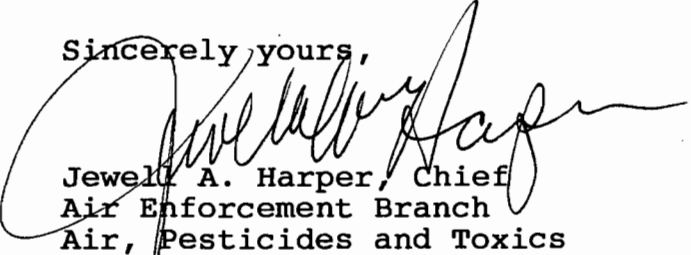
According to selection criteria contained in 40 C.F.R. §60.47a, the appropriate NO_x and SO₂ monitor span values for the AES Cedar Bay Cogeneration Plant would be 1000 ppm and 1300 ppm, respectively. Applicable emission standards at the facility effectively limit actual concentrations of NO_x and SO₂ in the exhaust stack to approximately 180 ppm and 260 ppm, respectively. Because the AES Cedar Bay Cogeneration Plant anticipates that actual NO_x and SO₂ concentrations in the exhaust stack will be at the extreme lower end of the monitoring range if the span values specified in 40 C.F.R. §60.47a are used, the company has proposed alternative NO_x and SO₂ monitor span values of 400 ppm and 500 ppm, respectively.

Based upon the applicable emission standards and expected emission rates for the AES Cedar Bay facility, we believe that monitor span values proposed by Black and Veatch will allow the company to measure emission rates more accurately than they could if the span values specified in 40 C.F.R. §60.47a were used. Therefore, we would not object if your agency approves the alternative monitor span values proposed by Black and Veatch.

The only concern that we have regarding the proposed alternative monitor span values is the possibility that the company would be unable to quantify the magnitude of any exceedances if actual SO₂ or NO_x concentrations are higher than monitor span value. Therefore, we recommend that if the alternative span values proposed for the AES Cedar Bay Cogeneration Plant are approved by the Florida DER, the approval should be made contingent upon the ability of the monitoring system to quantify emission concentrations during all periods of facility operation. If the actual SO₂ or NO_x concentrations in the exhaust stack ever exceed the monitor span value at the facility, the company should be required to switch to a higher span value that would enable it to quantify emissions during all periods of operation.

If you have any questions about the determination provided in this letter, please contact Mr. David McNeal of my staff at 404/347-5014.

Sincerely yours,



Jewel A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

Enclosure



BLACK & VEATCH

8400 Ward Parkway, P.O. Box No. 8405, Kansas City, Missouri 64114. (913) 339-2000

Multipower Associates
AES Cedar Bay Cogeneration Plant

B&V Project 15637
B&V File 62.0204
September 11, 1992

FEDERAL EXPRESS

U.S. Environmental Protection Agency
Region IV Headquarters
345 Courtland Street
Atlanta, Georgia 30365

Subject: Flue Gas Monitoring Equipment

Attention: Ms. Jewell Harper

Gentlemen:

We are in the process of selecting analyzers for the continuous emissions monitoring (CEM) system for the Cedar Bay Cogeneration Plant. Federal requirements (40 CFR 60 Subpart Da) dictate that the NO_x and SO₂ analyzers have span ranges of 1000 ppm and 1300 ppm (50 percent of the uncontrolled SO₂ emission rate), respectively.

The NO_x and SO₂ emission limits permitted for the plant are approximately 180 ppm and 260 ppm (uncorrected), respectively. Emission levels actually measured for similar circulating fluidized bed boilers (while firing coal) indicate emission levels lower than these permitted emission levels. In addition, expected NO_x and SO₂ emission limits while firing #2 fuel oil (during startup and low load operation) are anticipated to be only 75 ppm and 170 ppm respectively.

Analyzers designed to meet Federally required limits of 1000 ppm and 1300 ppm would operate in the lower extreme of the full scale range possibly compromising relative accuracy. Uncontrolled NO_x emissions from a circulating fluidized bed would never be as high as 1000 ppm. To increase accuracy of measurements during normal operation without compromising top end scale levels, we propose to use a NO_x analyzer with a 0 to 400 ppm range, and a SO₂ analyzer with a 0 to 500 ppm range. These analyzer ranges will help ensure the relative accuracy of the system, while providing the range required to define the magnitude of a violation.

U.S. EPA Region IV
Jewell Harper

B&V Project 15637
September 11, 1992

We have previously requested variance from the Florida Department of Environmental Regulation (DER) for the NO_x and SO₂ analyzer ranges required by the EPA regulations (reference the attached B&V letter dated April 24, 1992). The Florida DER has reserved judgement on this issue pending a ruling from the EPA. We would appreciate your variance request by September 29, 1992 to support the project equipment manufacturing schedules. Should you have any questions regarding this request, please contact John Cochran at (913) 339-2190.

Very truly yours,

BLACK & VEATCH


H. L. Jacobs *for*

Enclosures
gtb

cc: Mr. Dave McNeal, U.S. EPA Region IV
Mr. C. H. Fancy, Florida Bureau of Air Regulation
Mr. Jim Manning, City of Jacksonville
Mr. Paul Stinson, AES
Mr. R. C. Wilson
Ms. K. Lee, Enviroplan



BLACK & VEATCH

~~FILE~~
- FILE

1400 Grand Parkway, P.O. Box 1405, Kansas City, Missouri 64114-1405

Multipower Associates
AES Cedar Bay Cogeneration Plant

B&V Project 15637
B&V File 62.0203
April 24, 1992

Florida Department of Environmental Regulations
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Continuous Emissions Monitor
Analyzer Ranges

Attention: Mr. C. H. Fancy
Chief - Bureau of Air Regulation

Gentlemen:

We are in the process of selecting analyzers for the continuous emissions monitoring (CEM) system for the Cedar Bay Cogeneration Plant. Federal requirements (40 CFR 60 Subpart Da) dictate that the NO_x and SO₂ analyzers have span ranges of 1000 ppm and 1300 ppm (50 percent of the uncontrolled SO₂ emission rate), respectively.

The NO_x and SO₂ emission limits for the plant are approximately 180 ppm and 260 ppm (uncorrected), respectively. Analyzers designed to meet Federal requirements would operate in the lower extreme of the full scale range possibly compromising relative accuracy. Furthermore, uncontrolled NO_x emissions from a circulating fluidized bed boiler would never be as high as 1000 ppm. Therefore, we propose to use a NO_x analyzer with a 0 to 400 ppm range, and a SO₂ analyzer with a 0 to 500 ppm range. These analyzer ranges will help ensure the relative accuracy of the system, while providing the range required to define the magnitude of a violation.

I believe this request is consistent with the requirements of Section 17-2.710 of the Florida Air Pollution Rules. We would appreciate approval for this variance request by May 29, 1992 to support the


Florida DER
Mr. C. H. Fancy

B&V Project 15636
April 24, 1992

project equipment manufacturing schedules. Should you have any questions regarding this request please contact John Cochran at 913-339-2190.

Very truly yours,

BLACK & VEATCH


Hobart L. Jacobs

jrc

cc: Mr. Hamilton S. Owen, FDER
Mr. Jim Manning, City of Jacksonville
Mr. Steve Wolf, AES
Mr. R. C. Wilson

DER - AES Meeting
9/2/92

Buck Owen	DER	487-0472
OWEN WILLIAMS	AES	751-1955
DAVID KEHRES	AES	904-751-4326
MARK WOODRUFF	AES	(904) 751-1007
Jerry Owen	DER	904-448-4330 x301
Jan Mandrup-Poulsen	DER	(904) 488-4520
Bob LEETCH	DER-JA	(904) 448-4330 x107
Craig Diltz	DER-Tally	(904) 488-4522
Daryll Joyner	DER/PSES	904-488-0780
LARRY CURTIS	HUK/AES	904-224-7000
AL RUSHANAN	DER	904/488-4520
Phil Coram	FOEN	904/488-4522
JOHN KOOGER	KQA/AES	904/377-5822
Bruce Mitchell	FDER/DARJ/BAE	904-488-1344
Preston Lewis	FDER/AIE	904/488-1344
Tom Rogers	" "	" "
Max Linn	" "	" "
Richard Donelan	DER-OGC	904/488-9730
Clair Fancy	PSR-BAR	904 488 1344

Mark E. Woodruff, P.E.
Senior Project Engineer

David Kehres
Senior Project Engineer



AES Cedar Bay, Inc.
P.O. Box 26329
Jacksonville, FL 32226-6329
904-757-6382
Fax: 904-751-1008



AES Cedar Bay, Inc.
P.O. Box 26329
Jacksonville, FL 32226-6329
904-751-4326
Fax: 904-751-1008

9-2-92 Meeting on AES/Cedar Bay Project

10:00 am →

MC: Buck Over - PPS

[Mark Woodruff] - concern on the modeling requirements to substantiate the change in the Gov's Order.

① before case

SKC - approx 5 boilers (recycle facility)
3 oil-fired boilers
2 BBs

② after case

~~limestone dryer and~~ 3 CFBs (AES)
new SKC's
3 oil boilers and limestone dryer

* retire ^{new} RB construction permit - ✓ letter to Secretary on "not going to build" promise; probably, should include a "specific" condition on the new RB for surrendering the C.F.

[Mar] - a full modeling run will have to be conducted; however, there has been a modeled SO₂ violation!!!

[Richard] that will be eventually considered.

[Mark] concerned over the comparison scenario of one tall stack plume (original cert) vs. separate stack impact (new SKC some 1/2 AES CFBs)

[Richard] might be acceptable to end-up with a greater impact of the original impact of the CFBs but less than the baseline! will still be questioned!! will have to evaluate technical assumptions!!! will need to look into Natural Gas availability to the new SKC ^{pkgs.} boilers!!!!

[Mark] - currently, AES negotiators are only looking at using distillate oil in the S&C pkg. boilers, not N.G. (attempting to evaluate worst case) "S" ~~is~~ % content @ 0.3%, by weight

[Richard] - concern on SO₂ violation

[Max] = ^{AAQS number} 24-hr ambient std - increment does not exist

[General] original AES-Corder Bay project was permitted with the known AAQS ~~is~~ SO₂ violation;

[Tom] - trying to focus on the proposed net changes to try to see if there is an improvement; DCAQD is currently reworking permits to reduce pollutant emissions (i.e., SO₂) and to develop an accurate inventory for modeling; need to show that AES was not a significant contributor to an AAQS violation; concern w/ Hg, Cd, etc. ^{SS} toxics

[Buck] supposedly showing ↓ in emissions

[Mark] looking at actual coal suppliers for AES for trace metals, etc. vs Table 33 of original certification and impacts thru modeling

[Max] need to ✓ no threat levels on toxics

[Richard] NO_x? continue with better design ^{as} BACT without any controls: 0.17 lb/10⁶ Btu ~~vs~~ vs. 0.29 lb/10⁶ Btu;

[Mark] < 0.1 lb/10⁶ Btu @ the Hawaii plant - has SNCR tech.

[Richard] - there will be a condition addressing the proposed S&C new phy. boilers and subject to the cert. board scrutiny;

[Mark] S&C has essentially bought-off on

- ① steam
- ② pollutant temp on SO₂, NO_x, CO
- ③ # of boilers

[Max] - to ✓ Class I was out to 200kw for
NPS regard

[Max] - send Modeling Protocol to DER for approval

- ① grid
- ② sources/emissions
- ③ analysis direction
- ④ etc.

[John Keyler] stack hts of proposed new S&C boilers is not known, yet

TABLE 2
ALLOWABLE EMISSION LIMITS
185.5 MW Simple Cycle GE Frame FA Combustion Turbine

Pollutant	Standard Oil Firing	Each Unit lb/hr ^(a)	Total 2 Units T/yr	Basis
NO _x	42 ppmv at 15% oxygen-dry basis	334	1132 ^(a)	BACT
SO ₂	No. 2 fuel oil with 0.2% max. sulfur	407	1176 ^(c)	BACT
PM/PM ₁₀	0.01 lb/MMBtu	17	58 ^(b)	BACT
VOC	-	9	31 ^(b)	BACT
CO	25 ppm	79	268 ^(b)	BACT
Sulfuric Acid Mist	No. 2 fuel oil with 0.2% max. sulfur	28	81 ^(c)	BACT
Fluorines (FR)	-	6.13×10^{-2}	0.20 ^(b)	Application
Mercury (Hg)	3.0×10^{-6} lbs/MMBtu	5.66×10^{-3}	0.02 ^(b)	Application
Lead (Pb)	8.9×10^{-6} lbs/MMBtu	1.68×10^{-2}	0.06 ^(b)	Application
Inorganic Arsenic	4.20×10^{-6} lbs/MMBtu	7.9×10^{-3}	0.02 ^(b)	BACT
Beryllium (Be)	2.5×10^{-6} lbs/MMBtu	4.72×10^{-3}	0.02 ^(b)	BACT

(a) Emission rates based on 59°F and 15% O₂ at peak load.

(b) Equivalent to 3,390 hours per year at peak load (38.7% capacity factor) and 59°F.

(c) Total TPY for SO₂ assumes 33% capacity factor and fuel with a maximum sulfur content of 0.2%. Refer to Specific Condition No. 5 for listed capacity factors vs. sulfur content in oil.

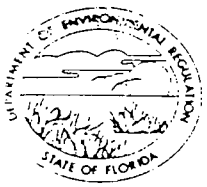
TABLE 1
ALLOWABLE EMISSION LIMITS
92.9 MW Simple Cycle GE Frame EA Combustion Turbine

Pollutant	Standard Oil Firing	Each Unit lb/hr ^(a)	Total 4 Units T/yr	Basis
NO _x	42 ppmv at 15% oxygen-dry basis	182	1232 ^(a)	BACT
SO ₂	No. 2 fuel oil with 0.2% max. sulfur	222	1283 ^(c)	BACT
PM/PM ₁₀	0.01 lb/MMBtu	15	102 ^(b)	BACT
VOC	-	5	34 ^(b)	BACT
CO	25 ppm	54	366 ^(b)	BACT
Sulfuric Acid Mist	No. 2 fuel oil with 0.2% max. sulfur	18	106 ^(c)	BACT
Fluorines (FR)	-	3.34×10^{-2}	0.23 ^(b)	Application
Mercury (Hg)	3.0×10^{-6} lbs/MMBtu	3.09×10^{-3}	0.02 ^(b)	Application
Lead (Pb)	8.9×10^{-6} lbs/MMBtu	9.16×10^{-3}	0.06 ^(b)	Application
Inorganic Arsenic	4.2×10^{-6} lbs/MMBtu	4.32×10^{-3}	0.03 ^(b)	BACT
Beryllium (Be)	2.5×10^{-6} lbs/MMBtu	2.57×10^{-3}	0.02 ^(b)	BACT

(a) Emission rates based on 59°F and 15% O₂ at peak load.

(b) Equivalent to 3,390 hours per year at peak load (38.7% capacity factor) and 59°F.

(c) Total TPY for SO₂ assumes 33% capacity factor and fuel with a maximum sulfur content of 0.2%. Refer to Specific Condition No. 5 for listed capacity factors vs. sulfur content in oil.



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Richard Donelan
Office of General Counsel

THROUGH: Robert E. Heilman, P.E., Chief *BJ*
Bureau of Water Facilities Planning and Regulation

FROM: Phil M. Coram, P.E., *PC* Administrator
Industrial Wastewater Section

DATE: August 5, 1992

SUBJECT: AES Cedar Bay/Seminole Kraft Project
Recommended Changes to Specific Conditions
and Review Comments

Craig Diltz, Daryll Joyner, and Jan Mandrup-Poulsen met to review the proposed AES Cedar Bay (AESCB) Petition for Modification of Certification (July 13, 1992 version). Attached are the specific changes to the language contained in the petition they believe should be incorporated to clarify the Department's intent in several areas. The reviewers also wish to express the following concerns requiring your attention prior to granting final approval of the Conditions of Certification.

- 1) Please provide us with a copy of the Zero Discharge Plan referred to on page 24.
- 2) Our initial evaluation of the "total treatment option" is there may not be a net environmental improvement with the additional treatment proposed by the AESCB. The added removal of BOD, TSS, and color from the Seminole Kraft Corporation discharge may not compensate for the release of higher concentrations of a variety of metals and nutrients from the AESCB water treatment system. The limited potential of this option does not concern the review group as they consider the zero discharge option acceptable. However, if the intent of the siting board was for AESCB to develop an option that significantly improves upon the zero discharge plan, then the total treatment option is not acceptable. Our question to you is, what was the understanding of the Siting Board when they agreed to the "Zero-Plus" Option?

Richard Donelan
August 5, 1992
Page Two

If treatment in excess of the zero discharge option was anticipated, then we would recommend AESCB provide the funds necessary for Seminole Kraft to install a clarifier of sufficient size to treat (for BOD and TSS) the remaining flow from the Seminole Kraft facility. This requirement would probably have to be put into effect immediately to minimize the added cost to AESCB. Installing the clarifier would eliminate the need for AESCB to secure a NPDES permit. The cost to install the added clarifier capacity should only be calculated as that beyond which AESCB would have paid to install the 3.6 million gallon clarifier already planned for use in pretreatment. We estimate a cost of about \$8.4 million for the additional clarifier.

If this approach is adopted, the added treatment of Seminole Kraft's discharge combined with maintaining zero discharge from AESCB would obviously provide a net environmental benefit. Any other type of added treatment whereby AESCB then starts to discharge would require a very detailed, parameter-by-parameter evaluation to determine whether the change produced a net environmental benefit. If additional treatment is required by the board and AESCB wants to be able to discharge, we need to develop and agree on a method to evaluate the "net environmental benefit" of any proposed changes.

If it was not the intent of the board to require additional treatment, then the text in the Conditions of Certification regarding the total treatment option (III.A.2) could simply be dropped as applicants always have the right to petition for modification.

Give me a call if you wish to discuss this further.

PMC/jmp

Attachment

cc: Richard Harvey
Al Bishop
Richard Drew
Craig Diltz
Daryll Joyner

Proposed Revisions to Conditions of Certification

III. WATER DISCHARGES

A. Plant Effluents and Receiving Body of Water

1. AESCB shall not discharge any coal pile runoff, cooling system, demineralizer regeneration, floor drainage, or any other process 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) and in accordance with engineering plans as reviewed and approved by the Department.
2. Pursuant to ~~the~~ Zero Discharge System Plan, AESCB shall make available to Seminole Kraft at least 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 so that Seminole Kraft may reduce its ground water consumption by this amount.
32. AESCB may 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 System 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....

Meeting Attendance Record

Project: AES / Cedar Bay Date: 7/16/92

Subject: COC Modifications

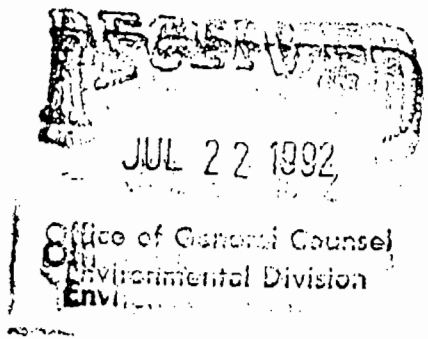
Name	Affiliation / Position	Phone Number
------	------------------------	--------------

Steve Palmer	SCO	7-0472
Dana D. Minerva	Secs Office	8-4805
Jan Mandrup-Poulsen	Water Pwr. Reg. Sect.	8-4520
Craig Diltz	Ind. Waste	84522
DARYLL JOYNER	Point Source Evaluation	8-0780
PRESTON Lewis	DER/DARM/BAR	8-1344
Bruce Mitchell	FDER/DARM/BAR	8-1344
R. T. Donelan Jr.	DER-OGC	8-9730

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Clair Fancy

MEMORANDUM



July 22, 1992

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, NOx, 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

AES Modification of Conditions of Certification
July 18, 1992
Page 2

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

AES Modification of Conditions of Certification

July 22, 1992

Page 3

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?

AES Modifications of Conditions of Certification

July 22, 1992

Page 4

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 "credible 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.

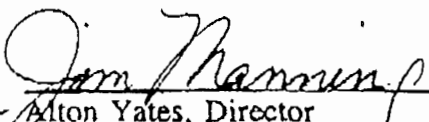
9. AES and Seminole Kraft both specify an increase in the use of natural gas relative to this modification, and actions separate to the certification (i.e., three natural gas boilers by SKC).

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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

1401 MANATEE AVENUE WEST
P.O. Box 241 (Zip 34206)
BRADENTON, FLORIDA 34205
(813) 747-5550
FAX (813) 748-6945

2000 INDEPENDENT SQUARE
P.O. Box 52687 (Zip 32201)
JACKSONVILLE, FLORIDA 32202
(904) 353-2000
FAX (904) 358-1872

400 NORTH ASHLEY
P.O. Box 1288 (Zip 33601)
TAMPA, FLORIDA 33602
(813) 227-8500
FAX (813) 229-0134

92 LAKE WIRE DRIVE
P.O. Box 32092 (Zip 33802)
LAKELAND, FLORIDA 33801
(813) 682-1161
FAX (813) 688-1186

CABLE ADDRESS
H&K Mia
TELEX 52-2233 MIAMI

1200 BRICKELL AVENUE
P.O. Box 015441 (Zip 33101)
MIAMI, FLORIDA 33131
(305) 374-8500
FAX (305) 374-1164

PLEASE REPLY TO:

200 SOUTH ORANGE AVENUE
P.O. Box 1526 (Zip 32802)
ORLANDO, FLORIDA 32801
(407) 425-8500
FAX (407) 423-3397

ONE EAST BROWARD BLVD.
P.O. Box 14070 (Zip 33302)
FORT LAUDERDALE, FLORIDA 33301
(305) 525-1000
FAX (305) 463-2030

315 SOUTH CALHOUN STREET
P.O. Drawer 810 (Zip 32302)
TALLAHASSEE, FLORIDA 32301
(904) 224-7000
FAX (904) 224-8832

888 SEVENTEENTH STREET, N.W.
SUITE 900
WASHINGTON, D.C. 20006
(202) 955-5550
FAX (202) 955-5564

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

Dept. of Environmental Reg.
Office of General Counsel

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

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. (ADESCB 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, ADESCB 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 ADESCB'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, ADESCB 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 ADESCB 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		Limitations			
		lbs/hr	TPY	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	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	
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

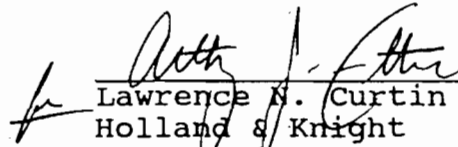
fiber mill. The proposed modification also contains a requirement, however, that will ensure that emissions from new boilers installed by Seminole Kraft to meet the first 375,000 lbs./hr. of the mill's steam needs (beyond the steam supplied by AESCB) will be more than offset by more stringent limitations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

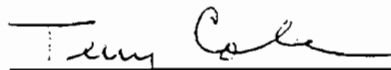
WHEREFORE, petitioners AESCB Limited Partnership and Seminole Kraft Corporation request that the proposed modifications to the February 11, 1991 Siting Board's Conditions of Certification be approved by the Governor and Cabinet for the reasons set forth above.

Respectfully submitted,



Lawrence N. Curtin
Holland & Knight
Post Office Drawer 810
Tallahassee, Florida 32302
904/224-7000

Counsel for Petitioner AESCB Limited Partnership



Terry Cole
Oertel, Hoffman, Fernandez & Cole,
P.A.
2700 Blair Stone Road
Tallahassee, Florida 32301

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
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550

Steve Pfeiffer, General Counsel
L. Kathryn Funchess, Esquire
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

M.B. Adelson IV, Esquire
Department of Natural Resources
3900 Commonwealth Boulevard
Douglas Building, MS-35
Tallahassee, Florida 32399-3000

Jim Antista, General Counsel
Florida Game and Fresh Water Fish Commission
620 South Meridian Road
Tallahassee, Florida 32399-1600

Rob Vandiver, General Counsel
Mike Palecki, Chief, Bureau of Electric and Gas
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0850

Gregory K. Radlinski, Esquire
600 City Hall
200 East Bay
Jacksonville, Florida 32202

William C. Bostwick, Esquire
1550-2 Hendricks Avenue
Jacksonville, Florida 32201

Kathryn L. Mennella, Esquire
St. Johns River Water
Management District
Post Office Box 1429
Palatka, Florida 32178-1429

David Maloney, Esquire
Governor's Office of Legal Counsel
The Capitol, Room 210
Tallahassee, Florida 32399-0001

James A. Heard, Esquire
2902 Independent Square
Jacksonville, Florida 32202

Rufus Pennington, Esquire
Margol & Pennington
76 Laura Street
Jacksonville, Florida 32202



Lawrence N. Curtin

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State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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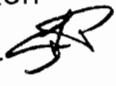
Interoffice Memorandum

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.

0.05%
Indian town!

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		374 126		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
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	neg
Coal Belt Feeder	neg	neg	neg
Coal Crusher	0.41	1.78	neg
Coal Belt transfer	neg	neg	neg
Coal Silo	neg	neg	neg
Limestone Crusher	0.06	0.28	neg
Limestone Hopper	0.01	0.03	neg
Fly Ash Bin	0.02	0.10	neg
Bed Ash Hopper	0.06	0.25	neg
Ash Silo	0.03	0.25	neg
Common Feed Hopper	0.03	0.13	neg
Ash Unloader	0.01	0.06	neg

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 Conservency. The sum of \$2,000,000 will be paid to the Nature Conservency 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 Conservency 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 Conservency. 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.

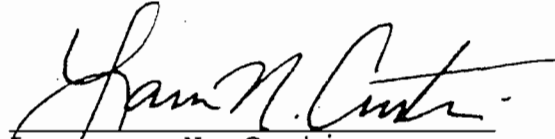
In addition, AESCB has voluntarily proposed significant reductions in its permitted emissions of NO_x and mercury. AESCB has also agreed to test an innovative control technique for mercury, which could produce even further reductions. These changes will result in improved air quality in the area impacted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



Lawrence N. Curtin
Holland & Knight
Post Office Drawer 810
Tallahassee, Florida 32302
904/224-7000

Counsel for Petitioner AESCB Limited
Partnership

Terry Cole
Oertel, Hoffman, Fernandez & Cole,
P.A.
2700 Blair Stone Road
Tallahassee, Florida 32301

Counsel for Petitioner Seminole
Kraft Corporation

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
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
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550

Steve Pfeiffer, General Counsel
L. Kathryn Funchess, Assistant General Counsel
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

M.B. Adelson IV
Assistant General Counsel
Department of Natural Resources
3900 Commonwealth Boulevard
Douglas Building, MS-35
Tallahassee, Florida 32399-3000

Jim Antista, General Counsel
Florida Game and Fresh Water Fish Commission
620 South Meridian Road
Tallahassee, Florida 32399-1600

Rob Vandiver, General Counsel
Mike Palecki, Chief, Bureau of Electric and Gas
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0850

Gregory K. Radlinski, Esquire
Assistant General Counsel
600 City Hall
200 East Bay
Jacksonville, Florida 32202

William C. Bostwick, Esquire
1550-2 Hendricks Avenue
Jacksonville, Florida 32201

Kathryn L. Mennella, Esquire
St. Johns River Water
Management District
Post Office Box 1429
Palatka, Florida 32178-1429

David Maloney, Esquire
Governor's Office of Legal Counsel
The Capitol, Room 210
Tallahassee, Florida 32399-0001

James A. Heard, Esquire
2902 Independent Square
Jacksonville, Florida 32202

Rufus Pennington, Esquire
Margol & Pennington
76 Laura Street
Jacksonville, Florida 32202


Lawrence N. Curtin

37836-1:311:TAL-8124

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6/3/92 MEW

AES SKC PROPOSED EMISSIONS

6/3/92 MEW

AES SKC PROPOSED EMISSIONS

*pm
na. x
502
0.60
0.37 x (6) hr
0.31
0.29 x (6) hr
NOx
0.29 x (6) hr
306.3 lb/hr
0.175*

	AES Existing Permit		SKC Proposed Sources	AES Proposed Limits		Net Increases(Decreases)
	TPY	#/MM	TPY	#/MM	TPY	AES/SKC proposed -vs- AES original permitted
SO2	4,015	0.31	765	0.240	3,118	(132)
NOX	3,767	0.29	449	0.170	2,208	(1,110)
TSP	260	0.02	33	0.020	260	33
CO	2,468	0.19	157	0.175	2,273	(38)
VOC	195	0.015	5	0.015	195	5
TOTAL	10,705		1,409		8,054	(1,242)

ASSUMPTIONS:

3 pkg blrs 125 kpph
 #2 oil 138,900 btu/gal
 blr eff 86%
 delta en 1191 btu/#
 oper hrs 8760 hrs/yr
 % sulphu 0.3%

ENERGY PERFORMANCE:

Heat Input 172.63 MMbtu/hr
 Annual heat ##### MMbtu/yr
 Annual fuel ##### gal/yr

MERCURY EMISSIONS:

Fuel concentration 0.746 ppm
 Fuel heating value 12250 btu/lb
 Control effectiveness 50%

EMISSION FACTORS:

SO2 (1) 157 #/Mgal
 NOx (2) 0.2 #/MMbtu
 CO (3) 10 #/Mgal
 VOC (3) 0.3 #/Mgal
 TSP (3) 2 #/Mgal

ANNUAL EMISSIONS (calculated):

SO2 769 tons/yr
 NOx 454 tons/yr
 CO 163 tons/yr
 VOC 5 tons/yr
 TSP 33 tons/yr

PROPOSED MERCURY LIMITS:

Emission limit 3.04E-05 lb/MMbtu
 lbs/hour (1 CFB) 0.0324 lb/hour
 tons/yr (1 CFB) 0.1318 tons/yr
 tons/yr (3 CFB) 0.3955 tons/yr

(1) Based upon 0.3% sulphur #2 oil
 (2) Based upon NSPS for high heat release blrs
 (3) Based upon EPA, EP-42 emission factors

- PRELIMINARY -

B&W - A&IS - P00190 - PKG BLR SEL/PERF. - VER 54.0 - DATE: 5/20/92 PAGE:

 PROP NO. NAME OF CUSTOMER PLANT LOCATION
 P12-8078 STONE CONTAINER FL

REMARKS: SEMINOLE KRAFT

 FM # 120 - 97 DESIGN PRESSURE (PSIG.): 700.

PERFORMANCE DATA

DESIGN FUEL

NATURAL GAS	LOAD 1	LOAD 2	LOAD 3	LOAD 4
STEAM FLOW (MLB/HR)	125.00			
CONTINUOUS BLOWDOWN (%)	3.00			
OUTLET PRESSURE (PSIG.)	600.00			
OUTLET STEAM TEMP (F)	750.00			
SH PRESSURE DROP (PSIG.)	35.64			
DRUM OPER. PRESS. (PSIG.)	635.64			
EXCESS AIR (%)	15.00			
FEEDWATER TEMP (F)	220.00			
FEEDWATER TMP LVG ECON (F)	345.36			
AMBIENT AIR TEMPERATURE (F)	80.00			
INPUT IN FUEL (MKB/HR)	180.86			
FUEL FLOW (MLB/HR / MCFH)	180.86			
HEAT AVAILABLE (MKB/HR)	161.47			
FURNACE RELEASE RATE (MBTU/HR-SQ.FT.)	160.62			
FURNACE LIBERATION (MBTU/HR-CU.FT.)	93.23			
GAS WEIGHT (MLB/HR)	160.63			
AIR WEIGHT (MLB/HR)	152.33			
HEAT LOSSES (%)				
DRY GAS	4.71			
H2O FROM FUEL	10.79			
MOISTURE IN AIR	.13			
RADIATION	.47			
UNACCOUNTED FOR	1.00			
TOTAL	17.10			
CALCULATED EFFICIENCY (%)	82.90			
DRAFT LOSSES (IN.-H2O)				
BOILER	9.62			
BURNER	.00			
FLUES	.90			
DUCTS	.10			
ECONOMIZER	6.27			
TOTAL	16.88			
GAS TEMPERATURE (F MHVT)				
ENT. ECONOMIZER	688.80			
FURNACE EXIT	2442.48			
FINAL EXIT	330.00			

PREDICTED NO_x - 0.1 #/MKB
 CO - 400 PPM

- PRELIMINARY -

B&W - A&IS - P00190 - PKG BLR SEL/PERF. - VER 54.0 - DATE: 5/20/92 PAGE: 4

PROP NO. NAME OF CUSTOMER PLANT LOCATION
 P12-8078 STONE CONTAINER FL

REMARKS: SEMINOLE KRAFT

FM # 120 - 97 DESIGN PRESSURE (PSIG.): 700.

PERFORMANCE DATA

ALT 1 FUEL

NO. 2 FUEL	LOAD 1	LOAD 2	LOAD 3	LOAD 4
STEAM FLOW (MLB/HR)	125.00			
CONTINUOUS BLOWDOWN (%)	3.00			
OUTLET PRESSURE (PSIG.)	600.00			
OUTLET STEAM TEMP (F)	709.17			
SH PRESSURE DROP (PSIG.)	35.38			
DRUM OPER. PRESS. (PSIG.)	633.03			
EXCESS AIR (%)	15.00			
FEEDWATER TEMP (F)	220.00			
FEEDWATER TMP LVG ECON (F)	356.92			
AMBIENT AIR TEMPERATURE (F)	80.00			
INPUT IN FUEL (MKB/HR)	170.47			
FUEL FLOW (MLB/HR / MCFH)	170.47			
HEAT AVAILABLE (MKB/HR)	158.42			
FURNACE RELEASE RATE (MBTU/HR-SQ.FT.)	151.40			
FURNACE LIBERATION (MBTU/HR-CU.FT.)	87.87			
GAS WEIGHT (MLB/HR)	157.38			
AIR WEIGHT (MLB/HR)	147.36			
HEAT LOSSES (%)				
DRY GAS	5.39			
H2O FROM FUEL	6.76			
MOISTURE IN AIR	.14			
RADIATION	.48			
UNACCOUNTED FOR	1.00			
TOTAL	13.76			
CALCULATED EFFICIENCY (%)	86.24			
DRAFT LOSSES (IN.-H2O)				
BOILER	8.57			
BURNER	.00			
FLUES	.90			
DUCTS	.10			
ECONOMIZER	6.25			
TOTAL	15.82			
GAS TEMPERATURE (F MHVT)				
ENT. ECONOMIZER	740.33			
FURNACE EXIT	2310.74			
FINAL EXIT	345.00			

Predicted NO_x - 0.2#/MKB
 CO - 400 PPM

Lenders cut off funding to AES

5-5-92

AES: What's ahead

- The Florida Department of Environmental Regulation is expected to present a complaint to AES Cedar Bay Inc. next week, saying the company's state permit should be revoked or suspended for misrepresentation of facts in its application.
 - AES then would have 21 days to request an administrative hearing to refute the complaint.
 - The DER then would have 10 days to refer the AES request to the state Division of Administrative Hearings.
 - The division would schedule a hearing within 45 days.
 - After the hearing, a hearing officer would make a recommendation to Gov. Lawton Chiles and the Cabinet.
 - Chiles and the Cabinet then would decide whether to revoke or suspend the permit.
- The entire process takes about six months, sometimes longer.
The entire process could be cut short if the project's lenders decide to pull out.

By Chuck Springston
and Beverly Keneagy
Staff writers

The lenders for Jacksonville's AES Cedar Bay Inc. power plant cut off all funding yesterday for the controversial project — perhaps sounding the death knell for the half-built plant.

Lenders, company officials and industry analysts say there's still a chance the \$470 million project will survive Tuesday's unanimous vote by Gov. Lawton Chiles and the Cabinet to begin proceedings to revoke or suspend the plant's operating permit.

But it's a slim chance, they acknowledge.

"I don't think it's completely dead," said Ralph Haben, a Tallahassee lobbyist for the lenders. "I think the fat lady is walking up to the podium with a song sheet

• The Chamber of Commerce is among the few groups neutral on the AES project, illustrating the division among business leaders in Jacksonville, senior business writer Karen Brune Malthis says.

Story, column in Business, C-7

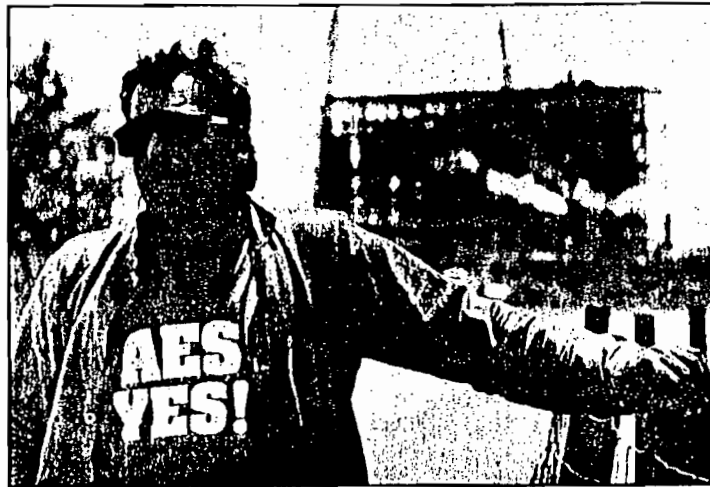
in her hand."

Even a top AES executive agreed that the outlook is grim.

"People who invest money in projects like this do not like political risk," said Robert H. Hemphill Jr., executive vice president of AES Corp., based in Arlington, Va.

The Northside coal-fired plant is being built to provide 250 megawatts for Florida Power & Light Co. and to provide steam to its neighbor, Seminole Kraft

(See LENDERS, Page A-10)



— Gary T. Clark/staff

Michael Moukakos, a welder working in the construction of the AES Cedar Bay steam and power plant on Jacksonville's Northside, wears a T-shirt making it clear where he stands on the Florida Cabinet's opposition to the plant. The unfinished facility is behind him.

AES: A profile

What industry analysts say about AES:

- Company officials run a "top-notch operation" and "bend over backward for the community."
- If the Jacksonville project is killed, AES's reputation in the financial community could be damaged and the company might have trouble getting loans for future projects.
- But if lenders believe AES's Jacksonville troubles were mostly the result of unreasonable political decisions, they might be more forgiving — unless AES's run-ins with state officials become a long-term trend.

What opponents say about AES:

- The company builds cogeneration plants — plants that produce electricity and steam — to take advantage of a federal law that exempts such plants from substantial federal and state regulation.
- Most of the plants built by AES burn coal, which emits more pollutants in combustion than other fossil fuels.
- The company disregards the wishes of the public and communicates poorly with the local citizens in the communities in which it chooses to locate.

Properties: Applied Energy Service (AES) Corp., based in Arlington, Va., is the owner of the following utilities:

- AES Cedar Bay, a coal-fired plant under construction on Jacksonville's Northside.
- AES Beaver Valley, a coal-fired plant in Monaca, Pa. Employs 74.
- AES Placerita, a natural-gas-fired plant in Newhall, Calif. Employs 34.
- AES Thames, a coal-fired plant in Montville, Conn. Employs 76.
- AES Shady Point, a coal-fired plant in LeFlore County, Okla. Employs 119.
- AES Barbers Point, a coal-fired plant on the island of Oahu, Hawaii. Employs 60.
- AES Deepwater, a coke-fired plant in Houston. Employs 62.

Total employees: 425
Total 1991 Revenue: \$333.5 million.
Total 1991 Profit: \$42.6 million.

Stock price: 29 1/4 a share yesterday, down 1 1/2 from Tuesday.

On Tuesday, the day the Florida Cabinet voted to seek the suspension or revocation of AES's operating permit for its Jacksonville project, the company's stock dropped 5 1/2 to 30 1/2 — one of the steepest plunges in the market that day.

The company's stock, traded on the over-the-counter market, took a beating Tuesday after the news of the Cabinet vote reached investors and continued to fall yesterday.

The stock dropped 5 1/2 on Tuesday — one of the day's steepest plunges — and fell yesterday 1 1/2 to close at 29 1/4. At one point in the past 12 months, it traded as high as 37 1/4.

If the project is abandoned, the lenders would be left holding a half-built shell of steel and assorted permits and contracts — but not the land, which AES is leasing from Seminole Kraft.

That doesn't excite lenders.

"We're not in the business of operating power plants," said Goldstein of Banque Paribas.

He said the lenders are exploring other options in the event the project is canceled but wouldn't elaborate.

In addition to Banque Paribas, the other lenders are Prudential Power Funding Associates, John Hancock Mutual Life Insurance Co., New York Life Insurance Co., Cigna Investments, Marubeni America Corp., Marubeni U.K., Ahlstrom Capital Corp., the Pritchard Corp. and Costain Coal Inc.

Staff writers Jim Saunders and Francis X. Donnelly contributed to this report.

(From Page A-1)

Corp.'s paper mill.

AES now has to go through a state hearing to prove it didn't mislead the state. The final decision on whether the permit is revoked or suspended rests with Chiles and the Cabinet.

The AES project was scheduled to get a \$10 million cash injection this month, but the lenders canceled that payment.

Meantime, work continues at the plant site, adjacent to Seminole Kraft. However, workers wondered how long it would be before they get a pink slip.

"I think the jobs of the people on the site are in serious peril," Hemphill said.

The AES executive said he didn't know how long the company could keep workers on their jobs but added, "Not very long without money."

Workers say they've resigned themselves to the uncertainty.

"I'll just keep coming until the gate is closed one day," said Ron Belson, 37, a senior engineering technician from Jacksonville.

Money isn't likely to start flowing into the project again unless AES' appeal of the Cabinet's decision is successful.

However, AES faces "a tough sell," said Richard Donelan, assistant general counsel for the state Department of Environmental Regulation. "It's their own documents that have gotten them in the trouble."

The decision by the governor and the Cabinet to revoke or suspend the AES permit was based on a document that showed Seminole Kraft planned to keep three boilers operating after the start of AES operations in 1994. That's contrary to a condition in the state permit that requires the boilers be permanently shut down.

Mayor Ed Austin, who said he was not surprised by the lenders' decision, said the review process could answer some of the questions that led to the governor and the Cabinet's vote.

"We must have all the facts on what's going to happen there, and we didn't have the facts," said Austin, who had asked the state to investigate the issue.

It could take AES six months to go through the state hearing process, and AES attorney Raymond Ehrlich, a retired Florida chief justice, said, "I'm optimistic we're going to come out of this thing clean."

But the question is: Can AES hold on for six months?

"These people [lenders] don't want to wait six months," said

Bram Canter, an attorney in Tallahassee who represents the lenders.

Since the Cabinet vote, AES has been talking with the lenders about the possibility of eventually resuming payments.

"We need to talk with AES, we need to talk with the contractors before we make a final decision," said Brian Goldstein, vice president of Banque Paribas of New York, the lead bank in a consortium of 11 lenders financing the plant.

Those lenders were in the process of pouring about \$460 million into the project, Goldstein said.

Thus far, \$150 million has been spent building the plant.

Goldstein said AES is contributing about \$10 million but that amount could go higher if the project's costs go up.

AES announced yesterday that it could be liable for up to \$25 million.

"For the size company we are, \$10 [million] to \$15 million is a huge loss for us," Hemphill said.

Business: Orlando firm buys downtown tower

Lifestyle: Baby walkers — unsafe at any speed

FLORIDA EDITION

The Florida Times-Union

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JACKSONVILLE, FLORIDA, **TUESDAY**, MAY 5, 1992

127th Year — Number 126 — 4 Sections — 38 Pages **2**

AES 'grossly misled' state, Chiles told

By Beverly Keneagy

Environmental writer

Florida Attorney General Bob Butterworth said yesterday that new evidence shows the state was "grossly misled" by AES Cedar Bay Inc. and Seminole Kraft Corp. when they applied for a permit to build a power plant in Jacksonville.

The companies' tactics amounted to a "bait-and-switch gimmick at the expense of Jacksonville citizens," and the state should begin proceedings today to suspend or revoke the AES permit, Butterworth said in a letter to Gov. Lawton Chiles and other Cabinet members.

Butterworth said his office uncovered a confidential memorandum between AES and Seminole Kraft that shows they planned to keep Seminole Kraft's boilers

operating once the AES plant started up. In their permit application, the companies said they planned to shut down the boilers, which opponents say are old and pollute the air.

Butterworth's findings come as he, five other Cabinet members and Chiles are to consider today the fate of the coal-fired plant AES is building on Jacksonville's Northside.

The \$470 million plant would provide steam to the adjacent Seminole Kraft paper mill and 250 megawatts to Florida Power & Light Co.

In its prepared statement yesterday, AES said the idea of keeping the boilers operating after the power plant began operating was "one of several options un-

(See AES, Page A-4)

Company says application truthful

By Beverly Keneagy

Environmental writer

In the face of mounting criticism of its power plant in Jacksonville, AES Cedar Bay Inc. went on the defensive yesterday, saying it has been truthful while applying for an operating permit.

AES made its comments in a report to Gov. Lawton Chiles and the Cabinet, who are to meet today to decide whether to pursue a suspension or revocation of the permit.

AES was responding to a report released last week by the Florida Department of Environmental Regula-

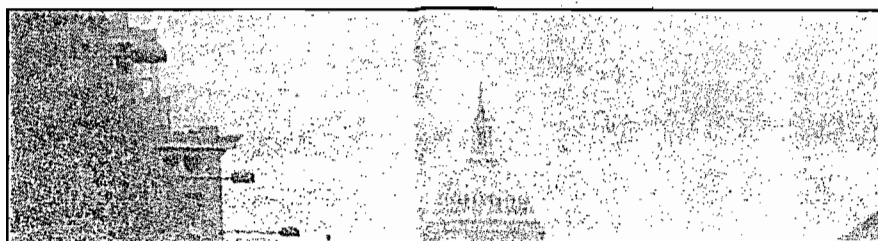
tion, which said the state had been misled. The report recommended that the Cabinet suspend or revoke the AES permit until numerous questions about changes in the plant's environmental impact are solved.

AES said it was submitting its own report to correct "various inaccuracies" in information submitted to Cabinet.

AES said its report should "demonstrate that it not make material false statements in connection"

(See COMPANY, Page A-4)

'Aftershocks' still rumble



3 more ships to be pulled from Maypor

By Susan P. Respess
Staff writer



McHugh

day they won't seek re-election, joining a class of House retirees that is already the longest since World War II.

Rep. Matthew McHugh, D-N.Y., who led the Ethics Committee probe of the bank, and Rep. Bob Davis, R-Mich., who wrote 878 overdrafts, said separately they will not return next year.

They bring to 54 the number of House

members in a 29-month period has been the reason why so many members are retiring, but other lawmakers are leaving because of a general dissatisfaction with government or because redistricting has carved up their turf.

McHugh, 53, who has served in Congress for 18 years, announced his decision at a news conference in his hometown of Ithaca,

being a member of Congress, he said. "There is now too great a gulf between my hopeful belief in what our institutions can be and the public perceptions of them."

Davis, a seven-term Republican, was the third-worst abuser of the House bank, with 878 checks written against insufficient funds.

AES misled Florida, attorney general says

(From Page A-1)

der consideration that had not been finalized" when the state permit was granted.

The AES statement also said it is a standard business practice to keep a business agreement confidential when it contains proprietary information.

Also yesterday, Mayor Ed Austin held a news conference to sign a City Council resolution adopted last week that sought a new state hearing on the AES project and "full disclosure" of the plant's environmental impacts.

Austin, who has been criticized for failing to take a firm stand on the AES plant, said yesterday's news conference had nothing to do with Butterworth's letter but was called to announce he would sign the resolution.

Butterworth's recommendation is similar to one last week by the Florida Department of Environmental Regulation, which said Chiles and the Cabinet should suspend or revoke the AES permit until numerous environmental issues are resolved.

Education Commissioner Betty Castor said yesterday that she will support Butterworth's recommendation.

"Without complete knowledge of the companies' intentions, it is impossible to determine the impact a project of this magnitude will have on the environment," Ms. Castor said.

Other Cabinet members said yesterday that they had not decided how they would vote.

Should the Cabinet agree to proceed with suspending or revoking the permit, the issue would be referred to a state hearing officer for review. The hearing officer would make a recommendation to the governor and Cabinet, who could then officially suspend or revoke the AES permit. Construction on the power plant, which is about 50 percent built, then would have to stop.

AES' Stinson said Butterworth's recommendation "demonstrates a lack of regard for the 700 workers at our site, 200 companies doing

business with us and the economy of Jacksonville."

Opposition to the plant increased late last year when Seminole Kraft decided it needed to keep three boilers operating even after the AES plant opened in 1994. That's contrary to a joint permit the state issued last year to AES and Seminole Kraft that requires the boilers be shut down.

The information prompted Austin to ask the state to investigate whether AES and Seminole Kraft misled the Cabinet when they applied for an operating permit.

The Cabinet assigned a special counsel, Denis Dean of the Attorney General's Office, to research the issue.

Dean found AES and Seminole Kraft did withhold information that could have affected the Cabinet's decision to grant AES an operating permit. However, he found the state law does not require the disclosure of future plans and no laws were broken to warrant suspending or revoking the permit.

However, a report released last week by the Florida Department of Environmental Regulation said Dean's report was "flawed." It recommended that Chiles and the Cabinet revoke the AES permit until numerous environmental issues are resolved.

Yesterday, the Attorney General's Office said it had continued researching the issue and it had now uncovered the new information showing AES and Seminole Kraft planned to keep Seminole Kraft's boilers operating once AES started up.

"The fact that DER had been kept in the dark about the existence of this agreement while the project's application was under consideration amounts to a bait-and-switch gimmick at the expense of Jacksonville citizens," Butterworth said.

Deputy Attorney General Peter Antonacci said the confidential memorandum, a letter of intent dated Sept. 10, 1990, showed AES and Seminole Kraft planned to proceed with the original permit and then later, once it was approved, attempt to change it. The permit was approved on Jan. 22, 1991.

Staff writer Beth Reese Cravey contributed information to this report.

Company files report defending application

(From Page A-1)

the site certification proceedings and that there is no basis for suspension or revocation of the site certification."

AES said in its report that:

- The AES project did "evolve" over time, but the changes occurred because Seminole Kraft decided to convert to a liner-board recycling operation.

AES says letters show the state was aware of the option.

- AES did not think it necessary to discuss the boiler plans with the Cabinet because the state law does not prohibit applying for a new permit for the refurbished boilers.

"So long as the environmental benefits for the cogeneration project would be realized, there was no reason to believe that the [Cabinet] members themselves needed to be



Jeff Meyer is surrounded by famous and historic trees at his Dinsmore

Dinsmore tree to grow in Red

(From Page A-1)

Washington used as his Revolutionary War headquarters in White Plains, N.Y.

Meyer, operator of the Big Tree Nursery in Dinsmore, will take part in a planting ceremony Saturday morning, the day of Russia's Peace Victory Parade, with Russian President Boris Yeltsin.

"I don't think we're going to go over there and solve all their problems with trees," Meyer said yesterday. "But maybe we can give them some hope."

He leaves today for New York and a series of radio interviews. Tomorrow, he and the tree leave for a 17-hour flight to Moscow.

It's a city in serious trouble, in turmoil after the death of communism: He's been told to bring his own snacks, toothpaste and toilet paper, as well as trinkets to give to people he meets. Meyer already has packed a box of cigarettes, candy bars, chewing gum and chocolate kisses.

Meyer, 33, is executive director for the Famous and Historic Trees project, a project of American

Forests, formerly the American Forests. The project, based at Meyer's home in White Plains, N.Y., is one of trees with historic significance across the nation — and now

Along with the sycamore, Meyer will be planting trees, for planting at Moscow. And he'll be collecting seeds from the trees at Meyer's home in Moscow for planting.

Meyer's trip — and the planting of George Washington sycamores — is a private and corporate development project. Contributors, real estate developers, Port Authority Chairman V. Thomas Ichniowski, his wife, Emily, also will contribute.

Meyer will be in for quite a long stay in Moscow: The Voice of America program, Moscow News, which has a circulation of more than 100 million copies, will be in the

"This to me is the biggest thing," Meyer said. "The tree planting — it's just ama-

L.A. riots bloodiest since Civil War

(From Page A-1)

work. It ended after participants met with Mayor Sharon Pratt Kelly, who wore a black armband in protest of the verdicts.

Yesterday in Atlanta, college students began taking exams despite calls for a boycott that followed violent demonstrations. Civic leaders promised a unified effort to heal racial divisions.

Police said their presence near the six-college Atlanta University Center was being cut back to normal levels.

The death toll from the three-day disturbance in Los Angeles surpassed the 48 people killed in 1917 race riots in East St. Louis, Ill., and was the nation's bloodiest unrest since the 1863 Civil War draft riots in New York City, in which about

1,000 people were killed. The riots also left 2,328 people injured and 11,724 jailed.

One of the most severely injured — truck driver Reginald Denny, who was beaten by rioters then rescued by four black strangers — is making "a remarkably recovery," doctors said.

Some commuters returned to bumper-to-bumper congestion.

Postal service resumed, and buses and trains also were running. Los Angeles International Airport was mostly back to normal.

Bradley renewed his criticism of the acquittals, saying, "I don't know how and why any jury can justify that verdict."

The mayor, who hadn't spoken to embattled police Chief Daryl Gates in the 13 months before the riots, also called for an explanation from

the police slow response. Gates' harsh

Bradley angry speech rioting because, the riots. "I s am angry

President riot areas domestic federal re David Ke

of educat of Xerox t egation of Los Angel

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AES said in its report that:

- The AES project did "evolve" over time, but the changes occurred because Seminole Kraft decided to convert to a liner-board recycling operation.

- The AES project will allow Seminole Kraft to shut down five old, polluting boilers. The air quality in Jacksonville will be as good or better than the predicted air quality presented last year to the Cabinet.

- While there was apparent confusion over the term "permanent shutdown" of the three Seminole Kraft boilers, "they do not evidence false statements or even misrepresentations." Seminole Kraft had planned to refurbish the boilers to meet new pollution standards.

- Refurbishing the boilers was only one option under consideration. Seminole Kraft didn't decide on the method until last September, after an engineering study was completed.

- The option of refurbishing the boilers was discussed with the DER and governor and Cabinet's staff.

AES says letters show the state was aware of the option.

- AES did not think it necessary to discuss the boiler plans with the Cabinet because the state law does not prohibit applying for a new permit for the refurbished boilers.

"So long as the environmental benefits for the cogeneration project would be realized, there was no reason to believe that the [Cabinet] members themselves needed to be informed that this refurbishment was one of a number of options being considered by Seminole Kraft," the AES report said.

- The Cabinet's knowledge of the boiler option wouldn't have justified denial of the permit application. The DER has maintained that the information could have affected the Cabinet's decision to give AES an operating permit.

"The mere fact that Seminole Kraft was considering one option that the siting board [Cabinet] may not have liked would not justify denying certification for the entire cogeneration project," AES said.

- Changes in the amount of steam AES would provide Seminole Kraft and electricity it will provide to Florida Power & Light Co. is not a basis for denying a permit, as stated by the DER.

Meyer, 33, is executive director for the Family and Historic Trees project, a project of American

L.A. riots bloodiest since

(From Page A-1)

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April 3, 1992

D. E. R.
SITING COORDINATION

Mayor Ed Austin
City of Jacksonville
14th Floor, City Hall
220 East Bay Street
Jacksonville, Florida 32202

Dear Mayor:

Since Stone Container/Seminole Kraft purchased and reopened the paper mill on Jacksonville's Northside in 1987, we have made significant changes in the historical way this paper mill has worked in cooperation with this community...and worked to improve the environment.

This letter is to inform you of another step in the journey we began in 1987. We believe, and hope you will agree, the most recent decision made by Seminole Kraft which I will describe to you here is another positive effort on our part to say once again to the people of Northeast Florida--as well as our elected officials-- that Seminole Kraft is very sensitive to the high environmental standards and expectations of our community...and very sensitive to the important role of perceptions in today's political environment.

As you know, Seminole Kraft will soon open the world's largest facility for the recycling of paper products...some 1,700 tons per day. A simultaneous benefit of removing over 600,000 tons of paper from our landfills each year will be the significant benefit of removing the smell from the air which has resulted from the operation of this mill for some four decades.

We think both of these benefits are extremely important not only to the growth and future of Seminole Kraft, but to the quality of life and the future of Northeast Florida.

It has been very expensive for Seminole Kraft to meet this significant milestone. We initially invested some \$50 million in recommissioning the mill after we purchased it, along with installing environmental equipment and controls which has already



Mayor Ed Austin
April 3, 1992
Page Two

resulted in the reduction of odorous TRS emissions by 92 per cent. On top of that \$50 million, Seminole Kraft is now spending another \$117 million to develop and build the facility which will make our paper mill a 100 per cent recycling operation...and totally eliminate the mill's smell.

I might add parenthetically here that none of the requirements from local, state or federal regulatory agencies called for the total elimination of TRS, only a significant reduction. The fact that Seminole Kraft will become 100 per cent odor free is another indication of our anxiousness and willingness to always do more than what is asked or called for in meeting legal requirements, or exceeding community standards.

In the last several months, there has been a misunderstanding and an unfortunate community controversy concerning Seminole Kraft's plans to close, and seek permission to rebuild and reopen three boilers that will meet the latest air emission standards and supply the steam needed to power our paper mill.

As you also know, the plans which were approved by the Florida DER and Jacksonville BESD in 1989 permitted a large low odor Kraft recovery boiler as well as the purchase of steam from AES Cedar Bay to power our mill. This approved plan allowed for 8 permitted sources of air emissions.

Without recounting all of the details, I simply want to point out again, when we determined that Seminole Kraft and Jacksonville's environment would benefit even further by seeking to rebuild three boilers to replace the already permitted low odor Kraft recovery boiler, our plans were always communicated to the proper government agencies and officials through proper channels.

We have every confidence and reason to believe that the Special Counsel appointed by the Governor will concur with this statement. We felt at the time, and still feel today, that this was a decision in the best interest of Seminole Kraft and the best interest of Jacksonville's environment.

Unfortunately, because of the controversy and important community attitudes, it has become apparent that Seminole Kraft has had great difficulty in explaining the environmental validity of this decision or in convincing the community of the correctness of this direction.

Mayor Ed Austin
April 3, 1992
Page Three

Frankly, Mayor, the controversy surrounding this single issue has tended to cloud and cover the tremendous successes made at Seminole Kraft, and it has overshadowed the \$165 million investment we are making to improve Jacksonville's environment.

For those reasons, and because we intend to maintain our policy of being extremely sensitive to the feelings of the people who live and work in this community, Seminole Kraft has decided NOT to seek permission to upgrade and reopen these three controversial boilers once they are closed. When they are shut down, they will become another piece of the past history of this mill.

And, at significant expense...at a cost of many millions of dollars...Seminole Kraft will permit and build new boilers meeting the same New Source Performance Standards to supply the steam required to power this mill in addition to that which will be purchased that will allow us to recycle 1,700 tons of OCC and other paper product's each day; clean Jacksonville's air; produce a quality American product which is competitive around the world, and help support Jacksonville's economy through good paying manufacturing jobs.

Mayor, I would say to you again that Seminole Kraft has made monumental contributions to Jacksonville since we reopened the closed mill and restored over 400 jobs.

We came to Northeast Florida with the clear understanding we would be an outstanding member of this community. We said Stone Container and Seminole Kraft would create a paper mill which would become a source of community pride because of its environmental and economic contributions. That was our commitment then, it is our commitment now. The decision I am communicating to you today is just one more way we are demonstrating that Seminole Kraft keeps its commitments.

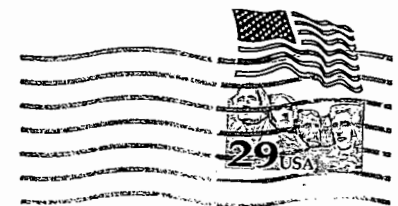
Finally, Mayor, I want you to know how much I appreciate the willingness of you and the members of your staff to work with us on this issue, the leadership you have provided, and the cooperation and courtesy we have received.

Sincerely,

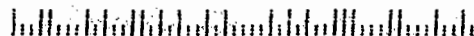


L.A. Stanley
General Manager

JAMES A. HEARD
ATTORNEY AT LAW
2902 INDEPENDENT SQUARE
JACKSONVILLE, FLORIDA 32202



Mr. Claire Fancy
Bureau Chief
Bureau of Air Regulation
DER
2600 Blair Stone Road
Tallahassee, FL 32399-2400



JAMES A. HEARD
ATTORNEY AT LAW

2902 INDEPENDENT SQUARE
JACKSONVILLE, FLORIDA 32202

TELEPHONE (904) 355-5467
FACSIMILE (904) 633-9328

February 21, 1992

Mr. Claire Fancy
Bureau Chief
Bureau of Air Regulation
DER
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED
FEB 24 1992
Division of Air
Resources Management

Re: AES Cedar Bay

Dear Mr. Fancy:

I am interested in the permitting process for the AES Cedar Bay, Inc. ("AES"), coal fired power plant now under construction in Jacksonville. Specifically, I am curious about your Department's apparent allowance of "netting" between Seminole Kraft ("SK") and AES, subtracting the emissions of old equipment being retired at SK from the new emissions of AES. I understand that this may have been the basis for AES avoiding some of the standards that it would otherwise have been subject to under the prevention of significant deterioration ("PSD") and non-attainment provisions of the Clean Air Act, as implemented by §§ 17-2.500 and 17-2.510, F.A.C.

I understand the "netting" issue was the topic of some debate between DER and EPA, but I do not have all of the relevant correspondence and internal memoranda. Accordingly, please consider this a request under the Public Records Act, Chapter 119, Florida Statutes, for the following:

1. Any and all correspondence between DER and either the applicant (AES) or EPA regarding the "netting" or crediting of SK emissions against those of AES, for purposes of either the PSD or non-attainment standards (§§ 17-2.500 and 17-2.510, F.A.C.).

2. Any and all correspondence between DER and either the applicant (AES) or EPA regarding whether AES and SK constitute one "facility" or two for purposes of determining applicability of either the PSD or non-attainment standards (§§ 17-2.500 and 17-2.510, F.A.C.).


3. Any and all correspondence between DER and either the applicant (AES) or EPA regarding whether AES was required to demonstrate LAER for VOCs or particulates.

4. Any and all internal DER memoranda regarding any of the preceding subjects (nos. 1-3, above).

Mr. Claire Fancy
February 21, 1992
Page two

Please feel free to contact me if you need any clarification, or I can otherwise assist you in responding. Thank you for your attention to this request.

Sincerely,

A handwritten signature in cursive script that reads "Jim Heard".

James A. Heard

cc: Richard Donelan, Esq.

Patty

January 1992

RECEIVED

JAN 28 1992

Division of Air
Resources Management

TO: WHOM IT MAY CONCERN

Please be advised that AES Cedar Bay has changed their address from:

AES Cedar Bay, Inc.
9469 Eastport Road Room 10
P.O. Box 26998
Jacksonville, FL 32218-0998

to:

AES Cedar Bay, Inc.
P.O. Box 26329
Jacksonville, FL 32218-0329

FOR FEDERAL EXPRESS USE ONLY

AES Cedar Bay, Inc.
9640 Eastport Road
Jacksonville, FL 32218

cc:

Clare Tancy



~~Jim~~ / P. Atty

January 1992

TO: WHOM IT MAY CONCERN

RECEIVED
JAN 28 1992
Division of Air
Resources Management

Please be advised that AES Cedar Bay has changed their address from:

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9469 Eastport Road Room 10
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AES Cedar Bay, Inc.
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Jacksonville, FL 32218-0329

FOR FEDERAL EXPRESS USE ONLY

AES Cedar Bay, Inc.
9640 Eastport Road
Jacksonville, FL 32218

cc: Steve Smallwood



CHF - file



JOHN A. DELANEY
GENERAL COUNSEL

OFFICE OF
GENERAL COUNSEL
CITY OF JACKSONVILLE
SUITE 715 TOWNCENTRE
421 WEST CHURCH STREET
JACKSONVILLE, FLORIDA 32202-4156

TEL (904) 630-4900
FAX (904) 630-4991

January 13, 1992

RECEIVED

JAN 15 1992

Secretary Carol Browner
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Division of Air
Resources Management

Dear Secretary Browner:

This letter reaffirms the request of the City of Jacksonville that you conduct an investigation into our allegations that AES Cedar Bay/Seminole Kraft Corporation misled the Siting Board, your Department and the City concerning its co-generation project in Jacksonville. It also addresses Seminole's denials in their attorney's letter of January 7, 1992. After reading that letter carefully, I am confident you will agree that it confirms the City's allegations -- the applicants misled the Siting Board and the parties to the site certification process.

In the January 7, 1992, letter, Seminole states that "as soon as Seminole Kraft knew that it might be possible to eliminate the recovery boilers entirely, but that some new source of steam might also be needed, this issue was discussed with [your] Department and the City of Jacksonville." The writer then refers to correspondence with the regulatory agencies to prove the point. All of this is completely outside the Chapter 120 process statutorily mandated to determine whether the Siting Board should approve the application. By omitting any reference to the site certification administrative record, Seminole Kraft concedes that the Hearing Officer's recommendation and the Siting Board's Order were made in ignorance of Seminole's true intentions.

In the original application for site certification, Seminole planned to build a new kraft recovery boiler and continue making paper from pulped virgin products. The recovery boiler would provide Seminole with black liquor for the paper process, 42 MW of electricity, and high pressure steam. By late 1989 Seminole "knew that it might be possible to eliminate the recovery boilers entirely." On January 29, 1990 shortly before the site certification hearings began, Seminole issued a press release, enclosure (1), reporting that "Stone Container Corporation," Seminole's parent company, "announced today that its board of directors has approved a plan for major reconfiguration and paper machine rebuild at the Seminole Kraft Corporation mill in Jacksonville." As for the old power boilers, the press release continued that "The existing paper mill oil

fired boilers would continue to operate until the AES Cedar Bay Cogeneration plant startup after which the mill's boilers will be shut down."

When the decision was made to reconfigure the plant, the applicants knew that some other source of steam was necessary just to operate as originally proposed. At the February 5, 1990 site certification hearing, Mr. Stanley, Seminole's general manager, testified the conversion would reduce the amount of steam available to the company; enclosure (2). In his December 2, 1991 letter to Mayor Austin, enclosure (3), AES plant manager Kerry Varkonda candidly explained that AES could never meet Seminole's steam needs.

We have never intentionally misled anyone into thinking that we would supply all of the steam requirements of the mill. In fact the project's Site Certification Application (SCA) clearly shows that Seminole Kraft intended to produce a portion of its own steam.

The original agreements between Seminole and AES were reached and permits filed on the assumption that the mill would operate as a kraft pulp mill with an associated recovery boiler. Then when Seminole Kraft made the decision to convert to a recycled fiber mill, the steam production from the recovery boiler had to be replaced as it would no longer operate.

Yet on February 7, 1990 Mr. Daniel Nelson, an employee of Black & Veatch, co-applicant AES's consulting firm, was permitted to testify that AES would be able to meet all of Seminole Kraft's steam needs. Enclosure (4). On February 20, four days after Seminole asked DER for permission to amend its permit to construct the new recovery boiler, the applicants' attorney told Hearing Officer Benton that the bark and power boilers would be shut down, as originally proposed, and that Seminole would purchase its additional electricity requirements from the Jacksonville Electric Authority. Enclosure (5). If these representations were true, another boiler refurbished or new was unnecessary. That information was inaccurate and remained uncorrected through the January 1991 hearing before the Governor and Cabinet.

Moreover, the air modeling submitted with the application to demonstrate compliance with applicable pollution control regulations was never adjusted to reflect the emissions from the refurbished boilers. Thus, the crucial emissions data was misleading as to the effect of the project on Jacksonville's environment!

In July, 1990, Seminole Kraft, your Department and the City negotiated Condition II.D. Contemporaneous Emissions Reductions. As originally proposed, that condition obligated Seminole Kraft to dismantle its bark and power boilers. That requirement was eliminated at Seminole Kraft's request because Seminole said to do so would have been very costly. Repowering the

boiler after shutdown to meet known steam shortfalls was not Seminole Kraft's reason for eliminating the requirement to dismantle the boiler. Seminole Kraft affirmatively led the parties, the Hearing Officer and the Siting Board to believe that there was no need for those old boilers in the future and that they would be forever made incapable of operation.

Outside the administrative record on the site certification application, Seminole Kraft and the regulatory agencies exchanged correspondence on a number of issues. The critical letters, in Seminole's view, are attached to the January 7, 1992 letter. Seminole contends that the correspondence shows the regulatory agencies, if not the public and the intervenors, were aware of their plans to reuse the boilers. On January 7, 1992, Mr. Stanley, the plant general manager, held a press conference at the recycling facility to share this evidence with the media. As reported in the Florida Times-Union the next day, Mr. Stanley conceded the company could have done a better job:

However, in response to critics' allegations that Seminole Kraft didn't reveal its intent fully, Stanley agreed that the company had not been specific.

'To an extent, that's probably a fair analysis because we just completed the full engineering about 45 days ago,' he said.

While an amended application with less than full engineering would have been helpful, the correspondence is offered to prove that as early as February, 1990, the company clearly told the regulatory agencies of their intent to meet steam shortfalls by repowering the old boilers. Let's review the correspondence to see whether anybody would agree that Seminole told us of their plans. The following comments are keyed to the numbered paragraphs of the January 7, 1992 letter and the attachments thereto:

1. On February 16, 1990, Seminole Kraft did request amendment of its construction permit for the new recovery boiler. (See attachment 2.) In that request, Seminole Kraft explained that "Our number one paper machine (presently making bag paper) will be placed on cold standby for the time being. However, we hope to develop a project to use recycled fiber on the number one paper machine in the future, and if AES cannot supply the required steam, we would like to use the creditable emissions from the recovery boilers for a power boiler to supply steam to the number one paper machine." No one could glean from this that Seminole Kraft intended to repower the old boilers. By the February 16, 1990, letter, your Department and the City could not have known that AES couldn't supply the required steam or that "a power boiler to supply steam to the number one paper machine" meant a refurbished bark or power boiler, especially considering Mr. Nelson's testimony only a week before.

2. The City, in a letter dated March 22, 1990, from Mr. Manning, signed by Mr. Woosley, Air Engineer for the City, addressed creditable emissions from a shutdown of the recovery boilers. The City agreed that the decision to shut

down certain boilers was not "an impediment to the future construction of a steam-producing boiler at the Seminole Kraft facility should the need arise. A new boiler would be subject to new source performance standards . . ." The future construction of a new steam-producing boiler at the Seminole Kraft plant clearly does not mean refurbishing a 1950's vintage bark or power boiler.

3. On April 4, 1990, EPA did respond to the Seminole Kraft package forwarded by DER. (See Attachment 4.) While EPA recognized Seminole's ability to preserve the emission credits for five years from shutting down the recovery boilers, it did not even mention the possibility of reopening old bark boilers using those emission credits.

4. Your Department responded to Seminole Kraft regarding contemporaneous emission credit calculations on June 6, 1990. (See Attachment 5.) That letter attached the EPA letter and the February 16, 1990, letter from Seminole. As discussed in paragraph #1, above, one stated purpose of requesting the emission credits in the February 16, 1990, letter was for a power boiler. The power boiler was not specified and certainly there is no indication Seminole Kraft was referring to any of its existing power boilers that were to be shut down under Condition II.D.

5. On June 6, 1990, your Department also responded to Seminole Kraft's request to amend the construction permit for the new recovery boiler to allow an option of closing down three existing recovery boilers and converting to a 100% recycle fiber operation. (See Attachment 6.) Neither your Department's letter of June 6 nor Seminole's request for amendment of February 16, 1990, even mentions the possibility of reactivating the old bark and power boilers once they were permanently shut down.

6. On June 14, 1990, Seminole Kraft formally notified your Department of its election to pursue use of recycled fiber rather than construct a new recovery boiler. (See Attachment 9.) That notification adds nothing to Seminole's February 16, 1990, letter which does not even hint at the use of the old power and bark boilers after "permanent" shutdown.

7. On July 2, 1990, your Department acknowledged receipt of Seminole's June 14, 1990, letter. This hardly establishes your Department knew Seminole Kraft planned to use the boilers further.

8. Seminole Kraft and AES negotiated Condition of Certification II.D. in July, 1990. The City disagrees that it concurred in any interpretation allowing Seminole to rebuild the bark boilers. On the contrary, regulatory agencies originally proposed a condition requiring Seminole to dismantle the boilers. Seminole complained that the cost of dismantling would be prohibitive and asked permission to leave the boilers in place after they had been permanently shut down. Your Department concurred that letting the boilers rust in place after they had been permanently shut down and made incapable of operation was acceptable. It was the intent of the parties that those boilers never be used again. In contrast, the City later negotiated a Consent Agreement with Seminole to

settle certain odor violations. (See Attachment 14.) That agreement pertained to Seminole's old kraft recovery boilers -- the ones that were to be replaced by the new kraft recovery boiler in the original AES/Seminole Kraft site certification application. Under paragraph 9.A.1.b. of the Consent Agreement, Seminole Kraft was required to "cease emissions of TRS by September 12, 1992, and cease use as recovery boiler as provided in paragraphs 11 and 12. Surrender permits for use as recovery boiler. Any further use of the equipment shall require compliance with applicable rules, including obtaining new permits." Certainly, if the City and your Department envisioned that Seminole Kraft could continue to use the bark and power boilers, Condition II.D. would have contained language like that found in the Seminole Kraft/City of Jacksonville Odor Consent Agreement.

9. On October 26, 1990, Seminole Kraft sent a letter to Mr. Steve Smallwood of the Bureau of Air Quality Management proposing to confirm his discussions concerning refurbishment or replacement of the existing bark boilers, or the use of the boilers to burn recycled fiber rejects and well as bark. The letter closed with a request that your Department confirm Seminole Kraft's understandings. Instead of confirming Seminole Kraft's understandings, DER sent Seminole's correspondence to EPA Region IV in Atlanta for review. The Governor and Cabinet approved the site certification before Region IV (which did not participate in negotiating Condition II.D.) responded on February 25, 1991. EPA's response, therefore, not only analyzed Seminole Kraft's proposals in the abstract, they also responded too late to give Seminole any comfort. At the time the Governor and Cabinet acted, Seminole could not have known what EPA would say and did not have the Department's concurrence that the old boilers could be refurbished and repowered.

10. When your Department transmitted Seminole's October 26, 1990, letter to EPA on November 21, 1990, a copy was provided to the City of Jacksonville. (See Attachment 12.) Seminole asserts that the City neither responded nor objected to Seminole's interpretation of the condition. This is hardly surprising because the City was not a party to the conversation Seminole sought to confirm, nor was the City asked to comment.

11. On November 14, 1990, the City and Seminole Kraft signed a Stipulation for Entry of a Consent Judgment, reaching an agreement on a civil action brought by the City relating to odor. (See Attachment 14.) In that Stipulation, Seminole specifically reserved the right to repermit and use the recovery boiler equipment for future power or steam needs. The Stipulation demonstrates that Seminole Kraft knew how to negotiate a condition allowing it to repower a source that had been shut down. They did not reserve such an opportunity in negotiating Site Certification Condition II.D. Moreover, while the Consent Judgment Stipulation may have put the City on notice of Seminole's needs for additional power or steam, nothing in the Stipulation, which relates to the kraft recovery boiler system, alerts the City that Seminole Kraft wanted to repower the boilers to be shut down under the unrelated site certification conditions.

12. As discussed above, on February 25, 1991, two weeks after the Governor and Cabinet granted site certification, EPA responded to DER's request concerning Seminole's October 26, 1990, letter. EPA erroneously believed that bark boilers were to be dismantled. Moreover, their views address repowering shutdown sources in the abstract because they were not a party to the negotiation of Condition II.D. designed to achieve a certain end: the permanent shutdown of old boilers with a notorious history of non-compliance.

The remaining correspondence submitted by Seminole Kraft discusses whether the company may burn rejects from the recycling operation in the bark boilers after the recycling conversion until AES's boilers come on line. These issues are still under study and there is nothing in the correspondence that would apprise anyone of a plan to use the boilers after AES is operational.

The attachments to Seminole Kraft's January 7, 1992 letter wouldn't convince anybody that the company had telegraphed their plan to us, and Mr. Stanley agrees "that's probably a fair analysis." Moreover, the response concedes several points. First, by omitting any reference to the administrative record on the site certification application, Seminole concedes that it never formally apprised the parties, the Hearing Officer, or the Governor and Cabinet of its plan to repower the old boilers or its incredible interpretation of Condition II.D. In this regard, Seminole also concedes that the testimony of Mr. Nelson and the statement of counsel were not corrected to reflect the true circumstances.

Second, Seminole admits by its exchange of correspondence outside the administrative record that, when it decided to convert the plant to 100% recycling, Seminole planned to repower the boilers. Otherwise, why would Seminole now argue that it told the regulatory agencies it wanted to repower the old boilers in correspondence as early as February, 1990?

Third, the correspondence is not, by any stretch of the imagination, a clear and unequivocal statement of Seminole's plans to repower its boilers. Even by the most strained reading no reasonable person could conclude that Seminole notified either your Department or the City of Jacksonville of its plans.

Rather than refuting the City's position, Seminole has confirmed that it affirmatively misled your Department, the City, and the Governor and Cabinet into believing that AES could provide all Seminole's steam needs when it could not; that Seminole would not need a rebuilt boiler (to replace electric power lost by eliminating the new kraft recovery boiler because it would buy electricity from JEA); and, that "permanently shut down and made incapable of operation," the language of Condition II.D., had a unique meaning known only to Seminole Kraft.

Undoubtedly, Seminole Kraft knew how to raise the issue of repowering the boilers: amend the site certification application. An amendment would have explicitly detailed its real plans and provided the basis for a careful and well-reasoned analysis. Seminole had done this on several earlier occasions, including withdrawing the new kraft recovery boiler system when the decision was made to convert the plant to a 100% recycle operation. Seminole's failure to

Secretary Carol Browner
January 13, 1992
Page -7-

amend the application when it planned to reuse the old boilers, and its failure to correct its affirmative statements on the record, deprived the parties, your Department, the City, the Hearing Officer and, the Governor and Cabinet of the opportunity to evaluate the real impact of Seminole's decision.

Ultimately, the question is whether, upon the administrative record before them, the Governor and Cabinet would have granted certification if they knew the truth about Seminole's plans. We don't think they would. Seminole's abuse of the process should be fully investigated with a view to suspending site certification, stopping construction until the impact of the applicants' true plans are fully explored.

Sincerely,



Gregory K. Radlinski
Assistant General Counsel
Environmental Law Division

GKR/lou

cc: Richard Donelan (with enclosures)
Gary Smallridge (with enclosures)
Mayor Ed Austin (with enclosures)
✓ Steve Smallwood (with enclosures)
Clair Fancy (with enclosures)
T. R. Hainline (with enclosures)
J. L. Manning (with enclosures)
EPA (with enclosures)
John A. Delaney (with enclosures)

ENCLOSURE (1)

R RELEASE JAN. 29, 1990 5:00 P.M.CST

For Information:

L.A.Stanley (904) 751-6400

~~STONE CONTAINER BOARD APPROVES PLAN TO CONVERT
SEMINOLE KRAFT MILL TO 100% RECYCLED FIBER OPERATIONS~~

TRS Emissions Will Be Eliminated And 1,200 Tons
Of Linerboard Per Day Will Be Produced

Jacksonville, FL January 29, 1990 --- Stone Container Corporation announced today that its board of directors has approved a plan for a major reconfiguration and paper machine rebuild at the Seminole Kraft Corporation mill in Jacksonville, Florida. Seminole Kraft Corporation is a 60% equity owned subsidiary of Stone Container Corporation.

In making the announcement, Roger W. Stone, Chief Executive Officer of both companies said, "The conversion of the Seminole Kraft mill to 100% recycled fiber helps us meet the changing needs of our customers - companies world-wide who package their goods in corrugated containers and who want to do their part to help minimize solid waste." The Seminole Kraft conversion would increase Stone's total recycling capacity from 1.3 million tons in 1990 to 1.8 million tons by 1992.

- more -

Page Two

This application of new technology would eliminate all regulated sources of TRS emissions - the familiar kraft mill odor - by closure of the kraft pulp mill and replacement with a 100% recycled fiber operation. This plan would also make a major contribution to the solution of solid waste disposal problems in the State of Florida and the nation by utilizing more than one-half million tons per year of waste paper.

The mill conversion is estimated to cost \$100 million and to take 30 months to complete. Engineering studies are currently underway to finalize these estimates. After conversion, the mill would be designed to produce 1,200 tons per day of 100% recycled linerboard.

The mill would continue operation during the conversion. The existing paper mill oil fired boilers would continue to operate until the AES Cedar Bay Cogeneration plant startup after which the mill's boilers will be shut down.

The plan is contingent upon approval by the Seminole Kraft Corporation board of directors and certain regulatory approvals, confirmation of the cost by a detailed engineering study, and completion of suitable financing.

- more -

Page Three

In describing the mill conversion, L.A. Stanley, General Manager, Seminole Kraft, said that, through innovative approaches utilizing the latest proven technology, the project would:

- . eliminate all regulated sources of TRS (i.e., pulp mill, recovery boilers and recausticizing operation will be shut down) which will result in elimination of the typical kraft pulp mill odor.
- . significantly reduce particulate emissions.
- . increase use of recycled waste paper by more than 1,300 tons/day from the current 100 tons/day.
- . reduce landfill needs by about 4,000 cubic yards per day (equivalent to the waste from a city of nearly 3/4 million people) by recycling this amount of paper.
- . reduce water usage and wastewater volume.
- . result in significant reduction of truck traffic.

Stanley stated that as a result of the shutdown of a portion of the mill, there will be a reduction in the mill's workforce. The exact number cannot be determined until engineering is complete.

Page Four

The Seminole Kraft mill was constructed in the early 1950's by St. Regis Paper Company and expanded to its present configuration in the mid-1950's. The mill was sold in 1983 to Ben Westby, who formed Jacksonville Kraft Paper. Jacksonville Kraft was acquired by Abraham Zion in early 1985, but was shut down in October, 1985, for economic and environmental reasons. Seminole Kraft Corporation was formed and the mill purchased in October, 1986. Following recommissioning at a cost of \$25 million, the mill was restarted in early 1987.

Stone Container Corporation is a major multi-national paper company, operating principally in one business segment - the production and sale of commodity pulp, paper and packaging products.

The company, which has grown steadily since its founding in 1926, has increased dramatically in size over the past six-plus years through a series of four major acquisitions and several smaller ones. Since 1982, sales have increased nearly 1200 percent to the currently indicated annualized rate of approximately \$5.5 billion. Stone Container Corporation, including its subsidiaries and affiliates, maintains manufacturing facilities and sales offices throughout North America and in Western Europe, as well as sales offices in Japan and China.

#

ENCLOSURE (2)

Mr. Stanley

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,
Petitioner,

CASE NO. 88-5740

vs.

DEPARTMENT OF ENVIRONMENTAL
REGULATION,
Respondent.

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC SERVICE
COMMISSION, and ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT, JACKSONVILLE
ELECTRIC AUTHORITY, CHARLES L. BOSTWICK,
BARNETT BANK TRUST COMPANY, IMESON
INTERNATIONAL PARK, INC., and INDUSTRIAL
PARK DEVELOPMENT CORPORATION,

STATE OF FLORIDA)

COUNTY OF DUVAL)

TESTIMONY and PROCEEDINGS before the Honorable
ROBERT T. BENTON, Hearing Officer, at 8050 Baymeadows
Road, Jacksonville, Duval County, Florida, on Monday,
Tuesday, and Wednesday, the 5th, 6th, and 7th days of
February, 1990, before Terry T. Hurley, a Notary Public
in and for the State of Florida at Large.

VOLUME I

(Pages 1 - 274)

DAWOOD & HOGAN
828 Blackstone Building
Jacksonville, Florida 32202
(904)353-5300

RED STAMP INDICATES
CERTIFIED
COPY

the new recycling facility would you be replacing any permitted air sources that you're aware of now?

A No.

Q Would there still be a requirement for power and for steam for the mill?

A Absolutely. The steam requirements would exist for the manufacture of paper in the future as they do currently.

Q How would the proposed project effect the AES project?

A There would -- there would be a reduction in the amount of steam. I don't -- I don't have the exact numbers at this time, and won't have them until engineering is complete, based upon a one machine operation.

Q Would you still need steam from some source?

A Oh, yes.

Q In terms of the election of construction of a power boiler, or of shutting it down and going to the recycled operation, is there a change in whether this project is required?

A We still require the source of steam in order to operate the mill and manufacture paper. Steam is a basic requirement of paper manufacturing.

Q Do you currently generate steam in-house?

ENCLOSURE (3)

you Manny Foster Delaney

*GREG ADOLINSKI
FYI
Dennis*
December 2, 1991

Honorable Ed Austin
Mayor
City of Jacksonville
14th Floor, City Hall
220 East Bay Street
Jacksonville, Florida 32202

RECEIVED **D**
DEC 06 1991

DEC 11 1991
MAYOR'S OFFICE
JACKSONVILLE, FLORIDA
Office of General Counsel
Environmental Division

Dear Mayor Austin:

We appreciate your consistent willingness to keep an open mind about AES/Cedar Bay, to thoroughly examine the issues and base your decisions on the facts. Several recent issues have been miscast by the media concerning AES/Cedar Bay's unchanged commitments to provide steam to Seminole Kraft and to cause the surrender of operating permits for 5 of Seminole Kraft's boilers. I am concerned that inaccurate information in the media has unfairly cast a shadow over the AES Cedar Bay project and am writing to provide you a complete picture of this issue.

ISSUE: AES/Cedar Bay cannot provide the amount of steam originally promised to Seminole Kraft ?

AES Cedar Bay has long maintained that it would provide approximately one-half of Seminole Kraft's steam needs. We have never intentionally misled anyone into thinking that we would supply all of the steam requirements of the mill. In fact the projects' Site Certification Application (SCA) clearly shows that Seminole Kraft intended to produce a portion of its own steam.

When indicated?

The original agreements between Seminole and AES were reached, and the SCA filed, during a time when the mill was, and planned to be, a kraft process pulp mill. As you are aware a kraft process pulp mill requires the operation of recovery boilers to process byproducts while producing steam. By necessity, these operating plans changed as a result of their recycle conversion.

*But the application
was never completed
subject to conversion X.*

ISSUE: AES/Cedar Bay is renegeing on promises to cause surrender of operating permits for 5 of Seminole Kraft's boilers?

AES Cedar Bay received its Site Certification based on the requirement that operating permits currently held by Seminole Kraft for two (2) bark boilers and three (3) power boilers would be surrendered to the State of Florida. As outlined above, the original agreements between Seminole and AES were reached and permits filed on the assumption that the mill would operate as a kraft pulp mill with an associated recovery boiler. Thus when Seminole Kraft made the decision to convert to a recycled fiber mill, the steam production from the recovery boiler had to be replaced as it would no longer operate.



BEST AVAILABLE COPY

Page 2 of 2

In order to determine how best to supply their share of steam, Seminole Kraft commissioned a study by Sandwell Engineering to evaluate many options for replacing the steam production from the recovery boiler and to burn waste fiber from the recycle process. That study was completed in September of 1991. Sandwell's recommendation was to upgrade and refurbish three of the boilers which will relinquish their permits when AES/Cedar Bay begins commercial operation.

In order for this to happen, Seminole Kraft must file applications, and undergo scrutiny from the regulatory agencies in the same fashion as any brand new source of air emissions. This process, the same as for any new source anywhere, must be followed in order to obtain new operating permits.

I hope that this letter more clearly explains what is happening with regards to the AES/Cedar Bay facility and its commitments to Seminole Kraft. AES/Cedar Bay is well aware of its obligation to supply 250,000 pounds per hour of steam to the mill and to cause the surrender of 5 operating permits for 1950's vintage boilers. And, AES/Cedar Bay intends to fully meet those commitments. We stand ready to meet with you and to answer any questions that you might have regarding the AES/Cedar Bay project.

Sincerely,


Terry Varkonda
Plant Manager

ENCLOSURE (4)

1 eat early and be back at 1:20.

2 (At, thereupon, the hearing was recessed at
3 12:40 p.m. to be reconvened at 1:40 p.m. of the
4 same day.)

5

6

7

A F T E R N O O N S E S S I O N

8

February 7, 1990

1:45 p.m.

9

THE HEARING OFFICER: Call your next witness.

10

MR. COLE: Mr. Nelson.

11

12

DANIEL WILLIAM NELSON,

13

having been produced and first duly sworn as a witness,

14

testified as follows:

15

16

DIRECT EXAMINATION

17

BY MR. COLE:

18

Q Would you state your full name and business
19 address, please.

20

A My name is Daniel William Nelson, and my
21 business address is 11401 Lamar, Overland Park, Kansas.

22

Q Okay. Could you briefly summarize your
23 education and experience.

24

A Okay. I have a Bachelor of Science degree in
25 meteorology. That was in 1975. Since then I've worked

1 briefly for the State of Iowa, and then at a research
2 institute for three years. And for the last twelve years
3 I've been employed at Black and Veatch,
4 Engineers-Architects.

5 Q At Black and Veatch what? Say it again,
6 Black & Veatch --

7 A Engineer-Architects.

8 Q Okay. Not as a architect, but that's part of
9 the name?

10 A No, right.

11 Q What is your position and responsibilities
12 there at Black & Veatch?

13 A I'm the unit supervisor for air quality and
14 noise units within Black & Veatch.

15 Q Okay. I'd like to show you a document we've
16 marked as Exhibit 1. Is that an accurate summary of your
17 education and experience?

18 A Yes, it is.

19 Q Does that detail some of the computer modeling
20 or air quality dispersion analysis, or air analysis that
21 you've done on some of the subsequent pages, and on
22 various projects around the country?

23 A Yes, it is.

24 Q Okay. Have you done any work in Florida in
25 terms -- besides this project in terms of ambient

1 analysis?

2 A I was involved in the Stanton Energy Center
3 air quality analysis, and we've done some other projects
4 that have been combustion turbines here in the last year
5 or so.

6 Q Okay. And the Stanton Energy Center, was that
7 a power plant siting application?

8 A Yes, it was.

9 Q Through the Department of Environmental
10 Regulation?

11 A Yes, it was.

12 MR. COLE: Okay. I would like to have -- I
13 would like to move this into evidence as
14 Petitioner's Exhibit 1, and I would like -- 21, I'm
15 sorry, and have him recognized as an expert in
16 meteorology and air quality analysis.

17 MR. MAGUIRE: No objection.

18 THE HEARING OFFICER: All right. Without
19 objection this is in evidence as DER's 21 -- I'm
20 sorry, as AES's 21.

21 (Petitioner's Exhibit Number 21 was received
22 and filed in Evidence.)

23 BY MR. COLE:

24 Q In the course of your duties at Black & Veatch
25 have you been asked to review air data and provide an

1 analysis of ambient air impacts of the proposed AES Cedar
2 Bay facility?

3 A Yes, I have.

4 Q Okay. What did you have to do in order to
5 prepare or assist in the preparation of the application;
6 what type of ground work do you lay in order to do that?

7 A Okay. Several things that we have to do. We
8 obtained background air quality or ambient data, and
9 that's what the monitors are out there for the State has,
10 measuring what people are breathing currently.

11 We get this information. We contacted the DER
12 and established what would be representative background
13 data that we could use for our analysis.

14 We also contacted the DER to establish what
15 set of meteorological data that we could use in our
16 computer programs to simulate the emissions coming from
17 the power plant. And they provided that to us.

18 We also have to establish what the proposed
19 emissions and source parameters would be for the AES
20 facility in this case, and that's -- I got that
21 information from Mr. Cochran.

22 We also have to establish if there's any
23 sources that will be replaced as a result of our
24 facility, and look at those actual emissions to see what
25 kind of credit we can get for replacing them.

1 Q Okay. Did you assist in the preparation of
2 the site certification application for this facility?

3 A Yes, I did.

4 Q Overall what sections or what parts of the
5 application did you help to prepare, or prepare?

6 A There's a general site climatology type
7 section, just a background of the existing climate of the
8 area, that I helped prepare. And the major one would be
9 5.6, which is the air impacts associated with the
10 operation and the construction of the proposed facility.

11 Q Okay. As far as you know, with the
12 application and the subsequent amendments -- and in terms
13 of the amendments did you provide input in your field of
14 expertise on some of the amendments as it effected air?

15 A Yes.

16 Q Okay. And taking both the application and the
17 amendments to the application, overall are the air data
18 relating to background, existing emissions, projected^e
19 emissions, are those true and accurate to the best of
20 your knowledge?

21 A We have here recently excluded a bunch of the
22 Seminole Kraft other sources, and we're only limiting --
23 or looking at the actual emissions to the power boilers
24 that we're replacing.

25 We provided a summary of that to BSD here

1 within the month.

2 Q Okay. And that was of the pieces of
3 information that you helped to prepare up there?

4 A Yes.

5 Q Okay. Overall, with taking that into account
6 then, do you consider that to be true in terms of any
7 facts that were in there?

8 A Yes.

9 Q To the best of your knowledge.

10 A Yes.

11 Q In terms of any opinions that may be found in
12 there, overall do you feel that the sections you prepared
13 are accurate and would be representative of either actual
14 conditions or proposed conditions?

15 A Yes.

16 Q Once you were able to collect the data that
17 you mentioned from the Department of Environmental
18 Regulation Bioservices Division, what did you do in
19 gathering the necessary information to make your
20 analysis?

21 A I guess we got the information from the DER,
22 not the BSD.

23 What we want to do is sit and identify what a
24 representative two-year period is for those existing
25 sources. This period was 1983-'84 for the paper mill

1 operation of those power boilers.

2 We calculated the emissions associated with
3 that operation during that period, and I -- that's like
4 our before case, or our base case.

5 Then we take our proposed emissions at the
6 worst case operating scenario to be conservative, and
7 generate what the emissions -- and that's what Mr.
8 Cochran was talking about here earlier -- and do a
9 comparison between the two to show if we're increasing
10 pollutants, if we've got a decrease associated with that,
11 to determine which pollutants would be applicable for
12 doing further analysis.

13 Q Okay. I would like to show you a document
14 which we'll mark for identification as Petitioner's
15 Exhibit 22. In fact, do you have a copy of the document
16 entitled Significant and Net Emission Rate Returns Per
17 Year that you can refer to?

18 A Right, I can look at mine right here.

19 Q Okay. Using this exhibit for identification,
20 could you summarize what you found, and without reading
21 the document, but in terms of overall increases of the
22 applicable validity.

23 A Okay. We -- this here is the current, just
24 showing the power boilers, the bark and the power -- the
25 three power boilers and the two bark boilers for the

1 existing '83-'84 data, along with our proposed emissions.
2 And we come up with a net increase in carbon monoxide,
3 nitrogen oxide. We have a significant decrease in sulfur
4 dioxide emissions.

5 Particulate matter also decreases. We've got
6 another subcategory of particulate matter, what they call
7 PM-1. And this is like particles that are less than ten
8 microns in diameter.

9 And EPA and DER, and various State agencies
10 are more -- making this more -- what do I want to say --
11 respirable. This size is more likely to get down into
12 your lungs. So they're really seeing that to be the
13 problem.

14 So we're kind of moving toward a PM-10
15 pollutant.

16 Q Fine particulate?

17 A Fine particulate, yes, also known as that.

18 I guess I would like to clarify one thing from
19 when Mr. Cochran was talking about from a VOC or volatile
20 organic compounds.

21 When we were looking at the entire facility
22 before with some of the other sources we show a decrease
23 in the volatile organic compounds. Now, if we just
24 consider the power boiler and the bark boiler emitting
25 those out, we've not increased ours, but the net is a

1 slight increase. We had a slight positive, but it's well
2 below EPA's significant criteria.

3 So that's a little bit of a clarification from
4 what Mr. Cochran said.

5 Q When you're totaling the net and significant
6 net emission rates, does that mean you're totaling what's
7 coming out of the stack, or actually what would be in the
8 area community that people would breathe?

9 A Okay. When we're talking about this table in
10 exhibit is what's coming out of the stacks.

11 THE HEARING OFFICER: Of course I don't have
12 that before me, so I'm having a little difficulty
13 following, but I would like to be sure I understand
14 the comparison that you made.

15 You say you looked at emissions from the paper
16 mill in the years 1983 and 1984?

17 THE WITNESS: Right.

18 THE HEARING OFFICER: And you had a record
19 that they kept at the time?

20 THE WITNESS: We had gone and looked at their
21 logs, I guess plant logs, to determine the amount
22 of air-dried pulp generated, and we also have
23 fuel -- fuel oil burn records. So we can see if
24 it's a representative year of operation.

25 Now, EPA and the DER will allow you, when

1 you're looking at -- getting a net benefit from
2 shutting down, you can go back and look at the two
3 representative years worth of data.

4 So we researched back into the files and
5 identified that '83-'84 is representative of the
6 current operation.

7 THE HEARING OFFICER: On the basis of fuel
8 usage and pulp dried.

9 THE WITNESS: In the amount of -- yes.

10 THE HEARING OFFICER: And then there were also
11 records of emissions?

12 THE WITNESS: What we have, is if you have the
13 amount of fuel oil burned you can calculate -- and
14 you know what the sulfur content of the fuel oil
15 is, you can mathematically calculate what, say, the
16 So₂ emissions would be.

17 THE HEARING OFFICER: All right. So all the
18 emissions were extrapolated from the fuel records,
19 fuel consumption records?

20 THE WITNESS: Those are used. There is -- EPA
21 also has some guidelines, what they call emission
22 factors. It's like, if this many tons or gallons
23 of fuel are burned for this type of source, you can
24 calculate.

25 The engineering or professional estimate would

1 be take this times the number of gallons and come
2 up with the emissions estimates for various
3 pollutants.

4 THE HEARING OFFICER: All right. Now, during
5 those years what was the paper mill firing?

6 THE WITNESS: We were only concerned here now
7 with the bark boilers and the power boiler. They
8 were firing oil. The bark boilers had a
9 combination of some oil, some bark.

10 THE HEARING OFFICER: Are you only concerned
11 with the bark boilers? These are the recovery
12 boilers we've heard about?

13 THE WITNESS: These are different recovery
14 boilers. It was a totally separate process. This
15 would be to provide steam to the plant.

16 THE HEARING OFFICER: All right. And I think
17 it's in the record, but just to help me now, how
18 many bark boilers are there?

19 THE WITNESS: There are two bark boilers and
20 three power boilers existing now at the Seminole
21 Kraft, and these will be replaced.

22 And right now these -- Mr. Cochran was saying
23 that there's really no controls associated with
24 these facilities, and they have very short stacks,
25 that they're allowing the pollution to be disbursed

1 into the air.

2 So with -- we'll get into it a little bit
3 further, but by putting our facility in there we
4 have improved the dispersion capability of the
5 facility by replacing these older outdated power
6 boilers.

7 THE HEARING OFFICER: All right. The recovery
8 boilers are to be shut down in any case.

9 THE WITNESS: The recovery boiler, as I
10 understand, with Seminole Kraft changing their
11 operation to a recycling mode, they will no longer
12 be required. And that's a separate issue from what
13 we're doing here.

14 THE HEARING OFFICER: All right. And how
15 about the bark boilers, are they going to be used
16 to recycle paper into liner board?

17 THE WITNESS: The bark boilers will be
18 replaced with the Seminole Kraft facility, so they
19 won't need any of those boilers anymore, the power
20 boiler and the bark boiler.

21 Any steam requirements that they need will
22 come from the AES project.

23 THE HEARING OFFICER: I guess my question is
24 whether when they go to their new process they're
25 going to have any bark that they could have used in

1 a boiler?

2 THE WITNESS: I'm not sure, but I think
3 they're only going to recycle cardboard at this
4 point, and there won't be any wood waste
5 associated.

6 THE HEARING OFFICER: Okay. There's not an
7 extra copy of that exhibit?

8 MR. COLE: I was fixing to move it into
9 evidence for you. I had wanted to lay a little bit
10 of ground work and then give it to you. And I'll
11 run through it in more detail.

12 Let me ask him one more question to lay a
13 predicate, and then I'm going to move it into
14 evidence and then you'll have it.

15 BY MR. COLE:

16 Q Mr. Nelson, in terms of the existing emissions
17 that are detailed in Exhibit 22 for identification, the
18 proposed emissions and the calculations that were done in
19 terms of increases or decrease, are these true and
20 accurate to the best of your knowledge?

21 A Yes, they are.

22 Q Okay.

23 MR. COLE: I would like to move that into
24 evidence as AES's Exhibit 22.

25 THE HEARING OFFICER: Any problem with this?

1 MR. MAGUIRE: No, sir.

2 THE HEARING OFFICER: All right. Without
3 objection.

4 (Petitioner's Exhibit Number 22 was received
5 and filed in Evidence.)

6 BY MR. COLE:

7 Q Okay. Would you finish your summary of the
8 overall emissions increases or decreases for the
9 applicable pollutants.

10 A Okay. I believe I left off with lead. We'll
11 have a net increase in lead. Asbestos, it's equal to or
12 less. Beryllium, a slight increase; mercury, a slight
13 increase; vinyl chlorides, possibly. It would not be
14 significant, however. Sulfuric acid mist, we will have a
15 net increase. I believe I skipped one. Chlorides, we'll
16 have a net increase. And total reduce sulfur will not be
17 a significant increase.

18 Q There is a term to the right, applicable
19 pollutant. What was the purpose of that, or what does
20 that mean?

21 A Okay. From an air quality standpoint EPA has
22 established a permitting process which the DER has
23 adopted also. And what you have to do is look at --
24 actually look at the second -- the last three columns
25 there are the most important.

ENCLOSURE (5)

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STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,
Petitioner,

vs.

Case No. 88-5740

DEPARTMENT OF ENVIRONEMNTAL
REGULATION,
Respondent.

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC SERVICE
COMMISSION, and ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT, JACKSONVILLE
ELECTRIC AUTHORITY, CHARLES L. BOSTWICK,
BARNETT BANK TRUST COMPANY, IMESON
INTERNATIONAL PARK, INC., and INDUSTRIAL
PARK DEVELOPMENT CORPORATION.

STATE OF FLORIDA)
COUNTY OF DUVAL)

TESTIMONY and PROCEEDINGS before the Honorable
ROBERT T. BENTON, Hearing Officer, at 7071 103rd Street,
Jacksonville, Duval County, Florida on Tuesday,
the 20th day of February, 1990, 9:00 a.m., before
LeeAnne T. Roberto, a Notary Public in and for the State
of Florida at Large.

VOLUME IV
(Pages 803-1055)

DAWOOD & HOGAN
828 BLACKSTONE BUILDING
JACKSONVILLE, FLORIDA 32202
(904) 353-5300

RED STAMP INDICATES
CERTIFIED
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1 But the work has been done as if it was
2 burning bark.

3 THE HEARING OFFICER: Of course, if you
4 switched to this other process, the recycling, then
5 you wouldn't have bark to fuel the -- two of the
6 five existing boilers?

7 MR. COLE: That's correct, but they would
8 not -- they probably would operate -- they are
9 capable of burning oil, also. So they can burn oil
10 in those instead of bark and are permitted to do
11 so. So that would be, if the -- depending on the
12 steam requirements, that's something that they
13 might have to do. But they are permitted either
14 way, I believe.

15 THE HEARING OFFICER: All right. Now,
16 when built, there would be -- is it correct that
17 there will be two separate operations; that there
18 will be one operation to generate electricity for
19 Seminole Kraft and another operation to generate
20 electricity for resale?

21 MR. COLE: That is correct, the way it
22 was proposed prior to the amendment, your Honor.
23 The -- Seminole Kraft, if it built the new recovery
24 boiler, would also generate about forty-five
25 megawatts -- is that -- forty-two megawatts of

1 electricity for use in the mill.

2 If the recycle -- if the recovery boiler
3 was not built, then Seminole Kraft would buy
4 electricity from J.E.A. They would not buy
5 electricity from A.E.S. Cedar Bay. They would
6 still get steam --

7 THE HEARING OFFICER: So the forty-two
8 megawatts were anticipated from the replacement
9 recovery boiler?

10 MR. COLE: That's correct.

11 THE HEARING OFFICER: Which will only be
12 built if you do not switch to the recycling?

13 MR. COLE: That's correct.

14 I have an answer to your question more
15 precisely on stack heights, your Honor.

16 The oil fired units have a stack height
17 of one hundred and six feet. The bark boilers have
18 a stack height of one hundred and thirty-six feet.
19 And that's found in Table 5.6-4. And it's also --
20 the page number would be page 5-42 of Volume II of
21 the application.

22 THE HEARING OFFICER: Thank you.

23 All right. Now, so again, these -- the
24 analysis, where some parameter is netted out, all
25 right, so that before was the five non-recovery

Ag 26, 1991

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,

Petitioner,

vs.

DER CASE NO. PA 88-24
DOAH CASE NO. 88-5740

DEPARTMENT OF ENVIRONMENTAL
REGULATION,

Respondent,

and

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC
SERVICE COMMISSION, ST. JOHNS
WATER MANAGEMENT DISTRICT,
JACKSONVILLE ELECTRIC AUTHORITY,
CHARLES L. BOSTWICK, BARNETT BANKS
TRUST COMPANY, IMESON INTERNATIONAL
PARK, INC., and INDUSTRIAL PARK
DEVELOPMENT CORPORATION,

Intervenors.

NOTICE OF FILING PROPOSED AGREEMENT

AES/Cedar Bay, Inc. hereby gives notice that concurrent herewith it has filed with the Florida Department of Environmental Regulation a Proposed Agreement to Modify Conditions of Certification for the Cedar Bay Cogeneration Project located in Duval County, Florida. Pursuant to Rule 17-17-211(4), F.A.C., original parties to the certification proceeding have forty-five (45) days to respond to the proposed agreement, except as to parties referenced in Condition of Certification XXV concerning the cooling water use portion of the requested modification.

Respectfully submitted,

OERTEL, HOFFMAN, FERNANDEZ
& COLE, P.A.
Post Office Box 6507
Tallahassee, FL 32314-6507
(904) 877-0099

Terry Cole
TERRY COLE
SCOTT SHIRLEY

Attorneys for AES CEDAR BAY, INC.,
and SEMINOLE KRAFT CORPORATION

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the original and one copy of the foregoing and the Proposed Agreement to Modify Conditions of Certification have been furnished by **hand delivery** to the CLERK OF THE OFFICE OF GENERAL COUNSEL, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and copies were furnished by **United States Mail** this **26th** day of **August, 1991** to:

Kathryn Funchess, Esquire
Office of General Counsel
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Richard Donelan, Esquire
Office of General Counsel
Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Susan Clark, Esquire
General Counsel
Public Service Commission
101 East Gaines #226
Tallahassee, FL 32399-0850

Kathryn L. Mennella, Esquire
St. Johns River Water
Management District
Post Office Box 1429
Palatka, FL 32178-1429

Charles L. Bostwick
1550-2 Hendricks Avenue
Jacksonville, FL 32201

Greg Radlinski, Esquire
Assistant General Counsel
Towncentre, Suite 715
421 West Church Street
Jacksonville, FL 32202

Earl Barker, Esquire
344 East Duval Street
Jacksonville, FL 32202

Terry Cole
Attorney

SS:cjb/1219-4.nof

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,

Petitioner,

vs.

DER CASE NO. PA 88-24
DOAH CASE NO. 88-5740

DEPARTMENT OF ENVIRONMENTAL
REGULATION,

Respondent,

and

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC
SERVICE COMMISSION, ST. JOHNS
WATER MANAGEMENT DISTRICT,
JACKSONVILLE ELECTRIC AUTHORITY,
CHARLES L. BOSTWICK, BARNETT BANKS
TRUST COMPANY, IMESON INTERNATIONAL
PARK, INC., and INDUSTRIAL PARK
DEVELOPMENT CORPORATION,

Intervenors.

**PROPOSED AGREEMENT TO MODIFY
CONDITIONS OF CERTIFICATION**

Petitioners, AES/CEDAR BAY, INC. and SEMINOLE KRAFT CORPORATION, pursuant to Section 403.516, Florida Statutes (Supp. 1990) and the Order Approving Certification issued February 11, 1991, hereby propose an agreement to modify the Conditions of Certification for the Cedar Bay Cogeneration Project as follows:

Background

1. Petitioners are AES Cedar Bay, Inc. (AES Cedar Bay) and Seminole Kraft corporation. Petitioner, AES Cedar Bay, is the holder of a certification for a power plant site in the City of

Jacksonville. Seminole Kraft operates a kraft paper mill in the City of Jacksonville and is the owner of the property.

2. Petitioners request modification on the following grounds:

a. Reclaimed Wastewater for Cooling Purposes -- The Governor and Cabinet sitting as the Siting Board required that a source of water other than groundwater be used for cooling purposes. Condition of Certification XXV.A. requires that a modification be requested to approve the use of the cooling water source selected and its discharge, and requires submittal of supporting information. AES Cedar Bay has selected reclaimed water from the Seminole Kraft paper-making process as its cooling water source. Cooling system blowdown will be treated so that discharges will comply with the certified discharge limitations. Consequently, no change to water quality discharge parameters nor additional variances are requested. Use of reclaimed water for cooling purposes at the Cedar Bay Cogeneration Project will satisfy the public policies of conservation of groundwater resources through efficient water use and environmental protection through adherence to established standards.

b. Deletion of Conditions Relating to Construction Dewatering -- The elimination of authorization to withdraw or discharge dewatering water is requested due to previous concerns expressed about the effect that dewatering withdrawals from the surficial aquifer will have on groundwater flow. Since that time, AES has developed improved methods for construction of the coal

unloading facility, the circulating water pipes and pump pits, which will eliminate the need for dewatering discharge.

c. Use of Additional Startup Fuel During First Two Years of Operation -- A modification to the limit on startup fuel which can be used is required. Additional experience at facilities similar to AES Cedar Bay has led to a revision in the calculations related to startup. It is now known that additional startup fuel will be required during the first and second years of commercial operation. Additional startup fuel usage reduces coal usage. This results in reduced emissions and, thus, will have only a positive environmental impact.

d. Deletion of Capacity Limitations Related to NO_x Emissions -- A modification is required to delete certain capacity limitations related to NO_x. Now that additional data is available from other circulating fluidized bed boilers, it is apparent that AES Cedar Bay can meet NO_x limits without the necessity for limitations. Therefore, Condition II.A.9.b. should now be deleted from the Conditions of Certification.

3. Transmitted together with this proposed agreement and incorporated herein by reference is a modification application containing referenced modifications to the original application. The attachment also constitutes the information submittal required by Condition XXV.A. with respect to use of water for cooling purposes. In addition to establishing compliance with relevant agency standards for each requested modification, this submittal discusses how the proposed modification affects AES Cedar Bay,

Inc., Seminole Kraft Corporation, the public, and the environment. Also included is a full text of the specific proposed modifications to the Conditions of Certification. The attached information establishes that overall, there will be a net environmental improvement as a result of the requested modification to the Conditions of Certification.

4. As ultimate facts entitling Petitioner to relief, AES/Cedar Bay incorporates paragraphs 2-4 above, as well as the modification application submitted herewith.

5. As a statement of how the proposed modification affects the application as modified by the Order Approving certification, the Conditions of Certification, findings of fact, and conclusions of law, and studies conducted pursuant to Rule 17-17.050, F.A.C., Petitioners also reference paragraphs 1-4 above, as well as the modification application submitted herewith.

6. Petitioners cite the following rules and statutes entitling them to relief:

- a. Section 403.501, et seq., Fla. Stat.;
- b. Fla. Admin. Code Chapter 17-17;
- c. Fla. Admin. Code Chapter 17-302;
- d. Fla. Admin. Code Chapter 17-2;
- e. Fla. Admin. Code Chapter 40C-2; and
- f. Section 120.57, Fla. Stat.

7. Petitioner therefore requests that the parties agree to the proposed modification of the terms and Conditions of Certification.

Agreement

Each party signing below hereby agrees to the proposed modifications of the Conditions of Certification for the Cedar Bay Cogeneration Project as indicated in the attachment hereto.

Terry Cole, Esquire
Scott Shirley, Esquire
OERTEL, HOFFMAN, FERNANDEZ
& COLE, P.A.
Post Office Box 6507
Tallahassee, FL 32314-6507

DATE: _____

Richard Donelan, Esquire
FLORIDA DEPARTMENT OF ENVIRON-
MENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

DATE: _____

Kathryn L. Menella, Esquire
ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT
Post Office Box 1429
Palatka, FL 32178-1429

DATE: _____

Greg Radlinski, Esquire
Office of General Counsel
City of Jacksonville
Towncentre Ste. 715
421 W. Church Street
Jacksonville, FL 32202

DATE: _____

Earl Barker, Esquire
344 East Duval Street
Jacksonville, FL 32202

DATE: _____

Charles Bostwick
1550-2 Hendricks Avenue
Post Office Box 164
Jacksonville, FL 32201

DATE: _____

Kathryn Funchess, Esquire
Office of General Counsel
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Susan Clark, Esquire
Public Service Commission
101 East Gaines #226
Tallahassee, FL 32399-0850

DATE: _____

DATE: _____

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the original and one copy of the foregoing has been furnished by hand delivery to the CLERK OF THE OFFICE OF GENERAL COUNSEL, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and copies were furnished by United States Mail to:

Kathryn Funchess, Esquire
Office of General Counsel
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Richard Donelan, Esquire
Office of General Counsel
Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Susan Clark, Esquire
General Counsel
Public Service Commission
101 East Gaines #226
Tallahassee, FL 32399-0850

Kathryn L. Mennella, Esquire
St. Johns River Water
Management District
Post Office Box 1429
Palatka, FL 32178-1429

Charles L. Bostwick
1550-2 Hendricks Avenue
Jacksonville, FL 32201

Greg Radlinski, Esquire
Assistant General Counsel
Towncentre, Suite 715
421 West Church Street
Jacksonville, FL 32202

Earl Barker, Esquire
344 East Duval Street
Jacksonville, FL 32202

this _____ day of _____, 1991.

Attorney

SS:cjb/1219-4.agm

**CEDAR BAY COGENERATION
PROJECT**

APPLICATION FOR MODIFICATION

to

CONDITIONS OF CERTIFICATION

AUGUST 26, 1991

SUBMITTED BY:

**AES CEDAR BAY, INC.
and
SEMINOLE KRAFT CORP.**

**CEDAR BAY COGENERATION
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SUBMITTED BY:

**AES CEDAR BAY, INC.
and
SEMINOLE KRAFT CORP.**

CBCP Conditions of Certification Modifications

August 26, 1991

Condition XXV requires AESCB to modify the certification to provide "information concerning the design and operation of the plant cooling systems as appropriate for the cooling water source selected. The selected cooling water source is reclaimed water received from Seminole Kraft after treatment. This source was chosen because it will be available in sufficient quantities at the commencement of operation and because its quality is such that the discharge limitations previously certified can be met. Reclaimed water from the City of Jacksonville may not be available in sufficient quantities at the commencement of operation. However, permitting and use of this water at a later date has not been ruled out. The quality of the river water is such that the cooling water discharge would not meet Class III water quality standards. Thus, from the perspectives of reliability and environmental impact, Seminole Kraft reclaimed water is the best source of cooling water for AESCB.

AESCB has also decided to delete our construction dewatering discharge due to concerns over impacts on groundwater movement. Improved construction techniques and elevating the site have made dewatering unnecessary. All conditions relating to dewatering discharges are to be deleted.

AESCB also requests modification to the start-up fuel allocation and deletion of the capacity factor limitations imposed upon the boilers for NO_x control.

The following represents the technical support for the modifications requested for the selection of Seminole Kraft reclaimed water as makeup to the cooling tower, deletion of dewatering discharges, and the other minor modifications being requested at this time. Section designations refer to the original Site Certification Application.

Proposed language for the revised Conditions of Certification is included in Appendix A .

For your convenience, a table is included below which identifies the particular Condition of Certification being modified along with the sections of the Site Certification Application which are being modified accordingly.

Table 1

Cross Reference for Modifications to
Conditions of Certification and SCA

<u>Condition of Certification being Modified</u>	<u>Sections of SCA being Revised</u>
Cooling Water Source III.A.7, IX, XXV	3.5, 3.5.1, 3.7.1, 5.1.1, 5.1.4.2, 5.2.2
III.A.13	5.2.2
Deletion of Dewatering III.A.12, XXVIII	4.3.1.2, 4.11
III.A.13, III.A.14	5.12
Fuel Allocation Revision II.A.1.e, II.B.3	3.3.2
Capacity Factor Deletion II.A.9.b	NA

3.5 Plant Water Use

The primary source of water for the Cedar Bay Cogeneration Plant will be treated effluent from the Seminole Kraft paper mill which will be used for makeup to the cooling towers. Ground water from the Floridian aquifer will be used for potable water, general plant uses, fire water, and makeup to the steam cycle. A water mass balance diagram for average flows based upon full load operation is shown on Figure 3.5-1. A process flow diagram of the cooling water treatment system is included as Figure 3.5-2.

AESCB and our water treatment consultant, Betz Industrial, have defined the expected quality of the effluent which will be produced by Seminole Kraft after their conversion to 100% recycle. The expected water quality, shown in Table 3.5-1, is based upon analyses of wastewater from a facility in Ontario, California which is very similar to the Seminole Kraft 100% recycle process being presently installed. Together with confirming analyses of samples from a similar European facility and from a paper recycle process in the Fernandina Beach, FL area, we were able to arrive at a "worst case" characterization of the future SK wastewater quality. The metals in the expected effluent are "worst case" and based upon the limits set out in the Seminole Kraft NPDES Permit, Permit No. FL0000400.

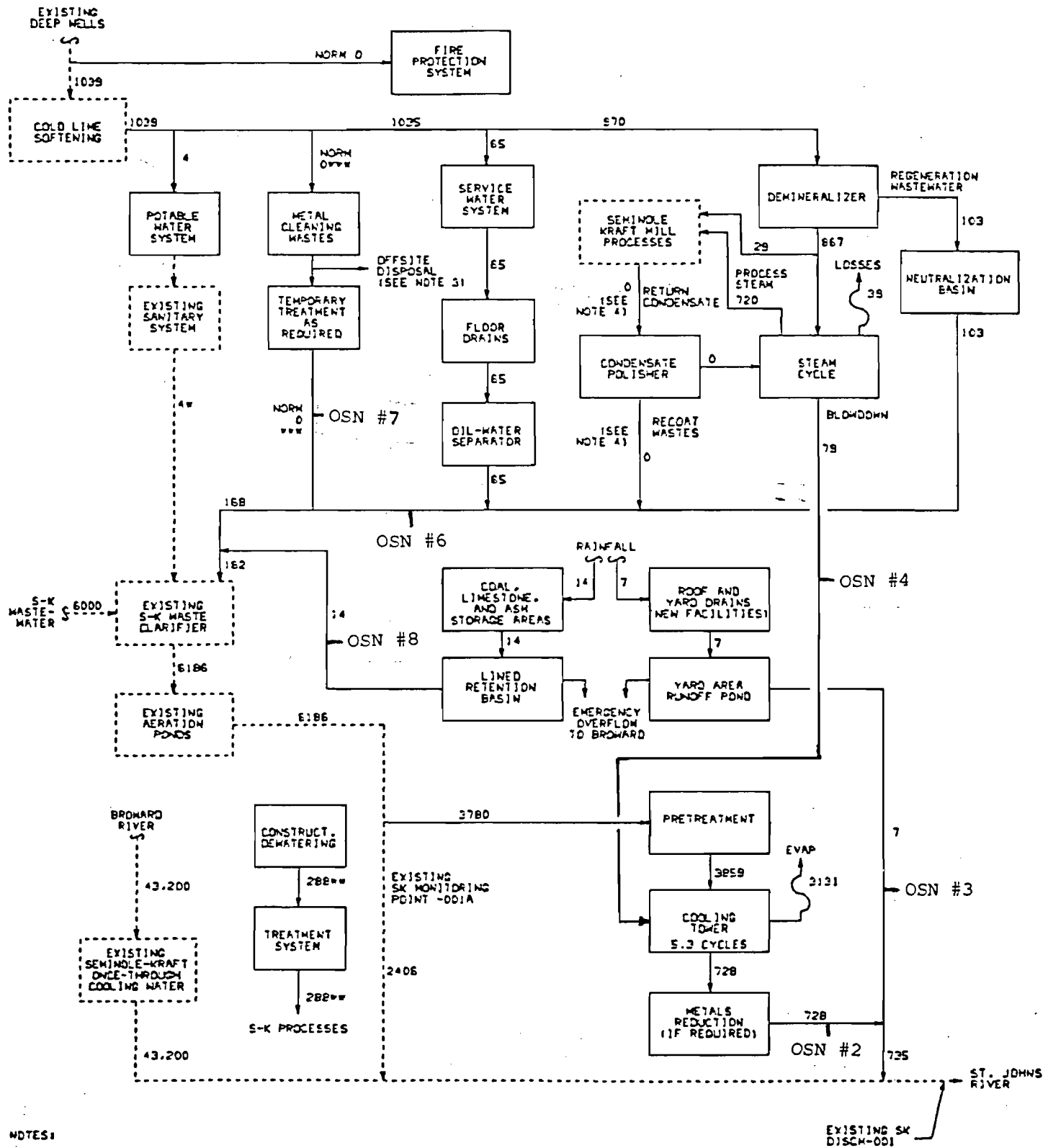
The raw water makeup to the Ontario, CA facility was also compared to that of the SK. Although the raw water analysis is only a part of the ultimate wastewater analysis, a comparison confirms that the make-up waters are similar, and thus will have a similar impact on the respective recycle mill wastewater streams. The raw water makeup analysis comparison is shown in Table 3.5-1a.

Makeup to the cooling towers from the discharge of the SK IWTS will be pretreated in a solids contact clarifier for removal of suspended solids and organics before admission to the cooling system. Solids from the clarifier will be dewatered and disposed of in a permitted landfill or reused for agricultural uses, see Section 3.7.1 for more details.

Section 3.5.1 Cooling Tower System

The majority of the makeup water will be treated reclaimed effluent from Seminole Kraft. Boiler blowdown will be routed to the cooling tower to supply a small portion of the makeup.

3.5.1.1 System Design. The AESCB facility will be constructed so that reclaimed water from the mill or any of the alternative sources certified by the Siting Board can be used for cooling water. All materials of construction have



NOTES:

1. FLOWS ARE ESTIMATED ANNUAL AVERAGES EXPRESSED IN 1000 GALLONS PER DAY FOR 100 PERCENT LOAD.
2. SOLID LINES REPRESENT NEW EQUIPMENT OR PIPELINES. DASHED LINES REPRESENT EXISTING EQUIPMENT OR PIPELINES.
3. ACID CLEANING SOLUTIONS TO BE DISPOSED OFFSITE TO APPROVED FACILITY.
4. RETURN CONDENSATE CAN VARY FROM 0 TO 432,000 GPD.
5. INCLUDES CONSTRUCTION RUNOFF.

- AMOUNT OF FLOW ATTRIBUTABLE TO CEDAR BAY COGENERATION PROJECT
- ** MAXIMUM FLOW DURING CONSTRUCTION DEWATERING. FLOW WILL OCCUR ONLY DURING CONSTRUCTION.
- *** FLOW WILL OCCUR ONLY DURING MAINTENANCE OUTAGES.

FIGURE 3.5-1

**AES CEDAR BAY
WATER BALANCE DIAGRAM**

AES CEDAR BAY

CLASS III DISCHARGE COOLING SYSTEM TREATMENT

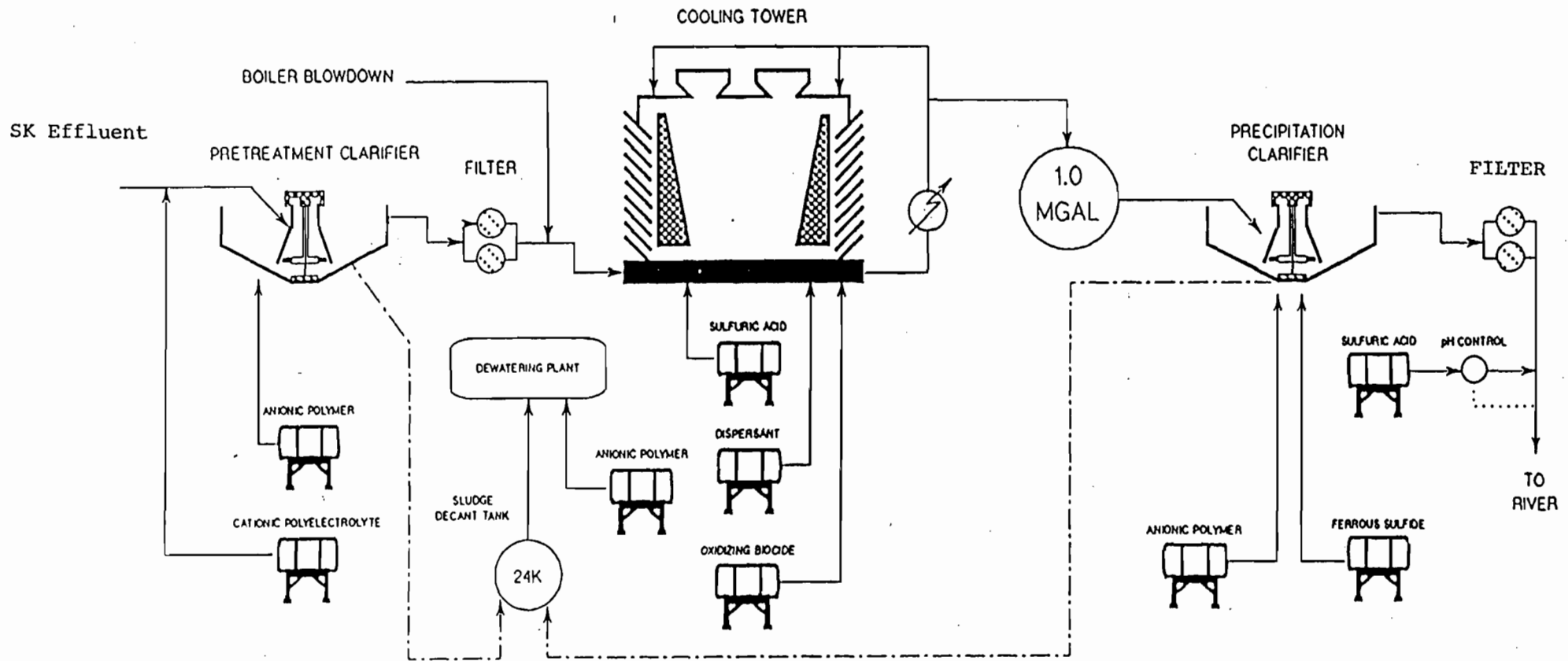


FIGURE 3.5-2

been upgraded to provide this flexibility. The changes in design were described in Steve Wolf's letter to DER dated September 27, 1990 (Appendix B).

The expected evaporation rate is approximately 2200 gpm and the estimated average makeup rate is 2680 gpm. The predicted makeup water quality should allow the cooling tower to operate at 5.3 cycles of concentration. Based on the 5.3 cycles of concentration, average blowdown will be approximately 505 gpm. Blowdown will still be from the cold side of the tower with a maximum expected temperature of 95 deg F and discharged via the existing SK discharge pipeline to the St. Johns River.

3.5.1.2 Source of Cooling Water. The water for use in the heat dissipation system will be primarily treated effluent from the SK mill. The expected quality is shown in Table 3.5-3 along with the expected circulating water quality. A small portion of the cooling water makeup will be obtained by routing the boiler blowdown water to the cooling towers.

TABLE 3.5-1
Anticipated SK Effluent Quality

Alkalinity, ppm as CaCO ₃	874
Calcium, ppm as CaCO ₃	169
Magnesium, ppm as CaCO ₃	41
Sodium, ppm as Na	680
Iron, ppm as Fe	< 1.0
Silver, ppm as Ag	< 0.05
Aluminum, ppm as Al	< 2.2
Copper, ppm as Cu	< 0.015
Phosphate, Total as PO ₄	3.4
Sulfate, ppm as SO ₄	388
Chloride, ppm as Cl	84
Silica, ppm as SiO ₂	22
Conductivity, umhos	2500
pH	6-8
Total Dissolved Solids, ppm	2300

TABLE 3.5-1a
Raw Water Makeup Analysis Comparison

<u>Parameter</u>	<u>Ontario Facility</u>	<u>Seminole Kraft</u>
Alkalinity, ppm as CaCO ₃	156	61
Calcium, ppm as CaCO ₃	172	129
Magnesium, ppm as CaCO ₃	35	65
Sodium, ppm as Na	22	17
Iron, ppm as Fe	0.1	0.09
Copper, ppm as Cu	0.05	0.07
Phosphate, Total as PO ₄	0.4	0.2
Sulfate, ppm as SO ₄	29	112
Chloride, ppm as Cl	29	38
Silica, ppm as SiO ₂	32	13
Conductivity, umhos	470	414
pH	8.3	8.4
Total Dissolved Solids, ppm	346	309

TABLE 3.5-3
 Anticipated Cooling Water Makeup
 and Circulating Water Analyses

<u>Parameter</u>	<u>Makeup Water</u>	<u>Circulating Water</u>
Alkalinity, ppm as CaCO ₃	874	4632
Calcium, ppm as CaCO ₃	169	896
Magnesium, ppm as CaCO ₃	41	217
Sodium, ppm as Na	680	3604
Iron, ppm as Fe	< 1.0	< 5.3
Copper, ppm as Cu	< 0.015	< 0.08
Phosphate, Total as PO ₄	3.4	18
Sulfate, ppm as SO ₄	388	2056
Chloride, ppm as Cl	84	445
Silica, ppm as SiO ₂	22	117
Total Dissolved Solids, ppm	2300	12190

Section 3.7.1 Solid Waste

The by-product from both the cooling water makeup clarifier and the metals treatment system will be dewatered in a thickener, then further dewatered in a sludge press. The characterization of the predominant components of the sludge, and the range of sludge volumes that is expected is listed below.

<u>Source</u>	<u>Wet TPD</u>	<u>Characterization</u>
Makeup clarifier	1.7-3.9	Paper fiber, suspended BOD, silt, suspended organic material
Blowdown treatment clarifier	0.2-1.1	Ferric hydroxides, copper sulfate, iron phosphate

The sludge will be stored on-site until loaded into trucks for disposal at a local landfill. Depending upon exact analysis, some of the sludge may be sold for reuse as an agricultural additive.

AESCB agrees to report the quantities of sludge produced, the amount disposed, and the location of the disposal site.

Section 4.3.1.2 Shallow Aquifer

Due to concerns expressed regarding dewatering waters and the effects of withdrawals of surficial water on groundwater flow, deletion of the dewatering discharge is requested. An explanation of the construction techniques to be used to eliminate the need for dewatering follows.

Since construction dewatering is being deleted and no dewatering will be required there will be no impact on the shallow aquifer as earlier stated.

AESCB's contractor originally proposed to construct certain structures and equipment below the natural groundwater table by dewatering. Dewatering is technique where a series of wells are installed around the perimeter of an excavation at depths below the bottom of the excavation. These wells pump continuously and pull the groundwater in the area down to acceptable levels. While keeping the excavation dry these wells draw water from the surrounding area or "cone of influence". This can have a significant impact on natural groundwater flow of movement.

During the siting process it was determined that these dewatering activities could pull up to 2000 gallons per minute of groundwater which would require discharging off-site. It was also determined that it would be difficult for dewatering discharges to meet Class III standards, particularly for copper.

The major structure which required the most significant and lengthy dewatering was the Coal Unloading Facility. Because concerns raised over the discharge of dewatering groundwater, AES and our contractor decided not to dewater during construction of this structure. However, the technique ultimately certified is not being modified. It involved the construction of a coffer dam consisting of sheet piling and bentonite cement slurry wall will be installed around the excavation. The bottom will be sealed with jet grout. Any leakage through the coffer dam will be minimal; most certainly less than 100 gallons per minute and possibly zero.

The remaining structures and equipment which were originally slated for dewatering included the circulating water piping and storm water pump pits. These structures could be built to minimize dewatering (less than 200 gallons per minute). These changes in construction techniques, as currently certified, significantly decreased the dewatering flowrate allowing a treatment system to be designed to successfully (yet costly) treatment of dewatered groundwater.

Subsequent to certification, AESCB and our contractor have made additional proposed enhancements to the designs in order to more cost effectively construct the facility. The most significant one being that the site elevation has been raised 5 feet. This allows us to totally eliminate dewatering and subsequent effects of impacting groundwater movement.

Circulating Water Piping

The circulating water piping is no longer significantly in the groundwater. The bottom of the pipe is essentially at the groundwater level and be installed without the use of dewatering wells and no dewatering discharge is required. Any groundwater which might seep into this excavation will be controlled, as much as practical, within the excavation during the installation of this pipe. No discharge or impacts to groundwater movement will occur.

Pump Pits

While the bottom of these structures are still below the water table it has been determined that they can also be installed without utilizing dewatering wells. These pump pits will be precast concrete or precast in sections in order to allow rapid installation into the excavation. No discharge or impact to groundwater movement will occur.

Coal Unloading Structure

The coffer dam with a bottom seal will be installed as described above. A greater effort is now contemplated to completely seal any leaks into this excavation to effectively eliminate any leakage. Any groundwater leaking into the coffer dam structure will be returned to the "wet" side of the dam and all practical efforts will be used to eliminate the leakage. No discharge or effect on groundwater movements will occur.

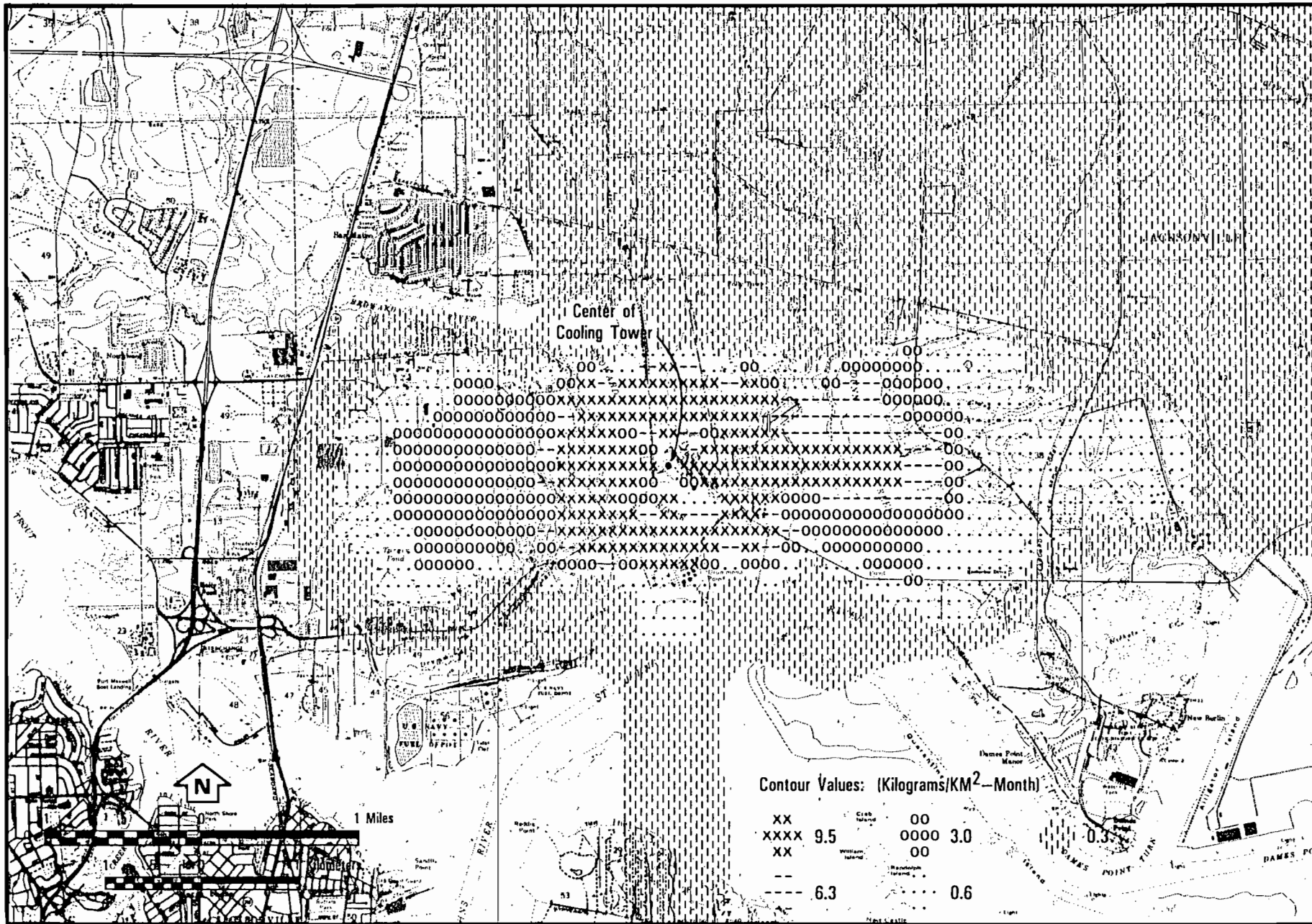
Section 4.11 Variances

Since all construction dewatering discharges have been eliminated, as described above, no variances will be required for the dewatering discharge as previously certified. No other construction related variances from applicable standards have been identified by AESCB at this time for construction of the CBCP.

Section 5.1 Effects of the Operation of the Heat Dissipation System

5.1.1 Temperature Effects on Receiving Body of Water Due to the change in source of cooling water makeup, the cooling tower will operate at a slightly higher cycles of concentration, 5.3 instead of 4.6. This change reduces the amount of cooling water blowdown discharged to the St. John's River via the existing SK outfall. The average blowdown flowrate has been reduced from 633 gpm to 505 gpm. The thermal effects of this reduced flowrate have been studied with the following results; the thermal mixing zone can be reduced from 30 feet to 15 feet in radius for each of the four discharge points. This is based upon recalculation of the six cases originally performed in the SCA. The case which resulted in the largest mixing zone was Case 4, combined SK and CBCP discharge during average ambient temperature (73.9 deg F) and minimum river salinity (5000 mg/l). The resulting total mixing zone required is now 265 m² (0.065 acres).

5.1.4.2 Salt Deposition The SACTI program was used to predict salt deposition totals surrounding the cooling tower. The revised salt deposition calculations were based upon the cooling tower drift analysis performed for the original Site Certification Application. The impacts determined for original application, based upon groundwater makeup, were multiplied by the ratio of SK salt concentrations to groundwater concentrations. Figure 5.1-1 has been revised to reflect the changes. The estimated maximum salt deposition rate is approximately 700 kilograms per square kilometer per month (kg/km²/month) or about 6.2 lb/acre/month. The location of the maximum rate is 200



Based on Seminole Kraft Effluent

PLUME SALT DEPOSITION FROM THE CEDAR BAY COOLING TOWER

meters east of the tower. The estimated average is 32.2 kg/km²/month or 0.3 lb/acre/month.

The salt deposition rate decreases significantly with distance within the first 300 meters and then continues out to 1,300 meters. Beyond 1,300 meters, the average salt deposition rate is reduced to less than 5.6 kg/km²/month. The estimated average deposition rate is reduced further at 3,000 meters to less than 1.0 kg/km²/month or 0.01 lb/acre/month.

The highest salt deposition rates occur very near the cooling tower onsite and on the adjacent Seminole Kraft property. Since the area has been previously greatly disturbed and only sparse or no vegetation remains, there is little potential for adverse impacts. The salt deposition rates on areas of offsite vegetation fall well below 400 kg/km²/month. This rate was determined¹ to be the minimum threshold level for sensitive plant species above which plant damage occurs. There are no known threatened or endangered species that occur in the vicinity of the cooling tower.

Section 5.2 Effects of Chemical and Biocide Discharges

5.2.2 Cooling Tower Blowdown Approximately 728,000 gallons per day (gpd) of cooling tower blowdown will result from cooling tower operations. The maximum cooling tower blowdown flow is expected to be 1,566,000 gpd. The cooling tower blowdown flow will be directed to a metals treatment system to ensure compliance with water quality standards before being discharged through the existing SK outfall. The cooling tower blowdown stream may require treatment for certain heavy metals, if present in the SK effluent, to meet the previously certified discharge limitations. Data from recycle mills similar to the proposed SK configuration indicate that the metals in the cooling tower blowdown will meet the certified discharge limitations without further treatment. However, if treatment is required, several possibilities exist for the reduction in metal concentrations. The primary option identified and the one AESCB will install is an iron co-precipitation process for metals treatment on the cooling tower blowdown stream. A bench scale testing program has been initiated by AESCB to determine the best practical means of operating the system to maximize any metals reduction which may be required. The results of this program, using water as similar in quality as possible to that expected from the SK recycle mill, will be used to fine tune the design installed by AESCB. The bench testing program will include toxicity screening on the

¹Dr. Charles Mulchi, Professor at the University of Maryland in telephone conversation to Dan Wilkus, Black & Veatch, August 14 and 21, 1991.

treated blowdown stream. Further confirmation testing will be conducted by AESCB once the SK mill completes their conversion to 100% recycle and effluent is available for testing.

In the iron co-precipitation process, metals are removed in the effluent as the hydroxides and sulfides in the presence of precipitating ferric hydroxide. This is facilitated by the addition of an alkaline chemical and an iron salt. In the presence of the alkali and upon aeration, metal hydroxides begin to form and precipitate. Ferrous sulfate is used as the iron source, improving the precipitation performance of the metals. To further the removal of heavy metals, a soluble sulfide is added to the process to precipitate residual metals as metal sulfides. The process is attractive because a very high degree of metal removal is attained. This process is presently being used at facilities such as the City of Lakeland's McIntosh Unit for removal of metals in effluent to acceptable levels. Table 5.2-8a lists typical metal removal efficiencies based upon the similar installation at Lakeland's McIntosh plant and are only intended to be representative of what the process is capable of achieving. While AESCB's effluent will be different from that at McIntosh, actual removal efficiencies at AESCB are expected to be similar.

A typical flow schematic for the iron co-precipitation process is shown in Figure 5.2-1. The influent water enters the rapid mix basin where the pH is adjusted by caustic addition and the ferrous sulfate is introduced. The solution is well mixed and a constant pH is attained when it enters the reactor. In the reactor the solution is aerated. Metal hydroxides first begin to form in the reactor, but are kept in suspension by the agitation of the aerators. As the reactor effluent enters the solids contact basin, a soluble sulfide is introduced to convert residual metals to metal sulfide precipitates. A polymer is added in the basin to aid in coagulation. Clarified treated effluent is filtered in gravity filters to ensure suspended solids removal prior to discharge. Solids collected in the solids contact clarifier will be dewatered and disposed, see Section 3.7.1 for further details on the sludge and its disposal. Reliability and a high degree of availability of the above process will be assured through the use of on-line spare pumps and spare components in our warehouse facility.

The treated cooling tower blowdown quality is given in Table 5.2-8b. The effluent quality will meet those limitations previously certified and will not exceed Class III standards. The previously granted variance for iron will no longer be required due to the metals treatment system being installed. The cooling tower blowdown discharge stream will have no adverse impacts on the St. John's River water quality as it will meet all relevant water quality standards.

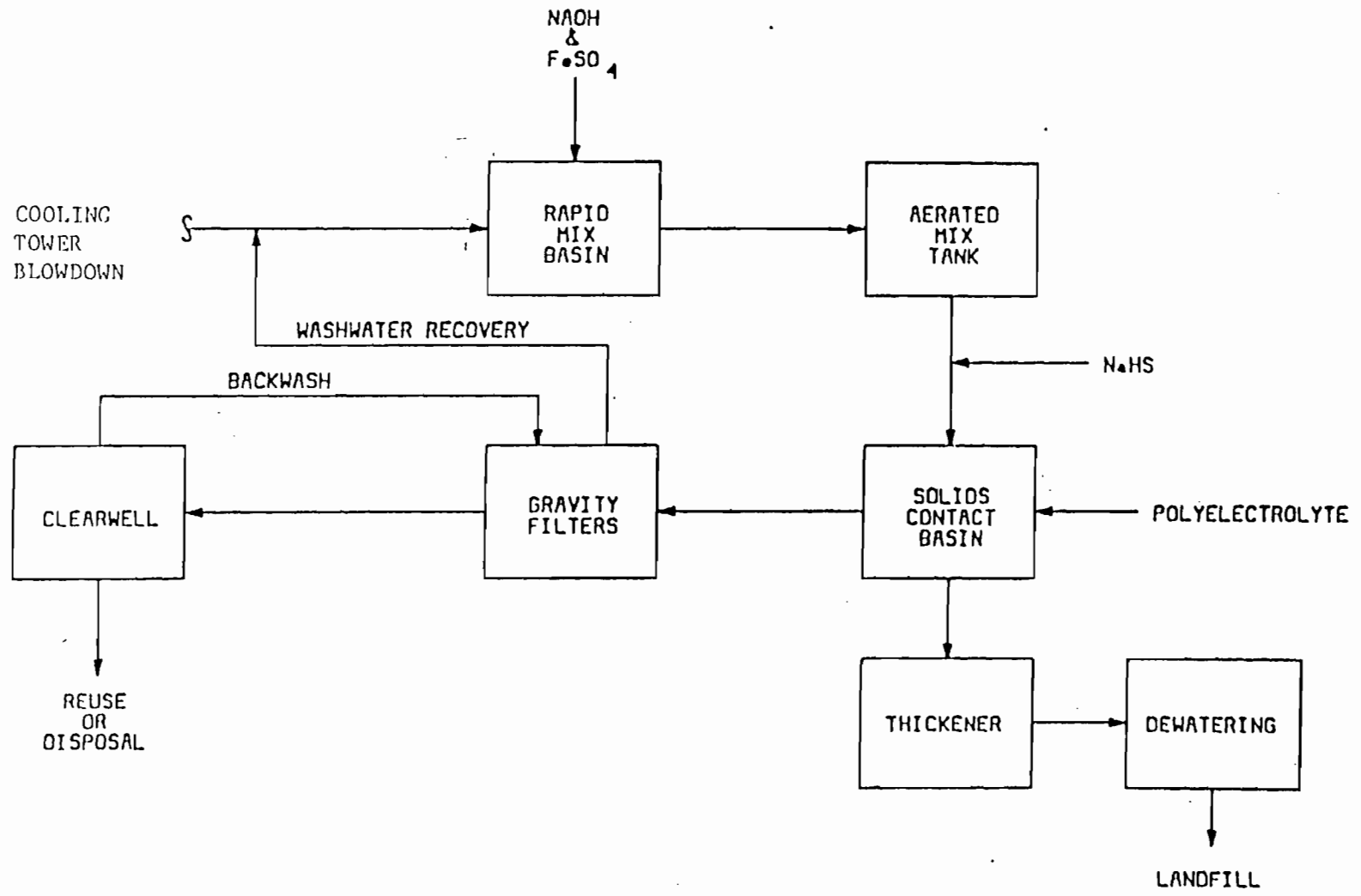


FIGURE 5.2-1

Iron Co-precipitation Process Schematic

Table 5.2-8a
 Typical Metals Removal Efficiencies ¹

<u>Metal</u>	<u>Influent level ug/l</u>	<u>Effluent level ug/l</u>	<u>% Removal</u>
Aluminum	870	31	96
Cadmium	10	2	80
Chromium	50	12	76
Copper	30	8	75
Iron	410	42	90
Lead	80	33	60
Mercury	240	NA ²	NA
Silver	10	3	70
Zinc	430	15	97

¹ Based upon actual performance at Lakeland's McIntosh Unit

² Data not available due to inconsistent test results

Table 5.2-8b Cooling Tower Blowdown Quality
Post Metals Treatment

<u>Constituent</u>	<u>Average Concentration mg/l</u>	<u>Maximum Concentration mg/l</u>
BOD ₅	< 10.0	10.0
COD	< 10.0	10.0
Total organic carbon	< 10.0	10.0
Total suspended solids	20.0	30.0
Ammonia	< 1.0	1.0
pH	7.2	8.0
Oil and grease	(1)	(1)
Calcium	896	1000
Magnesium	217	300
Sodium	3604	5000
Potassium	56	80
M-alkalinity as CaCO ₃	4632	6000
Sulfate	6360	9000
Chloride	445	600
Nitrate	35	56
Fluoride	< 5.0	5.0
Silica	117	200
Chlorine	0.05	0.10
Phosphate (total)	18	30
Cyanide	(1)	(1)
Iron	0.1	0.3
Manganese	(1)	(1)
Aluminum	< 1.5	1.5
Nickel	(1)	(1)
Zinc	< 1.0	1.0
Copper	< 0.015	0.015
Cadmium	< 0.005	0.005
Chromium	< 0.05	0.05
Beryllium	(1)	(1)
Arsenic	< 0.05	0.05
Selenium	< 0.025	0.025
Antimony	< 0.2	0.2
Mercury	< 0.001	0.0001
Barium	(1)	(1)
Silver	< 0.0005	0.0005
Lead	< 0.05	0.05
Thallium	(1)	(1)

(1) Not present in significant quantity

Section 5.4 Solid Waste Disposal Impacts

5.4.1 Solid Waste The sludge generated by the cooling water pretreatment and blowdown metals treatment operations will be dewatered and disposed of in a local landfill or sold for agricultural reuse as a soil amendment. AESCB will report on an annual basis the amount of sludge disposed of and the location of the landfill site.

Section 5.12 Variances

The variance from Class III water quality standards for iron will no longer be required as the cooling water blowdown metals treatment process will remove iron to below the 0.3 mg/l level.

Section 3.3 Fuel

3.3.2 Fuel Quantities Additional experience at facilities similar to AESCB have led to revisions in the calculations related to start-up fuel use. Start-up of a relatively new technology 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 decrease the annual emissions and thus does not impact the "worst case" air modeling already conducted. No further air modeling is necessary.

Condition II.A.9.b Capacity Factor Limitation

Based upon the experience AES has gained operating fluidized bed boilers, the certified NO_x emission rate limitation will be met at low loads. Accordingly, deletion of this condition limiting the capacity factor of the facility is requested. Supporting data from the AES Thames facility (Appendix C) and the letter from DER expressing no objection to this condition's deletion (Appendix D) are included in this document.

APPENDICES

- A Proposed Language for Conditions of Certification
- B Cooling System Design Letter
- C NOx Emissions versus Load for a CFB
- D DER Letter Regarding Condition II.A.9.b

CEDAR BAY COGENERATION PROJECT
Proposed Modifications to Conditions of Certification

II.A.1.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 start-ups. 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 gas shall not exceed 1120 MMBtu/hr. for the CFBs.

II.A.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.~~

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

II.B.3: The VOC emissions from the maximum No. 2 fuel oil utilization rate of 240 gals./hr., ~~2,100,000 gals./year~~ for the limestone dryers; and 8000 gals./hr., ~~160,000 gals./year~~ for the three boilers are not expected to be significant.

III.A.3. Thermal Mixing Zones - The instantaneous zone of thermal mixing for the AESCB cooling system shall not exceed an area of 0.065 acres. The temperature at the point of discharge into the St. John's River shall not be greater than 95 degrees F. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of Section 17-3.05(1)(d), F.A.C. Cooling tower blowdown shall not exceed 95° F as an instantaneous maximum.

III.A.7. Cooling Tower Blowdown - AESCB's discharge from Outfall Serial Number 002 - Cooling Tower Blowdown shall be limited and monitored as specified below:

a.

Parameter	Discharge Limit	Monitoring Frequency	Requirement Type
Discharge flow (mgd)	Report	1/day	Totalizer
Discharge Temp (°F)	Instantaneous Maximum	Continuous	Recorder
Total Residual Oxidants	Instantaneous Maximum - .05 mg/l	Continuous	Recorder
Time of Total Residual Oxidant Discharge (TRO)	120 minutes per day	Continuous	Recorder
Iron	Instantaneous Maximum - 0.5 0.1 mg/l	1/week	grab
pH	6 - 9	1/week	grab

III.A.12. Construction Dewatering

a. ~~Discharge of construction dewatering to the SKC once through cooling system from outfall serial number 005 shall be limited and monitored as specified below:~~

Effluent Characteristic	Discharge Limits		Monitoring Requirements	
	Instantaneous Maximum	Measurement Frequency	Sample Type	
Flow (MGD)	288	daily	Totalizer	
Turbidity (NTU)	29.000	1/week	composite/grab	
Aluminum mg/L	1.500	1/week	composite/grab	
Copper mg/L	0.015	1/week	composite/grab	
Iron mg/L	0.300	1/week	composite/grab	
Lead mg/L	0.050	1/week	composite/grab	
Mercury µg/l	0.100	1/week	composite/grab	
Phenol µg/l	1.000	1/week	composite/grab	

TSS mg/l	50.000	1/week	composite/grab
pH	6.000-9.000	1/week	composite/grab

Report N.D. if below detection limit, giving method used and detection limit. If the discharge limit is below the detection limit, then N.D. signifies compliance.

~~AES/CB shall take composite samples of dewatering effluent once a week for one month following the start of dewatering, then if no violations are found, grab samples may be taken for the remainder of dewatering.~~

~~AES Cedar Bay shall treat the construction dewatering discharge so as not to exceed the above effluent limits. AES/CB shall utilize the advanced treatment systems consisting of sand filter, carbon filter, and selective ion exchange, as shown in their letter of October 26, 1990, to Hamilton S. Owen, unless testing demonstrates that the above limits can be met without such treatment. Prior to discontinuing such treatment, AES/CB shall notify both DER and BESD, and provide them with an opportunity for consultation.~~

~~AES Cedar Bay shall do sufficient bench testing to demonstrate that it can meet the above limit for copper. AES Cedar Bay shall notify DER and BESD of the bench testing, and allow DER and BESD to be present if they so desire to observe the bench testing.~~

~~In addition, AES Cedar Bay shall determine the amount of treatment and removal provided for iron, aluminum and lead by the method of treatment selected for copper.~~

~~A report shall be submitted to DER and BESD summarizing the results of the bench testing of the proposed treatment technique.~~

~~b. Project discharge descriptions - Dewatering water, outfall 005, includes all surficial groundwater extracted during all excavation construction on site for the purpose of installing structures, equipment, etc. discharges to the SKC once through cooling water system at a location to be depicted on an appropriate engineering drawing to be submitted to DER and BESD. Final discharge after treatment is to the St. Johns River. The permittee shall report to BESD the date that construction dewatering is expected to begin at least one week prior to the commencement of dewatering.~~

III.A.13. Mixing Zones - The discharge of the following pollutants shall not violate the Water Quality Standards of Chapter 17-3, F.A.C., beyond the edge of the designated instantaneous mixing zones as described herein. Such mixing zones shall apply when the St. Johns River is in compliance with the applicable water quality standard.

~~The permittee shall report the date construction dewatering commences to the BESD.~~

- a. ~~During operation of CBCP for the life of the facility:~~

Iron	125,600 m² (31 acre) mixing zone
Chlorine	0 — not measurable in river
Temp	230 m² (0.065 acre)
pH	1,013 m² (0.25 acre)

~~14. Variance to Water Quality Standards — In accordance with the provisions of Sections 402.201 and 403.511(2), F.S., permittees are hereby granted a variance to the Water Quality Standard of Chapter 17-3.121, F.A.C. for iron during operation.~~

~~Such variance shall apply only as the natural background level of the St. Johns River approaches or exceeds the standards. In any event, the discharge from the CBCP shall comply with the effluent limitations set forth in Paragraph III.A.12. At least 90 days prior to start of construction, AES shall submit a bioassay program to assess the toxicity of construction dewatering effluent to the DER for approval. Such program shall be approved prior to start of construction dewatering.~~

~~V.D. Construction Dewatering Effluent~~

~~Maximum daily withdrawals for dewatering for the construction of the railcar unloading facility must not exceed 0.288 million gallons.~~

~~Dewatering for the construction of the railcar unloading facility shall terminate no later than nine months from the start of dewatering.~~

~~Should the permittee's dewatering operation create shoaling in adjacent water bodies, the permittee is responsible for removing such shoaling.~~

~~All offsite discharges resulting from dewatering activities must be in compliance with water quality standards required by DER Chapters 17-3 and 17-4, F.A.C.~~

IX. SOLID WASTE STORAGE AND DISPOSAL

Solid waste produced by the operation of the AESCB facility shall be removed from 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, and either shipped back

to the mine utilizing the trains to deliver the coal, or sold as an additive to concrete. 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 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.

On or before the last day of the first year of commercial operation, and each year of commercial operation thereafter, AES/CB shall report to DER and BESD concerning the 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.

XXV.A. AESCB Use of Water for Cooling Purposes

The CBCP may use either surface water from the Broward or St. Johns River or reclaimed water provided either by the City of Jacksonville or by the Seminole Kraft Papermill as its source of cooling water makeup. The CBCP is currently authorized to use 4.5 mgd of reclaimed water provided by the Seminole Kraft Papermill for cooling purposes.

~~Within six months after issuance of certification, AESCB shall submit to DER an application for a modification containing information concerning the design and operation of the plant cooling system as appropriate for the cooling water source selected. The application shall also be submitted to SJRWMD and BESD, who may report concerning the AESCB cooling water application modification. The AESCB application shall contain all information necessary to demonstrate that operation of the cooling system using either reclaimed or surface water for the preferred cooling water source selected will comply with all relevant non-procedural agency standards, or that AESCB qualifies for a variance. The AESCB application shall also include an analysis of the reasons for the selection of the requested cooling water source over the other preferred alternate sources referred to in the above paragraph. The participating agencies shall respond within 30 days of the receipt of the application modification as to whether or not it contains information sufficient to make a determination as to compliance with non-procedural agency standards. Thereafter, DER shall notify AESCB, BESD, and SJRWMD as to its determination concerning sufficiency. SJRWMD and BESD shall file any reports concerning the application with DER and provide a copy to AESCB within 60 days after DER's determination that the application is~~

~~sufficient. DER shall indicate its approval or disapproval of the selected cooling water system proposal within 90 days of its determination that the application is sufficient. Any modifications of the certification or the conditions of certification including variances, exceptions, or mixing zones shall be made pursuant to the procedures set forth in Section 402.516, Fla. Stat., and/or Fla. Admin. Code Rule 17-17.211.~~

Reclaimed domestic waste water used in the AESCB cooling tower shall be disinfected prior to use. Disinfectant levels in the cooling tower makeup shall be continuously monitored, prior to insertion in the cooling tower. The reclaimed water shall be treated so as to obtain no less than a 1.0 mg/l free chlorine residual after fifteen (15) minutes' contact time or its equivalent. Chlorination shall occur at a turbidity of 5 Nephelometric Turbidity Units (NTU) or less, unless a lesser degree of disinfection is approved by the Department upon demonstration of successful viral kill.

At least six months prior to beginning commercial operation, AES/CB shall report concerning the actual measured pollutant characteristics of reclaimed water to be obtained from the Seminole Kraft Papermill. Such report shall be based on samples obtained directly from the SKC waste stream to be tied in with the CBCP cooling system, and shall report as to concentrations of iron, aluminum, zinc, copper, cadmium, chromium, arsenic, selenium, antimony, mercury, silver, and lead.

(Metals, pH, any toxins of concern.)

In the report, AES/CB shall also confirm that the certified cooling tower blowdown treatment system will provide a level of treatment necessary to comply with the discharge limitations in condition III.A.7.a. and b.

~~XXVIII. PETROLEUM STORAGE TANKS~~

~~A. AES Cedar Bay shall provide clean-up of the #1 underground diesel fuel storage tank site, which is listed under the EDI program, in accordance with F.A.C. Chapter 17-770. AES shall complete an Initial Remedial Action (IRA) in accordance with Rule 17-770.300, F.A.C., prior to construction dewatering. DER and BESD will receive written notification ten working days prior to initiation of the IRA. AES shall determine the extent of contamination. AES Cedar Bay shall then design and install a pump and treatment system at the site, which will create a reverse hydraulic gradient that will prevent the further spread of the contamination by the dewatering operation. Furthermore, AES Cedar Bay shall submit a Quality Assurance Project Plan (QAPP), a Contamination Assessment Report (CAR) and a Remedial Action Plan (RAP), in accordance with F.A.C. chapter 17-770 to DER for approval with copies to BESD thirty days prior to the start of construction dewatering. AES Cedar Bay shall provide complete site rehabilitation in accordance with F.A.C. Chapter 17-770.~~

B. ~~AES Cedar Bay shall develop a QAPP, CAR, and RAP as required and in accordance with Chapter 17-1700, F.A.C. for the site listed in XXVIII, C and D below, and submit these plans to DER for approval with copies to BESD thirty days prior to the start of construction dewatering.~~

C. ~~Prior to construction dewatering, at the underground diesel fuel storage tank #2 site, AES Cedar Bay shall:~~

1. ~~Perform an IRA with F.A.C. Rule 17-770.300.~~
2. ~~Determine the extent of down gradient contamination and submit that information to BESD, and DER prior to installation of the well described in paragraph C.4 below.~~
3. ~~Establish a series of groundwater level monitoring wells at intervals of approximately 250 feet from the coal unloading site to the #2 tank for determination of the groundwater dewatering cone of influence. Daily groundwater levels shall be recorded for each of these wells during construction dewatering. A background well with a continuous water level recorder shall be installed, at a site that would not be influenced by the dewatering operations, to determine ambient conditions at the site.~~
4. ~~Install a monitoring well with a continuous water level recorder which will be used to trigger implementation of the RAP. The well will be located 150 feet down gradient from the boundary of the plume of contamination determined above in XXVII C.2. If the piezometric head in the trigger well drops 6 inches below ambient conditions as compared to the background well, then AES Cedar Bay shall notify DER and BESD of a verified drop of 6 inches or more in the trigger well within three working days and the appropriate portion of the RAP shall be implemented by AES Cedar Bay.~~
5. ~~AES Cedar Bay shall submit a plan for the location and construction of the monitoring wells described above in paragraph D.4., the DER and BESD for approval. AES Cedar Bay shall submit monthly reports of the groundwater level recordings to DER and BESD.~~

E. ~~Implementation of the appropriate portion of the RAP shall commence within 14 days of the determination that the construction dewaterings cone of depression will reach any of the contaminated sites.~~

F. ~~AES Cedar Bay shall monitor the construction dewatering effluent from their treatment system, once a week during dewatering, for the following criteria: Benzene 1 $\mu\text{g}/\text{l}$; Total VOA 50 $\mu\text{g}/\text{l}$; Total Naphthalenes (Total = naphthalenes + methyl naphthalenes) 100 $\mu\text{g}/\text{l}$; and Total Residual Hydrocarbons 5 mg/l , and polynuclear aromatic hydrocarbons, 10 $\mu\text{g}/\text{l}$. If the concentrations of contaminants in the effluent rise above those in the above list,~~

~~AES Cedar Bay shall take corrective actions to return concentrations to acceptable levels. In monitoring the dewatering effluent for the above contaminants, AES Cedar Bay shall use the methods prescribed in Chapter 17-770.600(8)(b), F.A.C.~~

~~G. If any disagreement arises regarding this condition, the parties agree to submit the matter for an expedited hearing to the DOAH and shall request assignment of the Hearing Officer who has heard this case, if possible, pursuant to 403.5064, F.S. The informal dispute resolution process shall be used.~~

~~H. Nothing in this condition shall affect the eligibility of reimbursement for clean-up of any site under EDI program.~~

~~I. Reinjection or infiltration of groundwater meeting the petroleum contamination clean-up criteria into the same zone from which it was extracted pursuant to an of the approved remedial action plans shall be permitted and is hereby authorized by this condition. The proposed location of the recharge system shall be upgradient of the site and included in the plans for remedial action referenced in XXVIII.A. and B.~~

SS:cjb/1219-4.1

Via Telecopier

September 27, 1990

Mr. Hamilton S. Oven
 Chief, Power Plant Siting Group
 Florida Department of Environmental Regulation
 Twin Towers Office Building
 2600 Blair Stone Road
 Tallahassee, FL 32399-2400

Dear Buck:

AES Cedar Bay is continuing negotiations with the City of Jacksonville for the use of sewage treatment re-use water as the source of cooling water makeup. As an alternate, AES Cedar Bay is evaluating the use of Broward River water. In the event that we are unable to finalize the details surrounding the use of re-use water prior to design deadlines for the cooling water system, AES Cedar Bay will install a "worse case" design which will allow the use of either Broward River water or Jacksonville sewage treatment re-use water as the source of cooling tower makeup.

AES Cedar Bay proposes to make the following changes to the circulating water system in order to facilitate the use of Broward River water as the "worse case" cooling water system makeup source. The changes are required to handle the higher flow rates of makeup and blowdown associated with brackish water and to protect the equipment from the high potential of corrosion.

Black & Veatch has developed an option for an alternate circulating water makeup supply system for the AES Cedar Bay project. The option involves furnishing and installing a system to use Broward River water as makeup to the circulating water system instead of Seminole Kraft well water. The option includes:

1. Highly corrosion resistant materials for:

Condenser -- (Titanium, AL-6XN, or "Sea-Cure" tubing with AL-6XN tube sheets; the current 304 stainless tubes are susceptible to chloride pitting corrosion)
 Cooling Tower
 Auxiliary Cooling Water Heat Exchangers
 Circulating Water Pumps
 Backwash Strainers
 Chemical Feed Equipment
 Associated piping and valves

2. Increased makeup water quantity because of the higher cooling tower blowdown. The makeup and blowdown piping and valve sizes would increase. The existing Seminole Kraft circulating water system (river water intake and discharge) would be used. The system would be sized for 10,000 gpm makeup and 8,000 gpm blowdown representing cycles of concentration in the tower of approximately 1.3.

AES/Cedar Bay Inc.

Hamilton S. Owen
September 27, 1990
Page Two

Additional items may be required, including:

Impressed current cathodic protection system
Upgrade of materials for the condenser tube cleaning system
Coated circulating water pipe
Treatment system for cooling tower blowdown

The above includes all basic changes necessary to install a cooling system which is capable of using either reclaimed water or surface water. AES Cedar Bay further proposes to submit detailed information concerning operation of the plant cooling system during post-certification monitoring and review pursuant to the attached proposed amendment to Condition of Certification XXV. This requires DER approval to be obtained prior to beginning operation.

If DER concludes that additional information is necessary to evaluate construction of the cooling system as outlined above, AES Cedar Bay will make every effort to provide it in a timely fashion. We will continue to provide additional details concerning cooling system design as they become available.

Sincerely,



Steve Wolf
Project Engineer

SW/sc

Attachment

cc: Betsy Hewitt, FDER -- Tal

bcc: Julie Blunden
Terry Cole, Esq., OHF&C
Dave Sundstrom, AES-KS
Jeff Swain
Kerry Varkonda

NO_x EMISSIONS VERSUS LOAD CIRCULATING FLUIDIZED BED BOILER

This discussion of the effect of boiler load on NO_x emissions from CFB boilers is based:

- 1) Generally upon an understanding of CFB Boiler Technology, and
- 2) Specifically upon the experiences of the AES Thames Cogeneration Plant.

The author, Paul Stinson, was graduated Magna Cum Laude with a BSChE from Texas A&M University in 1979. He has extensive process engineering experience with refinery, chemical plant, coal liquefaction, and power boilers. He was involved with the design, erection, startup and operation of the AES Thames CFB Boilers, and most recently, served as the Control Room Superintendent, responsible for operations of the AES Thames boilers and electrical generating equipment.

NO_x emissions from CFB Boilers are inherently low due to low combustion temperatures, on the order of 1500-1600°F, and due to staging of combustion air. NO_x emissions from a particular CFB boiler, burning a particular fuel are affected by the temperature of the combustor, the level of excess air, and the concentration of unreacted lime in the circulating bed. Other variables are generally considered second order effects.

Combustion temperature, excess air, and free lime concentration are all factors that are affected by boiler load. As load is reduced, temperature decreases, excess air increases, and free lime concentration can be decreased dramatically. This latter effect is due to the reduced fuel firing, and hence, reduced need for sulfur removal, and is enhanced by the beneficial effect that higher excess air has upon the sulfur capture reaction.

In general, NO_x emissions can be expected to increase somewhat as load is reduced. This is due to the effect of increased oxygen (less staging of combustion air) and the initially high level of free lime. As the excess free lime concentration drops over time, the NO_x emissions tend to reduce somewhat. The drop in combustor temperature tends to mostly, but not completely, offset the effect of

excess air as load drops to about 50 percent. Load reductions below this level tend to produce a reduction in NOx emissions as temperatures are reduced still further.

The attached tables provide typical data from the AES Thames boilers. At full load, NOx emissions are generally 0.04-0.06 lbs/MBTU. At 50-60 percent load, the emissions peak at about 0.08-0.10 lbs/MBTU. Further load reductions tend to decrease emissions.

The AES Thames combustor temperature at full load ranges from 1480 to 1550°F. At 50-60 percent load, the temperature is about 100°F lower. At 30 percent load, the temperature is about 1350°F. The AES Shady Point facility reports that NOx emissions are affected very little, if at all, by load reductions. Their actual emission levels are the same as AES Thames.

CFB Boiler manufacturers have tended to be very conservative in setting guarantee levels for NOx emissions. Guarantee levels for units without DeNOx equipment have tended to remain at levels that have previously been approved by permitting agencies. The level of 0.29 lbs/MBTU permitted and guaranteed for the AES Cedar Bay facility is the same as for the AES Thames facility.

The author, therefore, expects no problem in meeting the permitted NOx emissions level with the AES Cedar Bay boilers, regardless of load level.

Date: December 8-9, 1990
Dispatch vs. Load

Boiler 1A

<u>Time</u>	<u>Steam Load, %</u>	<u>NOx (lb/MBTU)</u>	<u>Stack Gas % O2</u>	<u>Comments</u>
2000	103	0.04	3.0	
2100	103	0.03	2.9	
2200	103	0.04	2.8	
2300	70	0.06	8.2	
0000	54	0.03	8.6	Plant @ 50% Electrical Production (90 MW net)
0100	58	0.06	7.9	"
0200	59	0.07	7.9	"
0300	61	0.08	7.7	"
0400	60	0.08	7.9	"
0500	60	0.07	7.8	"
0600	60	0.07	7.7	"
0700	60	0.07	7.6	"
0800	60	0.05	7.7	"
0900	59	0.02	7.7	"
1000	61	0.04	7.3	"
1100	92	0.05	2.4	Ramp Up
1200	104	0.04	2.3	At Full Load

Date: December 14 - 15, 1990
Dispatch vs. NOx

Boiler SG1B

<u>Tier</u>	<u>Steam Load. %</u>	<u>NOx (lb/MBTU)</u>	<u>Stack Gas % O2</u>	<u>Comments</u>
2000	104	0.05	3.9	
2100	104	0.05	3.9	
2200	104	0.05	4.1	
2300	101	0.05	4.6	
0000	78	0.07	8.0	
0100	53	0.06	10.0	Hold for Dispatch
0200	53	0.05	9.4	Hold for Dispatch
0300	36	0.03	10.8	Start Shut Down
0400	4	0.00	12+	Down

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

January 7, 1992

RECEIVED

Carol Browner, Secretary
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

JAN 7 1992

Division of Air
Resources Management

Re: Response to Letter from the Mayor of Jacksonville

Dear Secretary Browner:

This letter responds to the Mayor of Jacksonville's December 9, 1991 letter to you, in which he asserts that Seminole Kraft Corporation misled the Siting Board, the Department, and the City of Jacksonville concerning the AES Cedar Bay-Seminole Kraft Corporation Cogeneration Project in Jacksonville. In numerous documents and meetings, many of which are discussed below, Seminole Kraft and AES Cedar Bay have kept the Department and the City informed of plans for the Seminole Kraft Mill and for the AES facility, both before and after issuance of the Final Order of Certification and PSD Permit for the cogeneration plant.

THE APPLICANTS PROMPTLY DESCRIBED SEMINOLE KRAFT'S CHANGING PLANS FOR THE MILL.

In the three years since the site certification application for this cogeneration project was filed, the plans for the Seminole Kraft Mill to which the cogeneration project will supply steam have changed dramatically. In the middle of the site certification process, Seminole Kraft decided on a bold plan to convert the mill to 100% recycled fiber, eliminating kraft recovery boilers and other sources of odor from the kraft pulp mill. The steam needs of the re-configured Seminole Kraft Mill and the preferred way of meeting those needs without the steam generated by the recovery boilers were not finally determined until a study completed a few months ago. Nevertheless, as soon as Seminole Kraft knew that it might be possible to eliminate the recovery boilers entirely but that some new source of steam might also be needed, this issue was discussed with the Department and the City of Jacksonville.

Because federal law requires that sources be "permanently shut down" if their emissions will be credited to the permitting of a new source like the AES Cedar Bay project, Seminole Kraft attempted to be sure that the condition in the proposed air permit for the cogeneration project, requiring the permanent shut down of Seminole Kraft's boilers other than its recovery boilers, would not prohibit operating one or more of the bark or power boilers in the future as a substitute for the recovery boilers that would be shut down, provided appropriate new source permitting procedures were followed. DER and EPA both concluded that the "permanent shutdown" requirement did not preclude that possibility.

Far from attempting to mislead the interested parties or keep them in the dark about its plans, Seminole Kraft attempted to discuss the possible needs of the re-configured mill even before they were fully understood.

NEITHER THE DEPARTMENT, THE CITY, OR THE SITING BOARD WAS MISLED.

Although the standard for suspension of a Site Certification is not based on whether the agencies were misled, Seminole Kraft and AES Cedar Bay want to be sure that any question of their integrity is fully rebutted. The discussion below demonstrates that the City was well aware of Seminole Kraft boiler needs and plans. The sheer volume of correspondence and meetings related to Seminole Kraft's boiler needs (with the City even receiving multiple copies of some of the key correspondence) indicates the care applicants have taken to keep the City, the Department, and EPA advised.

1. Almost one year before entry of a Final Order of Certification and prior to the conclusion of the first certification hearing, Seminole Kraft, on February 16, 1990, requested amendment of its construction permit for a recovery boiler. (See Attachment 2.) A copy of the letter was provided to the City of Jacksonville Director of Bio-Environmental Services, James Manning, and the City's Office of General Counsel. On page 2 of that letter the possible "use of the creditable emissions from the recovery boilers for a power boiler to supply steam" was discussed. (Emphasis added.) (See Attachment 8.)

2. The City, in a letter dated March 22, 1990, from Mr. Manning, signed by Mr. Woosley, air engineer for the City, questioned the creditable emissions from shut down of the recovery boilers, but stated:

It is noted that BESD does not see this decision as an impediment to the future construction of a steam-producing boiler at

the Seminole Kraft facility, should the need arise. A new boiler would be subject to the New Source Performance Standards (NSPS) and possibly subject to the Prevention of Significant Deterioration (PSD) or New Source Review requirements, thus adequately protecting air quality standards. (Emphasis added.) (See Attachment 3)

The City and its counsel were clearly on notice regarding the contemplation of additional boiler capacity during the hearing and evidenced their knowledge by the letter referenced above.

3. The EPA on April 4, 1990, responded to the Seminole Kraft package forwarded them by DER. (See Attachment 4.) It recognized the ability of Seminole to preserve the emission credits from shutdown of the recovery boilers for five years.

4. The Department, on June 6, 1990, responded to Seminole Kraft regarding contemporaneous emission credit calculations. (See Attachment 5.) The letter was copied to the City (Mr. Manning) and EPA. It had attached the EPA letter and the February 16, 1990, letter from Seminole. The letter established the method of calculation of emission credits recommended by EPA. One stated purpose of requesting the emission credits in the February 16, 1990, letter was for a power boiler. This establishes that DER was also aware of the general plans when it received the February 16, 1990, letter and responded to it.

5. The Department on June 6, 1990, also responded to Seminole Kraft's request to amend the Construction Permit for the new recovery boiler to allow an option of closing the three existing recovery boilers down and converting to a 100% recycle fiber operation. (See Attachment 6.) The Department noted receipt of the above-referenced letter from the City and attached it and the February 16, 1990, letter from Seminole to the package. The City (Mr. Manning) was copied on this letter.

6. On June 14, 1990, Seminole Kraft formally notified the Department of its election to pursue use of recycle fiber rather than construction of a new recovery boiler. (See Attachment 9.)

7. The Department on July 2, 1990, acknowledged receipt of the above letter and referenced a further meeting on the project on July 10, 1990. (See Attachment 10.)

8. Seminole Kraft and AES met individually with BESD and its counsel and the Department and its counsel to discuss concerns with the proposed Condition of Certification II-D to insure there was no

impediment to applying for permits for rebuilding of the bark boilers. The City took a very strong position that it could be done only if the sources met NSPS.

9. At the request of the Department a summary of our meeting with the Department was prepared on October 26, 1990, and sent to DER. (See Attachment 11.) The letter was sent to the Director of the Division responsible for both power plant siting and air construction permits. The letter specifically summarized DER's interpretation of proposed Condition of Certification II-D. We described the conclusion of the meeting regarding permitting requirements for bark boilers if the AES/Seminole Kraft project was certified on page 2 of that letter:

In light of this condition [of the proposed Conditions of Certification], the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source. (Emphasis added.)

Again it must be pointed out that AES and Seminole, as their plans become firmer as engineering on the project progressed, met with the Department, the agency charged with administering the power plant siting program. They met within the Department with the personnel specifically charged with supervising and administering the program and later monitoring compliance to insure their plans were in concert with the proposed conditions of certification, months before the conditions became final. The letter requested the Department to respond if correction or clarification were needed. Receiving no corrections or clarification, AES and Seminole Kraft relied on the interpretation provided by the Department and did not request an amendment to the condition prior to final action.

10. The Department, on November 21, 1990, transmitted the October 26, 1990 letter referenced above to EPA for its interpretation. (See Attachment 12.) A copy was provided to the City of Jacksonville BESD. Again the City had notice months before final action on the certification of the plans and need for refurbishing the bark boilers. We have found no response or objection from the City to the interpretation of the condition, so long as NSPS and PSD requirements are met.

11. On November 14, 1990, the City and Seminole Kraft signed

a Stipulation for Entry of a Consent Judgment reaching an agreement on a civil action brought by the City relating to odor. (See Attachment 14.) In that Stipulation, agreed to by the City, Seminole specifically reserved the right to repermit and utilize the recovery boiler equipment for future power or steam needs. This again put the City on notice of Seminole needs for additional power or steam.

12. On February 25, 1991, EPA responded to DER regarding its November 21, 1990, letter. (See Attachment 13.) EPA confirmed the DER interpretation that, while they had to be shut down under the PSD permit, if Seminole Kraft chose to refurbish its existing boilers "the boilers would be treated as entirely new emissions units with none of the exemptions from applicability for existing units that are specified under PSD regulations being available." That letter was provided to AES and Seminole Kraft by the Department and has been relied upon in developing the plans for the remainder of the project. The Department has never differed with the EPA interpretation to our knowledge. The letter also reflects the Florida air rules which are a part of the EPA-approved State Implementation Plan and must be consistent with the Federal regulations. We continue to carry out the project in accordance with these rules and regulations and interpretations provided.

CONCLUSION

The above documents, as well as the attached chronology and numerous pieces of correspondence, demonstrate that the City's allegation of being misled about plans for refurbishing of the Seminole Kraft bark or power boilers is groundless. As soon as the possibility of shutting down the mill's recovery boilers and the possible need to replace some of the steam they generated become known, Seminole Kraft and AES began to discuss the issue with the City and with representatives of the Department who serve both as the Department's air permitting staff and as the staff to the Siting Board. As these plans have evolved, a key factor remains: the emissions of the Seminole Kraft bark and power boilers credited to the AES cogeneration project will be eliminated permanently; if those boilers operate after startup of the AES plant they will have to be permitted as new sources (and most of their emissions, in turn, will be offset by reductions in emissions from the recovery boilers and the remainder of the pulp mill sources being eliminated).

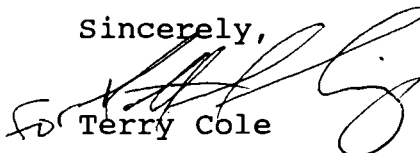
We do agree with one point in the Mayor's letter; before any new permits will be issued, it is important to assess the overall impact on ambient air quality. Seminole Kraft has been preparing an application for construction permits to refurbish two bark boilers and one power boiler to new source performance standards.

Carol Browner, Secretary
January 7, 1992
Page 6

That application will have to include a full assessment of emission increases and decrease, along with air quality modeling to predict the impact on ambient air quality. Obviously, the Department, the City, and the public would have a chance to comment on the predicted effects on ambient air quality. If Seminole Kraft is able to demonstrate that it meets applicable permitting requirements and is consistent with the air quality improvements realized through the cogeneration project, then a permit should be issued for refurbishing the two bark boilers and one power boiler. In any event, both Seminole Kraft and AES Cedar Bay have fully complied with and intend to continue to comply with the Site Certification.

We have attached a number of the documents we felt were most important in response to the issues discussed in the Mayor's letter. If you have questions about other points in the attached chronology or about any other related issues, please let us know.

Sincerely,


Terry Cole

TC/dg/A:Browner.ltr/1003/1219

cc: Richard Donelan (with attachments)
Gary Smallridge (with attachments)
Greg Radlinski (with attachments)
Mayor Ed Austin (with attachments)
Larry Stanley (with attachments)
Kerry Varkonda (with attachments)
Steve Smallwood (with attachments)
Clair Fancy (with attachments)
T. R. Hainline (with attachments)
J. L. Manning
EPA
Heinz Mueller

CHRONOLOGY

- November 10, 1988 - Need determination application filed with the Department of Environmental Regulation and petition for determination of need filed with the PSC
- November 14, 1988 - Application filed
- December, 1988 - Application Determined Complete
- February 10, 1989 - Application Amended
- February 14, 1989 - Land Use Hearing Held in Jacksonville
- Recommended Order Issued - In Compliance
- April 24, 25, 1989 - PSC Hearing
- June 10, 1989 - PSC Order Finding a need exists for the proposed cogeneration project
- June 27, 1989 - Siting Board - Determined Site in Compliance with Jacksonville Land Use Plans and Zoning Ordinances
- June 30, 1989 - PSC Order Determining Need
- July 7, 1989 - Application Amended
- August 4, 1989 - Seminole Kraft made Application for Permit to Construct new Kraft Recovery Boiler
- October 13, 1989 - Application Amended
- December 13, 1989 - Application Amended
- December 21, 1989 - Application Amended
- January 4, 1990 - Application Amended - Recovery Boiler and Associated Facility Removed (attached)
- January 5, 1990 - DER Issued Final Permit to Construction New Kraft Recovery Boiler
- February 5, 6, 7,
20, 21, 1990 - Cert. Hearing before Hearing Officer Robert T. Benton, II

February 16, 1990 - Seminole Kraft Filed a Request to Amend the Construction Permit for the Kraft Recovery Boiler to Provide the Option to Convert the Mill to 100% Recycled Fiber - Reference to need for power boiler

March 22, 1990 - Letter from City (Manning) discussing additional power boiler at Seminole

April 4, 1990 - Letter from EPA regarding emission credits

April 5, 1990 - Proposed Recommended Order Submitted

May 29, 1990 - Recommended Order

June 6, 1990 - DER Issued an Amendment to the New Kraft Recovery Boiler Construction Permit amended to allow conversion to 100% recycled fiber (attached)

June 6, 1990 - DER letter setting forth method for preserving Contemporaneous Emission Credits (attached)

August 14, 1990 - Siting Board Hearing

August 24, 1990 - Order of Remand Issued

October 26, 1990 - Letter to Steve Smallwood Confirming Discussion with DER on Refurbishment or Replacement of Seminole Kraft Bark Boilers and Changing Fuel Mix (attached)

October 29, 30, 1990 - Hearing on Remand

November 14, 1990 - Consent Judgment - Reservation of right to operate recovery boilers as power boilers (attached)

November 21, 1990 - DER Letter to EPA Forwarding October 26 Letter; cc to City of Jacksonville, BESD (attached)

December 5, 1990 - Supplemental Recommended Order

January 22, 1991 - Hearing by Siting Board on Supplemental Order

February 22, 1991 - Siting Board Order Approving Certification

- February 24, 1991 - Letter From EPA to DER re: Refurbishment of Boilers if AES Certified, if it is not Certified (attached)
- March 19, 1991 - PSD Permit Issued by DER to AES/Seminole Kraft
- June 25, 1991 - Letter to Smallwood w/cc to James Manning Construction Permit Application to be Filed After AESCB Startup and Testing (attached)
- July 16, 1991 - DER Letter to Seminole Kraft Co; cc: to R. Robertson, BESD (attached)
- December 2, 1991 - Letter from Terry Cole to Gregory G. Radlinski (attached)
- December 4, 1991 - Meeting with City of Jacksonville (Radlinski and Lucas)
- December 9, 1991 - Letter from Mayor to DER
- December 19, 1991 - Meeting at DER with City of Jacksonville, EPA, public and media

dg/a:chronolo.tc

January 4, 1990

Mr. Hamilton S. Owen
Administrator, Siting Coordination Section
Division of Air Resources Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

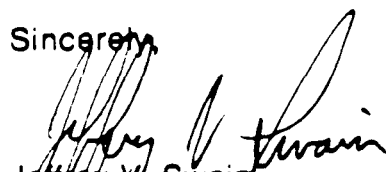
Dear Buck:

This letter is to serve as formal notification of the withdrawal of the kraft recovery boiler, multiple effect evaporators, smelt dissolving tanks and associated facilities from the Cedar Bay Cogeneration Project's Site Certification Application. This deletion is at the request of Rich Maguire, counsel for the City of Jacksonville, and Betsy Hewitt, counsel for the FDER, since these sources are being permitted separately.

The SCA sections primarily affected by this action include the Preface, 3.4 Air Emissions and control, 5.6 Air Quality Impacts, 10.1.4 Coastal Zone Management Certification, 10.6.1 Application to Operate/Construct Air Pollution Sources, and 10.9 Kraft Recovery Boiler BACT Analysis.

Seminole Kraft Corporation remains a joint applicant with AES Cedar Bay. This deletion is intended to simplify the review of the SCA, the certification hearing, and the preparation of the conditions of certification.

Sincerely,


Jeffrey V. Swain
Project director



Seminole Kraft Corporation

Jacksonville Mill

9489 Eastport Road
P.O. Box 28998
Jacksonville, Florida 32218-0998

February 16, 1990

904 751-6400

Mr. C.H. Fancy, P.E.
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

This letter is to request an amendment to construction permit No. AC16-168607 (Kraft Recovery Boiler) for our mill in Jacksonville. As indicated earlier, Seminole Kraft has engaged in extensive engineering studies related to the proposed new recovery boiler installation as well as examining how best to position the mill for the future. These studies have concluded that the mill is a high cost operation in its current configuration and would remain so even after the installation of the new recovery boiler currently estimated to cost \$130,000,000.

Accordingly, three months ago, Seminole Kraft began an investigation to determine what technology alternatives to the recovery boiler project might provide an improved environment to the City of Jacksonville and a mill that would be more competitive in domestic and foreign markets in the future.

An alternative has been tentatively selected that will provide the business with the stability required to insure a long term viable operation. This alternative provides for reconfiguration of the existing mill to enable it to use 100% recycled fiber instead of virgin fiber to produce 1,200 tons per day of linerboard on our existing No.2 paper machine. The kraft pulp mill, old recovery boilers and associated facilities will be permanently shut down and the No.1 paper machine will be placed on cold standby. This alternative will result in the elimination of all regulated TRS (odor) emission sources prior to the stated November 12, 1992 deadline as well as substantial reductions in particulate emissions. This conversion will increase the use of recycled fiber at the mill from about 100 TPD to about 1,400 TPD and will substantially increase Florida's waste paper recycle rate.

As we discussed, the best approach to providing regulatory approval of this alternative appears to be an amendment to the specific conditions in the new recovery boiler construction permit. We believe this new condition should relieve Seminole Kraft of the obligation of building a new recovery boiler if Seminole chooses to shut down the kraft pulping operation, old recovery boilers and related facilities by supplying recycled fiber to the paper machine instead of virgin wood pulp from the kraft pulp mill. In addition, this new condition would require Seminole Kraft to turn in the operating permits for the old recovery boilers once the recycle operation is up and running and to make the old recovery boiler incapable of operation. We believe this specific condition should also provide the mechanism for retaining the recovery boiler creditable emission reductions for potential use by Seminole Kraft pursuant to 17-2.500(2)(e) 3 & 4. As noted, our No.1 paper machine (presently making bag paper) will be placed on cold standby for the time being. However we hope to develop a project to use recycle fiber on the No.1 paper machine in the future and if AES cannot supply the required steam, we would like to use the creditable emissions from the recovery boilers for a power boiler to supply steam to the No.1 paper machine.

Finally, this specific condition should provide for notice to DER of Seminole Kraft's final decision to pursue this alternative or proceed with the new recovery boiler by a date certain.

To facilitate development of the language for this amendment, we have prepared the draft specific condition shown below for your consideration.

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:

- a. The existing kraft pulp mill, including three recovery boilers, three smelt dissolving tanks, digester system, three lime kilns and three multiple effect evaporators, will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESP office by this same date.

- b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by May 1, 1990.
- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and BESD by June 30 and December 31 of each year until the recycle fiber project is completed and in operation.
- d. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation and shuts down the kraft pulp mill sources listed in a. above, the following creditable emission reductions are available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier.

CREDITABLE EMISSION REDUCTIONS (TPY)
 (1983-84)*

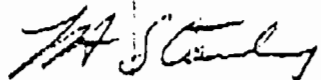
<u>Source</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>TRS</u>
3 existing Recovery Boilers	427.2	320.5	1481	321.1	2327.2	89.3
3 Existing Smelt Dissolving Tanks	122.6	109.7	8.6	-	-	8.9
3 Existing Lime Kilns	74.1	72.6	1.4	98.1	21.2	17.3
No.1 & No.2 Lime Slaker (shut down in 1988)	140.5	133.0	-	-	-	-
No.3 Lime Slaker	14.0	12.8	-	-	-	-

*Note that emissions for the recovery boilers, smelt dissolving tanks, and lime slakers are the same as in the PSD construction permit application (see Attachment A). The emissions for the lime kilns are based on 1983-84 operating hours, but today's control technology/emission limits. See Attachment B for details.

Mr. C.H. Fancy, P.E.
February 16, 1990
page 4

We hope this information will be adequate to proceed with processing the proposed amendment. Please let us know if you require any additional information. We would be happy to meet with the Department to help expedite the handling of this matter.

Sincerely,



L.A. Stanley
General Manager

ah

CC: Steve Smallwood
Dale Twachtmann
James L. Manning
Richard Maguire
Mike Riddle
Curt Barton
Al Koleff

P. Naval

K. Williams

M. Linn

J. Tolpelt, NE Dist

St. Benson, EPA

C. Stamer NPS

00000000

ATTACHMENT A

(Table 4-3 from Original Recovery Boiler PSD Application)

Table 4-3 Baseline Emissions (1983-1984) from Existing Recovery Boilers and Smelt Dissolving Tanks at Seminole Kraft

Pollutant	Annual Baseline Emissions (TPY)						Totals
	RB1	RB2	RB3	SDT1	SDT2	SDT3	
Particulate Matter (TSP)	143.8	144.4	139.0	31.3	48.4	42.9	549.8
Particulate Matter (PM10)	107.9	108.3	104.3	28.0	43.3	38.4	430.2
Sulfur Dioxide	429.5	519.8	531.7	2.5	3.0	3.1	1,489.6
Nitrogen Oxides	94.4	112.7	114.0	-	-	-	321.1
Carbon Monoxide	674.9	816.8	835.5	-	-	-	2,327.2
Volatile Organic Compounds	100.0	119.4	120.8	-	-	-	340.2
Total Reduced Sulfur	25.2	31.3	32.8	2.6	3.1	3.2	98.2
Lead	.012	0.13	0.12	-	-	-	0.37
Mercury	-	-	-	-	-	-	-
Beryllium	0.0090	0.0098	0.0090	-	-	-	0.0278
Sulfuric Acid Mist	6.18	6.76	6.19	-	-	-	19.1
Inorganic Arsenic	-	-	-	-	-	-	-
Fluorides	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-
Vinyl Chloride	-	-	-	-	-	-	-

Note: TPY = tons per year

ATTACHMENT B

Basis for Lime Kiln Creditable Emissions

Particulate Emissions - actual data from 1983-84 Annual Report
 PM₁₀ - used AP-42 Table 10.1-4 and particulate emissions from
 1983-84 Annual Report.

NO_x used NCASI Technical Bulletin No. 107, April 1988

Kiln

No.	mmBTU/Year		Tons NO _x /Year		Average
	83	84	83	84	
1	156150	89535	12.5	7.16	9.8
2	241883	322084	37.5	49.9	43.7
3	267245	308848	41.4	47.9	<u>44.6</u>
				Total	98.1

TRS emissions calculated from actual gas flow rates in 1983-84
 and at 20 ppm TRS as H₂S. This would correspond to permit limit
 today.

CO used AP-42 Table 10.1-1 (0.1 lbs/ADUP)

Year	Pulp Produced (Tons-ADUP/Year)	CO Emissions (TPY)
1983	410,238	20.5
1984	436,032	<u>21.8</u>
		Avg. 21.2

For SO₂-use data compiled in 1989's operating permit application.

Kiln	SO ₂ Emission Rate	Avg. Hours of Operation	SO ₂ (TPY)
No.1	0.16 lb/hr	3882	0.31
No.2	0.06 lb/hr	6829	0.21
No.3	0.24 lb/hr w/noncondensibles	7462	<u>0.90</u>
		Total	1.42

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services



March 22, 1990

Mr. Clair H. Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: **Seminole Kraft Corporation (SKC) letter dated February 16, 1990**

Dear Mr. Fancy:

The Bio-Environmental Services Division staff has carefully reviewed the requested permit revisions in the above-captioned letter. It is the recommendation of our Division that the permit modification be denied for the following reasons:

- A. Inserting a statement in a construction permit to address the issue of not constructing the source for which the permit was issued is not appropriate. Rule 17-2.210 (1), Florida Administrative Code (FAC) provides that "...The construction permit shall be issued for a period of time sufficient to allow construction or modification of the source..." Since SKC has stated in a Variance Request that construction will not take place, the new recovery boiler permit is not required, nor should it be allowed to continue, since available ambient increment is used by the permit for a source which, by admission of the applicant, will not be constructed.

Rule 17-2.210 FAC (Permits Required) requires applicable permits for sources of air pollution, however; based on information available to BESD, the proposed recycling operation will not be expected to be a source of air pollution and, therefore, will not be required to obtain a construction permit.

- B. **Creditable Emissions** - The shutdown of sources at SKC for the construction of the new recovery boiler and the Applied Energy Systems (AES) co-generation facility has been an integral part of the permitting process for both of the new projects. Direct emission reductions, modeling to determine ambient pollutant concentrations, and permit stipulations have all involved the shutdown of these sources. A permit to construct the recovery boiler has been issued and accepted by the applicant, which includes the use of creditable emissions.

Based upon the information which is available to the BESD at this time, there are no creditable emissions for future use.

RECEIVED
MAR 29 1990

DER-BAQM



BEST AVAILABLE COPY


Mr. Clair H. Fancy, P.E.
March 22, 1990
Page 2

It is noted that BESD does not see this decision as an impediment to the future construction of a steam-producing boiler at the Seminole Kraft facility, should the need arise. A new boiler would be subject to the New Source Performance Standards (NSPS) and possibly subject to the Prevention of Significant Deterioration (PSD) or New Source Review requirements, thus adequately protecting air quality standards.

- C. Compliance with Total Reduced Sulfur rule — It is suggested that if SKC does proceed with the recycling project and does not construct the new recovery boiler, a determination should be made as to the compliance status of the Seminole Kraft Corporation facility in regard to compliance with the May 12, 1989, TRS compliance date stated in Rule 17-2.966, FAC.

If BESD may be of further assistance in this matter, please advise.

Very truly yours,


James E. Manning, P.E.
Deputy Director

cc: Andy Kutyna, P.E., DER
BESD File 2155 A

JLM:gw

Handwritten notes:
Manning
Fancy
3/22/90



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 4 1990

4APT-AEB

RECEIVED

APR 09 1990

DER-BAQM

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Seminole Kraft Corporation (PSD-FL-141)

Dear Mr. Fancy:

This is to acknowledge receipt of a package from your office transmitting a request from Seminole Kraft Corporation to modify their prevention of significant deterioration (PSD) permit, dated February 16, 1990. As discussed between Mr. Pradeep Raval of your staff and Mr. Gregg Worley of my staff on March 30, 1990, we have the following comments.

CREDITABLE EMISSIONS REDUCTIONS

The source has requested that conditions be placed in the PSD permit to allow them the flexibility to convert to 100% recycled fiber in lieu of constructing the new recovery boiler. In the event that the source makes the decision to convert to recycled fiber, the source would like to retain emissions credit for the units which would be shut down at the facility (i.e., the existing kraft pulp mill). The credit for shutting down any units may be retained but we must emphasize that such credit must be based on actual operating data from the two years previous to the shutdown, unless another time period is determined to be more representative of actual operating conditions. The information submitted by Seminole Kraft is based on the years 1983-84. Apparently the source used the operating hours of this time period along with presently permitted allowable emission rates to arrive at their creditable emission reductions. This is not acceptable. We would suggest that it would be prudent of FDER to require testing of the units prior to shutdown for the pollutants which are to be credited. In any case, the actual emission rates must be used rather than the permitted allowable rates unless the actual emissions exceed the allowable emissions.

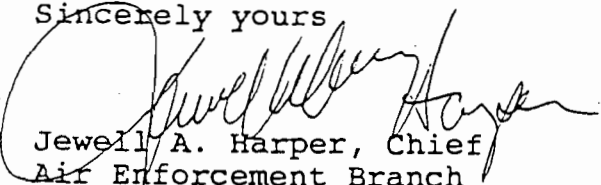
In a related matter, we do not think it is wise to include as a permit condition the language suggested by the source in provision 15 (d) which specifies what credits are available prior to the shutdown of the units. It appears that such a provision would lock FDER into accepting those numbers as creditable emissions no matter what the source operation was prior to shutdown. The fact that emissions resulting from federally enforceable shutdowns are creditable does not need to be established in a permit; the fact that such emissions are creditable is already established in federal and Florida regulations. In addition, the contemporaneous time period for which the emissions are creditable is established in regulations. Thus, it is redundant to state that "...the following emissions reductions will be available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier." By establishing a federally enforceable shutdown date at the completion of construction or November 12, 1992, whichever is earlier, it is understood that emissions credit is available for a period of five years from that point.

EFFECT ON THE AES CEDAR BAY PROJECT

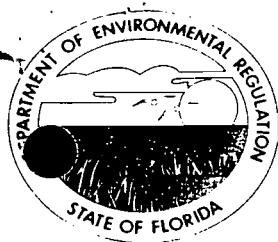
The AES project which is currently under review for permitting plans to use the ambient impacts of shutting down several units at Seminole Kraft in their air quality analysis. How will the proposed permit amendment by Seminole Kraft affect the AES project?

Thank you for the opportunity to review and comment on this proposal by Seminole Kraft. If you have any questions or comments on this matter, please do not hesitate to contact Mr. Gregg Worley of my staff at 404/347-2864.

Sincerely yours



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 6, 1990

*Cc: A. Riddle
C. Barton
J. Cole*

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218-0998

RECEIVED
JUN 11 1990

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Re: Contemporaneous Emissions Credit Calculations

The Department and the U.S. EPA - Region IV have reviewed your letter with attachments dated February 16, 1990. A letter of response, which is attached, was received from Ms. Jewell A. Harper, Chief of the Air Enforcement Branch, U.S. EPA-Region IV, posing a concern about the calculation of contemporaneous emissions credit. Specifically, contemporaneous emissions shall be based on actual emissions data established by conducting emissions tests and on actual operating data (hours per year) from the two years previous to shutdown, unless another time period within the last 5 years prior to shutdown is more representative of actual operating conditions. The Department concurs with EPA on this issue since this is the guidelines established in both the federal and state regulations.

Because Seminole Kraft Corporation (SKC) has indicated that the mill might be going to 100% recycled fiber by no later than November 12, 1992, the mill will have adequate time to conduct emissions tests on the various sources that would be shut down and candidates for contemporaneous emissions credit. Therefore, the Department requests that SKC conduct emissions tests on all sources that it intends to shutdown in order to calculate contemporaneous emissions credit.

Mr. L. A. Stanley
Page 2
June 6, 1990

If there are any questions, please call Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,



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

CHF/BM/t

attachments

cc: A. Kutyna, NE District
J. Manning, BESD
J. Harper, U.S. EPA
C. Shaver, NPS
T. Cole, OHF & C, P.A.

Attachments

Seminole Kraft Corporation

J. sonville Mill

9489 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

February 16, 1990

904 751-6400

Mr. C.H. Fancy, P.E.
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

This letter is to request an amendment to construction permit No. AC16-168607 (Kraft Recovery Boiler) for our mill in Jacksonville. As indicated earlier, Seminole Kraft has engaged in extensive engineering studies related to the proposed new recovery boiler installation as well as examining how best to position the mill for the future. These studies have concluded that the mill is a high cost operation in its current configuration and would remain so even after the installation of the new recovery boiler currently estimated to cost \$130,000,000.

Accordingly, three months ago, Seminole Kraft began an investigation to determine what technology alternatives to the recovery boiler project might provide an improved environment to the City of Jacksonville and a mill that would be more competitive in domestic and foreign markets in the future.

An alternative has been tentatively selected that will provide the business with the stability required to insure a long term viable operation. This alternative provides for reconfiguration of the existing mill to enable it to use 100% recycled fiber instead of virgin fiber to produce 1,200 tons per day of linerboard on our existing No.2 paper machine. The kraft pulp mill, old recovery boilers and associated facilities will be permanently shut down and the No.1 paper machine will be placed on cold standby. This alternative will result in the elimination of all regulated TRS (odor) emission sources prior to the stated November 12, 1992 deadline as well as substantial reductions in particulate emissions. This conversion will increase the use of recycled fiber at the mill from about 100 TPD to about 1,400 TPD and will substantially increase Florida's waste paper recycle rate.

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Finally, this specific condition should provide for notice to DER of Seminole Kraft's final decision to pursue this alternative or proceed with the new recovery boiler by a date certain.

To facilitate development of the language for this amendment, we have prepared the draft specific condition shown below for your consideration.

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:

- a. The existing kraft pulp mill, including three recovery boilers, three smelt dissolving tanks, digester system, three lime kilns and three multiple effect evaporators, will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESP office by this same date.

- b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by May 1, 1990.
- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and BESD by June 30 and December 31 of each year until the recycle fiber project is completed and in operation.
- d. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation and shuts down the kraft pulp mill sources listed in a. above, the following creditable emission reductions are available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier.

CREDITABLE EMISSION REDUCTIONS (TPY)
 (1983-84)*

<u>Source</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>TRS</u>
3 existing Recovery Boilers	427.2	320.5	1481	321.1	2327.2	89.3
5 Existing Smelt Dissolving Tanks	122.6	109.7	8.6	-	-	8.9
3 Existing Lime Kilns	74.1	72.6	1.4	98.1	21.2	17.3
No.1 & No.2 Lime Slaker (shut down in 1988)	140.5	133.0	-	-	-	-
No.3 Lime Slaker	14.0	12.8	-	-	-	-

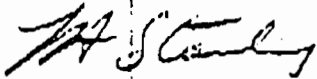
*Note that emissions for the recovery boilers, smelt dissolving tanks, and lime slakers are the same as in the PSD construction permit application (see Attachment A). The emissions for the lime kilns are based on 1983-84 operating hours, but today's control technology/emission limits. See Attachment B for details.

BEST AVAILABLE COPY

Mr. C.H. Fancy, P.E.
February 16, 1990
page 4

We hope this information will be adequate to proceed with processing the proposed amendment. Please let us know if you require any additional information. We would be happy to meet with the Department to help expedite the handling of this matter.

Sincerely,



L.A. Stanley
General Manager

ah

CC: Steve Smallwood
Dale Twachtmann
James L. Manning
Richard Maguire
Mike Riddle
Curt Barton
Al Koleff

P. Raval

R. Anderson

M. Linn

G. Kellogg, NE Dist.

M. Aronson, EPA

C. Stauer, NPS

CAFFR P/ET

ATTACHMENT A

(Table 4-3 from Original Recovery Boiler PSD Application)

Table 4-3 Baseline Emissions (1983-1984) from Existing Recovery Boilers and Smelt Dissolving Tanks at Seminole Kraft

Pollutant	Annual Baseline Emissions (TPY)						Totals
	RB1	RB2	RB3	SDT1	SDT2	SDT3	
Particulate Matter (TSP)	143.8	144.4	139.0	31.3	48.4	42.9	549.8
Particulate Matter (PM10)	107.9	108.3	104.3	28.0	43.3	38.4	430.2
Sulfur Dioxide	429.5	519.8	531.7	2.5	3.0	3.1	1,489.6
Nitrogen Oxides	94.4	112.7	114.0	-	-	-	321.1
Carbon Monoxide	674.9	816.8	835.5	-	-	-	2,327.2
Volatile Organic Compounds	100.0	119.4	120.8	-	-	-	340.2
Total Reduced Sulfur	25.2	31.3	32.8	2.6	3.1	3.2	98.2
Lead	.012	0.13	0.12	-	-	-	0.37
Mercury	-	-	-	-	-	-	-
Beryllium	0.0090	0.0098	0.0090	-	-	-	0.0278
Sulfuric Acid Mist	6.18	6.76	6.19	-	-	-	19.1
Inorganic Arsenic	-	-	-	-	-	-	-
Fluorides	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-
Vinyl Chloride	-	-	-	-	-	-	-

Note: TPY = tons per year

ATTACHMENT B

Basis for Lime Kiln Creditable Emissions

Particulate Emissions - actual data from 1983-84 Annual Report
 PM₁₀ - used AP-42 Table 10.1-4 and particulate emissions from
 1983-84 Annual Report.

NO_x used NCASI Technical Bulletin No. 107, April 1988

Kiln

No.	mmBTU/Year		Tons No _x /Year		Average
	83	84	83	84	
1	156150	89535	12.5	7.16	9.8
2	241883	322084	37.5	49.9	43.7
3	267245	308848	41.4	47.9	<u>44.6</u>
				Total	98.1

TRS emissions calculated from actual gas flow rates in 1983-84
 and at 20 ppm TRS as H₂S. This would correspond to permit limit
 today.

CO used AP-42 Table 10.1-1 (0.1 lbs/ADUP)

Year	Pulp Produced (Tons-ADUP/Year)	CO Emissions (TPY)
1983	410,238	20.5
1984	436,032	<u>21.8</u>
		Avg. 21.2

For SO₂-use data compiled in 1989's operating permit application.

Kiln	SO ₂ Emission Rate	Avg. Hours of Operation	SO ₂ (TPY)
No.1	0.16 lb/hr	3882	0.31
No.2	0.06 lb/hr	6829	0.21
No.3	0.24 lb/hr w/noncondensibles	7462	<u>0.90</u>
		Total	1.42



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 4 1990

4APT-AEB

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APR 09 1990

DER-BAQM

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Seminole Kraft Corporation (PSD-FL-141)

Dear Mr. Fancy:

This is to acknowledge receipt of a package from your office transmitting a request from Seminole Kraft Corporation to modify their prevention of significant deterioration (PSD) permit, dated February 16, 1990. As discussed between Mr. Pradeep Raval of your staff and Mr. Gregg Worley of my staff on March 30, 1990, we have the following comments.

CREDITABLE EMISSIONS REDUCTIONS

The source has requested that conditions be placed in the PSD permit to allow them the flexibility to convert to 100% recycled fiber in lieu of constructing the new recovery boiler. In the event that the source makes the decision to convert to recycled fiber, the source would like to retain emissions credit for the units which would be shut down at the facility (i.e., the existing kraft pulp mill). The credit for shutting down any units may be retained but we must emphasize that such credit must be based on actual operating data from the two years previous to the shutdown, unless another time period is determined to be more representative of actual operating conditions. The information submitted by Seminole Kraft is based on the years 1983-84. Apparently the source used the operating hours of this time period along with presently permitted allowable emission rates to arrive at their creditable emission reductions. This is not acceptable. We would suggest that it would be prudent of FDER to require testing of the units prior to shutdown for the pollutants which are to be credited. In any case, the actual emission rates must be used rather than the permitted allowable rates unless the actual emissions exceed the allowable emissions.

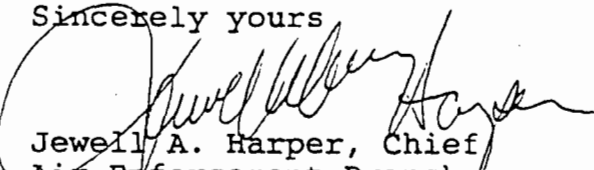
In a related matter, we do not think it is wise to include as a permit condition the language suggested by the source in provision 15 (d) which specifies what credits are available prior to the shutdown of the units. It appears that such a provision would lock FDER into accepting those numbers as creditable emissions no matter what the source operation was prior to shutdown. The fact that emissions resulting from federally enforceable shutdowns are creditable does not need to be established in a permit; the fact that such emissions are creditable is already established in federal and Florida regulations. In addition, the contemporaneous time period for which the emissions are creditable is established in regulations. Thus, it is redundant to state that "...the following emissions reductions will be available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier." By establishing a federally enforceable shutdown date at the completion of construction or November 12, 1992, whichever is earlier, it is understood that emissions credit is available for a period of five years from that point.

EFFECT ON THE AES CEDAR BAY PROJECT

The AES project which is currently under review for permitting plans to use the ambient impacts of shutting down several units at Seminole Kraft in their air quality analysis. How will the proposed permit amendment by Seminole Kraft affect the AES project?

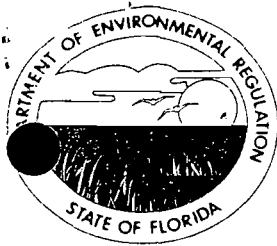
Thank you for the opportunity to review and comment on this proposal by Seminole Kraft. If you have any questions or comments on this matter, please do not hesitate to contact Mr. Gregg Worley of my staff at 404/347-2864.

Sincerely yours



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

T-100-212



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 6, 1990

RECEIVED

JUN 13 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218-0998

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Re: Amendment Request to Construction Permits: AC 16-168607
PSD-FL-141

The Department and the U.S. EPA-Region IV have reviewed your letter with attachments dated February 16, 1990, which was amended by a letter from Mr. Terry Cole on May 21, 1990. The letters requested an amendment to the above referenced construction permits. The Department received responses to the request from Mr. James L. Manning, Deputy Director of Duval County's Bio-Environmental Services Division, on March 29, 1990, and from Ms. Jewell A. Harper, Chief of the Air Enforcement Branch, U.S. EPA-Region IV, on April 9, 1990. The Department's response to the request package will follow.

The final compliance date for those recovery furnaces subject to F.A.C. Rule 17-2.600(4)(c), that will be replaced, is November 12, 1992, pursuant to F.A.C. Rule 17-2.960(1)(d)2.b.(ii). The mill's plan to change to 100% recycle fiber instead of constructing a new recovery furnace to comply with the applicable regulations would not be a SIP violation because there is no change in the final compliance date. Therefore, the Department is in agreement to establish the potential for the mill to change to 100% recycle fiber for compliance purposes and to establish certain critical dates for reasonable assurances.

The letter of response from Ms. Jewell A. Harper posed specific concerns about contemporaneous emissions credit. The Department concurs with the issues discussed in the letter, that (1) contemporaneous emissions shall be based on actual emissions data established by conducting emissions tests and on actual operating data (hours per year) from the two years previous to shutdown, unless another time period within the last 5 years

Mr. L. A. Stanley
Page Two
June 6, 1990

prior to shutdown is more representative of actual operating conditions, and (2) contemporaneous emissions credit should not be established as a permit condition prior to a source shutting down because of the potential premature lock-in of a shutdown date. Since both the federal and state regulations clearly define the process and time frames for the establishment of contemporaneous emissions credit, the request to establish contemporaneous emissions credit as a condition in the above referenced construction permits is denied.

The letter of response from Mr. James L. Manning posed concerns about the issues already discussed in the previous two paragraphs as well as a concern over the validity of the new recovery furnace construction permits. Since the mill is privileged to demonstrate compliance by its own choosing so long as it is within the guidelines of the appropriate rules, the permits shall remain viable in case the mill decides that it will continue with its original plans, which is to construct the new recovery boiler. The permits also contain compliance dates that still must be met and are federally enforceable. Consequently, until the mill makes its decision on how it will demonstrate compliance with the 111(d) TRS rule, the surrendering of the construction permits will not be required at this time.

Therefore, based on the discussions in the previous paragraphs, the following will be added:

Specific Condition (new)

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:
 - a. The existing three recovery boilers and three smelt dissolving tanks will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESD office by this date.
 - b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by June 15, 1990.

Mr. L. A. Stanley
Page Three
June 6, 1990

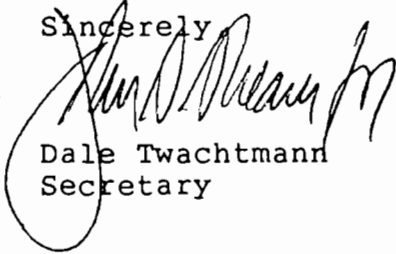
- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and BESD by June 30 and December 31 of each year until the recycle project is completed and in operation.

Attachments to be Incorporated

16. Mr. L. A. Stanley's letter with attachments dated February 16, 1990.
17. Mr. James L. Manning's letter received March 29, 1990.
18. Ms. Jewell A. Harper's letter received April 9, 1990.
19. Mr. Terry Cole's letter received May 21, 1990.
20. Mr. Bruce Mitchell's Interoffice Memorandum dated June 1, 1990.

This letter must be attached to your air construction permits, AC 16-168607 and PSD-FL-141, and shall become a part of the permits.

Sincerely



Dale Twachtmann
Secretary

DT/plm

Attachments

- c: A. Kutyna, NE District
J. Manning, BESD
J. Harper, U.S. EPA
C. Shaver, NPS
T. Cole, OHF&C, P.A.

ATTACHMENT 16

**Seminole Kraft Corporation**

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

February 16, 1990

904 751-6400

Mr. C.H. Fancy, P.E.
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

This letter is to request an amendment to construction permit No. AC16-168607 (Kraft Recovery Boiler) for our mill in Jacksonville. As indicated earlier, Seminole Kraft has engaged in extensive engineering studies related to the proposed new recovery boiler installation as well as examining how best to position the mill for the future. These studies have concluded that the mill is a high cost operation in its current configuration and would remain so even after the installation of the new recovery boiler currently estimated to cost \$130,000,000.

Accordingly, three months ago, Seminole Kraft began an investigation to determine what technology alternatives to the recovery boiler project might provide an improved environment to the City of Jacksonville and a mill that would be more competitive in domestic and foreign markets in the future.

An alternative has been tentatively selected that will provide the business with the stability required to insure a long term viable operation. This alternative provides for reconfiguration of the existing mill to enable it to use 100% recycled fiber instead of virgin fiber to produce 1,200 tons per day of linerboard on our existing No.2 paper machine. The kraft pulp mill, old recovery boilers and associated facilities will be permanently shut down and the No.1 paper machine will be placed on cold standby. This alternative will result in the elimination of all regulated TRS (odor) emission sources prior to the stated November 12, 1992 deadline as well as substantial reductions in particulate emissions. This conversion will increase the use of recycled fiber at the mill from about 100 TPD to about 1,400 TPD and will substantially increase Florida's waste paper recycle rate.

As we discussed, the best approach to providing regulatory approval of this alternative appears to be an amendment to the specific conditions in the new recovery boiler construction permit. We believe this new condition should relieve Seminole Kraft of the obligation of building a new recovery boiler if Seminole chooses to shut down the kraft pulping operation, old recovery boilers and related facilities by supplying recycled fiber to the paper machine instead of virgin wood pulp from the kraft pulp mill. In addition, this new condition would require Seminole Kraft to turn in the operating permits for the old recovery boilers once the recycle operation is up and running and to make the old recovery boiler incapable of operation. We believe this specific condition should also provide the mechanism for retaining the recovery boiler creditable emission reductions for potential use by Seminole Kraft pursuant to 17-2.500(2)(e) 3 & 4. As noted, our No.1 paper machine (presently making bag paper) will be placed on cold standby for the time being. However we hope to develop a project to use recycle fiber on the No.1 paper machine in the future and if AES cannot supply the required steam, we would like to use the creditable emissions from the recovery boilers for a power boiler to supply steam to the No.1 paper machine.

Finally, this specific condition should provide for notice to DER of Seminole Kraft's final decision to pursue this alternative or proceed with the new recovery boiler by a date certain.

To facilitate development of the language for this amendment, we have prepared the draft specific condition shown below for your consideration.

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:

- a. The existing kraft pulp mill, including three recovery boilers, three smelt dissolving tanks, digester system, three lime kilns and three multiple effect evaporators, will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESP office by this same date.

- b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by May 1, 1990.
- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and BESD by June 30 and December 31 of each year until the recycle fiber project is completed and in operation.
- d. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation and shuts down the kraft pulp mill sources listed in a. above, the following creditable emission reductions are available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier.

CREDITABLE EMISSION REDUCTIONS (TPY)
 (1983-84)*

<u>Source</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>TRS</u>
3 existing Recovery Boilers	427.2	320.5	1481	321.1	2327.2	89.3
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3 Existing Lime Kilns	74.1	72.6	1.4	98.1	21.2	17.3
No.1 & No.2 Lime Slaker (shut down in 1988)	140.5	133.0	-	-	-	-
No.3 Lime Slaker	14.0	12.8	-	-	-	-

*Note that emissions for the recovery boilers, smelt dissolving tanks, and lime slakers are the same as in the PSD construction permit application (see Attachment A). The emissions for the lime kilns are based on 1983-84 operating hours, but today's control technology/emission limits. See Attachment B for details.

Mr. C.H. Fancy, P.E.
February 16, 1990
page 4

We hope this information will be adequate to proceed with processing the proposed amendment. Please let us know if you require any additional information. We would be happy to meet with the Department to help expedite the handling of this matter.

Sincerely,



L.A. Stanley
General Manager

ah

CC: Steve Smallwood
Dale Twachtmann
James L. Manning
Richard Maguire
Mike Riddle
Curt Barton
Al Koleff

P. Royal

K. Johnson

M. Evans

G. Kelly, WE Dist

A. Brown, EPA

C. Stover NPS

CHP/ET

ATTACHMENT A

(Table 4-3 from Original Recovery Boiler PSD Application)

Table 4-3 Baseline Emissions (1983-1984) from Existing Recovery Boilers and Smelt Dissolving Tanks at Seminole Kraft

Pollutant	Annual Baseline Emissions (TPY)						Totals
	RB1	RB2	RB3	SDT1	SDT2	SDT3	
Particulate Matter (TSP)	143.8	144.4	139.0	31.3	40.4	42.9	549.8
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Total Reduced Sulfur	25.2	31.3	32.8	2.6	3.1	3.2	98.2
Lead	.012	0.13	0.12	-	-	-	0.37
Mercury	-	-	-	-	-	-	-
Beryllium	0.0090	0.0098	0.0090	-	-	-	0.0278
Sulfuric Acid Mist	6.18	6.76	6.19	-	-	-	19.1
Inorganic Arsenic	-	-	-	-	-	-	-
Fluorides	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-
Vinyl Chloride	-	-	-	-	-	-	-

Note: TPY = tons per year

ATTACHMENT B

Basis for Lime Kiln Creditable Emissions

Particulate Emissions - actual data from 1983-84 Annual Report
 PM₁₀ - used AP-42 Table 10.1-4 and particulate emissions from
 1983-84 Annual Report.

NO_x used NCASI Technical Bulletin No. 107, April 1988

Kiln

No.	<u>mmBTU/Year</u>		<u>Tons No_x/Year</u>		<u>Average</u>
	83	84	83	84	
1	156150	89535	12.5	7.16	9.8
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3	267245	308848	41.4	47.9	<u>44.6</u>
				Total	98.1

TRS emissions calculated from actual gas flow rates in 1983-84
 and at 20 ppm TRS as H₂S. This would correspond to permit limit
 today.

CO used AP-42 Table 10.1-1 (0.1 lbs/ADUP)

<u>Year</u>	<u>Pulp Produced</u> (Tons-ADUP/Year)	<u>CO Emissions (TPY)</u>
1983	410,238	20.5
1984	436,032	<u>21.8</u>
		Avg. 21.2

For SO₂-use data compiled in 1989's operating permit application.

<u>Kiln</u>	<u>SO₂ Emission</u> Rate	<u>Avg. Hours</u> of Operation	<u>SO₂</u> (TPY)
No.1	0.16 lb/hr	3882	0.31
No.2	0.06 lb/hr	6829	0.21
No.3	0.24 lb/hr w/noncondensibles	7462	<u>0.90</u>
		Total	1.42

ATTACHMENT 17

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services



March 22, 1990

Mr. Clair H. Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Seminole Kraft Corporation (SKC) letter dated February 16, 1990

Dear Mr. Fancy:

The Bio-Environmental Services Division staff has carefully reviewed the requested permit revisions in the above-captioned letter. It is the recommendation of our Division that the permit modification be denied for the following reasons:

- A. Inserting a statement in a construction permit to address the issue of not constructing the source for which the permit was issued is not appropriate. Rule 17-2.210 (1), Florida Administrative Code (FAC) provides that "...The construction permit shall be issued for a period of time sufficient to allow construction or modification of the source..." Since SKC has stated in a Variance Request that construction will not take place, the new recovery boiler permit is not required, nor should it be allowed to continue, since available ambient increment is used by the permit for a source which, by admission of the applicant, will not be constructed.

Rule 17-2.210 FAC (Permits Required) requires applicable permits for sources of air pollution, however; based on information available to BESD, the proposed recycling operation will not be expected to be a source of air pollution and, therefore, will not be required to obtain a construction permit.

- B. Creditable Emissions - The shutdown of sources at SKC for the construction of the new recovery boiler and the Applied Energy Systems (AES) co-generation facility has been an integral part of the permitting process for both of the new projects. Direct emission reductions, modeling to determine ambient pollutant concentrations, and permit stipulations have all involved the shutdown of these sources. A permit to construct the recovery boiler has been issued and accepted by the applicant, which includes the use of creditable emissions.

Based upon the information which is available to the BESD at this time, there are no creditable emissions for future use.

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MAR 29 1990

DER-BAQM



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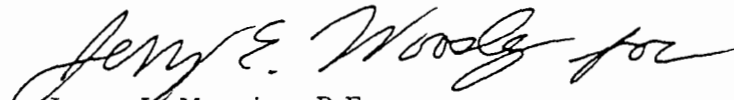
Mr. Clair H. Fancy, P.E.
March 22, 1990
Page 2

It is noted that BESD does not see this decision as an impediment to the future construction of a steam-producing boiler at the Seminole Kraft facility, should the need arise. A new boiler would be subject to the New Source Performance Standards (NSPS) and possibly subject to the Prevention of Significant Deterioration (PSD) or New Source Review requirements, thus adequately protecting air quality standards.

- C. Compliance with Total Reduced Sulfur rule — It is suggested that if SKC does proceed with the recycling project and does not construct the new recovery boiler, a determination should be made as to the compliance status of the Seminole Kraft Corporation facility in regard to compliance with the May 12, 1989, TRS compliance date stated in Rule 17-2.960, FAC.

If BESD may be of further assistance in this matter, please advise.

Very truly yours,


James E. Manning, P.E.
Deputy Director

cc: Andy Kutyna, P.E., DER
BESD File 2155 A

JLM:gw

Handwritten notes:
Mr. Manning
6/15/87

ATTACHMENT 18



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 4 1990

4APT-AEB

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DER-BAQM

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Seminole Kraft Corporation (PSD-FL-141)

Dear Mr. Fancy:

This is to acknowledge receipt of a package from your office transmitting a request from Seminole Kraft Corporation to modify their prevention of significant deterioration (PSD) permit, dated February 16, 1990. As discussed between Mr. Pradeep Raval of your staff and Mr. Gregg Worley of my staff on March 30, 1990, we have the following comments.

CREDITABLE EMISSIONS REDUCTIONS

The source has requested that conditions be placed in the PSD permit to allow them the flexibility to convert to 100% recycled fiber in lieu of constructing the new recovery boiler. In the event that the source makes the decision to convert to recycled fiber, the source would like to retain emissions credit for the units which would be shut down at the facility (i.e., the existing kraft pulp mill). The credit for shutting down any units may be retained but we must emphasize that such credit must be based on actual operating data from the two years previous to the shutdown, unless another time period is determined to be more representative of actual operating conditions. The information submitted by Seminole Kraft is based on the years 1983-84. Apparently the source used the operating hours of this time period along with presently permitted allowable emission rates to arrive at their creditable emission reductions. This is not acceptable. We would suggest that it would be prudent of FDER to require testing of the units prior to shutdown for the pollutants which are to be credited. In any case, the actual emission rates must be used rather than the permitted allowable rates unless the actual emissions exceed the allowable emissions.

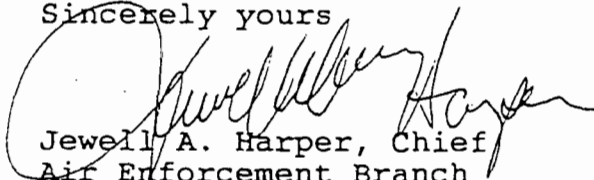
In a related matter, we do not think it is wise to include as a permit condition the language suggested by the source in provision 15 (d) which specifies what credits are available prior to the shutdown of the units. It appears that such a provision would lock FDER into accepting those numbers as creditable emissions no matter what the source operation was prior to shutdown. The fact that emissions resulting from federally enforceable shutdowns are creditable does not need to be established in a permit; the fact that such emissions are creditable is already established in federal and Florida regulations. In addition, the contemporaneous time period for which the emissions are creditable is established in regulations. Thus, it is redundant to state that "...the following emissions reductions will be available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier." By establishing a federally enforceable shutdown date at the completion of construction or November 12, 1992, whichever is earlier, it is understood that emissions credit is available for a period of five years from that point.

EFFECT ON THE AES CEDAR BAY PROJECT

The AES project which is currently under review for permitting plans to use the ambient impacts of shutting down several units at Seminole Kraft in their air quality analysis. How will the proposed permit amendment by Seminole Kraft affect the AES project?

Thank you for the opportunity to review and comment on this proposal by Seminole Kraft. If you have any questions or comments on this matter, please do not hesitate to contact Mr. Gregg Worley of my staff at 404/347-2864.

Sincerely yours



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

ATTACHMENT 19

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVTICH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, Ph.D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

May 21, 1990

RECEIVED

MAY 21 1990

DER-BAQM.

Mr. Bruce Mitchell
Engineer IV
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Seminole Kraft Corporation
Construction Permit No. AC16-168607

Dear Bruce:

On behalf of Seminole Kraft this will amend the letter of February 16, 1990 dealing with the above construction permit. We request that the suggested amendment to paragraph 15 be changed as follows:

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:
 - a. The existing three recovery boilers and three smelt dissolving tanks, will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESD office by this same date.
 - b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by June 1, 1990.

Mr. Bruce Mitchell
May 21, 1990
Page 2

- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and ESD by June 30 and December 31 of each year until the recycle fiber project is completed and in operation.
- d. To be inserted by DER.

We appreciate your cooperation in this matter. Please let me know if you have any questions.

Sincerely,

Terry
Terry Cole

TC:slw

cc: Curt Barton
Larry Stanley
Mike Riddle

R. J. Felt
...
...
...
...

ATTACHMENT 20



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: File: Seminole Kraft Corporation - Recovery Boiler
AC 16-168607
PSD-FL-141

FROM: Bruce Mitchell *BM*

DATE: June 1, 1990

SUBJ: Amendment to Mr. Terry Cole's letter dated May 21, 1990

In a phone conversation with Mr. Terry Cole, it was agreed to change the date in the proposed condition No. 15.b. from June 1, 1990 to June 15, 1990.

BM/plm



Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

May 7, 1990

904 751-6400

Mr. Dale Twachtmann, Secretary
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Twachtmann:

This letter is to inform you of some additional recycling plans at Seminole Kraft Corporation in Jacksonville. As you will recall from our January meeting, Seminole Kraft is in the process of making plans to convert our mill to 100% recycle fiber. These plans are progressing nicely. We expect to order major equipment in July and be fully operational by September, 1992.

You mentioned at our January meeting that a real concern of yours was old newspapers and could we do anything in this area. We indicated Seminole was always looking for recycle opportunities that would make economic sense and would seriously look into how we might use old newspaper. However, we had no idea we would be able to move so quickly.

The attached announcement is being released today by our parent company, Stone Container Corporation. As noted in this press release, Stone Container is unveiling a grocery sack that uses 20% old newspaper fiber, 13% saw mill waste and Kraft pulp in its makeup. The initial paper machine trials on the "good news" grocery sack paper were run on the No.1 paper machine at Seminole Kraft in Jacksonville. As noted in the press release, Stone plans to have adequate supplies of "good news" grocery sacks available to meet supermarket demand by the end of 1990. Seminole Kraft will be a key supplier of the paper which will be used by Stone's converting plants to make the "good news" grocery sacks.

We plan to produce 120,000 TPY of "good news" sack paper on our No.1 paper machine instead of 100% virgin kraft paper. We will use 30,000 tons per year of old newsprint in this paper. This is approximately the same amount that is used in the First Coast area each year.



Mr. Dale Twachtmann, P.E.
May 7, 1990
Page 2

It should also be noted that this change in fiber composition will have no negative effects on the environment systems at the mill. Our environmental review indicates the wastewater characteristics will remain essentially the same. TRS emissions may actually decrease slightly as the result of slightly less kraft pulp production. Seminole will continue to comply with all applicable regulations and permit conditions.

Seminole Kraft is very pleased that this recycle concept came to fruition so quickly to assist in Florida's recycling effort. Please let me know if you have any questions.

Sincerely,



L.A. Stanley
General Manager

ah

CC: Ernest Frey
Jim Manning - BESD



Stone Container Corporation 150 North Michigan Avenue Chicago, Illinois 60601-7788

news release

Contact:

William J. Klaisle
Stone Container Corporation
(312) 580-4718

FOR IMMEDIATE RELEASE

STONE CONTAINER ANNOUNCES RECYCLING BREAKTHROUGH

-- GROCERY BAG MADE FROM OLD NEWSPAPERS

Process Could Use Up 1.5 Billion Pounds Of Used Newsprint Annually

CHICAGO, IL., May 7 -- A new recycling breakthrough that could use up 1.5 billion pounds of old newspapers annually in the manufacture of grocery bags was announced today by Stone Container Corporation.

The disclosure follows full-scale production testing completed in the last 10 days at Stone's Jacksonville paper mill and Yulee bag plant, both in Florida.

Stone calls its new product, which is composed of 20 percent old newsprint, the "Good News" bag. "We gave it this name because we're excited that we have discovered a significant new and practical use for old newspapers", said Ira. N. Stone, senior vice president, who made the announcement. "It is a recycling development for which our R&D people have been searching. Stone already has considerable knowledge about recycling newspapers since we are one of the world's largest suppliers of recycled newsprint. Our newsprint mills around the world use old newspapers in about 44% of the paper we make," he said.

Production plans at the Jacksonville paper mill call for 60 million pounds of old newspapers being recycled yearly in the manufacture of the "Good News" bag. "We fully expect this figure to grow. Only the market will determine how the capacity grows," said the Stone executive. "If all grocery bags in the country were made of paper containing 20 percent newsprint we would use up 1.5 billion pounds of old newspapers. And, that would save a tremendous amount of landfill space."

According to industry figures, that volume is equal to the total annual newsprint usage of the Sun-Times, Chicago Tribune, New York Times and Wall Street Journal.

"We expect to be able to be making the "Good News" bag at all our mills over the next few months," said Stone, adding, "this is just the beginning. We are also looking at the possibility of increasing the old newsprint content beyond the 20% level which could mean that it might be possible to consume an even greater amount of old newspapers in the future. We are also offering our new recycling knowhow to other paper bag producers because we believe the industry should work together when there are opportunities where we can all help with a solution to the growing solid waste problem."

Extensive testing of the new grocery bag shows that it meets or exceeds all the properties of a 100% virgin bag with respect to tear, weight, appearance, and strength.

Initial shipments for the "Good News" bag are going to supermarket chains in the southeast but will be made available nationally in the coming weeks. "The few supermarket chains that have been exposed to the new bag in the last week or so have been very excited about it", said Stone. "We expect interest to grow

as the industry continues to respond to growing consumer concerns about the environment and the ability to recycle packaging taken home from the supermarkets.

Thinking about the future and how supermarkets, consumers and manufactures like ourselves might work even closer together, Stone suggested "we have also given some thought to encouraging consumers to fill their paper bags with old newspapers and return them together at their recycling center. We can recycle both papers into new bags once again."

The new recycling development follows Stone announcement to spend some \$200 million over the next two years to increase its total use of old corrugated containers and old newsprint from about 2 million tons to 3 million tons. On a combined basis, said Stone, "we believe this makes us the largest user of these recycled paper grades in North America and possibly the world."

Headquartered in Chicago, Stone Container Corporation is a major international pulp and paper company. With manufacturing facilities in the United States, Canada, the United Kingdom, Western Germany, the Netherlands and Mexico (an affiliate), the Company's product line includes containerboard, corrugated containers, kraft paper, paper bags and sacks, market pulp, newsprint, groundwood specialties, flexible packaging, and wood products.

#

Mary Cole

JUN 7 1990

1003
Recycling

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 4, 1990

RECEIVED

JUN 12 1990

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
Post Office Box 26998
Jacksonville, Florida 32218-0998

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Thank you for your May 7 letter concerning recycling activities at Seminole Kraft Corporation in Jacksonville. We applaud your efforts to convert your mill to 100% recycled fiber and your plan to be fully operational by September 1992. By then, the county recycling programs will be in high gear and we will need all the recycling capacity we can muster.

Your announcement about the "good news" recycled paper grocery sack is also very exciting and will be a great addition to uses for old newspaper. It was especially gratifying to hear that there would be no additional environmental impacts at the mill resulting from these changes.

We have been very impressed lately with the activities and commitment of the paper industry to recycling. This includes the announcement by the Florida Press Association of a statewide task force to improve the recycling of old newspaper, as well as the recent announcement by the American Paper Institute of its 40% recycling goal by 1995. These steps show the commitment by the paper industry to help solve Florida's solid waste problems.

Thank you for keeping us apprised of your recycling activities and for showing such leadership in recycling. If other industries were to follow your example, we should have no problems achieving our recycling goals.

Sincerely,

Dale Twachtmann
Secretary

DT/bhm



Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

RECEIVED

JUN 18 1990

June 14, 1990

904 751-6400

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Mr. Dale Twachtmann, Secretary
Florida Dept. of Environment Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Notice of Intent to Convert to Recycle Fiber Operation

Dear Secretary Twachtmann:

This letter will provide notice, pursuant to the Amendment to Seminole Kraft Corporation's construction permit dated June 6, 1990, that Seminole Kraft Corporation plans to convert the Seminole Kraft mill to a 100% recycle fiber operation.

We appreciate the Department's cooperation in this matter and will periodically brief you on the progress of the project.

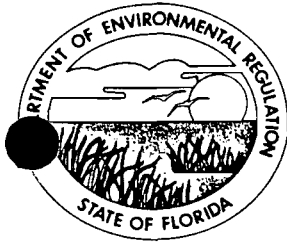
Sincerely,

L.A. Stanley
General Manager

ah

CC: Mike Riddle
Curt Barton
Terry Cole

JUL 5 1990



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

cc: *M. Kiddle*
C. Barton
J. Cole

July 2, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley, General Manager
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218-0998

RECEIVED

JUL 9 1990

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Re: Notice of Intent to Convert to Recycle Fiber Operation

The Department is acknowledging your letter dated June 14, 1990, advising that you intend to convert to a recycle fiber operation. We look forward to further discussions about this event in the meeting scheduled for July 10, 1990, with representatives of your facility and to be held here in the Division of Air Resources Management's conference room.

If we can be of any service, please give me a call at (904)488-1344.

Sincerely,

for James K. Pennington
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/plm

c: S. Smallwood, DARM

OERTEL, HOFFMAN, FERNANDEZ & COLE, P A.

ATTORNEYS AT LAW

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0088
FACSIMILE (904) 877-0881

JOHN H. MILLIGAN
ENVIRONMENTAL CONSULTANT
NOT A MEMBER OF THE FLORIDA BAR

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SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

October 26, 1990

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

The purpose of this letter is to confirm your previous discussion with Julie Blunden, Curt Barton, and me concerning refurbishment or replacement of existing bark boilers, or the use of such boilers to burn recycled fiber rejects as well as bark.

As you know, Seminole Kraft Corporation proposes to convert its Jacksonville mill to a 100% recycle operation. This will benefit the community in many ways, including reducing the need to landfill used corrugated containers and eliminating all TRS emissions.

In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
Page 2

that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

Permitting Requirements for Bark Boilers if AES Cedar Bay/Seminole Kraft Project Not Certified:

The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

Modification is defined in 40 CFR §60.2 (also found in Chapter 17-2, F.A.C.) as:

Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Mr. Steve Smallwood
October 26, 1990
Page 3

There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
Page 4

I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

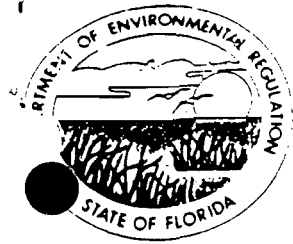
Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 21, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Ms. Harper:

Re: Seminole Kraft Corporation: Use of Recycling Fiber as a
Fuel in an Existing Boiler(s)

The Department's Bureau of Air Regulation received a letter requesting an interpretation and rule applicability to a proposed operational change at SKC's existing facility. The letter has been enclosed. Prior to sending SKC a response from us, we would appreciate your consideration, review, and a response on how EPA would interpret the proposal that is presented.

If there are any questions, please call Mr. Bruce Mitchell or me at 904-488-1344 or write to me at the above address. A timely response would be very much appreciated.

Sincerely,

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

CHF/BM/plm

Enclosure

c: A. Kutyna, NE Dist.
R. Roberson, BESD
G. Smallridge, OGC
T. Cole, OHF&C

OERTEL, HOFFMAN, FERNANDEZ & COLE, P A

ATTORNEYS AT LAW

SUZANNE BROWNLESS
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J. P. SUBRAMANI, Ph. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

October 26, 1990

RECEIVED

OCT 29 1990

DER-BAQM

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

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In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
Page 2

that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

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The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

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Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Mr. Steve Smallwood
October 26, 1990
Page 3

There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
Page 4

I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET NE
ATLANTA, GEORGIA 30365

FEB 25 1991

4APT-AE

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
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DER-BAQM

Dear Mr. Fancy:

As requested in your November 16, 1990, letter, we have reviewed the analysis by Mr. Terry Cole of Oertel, Hoffman, Fernandez and Cole, P.A., regarding the applicability of NSPS and PSD to the boilers at Seminole Kraft and AES Cedar Bay (AESCB) in Jacksonville, Florida. In Mr. Cole's letter, two specific situations involving the boilers at Seminole Kraft and the AESCB project were addressed.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS CERTIFIED

Under the conditions of certification for the AESCB project, the shutdown of boilers at Seminole Kraft is required in order to provide offsets for increases in pollutants from the cogeneration facility. It must be noted that for the emissions reductions to be creditable, they must be permanent. After the PSD permit is issued which incorporates these shutdowns and makes them federally enforceable, there will be no additional emissions reduction credit available from the shutdown of these boilers. Should Seminole Kraft decide to refurbish the dismantled bark boilers, the boilers would be treated as entirely new emissions units with none of the exemptions from applicability for existing units that are specified under PSD regulations being available.

With regard to NSPS, the existing boilers at Seminole Kraft would not become subject to NSPS if they remained intact and were merely restarted, without any physical or operational change.

If the boilers are dismantled in any fashion (i.e. key components removed) and the decision is later made to restart the boilers, then NSPS would apply. This is due to the fact that there would be an emission increase caused by a physical change to the boilers. Since the boilers were incapable of operating, the emissions would be zero immediately before the changes necessary for a restart and therefore, an emissions increase would have resulted thus triggering NSPS. This is consistent with the Wisconsin Electric Power Company decision. If changes are only necessary to accommodate a different fuel mix, then we would accept emission data just prior to the shutdown and compare with data after start up to determine if an emissions increase, and hence a modification, would result thus triggering NSPS. Furthermore, the composition of the fiber rejects would need to be evaluated to determine if the new combination of fuel would be classified as municipal solid waste (MSW). If so, then the newly promulgated NSPS regulations for municipal waste combustors would apply.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS NOT CERTIFIED

According to Mr. Cole, the bark boilers would not be subject to NSPS or PSD permit review when the fuel mixture for the bark boilers is changed from 100% bark to 75% bark/25% fiber reject mix. The basis for this determination is that the bark boilers were capable of firing the fiber rejects at the percentages anticipated as of January 6, 1975.

In order to determine the applicability of NSPS to the bark boilers due to the change in fuel type it must be ascertained if the bark boilers will have an increase in the emission rate, expressed as kilograms per hour, of a regulated pollutant and if the bark boilers could fire the fiber rejects as originally constructed. However, not enough information was provided to determine if an emission rate increase in a regulated pollutant would occur, therefore, we will assume that an increase in a regulated pollutant will occur.

Assuming that an increase will occur, then the second condition must be addressed. It is incorrect to use January 6, 1975, as the date to determine if the bark boilers were originally designed to burn the bark and fiber rejects simultaneously. The exemption to the modification provision at §60.14(e)(4) essentially states that if the existing facility could have fired the alternative fuel prior to the applicability date of

the NSPS Subpart, then the increase in the emission rate of a regulated pollutant due to the use of the alternative fuel would not be considered a modification as defined in §60.14. Since Mr. Cole indicated that on January 6, 1975, the bark boilers were capable of firing the 75% bark/25% fiber rejects mixture, the only possible applicable NSPS Subparts are Subparts D and E. If the bark boilers were capable of firing the alternative fuel prior to August 17, 1971, then neither Subpart would apply.

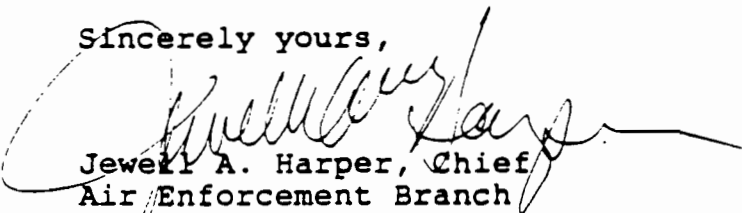
If the bark boilers were not capable of firing the alternative fuel prior to August 17, 1971, then they could be subject to either Subparts D or E or both if an increase in the emission rate of a regulated pollutant occurs. In addition, in order for Subpart E to apply, the combination of bark and fiber rejects would have to be determined to be MSW.

In addition, if the combination of bark and fiber rejects is considered to be MSW, then the bark boilers would be subject to emission standards for existing MSW combustors which will be established in accordance with the guidelines published in the February 11, 1991, Federal Register.

With regard to PSD, since the bark boilers were capable of firing bark and fiber refuse prior to January 6, 1975, then PSD review would not be required.

If you have any questions regarding this letter, please contact Mr. Brian Beals at 404/347-2904.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

RECEIVED

BEST AVAILABLE COPY

JAN 2 1991

Office of General Counsel
Environmental Division

IN THE CIRCUIT COURT, FOURTH
JUDICIAL CIRCUIT, IN AND FOR
DUVAL COUNTY, FLORIDA

CASE NO: 88-12385-CA

DIVISION: DIVISION CV-G

CITY OF JACKSONVILLE, a municipal
corporation,

Plaintiff.

-vs-

SEMINOLE KRAFT CORPORATION, a
Florida corporation,

Defendant.

CONSENT JUDGMENT

The above-styled cause having been settled by stipulation of the parties, as reflected in the attached Stipulation for Entry of a Consent Judgment, this Court having duly reviewed and considered the Stipulation and Motion, and having found that the settlement is in the best interest of all parties, and in the public interest, it is, therefore,

ORDERED AND ADJUDGED that:

1. The settlement of the above-styled cause among the parties shall be, and is hereby, approved.
2. The Stipulation for Entry of a Consent Judgment, executed by the parties, shall become, and is hereby made, a part of this Order by reference.
3. This Court retains jurisdiction over this cause and over the parties pending compliance with the terms of the Stipulation, and during its duration for enforcement of the same.

DONE AND ORDERED at Jacksonville, Duval County, Florida, this 19th
December
day of ~~November~~, 1990.

Crest. Borden
CIRCUIT JUDGE

cc:

Terry Cole, Esq.
R. L. Caleen, Esq.
Oertel, Hoffman, Fernandez & Cole
2700 Blair Stone Road, Suite C
P. O. Box 6507
Tallahassee, FL 32314
Attorneys for Defendant

Richard L. Maguire, Esq.
General Counsel's Office
421 West Church Street, Suite 715
Jacksonville, FL 32202
Attorney for Plaintiff

COPY

IN THE CIRCUIT COURT OF THE
FOURTH JUDICIAL CIRCUIT, IN
AND FOR DUVAL COUNTY, FLORIDA

CITY OF JACKSONVILLE, a
Municipal Corporation,

Plaintiff,

vs.

Case No.: 88-12385-CA-CV-G
Civil Division

SEMINOLE KRAFT CORPORATION,
A Delaware Corporation,

Defendant.

STIPULATION FOR ENTRY OF A CONSENT JUDGMENT

The Plaintiff, CITY OF JACKSONVILLE, a Municipal Corporation ("City") and the Defendant, SEMINOLE KRAFT CORPORATION ("Seminole Kraft"), a Delaware Corporation, stipulate to entry of a Consent Judgment based on the following:

1. The City operates an approved local pollution control program pursuant to Section 403.182, Florida Statutes, and is empowered to enforce the provisions of Chapter 376, Jacksonville Municipal Ordinance Code and Environmental Protection Board Rule 2.

2. Seminole Kraft is a Delaware Corporation, authorized to do business in Florida, which operates a pulp and paper mill located at 9469 Eastport Road in Jacksonville, Duval County, Florida. The mill is currently operating under valid Department of Environmental Regulation ("DER") air pollution operating permits.

3. The City alleges that Seminole Kraft causes or contributes to objectionable odor in violation of Chapter 376, Jacksonville Ordinance Code. Seminole Kraft has filed an answer denying the charges, affirmative defenses and a counterclaim.

4. Without trial, adjudication, or admission of any issue of fact or law between them, the parties hereto agree to settle their differences in accordance with the terms herein. This Stipulation shall serve as a full and complete resolution of all civil, and administrative complaints, citations, and claims brought by the City or which may have been brought by the City with reference to the alleged objectionable odor from Seminole Kraft's pulp and paper mill as of the date the Court enters a Consent Judgment pursuant to this Stipulation.

5. This Stipulation does not convey any vested rights or any exclusive privileges other than as specified in City of Jacksonville Ordinance §376.104(d)(4). Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations other than as specified in City of Jacksonville Ordinance §376.104(d)(4). This Stipulation does not constitute a waiver or approval of any other City permits that may be required which are not addressed in this Stipulation.

6. This Stipulation does not relieve Seminole Kraft of the need to comply with applicable federal, state or local

laws, regulations, ordinances, attainment plans, or compliance plans relating to matters not covered by this Stipulation.

7. The parties agree that settlement of the above-styled cases in accordance with the terms herein is in the public interest. This settlement requires the scheduled elimination of Total Reduced Sulfur (TRS) emissions from all existing, regulated sources at the kraft pulp mill by September 12, 1992. The kraft pulp mill will be replaced by a 100% recycled fiber operation. This will eliminate TRS emissions from all regulated sources of TRS at the mill and result in an improvement in air quality two (2) months earlier than the TRS compliance date specified in rules of the City and the Department of Environmental Regulation.

8. This settlement shall not constitute, nor shall be construed, as an admission of liability or wrongdoing by Seminole Kraft, or as an admission of any violation of federal, state, or local laws, ordinances, rules, or other requirements.

9. The parties agree that the following tasks will be undertaken and performed by Seminole Kraft in accordance with the specified schedule:

ODOR/TOTAL REDUCED SULFUR (TRS) EMISSIONS

A. Currently Regulated Sources

1. Recovery Boilers - Existing Units

- a. (1) Total Reduced Sulfur (TRS) compliance testing on each Recovery Boiler (RB) shall be conducted by stack sampling in accordance with Environmental Protection Agency (EPA) Reference Method 16 or 16A. Testing shall be

performed on each RB within thirty (30) days of the effective date of this Stipulation. Compliance shall be demonstrated if the test results are equal to or less than 17.5 ppm by volume on a dry basis at standard conditions corrected to 8% oxygen. Failure to demonstrate compliance with the above specified limit shall result in the following:

1. Seminole Kraft shall pay a stipulated penalty of \$750.00 to the Environmental Protection Fund of the City of Jacksonville within 30 days of the test failure date.

2. Seminole Kraft shall perform additional testing as necessary within 45 days of the previous test to demonstrate compliance with the above specified limits. Seminole Kraft shall pay a stipulated penalty of \$750.00 to the Environmental Protection Fund for each subsequent failure of the above specified testing until such time as compliance is demonstrated.

(2) Continuous Emission Monitors (CEMs) shall be used to demonstrate continuous compliance with an emission limit of 20 ppm by volume on a dry basis at standard conditions corrected to 8% oxygen on a 12-hour basis (12 noon to 12 midnight and 12 midnight to noon) for each RB. If exceedence of the above limit is demonstrated by the CEMs on more than 5% of the operating periods of each RB during a calendar month, Seminole Kraft shall pay a stipulated penalty of \$750.00 for each 12-hour exceedence period in excess of 5%. This penalty shall be paid to the Environmental Protection Fund within 30 days of the end of the month during which the exceedence occurred. Seminole Kraft shall submit monthly reports by the 15th of the following month specifying the information listed below:

(a) 12-hour average TRS readings for each RB for each operating period;

(b) cause and corrective action taken for each exceedence of the 20 ppm limit.

- b. Cease emissions of TRS by September 12, 1992, and cease use as recovery boiler as provided in paragraphs 11 and 12. Surrender permits for use as recovery boiler. Any further use of the equipment shall require compliance with applicable rules, including obtaining new permits.
- c. CEMs data shall be available for 75% of the operating hours per RB on a monthly basis. Failure to maintain data for the required minimum time shall require that the EPA reference method 16 or 16A stack test be performed to demonstrate compliance within 30 days of the end of the month during which the data availability was below 75%.

2. Smelt Dissolving Tanks.

a. Existing Smelt Dissolving Tanks

TRS - Interim and Final Limits - Meet existing source limit until shut down.

- b. Remove from Service and render inoperable by September 12, 1992 and surrender permit to the Department of Environmental Regulation by September 12, 1992.

3. All Lime Kilns

- a. (1) Seminole Kraft shall comply with Chapter 17-2 Florida Administrative Code as applicable to lime kilns.
- (2) In addition to Florida Administrative Code requirements, continuous emission monitors (CEMs) shall be used to demonstrate compliance with an emission limit of 20 ppm by volume on a dry basis at standard conditions corrected to 10% oxygen on a 12-hour basis (12 noon to 12 midnight and 12 midnight to noon) for each lime kiln. Exceedence of the above limit as demonstrated by the CEMs on

more than 2% of the operating periods for each lime kiln during a calendar month shall result in a stipulated penalty of \$750 per 12 hour exceedance, in excess of 2%. This penalty shall be paid to the Environmental Protection Fund within 30 days of the end of the month during which the exceedance occurred. Seminole Kraft shall submit monthly reports by the 15th of the following month specifying the information listed below:

(a) 12-hour average TRS readings for each lime kiln for each operating period;

(b) cause and corrective action taken for each exceedance of the 20 ppm limit.

b. Cease emissions of TRS by September 12, 1992. Any further use of the equipment shall require compliance with applicable rules.

c. CEM data shall be available for 75% of the operating hours per lime kiln on a monthly basis. Failure to maintain data for the required minimum time shall require that an EPA reference method 16 or 16A stack test be performed to demonstrate compliance within 30 days of the end of the month during which the data availability was below 75%.

d. Definitions.

1. Operating Period: Any 12-hour period (12 midnight to 12 noon and 12 noon to 12 midnight) during any part of which a source was in operation.

2. Operating Hours: Any hour during any part of which a source was in operation.

4. Digestors and Evaporators

a. The TRS emissions from these sources have already been collected and are incinerated in the lime kilns which is equivalent to meeting NSPS.

- b. Cease emissions of TRS by September 12, 1992. Any further use of the equipment shall require compliance with applicable rules.

B. Seminole Kraft shall comply with Rule 17-2.710 Florida Administrative Code as to requirements concerning operation, calibration and maintenance of the CEMs.

10. Although not admitting that any violations of the City of Jacksonville Ordinance have occurred, Seminole Kraft will agree to a stipulated settlement of \$30,000 subject to the following conditions:

- a. The sum of \$20,000 will be paid to the City of Jacksonville Environmental Protection Fund within thirty days of entry of an order by the court approving this Stipulation. An additional sum of \$10,000 will be placed in a mutually agreeable escrow account within thirty days of entry of an order by the court approving this stipulation and Seminole Kraft will provide the City of Jacksonville with evidence that the money has been placed in that escrow account within ten days.
- b. In the event that Seminole Kraft achieves final compliance with paragraph 11 prior to 12:01 a.m., on July 11, 1992, the entire amount of \$10,000 from the escrow account

will be returned to Seminole Kraft. If final compliance with paragraph 11 is not achieved by 12:01 a.m., July 12, 1992, the sum of \$5,000 from the escrow account will be paid to the City of Jacksonville Environmental Protection Fund within ten days.

c. If Seminole Kraft achieves final compliance with paragraph 11 prior to 12:01 a.m. on August 12, 1992, the remaining \$5,000 from the escrow account will be returned to Seminole Kraft. If final compliance with paragraph 11 is not achieved by 12:01 a.m. August 12, 1992, the remaining sum of \$5,000 from the escrow account will be paid to the City of Jacksonville Environmental Protection Fund within ten days.

d. If Seminole Kraft does not achieve final compliance with paragraph 11 by 12:01 a.m. September 12, 1992, an additional sum of \$5,000.00 will be paid to the City of Jacksonville Environmental Protection Fund within 10 days. If Seminole Kraft does not achieve final compliance with paragraph 11

prior to 12:01 a.m. on October 12, 1992, an additional sum of \$5,000.00 will be paid to the City of Jacksonville, Environmental Protection Fund within 10 days.

11. Seminole Kraft agrees to the following compliance schedule:

Enter into Letter of Intent to purchase major equipment-no later than 30 days from date of entry of this order.

Place first order for major equipment - no later than December 31, 1990.

Commence construction on first recycle fibre line - no later than March 1, 1991.

Start-up of first recycle fibre processing line - no later than June 1, 1992.

Start-up of rebuilt paper machine - no later than September 1, 1992.

Shut-down of the old pulp mill - no later than September 12, 1992.

Seminole Kraft shall furnish notification of completion of each compliance step above within 15 days of completion of each event.

The parties recognize that Seminole Kraft has agreed to an earlier date of September 12, 1992 for compliance with TRS emission limiting standards of the City of Jacksonville.

Seminole Kraft shall not be considered in violation of the ordinance or this order if it demonstrates that compliance by the earlier September 12, 1992 date was not achieved due to a force

majure event caused by events beyond its reasonable control, such as unavoidable delays of its contractors in engineering the new equipment, delays in manufacture, delivery of the equipment or unforeseen construction problems, which could not have been prevented using due diligence.

Seminole Kraft agrees that it will use due diligence to meet the September 12, 1992 date and mitigate any delays. Within 30 days of the General Manager of Seminole Kraft learning of events that may lead to probable delays in meeting the September 12, 1992 date, Seminole Kraft shall notify BESD of that possibility, the reasons for the possible delay and efforts it is taking to prevent or minimize the delay. Failure to provide such notice may prevent assertion that such event was caused by force majure event.

12. Compliance with the terms of this Stipulation, as confirmed and incorporated in a Consent Judgment entered by the Court, shall constitute compliance with all ordinances, rules and standards of the City which relate to objectionable odors, including but not limited to, Jacksonville Environmental Protection Board Rule 2; Section 823.01, Florida Statutes; City of Jacksonville Ordinance Chapters 360, 362, and 376, et seq.; and Chapter 403, Florida Statutes and Chapter 17-2, F.A.C., to the extent the City is authorized to enforce such requirements. Any odor emission from the Seminole Kraft facility made in complianee with this Stipulation, which shall be deemed a consent

order with respect to odor, and otherwise meets the requirements for "safe harbor" in City of Jacksonville Ordinance, Section 376.104(d), shall not be considered an objectionable odor. The City expressly reserves the right to initiate appropriate legal action to prohibit the violation of applicable statutes or rules promulgated thereunder for matters not covered by this Stipulation.

13. The parties agree that the Court shall retain jurisdiction for the purpose of enforcing compliance with this Stipulation. The parties further agree that should any dispute arise under this agreement, they will seek an expedited hearing on the disputed issue. Seminole Kraft shall not be considered in violation of the terms of this Stipulation if its non-compliance was caused by a force majeure occurrence, including, but not limited to, an Act of God, fire, flood, labor strike, walk-out, upset, malfunction, start up or shutdown under BESD or DER rules, or circumstances otherwise beyond the reasonable control of Seminole Kraft.

14. This Stipulation is not dependent on whether AES Cedar Bay (AESCB) will be certified to operate an electrical power plant adjacent to the Seminole Kraft facility. The parties are required to perform their obligations as set forth in this Stipulation, even if AESCB is ultimately denied Certification pursuant to the Florida Electrical Power Plant Siting Act, Florida Statutes 403.501 et. seq. The Seminole Kraft power

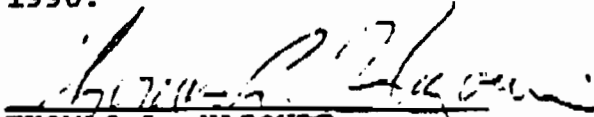
boilers will continue to operate in compliance with the applicable particulate emission limiting standards in the event they are not replaced by the proposed AES circulating fluidized bed boilers.

15. This Stipulation and any qualification under the "safe harbor" provision of the City of Jacksonville Ordinance, Section 376.104(d), shall expire on September 12, 1992, unless Seminole Kraft demonstrates qualification for a force majeure event under Paragraph 11 or 13. Upon completion of all required acts under this Stipulation, the parties shall file with the Court a notice that such compliance has been achieved and a request for entry of an Order dismissing both the Complaint by the City and the Counterclaim by Seminole Kraft.

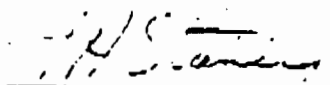
The City of Jacksonville provides notice that in the event the TRS emissions from existing, permitted TRS sources are not eliminated and permits surrendered by November 12, 1992, the City shall take such action as it deems necessary, including seeking injunctive relief.

AGREED TO THIS 14TH DAY OF November

1990.



THOMAS L. HAZOURI
Mayor
City of Jacksonville
City Hall
Jacksonville, Florida 32202



L.A. STANLEY
General Manager
Seminole Kraft Corporation
Jacksonville Mill
9469 Eastport Road
Jacksonville, Florida 32218

Richard L. Maguire

RICHARD L. MAGUIRE
Assistant General Counsel
1300 City Hall
Jacksonville, Florida 32202

ATTORNEYS FOR PLAINTIFF

Terry Cole

TERRY COLE
Cortel, Hoffman, Fernandez &
Cole, P.A.
Post Office Box 6507
Tallahassee, Florida 32314

ATTORNEYS FOR DEFENDANT

OERTEL, HOFFMAN, FERNANDEZ & COLE, P A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BARI)
J. P. SUBRAMANIAM, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BARI)

December 2, 1991

Gregory G. Radlinski, Assistant Counsel
Environmental Law Division
City of Jacksonville
Suite 715 - Town Center
4251 West Church Street
Jacksonville, Florida 32202-4156

RE: Seminole Kraft Corporation, Bark Boilers

Dear Mr. Radlinski:

This will respond to your letter of November 14, 1991 regarding continued operation of certain Seminole Kraft bark and power boilers after commercial operation of the AES Cedar Bay Facility was reached.

I do not believe there is any issue involving the odor settlement between the City and Seminole Kraft. The settlement related to agreeing to shut down certain TRS specified sources, including the recovery boilers. Seminole Kraft is on schedule to meet the specified dates in that consent judgment. That settlement did not include or have any relevance to operation of the power or bark boilers. The settlement specifically reserved the creditable emission reductions from retiring the old recovery boilers.

The bark and power boilers were offered as creditable emission reductions as part of the AES power plant siting process. The creditable emissions remain intact and available to AES and Cedar Bay. At the time the application was filed Seminole Kraft planned to replace the three old recovery boilers with one large new recovery boiler. They planned to retire the power boilers and burn the bark in the AES circulating fluidized bed boilers. Based upon market conditions, the desire of the City and the State to promote additional recycling in the state and the desire to make a much larger reduction in odors by eliminating the Kraft pulping process from the mill, the proposal was later changed to eliminate the new recovery boiler (which had been permitted) and instead to convert the mill to a recycled fiber facility. It was at that point that agreement was reached with the City and later filed in circuit court resolving the pending odor questions. Meetings were held with the City and the State to discuss


Mr. Gregory G. Radlinski
December 2, 1991
Page 2

the proposed conditions of certification relating to shutting down the bark and power boilers. It was agreed this condition did not preclude Seminole Kraft from applying for additional permits for new sources in the future, utilizing the recovery boiler offsets, should Seminole be able to demonstrate compliance with applicable environmental requirements. The City made clear that should Seminole Kraft file such applications that it would expect NSPS requirements to be met. Although it is not clear NSPS requirements are applicable, the application that Seminole Kraft files will honor the City's request that NSPS limitations be met.

I have attached copies of relevant correspondence from the Department of Environmental Regulation, EPA and Seminole Kraft for your information. It should be noted for informational purposes that Seminole Kraft also has provided notice to DER that upon completion of the recycle fiber project, there will be a change in the mix of carbonaceous fuel burned in the bark boilers in the interim between the startup of the new recycled fiber process next year and commercial operation of AES.

As you will see from the correspondence Seminole Kraft has been candid and open on this issue since the possibility of converting the application for a new recovery boiler to recycled fiber project for the entire mill was first discussed and later approved by the City and the State. Once you have had the opportunity to review these materials and this letter, we will be glad to meet with you to discuss this in more detail. Please feel free to call me should you have any questions.

Sincerely,


Terry Cole

TC/kp

cc: Steve Smallwood
Richard Donellan
Larry Stanley
Curt Barton
Bruce Mitchell

**Seminole Kraft Corporation**

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

904 751-6400

June 25, 1991

Mr. Steve Smallwood, Director
Division of Air Resources Management
Florida Dept. of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**Re: Notice in the change of Mix of Carbonaceous
Fuels for Seminole Kraft Bark Boilers**

Dear Mr. Smallwood:

This letter is to notify the Department of an anticipated change in the mix of carbonaceous fuels for the Seminole Kraft Corporation No.1 and No.2 bark boilers for the period of time between conversion to recycled fiber operation (Summer/Fall 1992) and AES compliance testing (Spring, 1994). These boilers are authorized to burn carbonaceous fuel and oil. Carbonaceous fuel will remain the primary fuel with oil used during startup, shutdown upsets or malfunctions.

As you know, Seminole Kraft has been authorized to replace its existing kraft mill with a recycled fiber operation. Seminole Kraft is required to have that project completed and the recovery boilers shut down by November 12, 1992 under the state permit. In addition, in a settlement with the City of Jacksonville, Seminole Kraft has agreed to expedite that process.

Seminole Kraft hopes to start the new recycled fiber operation in the summer of 1992. At that time the bark boilers will continue to burn bark but, in addition, will need to burn a small amount, less than 25%, of recycled fiber rejects. These recycled fiber rejects consist of 75% wood fiber, 15% inorganic material (sand, grit, glass and metal), and 10% plastic. Hence, on a BTU basis, wood fiber will still account for over 90% of the carbonaceous fuel. There will be no increase in the allowable emissions or heat input. Please see Attachment A for more details.

The boilers will require no physical changes to accommodate the fuel and would have been capable of burning that mix of fuel prior to January 6, 1975, or prior to 1971. There is no change in the method of operation since the boilers were capable of accommodating an alternative fuel under the facility's

Mr. Steve Smallwood
Carbonaceous Fuels
June 25, 1991
Page Two

construction specifications. See 40 CFR 60.14(e)(4). Similarly, under F.A.C. Rule 17-2.500(2)(c)4, there is an exemption from the definition of "modification" for the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1979. This also would be outside the definition of "major modification" as an alternative fuel since the source was capable of accommodating the fuel prior to January 6, 1975. See 40 CFR 52.21(2)(d) and F.A.C. Rule 17-2.500(2)(c)4. Accordingly, we believe no permit is required to accommodate such a minor change in the mix of carbonaceous fuels. We would request that this letter be attached to the operating permit file.

We would like to continue to operate the two bark boilers in this fashion subject to renewal of its operating permit up until they are required to be shut down under terms of the AES Cedar Bay Certification Order. In the meantime, and most likely within the next three months, Seminole Kraft will apply for a construction permit to address operating requirements after the date on which the existing bark boilers are required to be shut down and their current operating permits surrendered. This will allow sufficient time to address all necessary information requirements of the Department in order to ensure their continued operation in accordance with applicable requirements of the Department and the City, as well as EPA. I have attached copies of significant correspondence regarding this matter, the operating permits for these sources and the relevant portion of the AES Cedar Bay conditions and certification.

In summary, we believe no special permitting is required to enable Seminole Kraft to continue to burn carbonaceous fuels in the bark boilers. We do intend to submit a full construction permit application for operation after AES Cedar Bay startup and testing and will submit such an application to you within the next two months.

If you have any questions regarding this, please let me know.

Sincerely,



L.A. Stanley
General Manager

ah
attachments

CC: Curt Barton
Terry Cole

Ernest Frey
James Manning

Clair Fancy
Mike Riddle

ATTACHMENT A

Seminole Kraft Corporation
Bark Boilers

I. Current Permit

A. Fuel

1. Carbonaceous Fuel (Bark)
2. No. 6 Fuel Oil (2.27% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr heat input

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel
(Startup, Shutdown, Malfunction, etc.)

E. Allowable Emissions

PM (Carbonaceous Fuel) 0.2 lb/mmBtu or 38.6 lb/hr
PM (Oil Fired) 0.1 lb/mmBtu or 19.3 lb/hr
PM (Combinations of Carbonaceous and Oil - Limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated on the sum of the individual calculations for carbonaceous and oil fuels.

II. Projected Fuel After Startup of Recycle Operation

A. Fuel

1. Carbonaceous Fuel (Bark & Wastepaper Rejects*)
2. No. 6 Fuel Oil (1.0% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr per boiler

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel

* Wastepaper rejects consist of approximately 75% wood fiber, 15% inorganic material (sand, grit, glass and metal fragments) and 10% plastic.

E. Carbonaceous Fuel Data

1. Heat Value
Bark (Dry) - 6500 Btu/#
Wastepaper Rejects (Dry) - 8000 Btu/#
2. Fuel Quantity
Bark (Dry) - 11.15 Tons/hr
Wastepaper Rejects (Dry) - 3 Tons/hr
3. Firing Rate
Bark Heat Input = 6500 (11.15) 2000 = 145 mmBtu/hr
Wastepaper Rejects = 8000 (3) 2000 = 48 mmBtu/hr
Total Heat Input = 193 mmBtu/hr

F. Allowable Emissions

PM (Carbonaceous Fuel) = 0.2 lb/mmBtu or 38.6 lb/hr
PM (Oil Fired) = 0.1 lb/mmBtu or 19.3 lb/hr
PM (Combinations of Carbonaceous Fuel and Oil limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated based on the sum of the individual calculations for Carbonaceous and Oil Fuels.



ATTACHMENT B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FEB 25 1991

4APT-AE

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
MAR 13 1991
DER-BAQM

Dear Mr. Fancy:

As requested in your November 16, 1990, letter, we have reviewed the analysis by Mr. Terry Cole of Oertel, Hoffman, Fernandez and Cole, P.A., regarding the applicability of NSPS and PSD to the boilers at Seminole Kraft and AESC Cedar Bay (AESCB) in Jacksonville, Florida. In Mr. Cole's letter, two specific situations involving the boilers at Seminole Kraft and the AESCB project were addressed.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS CERTIFIED

Under the conditions of certification for the AESCB project, the shutdown of boilers at Seminole Kraft is required in order to provide offsets for increases in pollutants from the cogeneration facility. It must be noted that for the emissions reductions to be creditable, they must be permanent. After the PSD permit is issued which incorporates these shutdowns and makes them federally enforceable, there will be no additional emissions reduction credit available from the shutdown of these boilers. Should Seminole Kraft decide to refurbish the dismantled bark boilers, the boilers would be treated as entirely new emissions units with none of the exemptions from applicability for existing units that are specified under PSD regulations being available.

With regard to NSPS, the existing boilers at Seminole Kraft would not become subject to NSPS if they remained intact and were merely restarted, without any physical or operational change.

If the boilers are dismantled in any fashion (i.e. key components removed) and the decision is later made to restart the boilers, then NSPS would apply. This is due to the fact that there would be an emission increase caused by a physical change to the boilers. Since the boilers were incapable of operating, the emissions would be zero immediately before the changes necessary for a restart and therefore, an emissions increase would have resulted thus triggering NSPS. This is consistent with the Wisconsin Electric Power Company decision. If changes are only necessary to accommodate a different fuel mix, then we would accept emission data just prior to the shutdown and compare with data after start up to determine if an emissions increase, and hence a modification, would result thus triggering NSPS. Furthermore, the composition of the fiber rejects would need to be evaluated to determine if the new combination of fuel would be classified as municipal solid waste (MSW). If so, then the newly promulgated NSPS regulations for municipal waste combustors would apply.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS NOT CERTIFIED

According to Mr. Cole, the bark boilers would not be subject to NSPS or PSD permit review when the fuel mixture for the bark boilers is changed from 100% bark to 75% bark/25% fiber reject mix. The basis for this determination is that the bark boilers were capable of firing the fiber rejects at the percentages anticipated as of January 6, 1975.

In order to determine the applicability of NSPS to the bark boilers due to the change in fuel type it must be ascertained if the bark boilers will have an increase in the emission rate, expressed as kilograms per hour, of a regulated pollutant and if the bark boilers could fire the fiber rejects as originally constructed. However, not enough information was provided to determine if an emission rate increase in a regulated pollutant would occur, therefore, we will assume that an increase in a regulated pollutant will occur.

Assuming that an increase will occur, then the second condition must be addressed. It is incorrect to use January 6, 1975, as the date to determine if the bark boilers were originally designed to burn the bark and fiber rejects simultaneously. The exemption to the modification provision at §60.14(e)(4) essentially states that if the existing facility could have fired the alternative fuel prior to the applicability date of

the NSPS Subpart, then the increase in the emission rate of a regulated pollutant due to the use of the alternative fuel would not be considered a modification as defined in §60.14. Since Mr. Cole indicated that on January 6, 1975, the bark boilers were capable of firing the 75% bark/25% fiber rejects mixture, the only possible applicable NSPS Subparts are Subparts D and E. If the bark boilers were capable of firing the alternative fuel prior to August 17, 1971, then neither Subpart would apply.

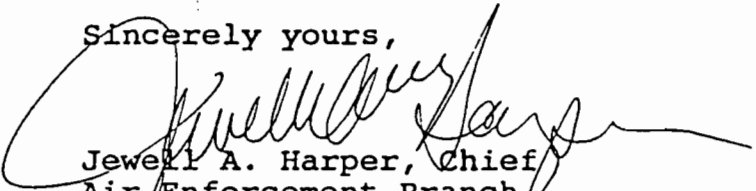
If the bark boilers were not capable of firing the alternative fuel prior to August 17, 1971, then they could be subject to either Subparts D or E or both if an increase in the emission rate of a regulated pollutant occurs. In addition, in order for Subpart E to apply, the combination of bark and fiber rejects would have to be determined to be MSW.

In addition, if the combination of bark and fiber rejects is considered to be MSW, then the bark boilers would be subject to emission standards for existing MSW combustors which will be established in accordance with the guidelines published in the February 11, 1991, Federal Register.

With regard to PSD, since the bark boilers were capable of firing bark and fiber refuse prior to January 6, 1975, then PSD review would not be required.

If you have any questions regarding this letter, please contact Mr. Brian Beals at 404/347-2904.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

ATTACHMENT G

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLIGAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

October 26, 1990

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

The purpose of this letter is to confirm your previous discussion with Julie Blunden, Curt Barton, and me concerning refurbishment or replacement of existing bark boilers, or the use of such boilers to burn recycled fiber rejects as well as bark.

As you know, Seminole Kraft Corporation proposes to convert its Jacksonville mill to a 100% recycle operation. This will benefit the community in many ways, including reducing the need to landfill used corrugated containers and eliminating all TRS emissions.

In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
Page 2

that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

Permitting Requirements for Bark Boilers if AES Cedar Bay/Seminole Kraft Project Not Certified:

The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

Modification is defined in 40 CFR §60.2 (also found in Chapter 17-2, F.A.C.) as:

Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Mr. Steve Smallwood
October 26, 1990
Page 3

There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
Page 4

I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr

AUG 1 - 1991



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 16, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

RECEIVED
8/11/91
M. RIDGE
P. BROWN
A. KOCST

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 Eastport Road
P. O. Box 26998
Jacksonville, Florida 32218-0998

AUG 5 1991

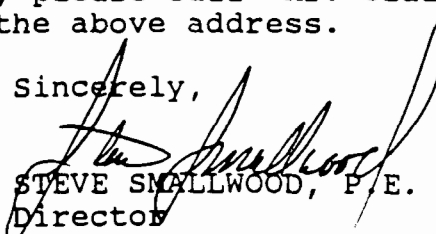
OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Re: Request to Burn Recycle Fiber as a Fuel
Nos. 1 and 2 Bark Boilers

The Department has reviewed your letter with attachments received June 28, 1991, regarding the request to burn recycle fiber as a fuel in the above referenced combination (carbonaceous and fossil fuels) boilers. Based on a review of the letter and attachments, a construction permit for a modification will be required in order for the boilers to be allowed to burn recycle fiber as a fuel, because the boilers are not currently permitted to burn plastics and metals (other than the normal constituents of the fossil fuels permitted as fuels), which are components of the recycle fiber. Therefore, please submit the proper application form(s), including all assumptions, calculations and reference material, and the appropriate processing fee to the Department of Environmental Regulation; and, the evaluation of all pollutants should compare the current actual emissions versus the future potential/allowable emissions. Also, provide an ultimate analysis of the current fuel(s) and the proposed fuels on a bone dry, percent weight basis; and, provide the fuel utilization rates on a tons per hour and tons per day basis. Please explain where the plastics will come from and how it is part of the recycle fiber waste stream.

If there are any questions, please call Mr. Clair Fancy at (904) 488-1344 or write to me at the above address.

Sincerely,

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management

SS/BM/t

cc: A. Kutyna, NE District G. Smallridge, Esq., DER
R. Roberson, BESD



Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

November 6, 1991

904 751-6400

Mr. Clair Fancy, Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED
NOV 8 1991

Dear Mr. Fancy:

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

In September you met with Stone Container representatives, Mr. Curt Barton and Mr. Terry Cole, concerning Seminole Kraft Corporation's request to burn recycled fiber rejects in the bark boilers. This request was for the period of time between the mill conversion to recycled fiber operation in the Summer/Fall 1992 and AES Compliance testing (Spring 1994). In a July 23, 1991 letter to Mr. Steve Smallwood, it was stated that the rejects would be less than 25% of the fuel and would not result in the increase of allowable emissions or heat input.

At the meeting you expressed three concerns: 1) Of the estimated 10% plastic content, how much is chlorinated plastic, 2) is there a danger of increased metals emissions from the estimated 15% inorganic portion, and 3) will there be a significant increase in VOC emissions. During the past month, we have initiated several projects to help address these concerns.

Quantity of Chlorinated Plastic

Stone Container's Missoula, Montana mill has a new recycled fiber plant which is similar in operation, reject removal and burning, and raw material feed to the one being constructed at Seminole Kraft. A typical 750 pound bale of recycled fiber was broken open and hand sorted for plastic material. While most of the plastic could not be identified as to original use, nearly all of it fell into one of two categories; strapping or bags. Further, the total 2 1/2 pounds of retrieved plastic (0.3% of the bale weight) was nearly equally divided between the two fractions. These two samples were sent to Galbraith Laboratories for chlorine analyses and the results are included in Appendix I.

The average chlorine content, 190 ppm, is low and is comparable with the chlorine content of bark, 153 ppm, (Appendix II). Total chlorine contribution from the plastic is 190 ppm CH x 0.3% plastic = 0.0001%.

Mr. Clair Fancy, Chief
November 4, 1991
Page 2

Inorganic Fraction of Recycle Rejects

Again, our Missoula, Montana operation was used to provide the necessary data. Samples of actual recycle fiber reject material was taken from the collection bin just prior to burning. The samples were ashed and the results (Appendix III) revealed that the inorganic portion was 1.43% which is much lower than the original estimate of 15% and, in fact, is lower than the inorganic fraction found in bark, 3.4%, (Appendix II). As a second check, a sample of recycle fiber rejects from Stone Container's Florence, South Carolina mill was also ashed. The inorganic portion was found to be 1.23% (Appendix IV) which agrees with the Missoula results. This low ash content is similar to carbonaceous fuels presently being burned in the bark boilers, and indicates there should be no increase in metal emissions resulting from burning recycle fiber rejects.

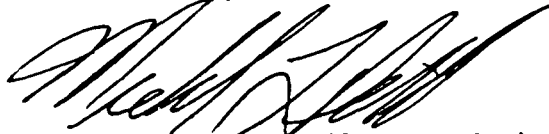
VOC Emissions

As you suggested at the September meeting, the best way of ascertaining that there will be no significant increase in VOC emission is to conduct a VOC stack test before and after the introduction of recycle fiber rejects to the bark boilers. Seminole Kraft agrees to conduct these tests.

Summary

In summary, our projects portray a burnable recycle fiber reject feed containing 98.3% fiber, 1.4% inorganic (sand, glass, etc.) and 0.3% plastic which contained only 190 ppm chlorine. We trust these data adequately answer your concerns and that we have demonstrated that this interim burning of recycle fiber rejects will have no environmental impact.

Sincerely,



Michael E. Riddle, Technical Director
Craig Hurd, Regional Environmental Manager

/pt

cc: L.A. Stanley
Terry Cole
Curt Barton

GALBRAITH

Laboratories, Inc.

QUANTITATIVE MICROANALYSES

ORGANIC — INORGANIC

PHONE 615/546-1335 FAX 615/546-7209

cc. Craig Hurd.
HARRY W. GALBRAITH, Ph.D.
CHAIRMAN OF THE BOARD
KENNETH S. WOODS
PRESIDENT
VELMA M. RUSSELL
SECRETARY-TREASURER
DAVID J. STROM
SENIOR VICE-PRESIDENT
GAIL R. HUTCHENS
EXECUTIVE VICE-PRESIDENT
WILLIAM M. LONGMIRE
VICE-PRESIDENT
TECHNICAL SERVICES

Mr. Gene Doss
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218

October 21, 1991

Received: Oct. 16th
PO#: 11423

Dear Mr. Doss:

Analysis of your compound gave the following results:

Your #,	Our #,	ppm Chlorine,
A <i>strap/tape</i>	T-3677	270
B <i>bags</i>	T-3678	109

Sincerely yours,

GALBRAITH LABORATORIES, INC.

Gail R. Hutchens
Gail R. Hutchens
Exec. Vice-President

GRH:sla

APPENDIX II

Average of 7 attached bark tests.

Ash = 3.4%

Chlorine = 153 ppm



TECHNICAL SERVICES, INC.

ENVIRONMENTAL CONSULTANTS — INDUSTRIAL CHEMISTS

OFFICE 2471 SWAN ST. — P.O. BOX 52329

LABORATORIES 103-107 STOCKTON STREET

JACKSONVILLE, FLORIDA 32201

(904) 353-5761



Laboratory No. 82968

February 24, 1988

Sample of Bark

Date Received 02/16/88

For Seminole Kraft Corporation, P.O. Box 26998, Jacksonville, Florida 32218
Attention: Mr. Hodges

Marks: 02/16/88

CERTIFICATE OF ANALYSIS OR TESTS

		<u>Method</u>	<u>Date/Time</u>	<u>Analyst</u>
BTU/lb (Dry Basis)	6,971	ASTM D2015	02/17/88-1525	RK
Carbon (Dry Basis)	50.11 %			
Hydrogen (Dry Basis)	6.08 %			
Nitrogen (Dry Basis)	0.26 %			
Sulfur (Dry Basis)	0.012 %	ASTM D3177	02/18/88-0911	RK
Chloride (Dry Basis)	0.061 %	ASTM D808	02/18/88-1341	RK
Oxygen	41.67 %	By Difference		
Ash (Dry Basis)	1.804 %	ASTM D3174	02/17/88-1427	RK
Moisture (as received)	34.89 %	ASTM D3172	02/17/88-0912	RK

368 ppm as Chlorine
 calculated by M. Riddle 10/31/91
 Assume Chloride = NaCl
 Chlorine = 60.3% of chloride

Respectfully submitted,

TECHNICAL SERVICES, INC.

Henry C. Gray, Jr.

GALBRAITH

Laboratories, Inc.

QUANTITATIVE MICROANALYSES

ORGANIC - INORGANIC

PHONE 615/546-1335 FAX 615/546-7209

HARRY W. GALBRAITH, Ph.D.
CHAIRMAN OF THE BOARD
KENNETH S. WOODS
PRESIDENT
VELMA M. RUSSELL
SECRETARY-TREASURER
DAVID J. STROM
SENIOR VICE-PRESIDENT
GAIL R. HUTCHENS
EXECUTIVE VICE-PRESIDENT
WILLIAM M. LONGMIRE
VICE-PRESIDENT
TECHNICAL SERVICES

Mr. G. Doss
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218

September 10, 1991

Received: August 28th
PO#: 10441

Dear Mr. Doss:

(Bark)
Analysis of your compound gave the following results:

Your #,	Our #,	Analyses,	
1	S-6602	As Received,	
		% Moisture	41.76
		% Ash	2.15
		Dry Basis,	
		% Carbon	51.13
		% Hydrogen	5.73
		% Kjeldahl Nitrogen	0.15
		ppm Sulfur	228
		ppm Chlorine	91
		% Ash	3.70
		% Oxygen (By Diff)	39.41
2	S-6603	As Received,	
		% Moisture	44.91
		% Ash	3.48
		Dry Basis,	
		% Carbon	46.61
		% Hydrogen	5.78
		% Kjeldahl Nitrogen	0.12
		ppm Sulfur	1247
		ppm Chlorine	336
		% Ash	6.31
		% Oxygen (By Diff)	41.14

Mr. Doss
Page 2
September 10, 1991

Your #,	Our #,	Analyses,	
3	S-6604	As Received,	
		% Moisture	40.99
		% Ash	1.28
		Dry Basis,	
		% Carbon	52.79
		% Hydrogen	5.72
		% Kjeldahl Nitrogen	0.19
		ppm Sulfur	272
		ppm Chlorine	97
		% Ash	2.17
		% Oxygen (By Diff)	39.28
4	S-6605	As Received,	
		% Moisture	40.16
		% Ash	1.96
		Dry Basis,	
		% Carbon	51.96
		% Hydrogen	5.65
		% Kjeldahl Nitrogen	0.15
		ppm Sulfur	245
		ppm Chlorine	80
		% Ash	3.27
		% Oxygen (By Diff)	39.09
5	S-6606	As Received,	
		% Moisture	63.15
		% Ash	1.69
		Dry Basis,	
		% Carbon	51.05
		% Hydrogen	5.50
		% Kjeldahl Nitrogen	0.27
		ppm Sulfur	663
		ppm Chlorine	79
		% Ash	4.58
		% Oxygen (By Diff)	38.80

Mr. Doss
Page 3
September 10, 1991

Your #,	Our #,	Analyses,	
6	S-6607	As Received,	
		% Moisture	57.49
		% Ash	0.87
		Dry Basis,	
		% Carbon	51.84
		% Hydrogen	5.59
		% Kjeldahl Nitrogen	0.34
		ppm Sulfur	348
		ppm Chlorine	19
		% Ash	2.04
		% Oxygen (By Diff)	40.49

Sincerely yours,

GALBRAITH LABORATORIES, INC.

Gail R. Hutchens/dse

Gail R. Hutchens
Exec. Vice-President

GRH:dse



Stone Container Corporation

APPENDIX III

Containerboard and Paper Division

Missoula Mill

 Mulian Road
 P.O. Box 4707
 Missoula, Montana 59806-4707

October 30, 1991

406 626-4451

Craig Hurd
 Regional Manager
 Environmental Services
 Stone Container Corporation
 Technology and Environmental Center
 2150 Parklake Drive, Suite 400
 Atlanta, GA 30345

Dear Craig,

As you requested, I had a sample of our burnable wastes tested for ash content. The averaged ash content was 1.43%.

A representative sample of our burnable OCC rejects was collected from the central collection bin. These rejects are a combination of rejects from: 1) the hydrapurge/selectpurge system, 2) the Wandel vibration screens (rejects from the coarse screens) and 3) the hydradenser (rejects from the tertiary slotted screen and waxes and stickies from the Krofta clarifier). I have included a print out of the basic scheme of the Missoula OCC plant from the Honeywell computer controls for reference.

This sample was divided into three parts and dried for 24 hours and weighed on a bone dry basis. The samples were then brought gradually up to approximately 575 degrees Centigrade in our muffle furnace and burned at that temperature for approximately three hours. The samples were then cooled for about one hour in a desiccator and weighed. The weights, in grams, are recorded below along with the calculated inorganic fraction of the sample in percent.

	<u>Bone Dry</u>	<u>Ash</u>	<u>%Ash</u>
Sample 1	1.7913	0.0237	1.323
Sample 2	0.8943	0.0133	1.487
Sample 3	0.9651	0.0152	1.606
Average:	1.2169	0.0174	1.430 (using the average weights.)

If you have any questions, please let me know.

Sincerely,

Jenny Brown
 Quality Control Engineer

APPENDIX IV

A representative sample off recycle fiber rejects from the Stone Container mill in Florence, South Carolina was dried and then ashed in a muffle furnace at 600°C.

Bone Dry Weight:

58.5604		53.6512
- <u>53.5902</u> (crucible)		- <u>53.5902</u>
4.9702 grams		0.0610
0.0610/4.9702	=	0.0123
	=	1.23% Ash

October 22, 1991
Gene Doss

Claw-Fzi

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

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DEC 2 1991

December 2, 1991

Division of Air
Resources Management

Gregory G. Radlinski, Assistant Counsel
Environmental Law Division
City of Jacksonville
Suite 715 - Town Center
4251 West Church Street
Jacksonville, Florida 32202-4156

RE: Seminole Kraft Corporation, Bark Boilers

Dear Mr. Radlinski:

This will respond to your letter of November 14, 1991 regarding continued operation of certain Seminole Kraft bark and power boilers after commercial operation of the AES Cedar Bay Facility was reached.

I do not believe there is any issue involving the odor settlement between the City and Seminole Kraft. The settlement related to agreeing to shut down certain TRS specified sources, including the recovery boilers. Seminole Kraft is on schedule to meet the specified dates in that consent judgment. That settlement did not include or have any relevance to operation of the power or bark boilers. The settlement specifically reserved the creditable emission reductions from retiring the old recovery boilers.

The bark and power boilers were offered as creditable emission reductions as part of the AES power plant siting process. The creditable emissions remain intact and available to AES and Cedar Bay. At the time the application was filed Seminole Kraft planned to replace the three old recovery boilers with one large new recovery boiler. They planned to retire the power boilers and burn the bark in the AES circulating fluidized bed boilers. Based upon market conditions, the desire of the City and the State to promote additional recycling in the state and the desire to make a much larger reduction in odors by eliminating the Kraft pulping process from the mill, the proposal was later changed to eliminate the new recovery boiler (which had been permitted) and instead to convert the mill to a recycled fiber facility. It was at that point that agreement was reached with the City and later filed in circuit court resolving the pending odor questions. Meetings were held with the City and the State to discuss

Mr. Gregory G. Radlinski
December 2, 1991
Page 2

the proposed conditions of certification relating to shutting down the bark and power boilers. It was agreed this condition did not preclude Seminole Kraft from applying for additional permits for new sources in the future, utilizing the recovery boiler offsets, should Seminole be able to demonstrate compliance with applicable environmental requirements. The City made clear that should Seminole Kraft file such applications that it would expect NSPS requirements to be met. Although it is not clear NSPS requirements are applicable, the application that Seminole Kraft files will honor the City's request that NSPS limitations be met.

I have attached copies of relevant correspondence from the Department of Environmental Regulation, EPA and Seminole Kraft for your information. It should be noted for informational purposes that Seminole Kraft also has provided notice to DER that upon completion of the recycle fiber project, there will be a change in the mix of carbonaceous fuel burned in the bark boilers in the interim between the startup of the new recycled fiber process next year and commercial operation of AES.

As you will see from the correspondence Seminole Kraft has been candid and open on this issue since the possibility of converting the application for a new recovery boiler to recycled fiber project for the entire mill was first discussed and later approved by the City and the State. Once you have had the opportunity to review these materials and this letter, we will be glad to meet with you to discuss this in more detail. Please feel free to call me should you have any questions.

Sincerely,


Terry Cole

TC/kp

cc: Steve Smallwood
Richard Donellan
Larry Stanley
Curt Barton
Bruce Mitchell



JOHN A. DELANEY
GENERAL COUNSEL

OFFICE OF
GENERAL COUNSEL
CITY OF JACKSONVILLE
SUITE 715 TOWNCENTRE
421 WEST CHURCH STREET
JACKSONVILLE, FLORIDA 32202-4156

TEL (904) 630-4900
FAX (904) 630-4991

RECEIVED

NOV 18 1991

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

November 14, 1991

Terry Cole, Esq.
Oertel, Hoffman, Fernandez & Cole, P.A.
2700 Blair Stone Road, Suite C
P. O. Box 6507
Tallahassee, Florida 32314-6507

RE: Seminole Kraft Corp., Jacksonville Plant, continued boiler use

Dear ~~Mr. Cole~~ ^{Terry} :

Yesterday, Mr. Larry Stanley, the manager of the Seminole Kraft plant in Jacksonville, addressed a group of concerned citizens. He explained Seminole's recent application to change Seminole Kraft's land use classification from light industrial to heavy industrial. At the meeting, he also mentioned that Seminole Kraft would not be receiving all of its steam power from AES Cedar Bay's cogeneration plant, and would continue to operate some of its present boilers. Would you please confirm and explain Seminole Kraft's intentions regarding the existing boilers and the power sharing arrangement with AES.

AES/Cedar Bay and Seminole Kraft, co-applicants for a co-generation plant under Florida's Electric Power Plant Siting Act, have represented that one of the major benefits of the project was elimination of Seminole's inefficient boilers. As Hearing Officer Benton found in his May, 1990, Recommended Order


Construction of the new cogeneration facility will allow the existing bark boilers and oil-fired boilers at the mill to shut down. (cit. omit.) Seminole Kraft is under orders to close down the most egregious of its several air pollution sources, in any event.

Under the Consent Judgment approved by Circuit Judge Darden last December, Seminole Kraft agreed to shut down the old pulp mill by September, 1992, including discontinuing use of the recovery boilers.

Terry Cole, Esq.
November 14, 1991
Page -2-

Mr. Stanley's comments suggest that Seminole Kraft has other plans. If that is true, the City would like those plans explained. If Mr. Stanley is misinformed, your explanation of the true circumstances will help allay our understandable concerns.

Sincerely,


Gregory K. Radlinski
Assistant Counsel
Environmental Law Division

cc:
Councilman Reagan
Councilman Carlucci
Councilman Crescimbeni
General Counsel Delaney
J. Heard, Esq.
R. Pennington, Esq.
Mr. S. Campbell
Mrs. B. Broward
R. G. Haines, Ph.D.
R&ESD

GKR/lou



Florida Department of Environmental Regulation

Northeast District • 3426 Bills Road • Jacksonville, Florida 32207 • 904-798-4200

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary
Ernest Frey, Deputy Assistant Secretary

Permittee:

Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32229

I.D. Number:

31-16-0067-04

Permit/Certification Number:

AO16-149235

Date of Issue:

November 9, 1988

Expiration Date:

May 31, 1993

County:

Duval

Latitude/Longitude:

30:25:15/81:36:00

UTM:

E-7441.800 N-3365.575

Project:

No. 1 Bark Boiler

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of No. 1 Bark Boiler, Combustion Engineering Serial No. 16703 for the the production of steam. Maximum heat input shall be 193×10^6 BTU per hour firing carbonaceous fuel (bark) and/or Bunker C or No. 6 Fuel Oil with a maximum sulfur content of 2.27% by weight.

Particulate Matter (PM) emissions shall be controlled as follows:

Source

No. 1 Bark Boiler

Control Equipment

Two sets of 4 each Buell VT Cyclone Separators in series with a Ducon Venturi Scrubber Type VVO

Emission source(s) shall be as follows:

Point

04

Source

No. 1 Bark Boiler

Located at 9469 Eastport Road, Jacksonville, Florida 32229

Supporting documents shall be as follows:

- (1) Permit AO16-71204
- (2) Operating Permit Application dated May 3, 1988
- (3) DER letter approving transfer of permits dated January 12, 1987
- (4) Stack tests (2) performed on October 28, 1987 and November 4, 1987.
- (5) Operation and Maintenance Plan

BEST AVAILABLE COPY

Permittee:
Seminole Kraft Corporation

I.D. Number: 31-16-0067-04
Permit/Certification Number: AO16-149235
Date of Issue: November 9, 1988
Expiration Date: May 31, 1993

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing in accordance with Rule 17-2.700(2)(a)5., Florida Administrative Code (FAC), and Rule 2.501, Jacksonville Environmental Protection Board (JEPB).
2. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days of completion of testing in accordance with Rule 17-2.700(7)(b), FAC, and Rule 2.501, JEPB.
3. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
4. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
5. Control equipment shall be provided with a method of access that is safe and readily accessible.
6. Stack sampling facilities shall be required and shall comply with the requirements of Rule 17-2.700(4), FAC, and Rule 2.207, JEPB.
7. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1 in accordance with Rule 17-4.140, FAC.
8. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1988:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>Interval</u>	<u>Test Method</u>
04	Particulate Matter (PM)	4 Months	EPA Reference Method (RM) No.5
	Fuel Oil Analysis (2.27% Sulfur)	on Request	*
	Visible Emissions (VE)	On request	EPA RM No. 9

*Sulfur analysis of the No. 6 Fuel Oil shall be done in accordance with ASTM D 2622-82 (Sulfur in Petroleum Products - X Ray Spectrographic Method) or other method approved in advance by BESD, and shall be reported as the sulfur content by percent (%) weight.

9. The applicable emission limiting rules shall be as follows:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>¹FAC</u>	<u>²JEPB</u>	<u>Other</u>
04	PM (carbonaceous fuel fired)	17-2.650(2)(c)3	2.207	
	PM (oil fired)	17-2.650(2)(c)3	2.207	
	VE	17-2.650(2)(c)3	2.207	

Seminole Kraft Corporation
Bark Boilers

I. Current Permit

A. Fuel

1. Carbonaceous Fuel (Bark)
2. No. 6 Fuel Oil (2.27% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr heat input

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel
(Startup, Shutdown, Malfunction, etc.)

E. Allowable Emissions

PM (Carbonaceous Fuel) 0.2 lb/mmBtu or 38.6 lb/hr
PM (Oil Fired) 0.1 lb/mmBtu or 19.3 lb/hr
PM (Combinations of Carbonaceous and Oil - Limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated on the sum of the individual calculations for carbonaceous and oil fuels.

II. Projected Fuel After Startup of Recycle Operation

A. Fuel

1. Carbonaceous Fuel (Bark & Wastepaper Rejects)
2. No. 6 Fuel Oil (1.0% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr per boiler

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel

E. Carbonaceous Fuel Data

1. Heat Value
Bark (Dry) - 6500 Btu/#
Wastepaper Rejects (Dry) - 8000 Btu/#
2. Fuel Quantity
Bark (Dry) - 11.15 Tons/hr
3. Firing Rate
Wastepaper Rejects (Dry) - 3 Tons/hr
Bark Heat Input = 6500 (11.15) 2000 = 145 mmBtu/hr
Wastepaper Rejects = 8000 (3) 2000 = 48 mmBtu/hr
Total Heat Input = 193 mmBtu/hr

F. Allowable Emissions

PM (Carbonaceous Fuel) = 0.2 lb/mmBtu or 38.6 lb/hr
PM (Oil Fired) = 0.1 lb/mmBtu or 19.3 lb/hr
PM (Combinations of Carbonaceous Fuel and Oil limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated based on the sum of the individual calculations for Carbonaceous and Oil Fuels.

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
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HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
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(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

October 26, 1990

Post-It™ brand fax transmittal memo 7671		# of pages ▶
To	Chasch Schrenk	From
Co.		Co.
Dept.		Phone #
Fax #	312 853 7312	Fax #

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regula
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

The purpose of this letter is to confirm your previous discussion with Julie Blunden, Curt Barton, and me concerning refurbishment or replacement of existing bark boilers, or the use of such boilers to burn recycled fiber rejects as well as bark.

As you know, Seminole Kraft Corporation proposes to convert its Jacksonville mill to a 100% recycle operation. This will benefit the community in many ways, including reducing the need to landfill used corrugated containers and eliminating all TRS emissions.

In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
Page 2

that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

Permitting Requirements for Bark Boilers if AES Cedar Bay/Seminole Kraft Project Not Certified:

The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

Modification is defined in 40 CFR §60.2 (also found in Chapter 17-2, F.A.C.) as:

Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Mr. Steve Smallwood
October 26, 1990
Page 3

There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
Page 4

I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FEB 25 1991

4APT-AE

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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MAR 13 1991
DER-BAQM

Dear Mr. Fancy:

As requested in your November 16, 1990, letter, we have reviewed the analysis by Mr. Terry Cole of Oertel, Hoffman, Fernandez and Cole, P.A., regarding the applicability of NSPS and PSD to the boilers at Seminole Kraft and AES Cedar Bay (AESCB) in Jacksonville, Florida. In Mr. Cole's letter, two specific situations involving the boilers at Seminole Kraft and the AESCB project were addressed.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS CERTIFIED

Under the conditions of certification for the AESCB project, the shutdown of boilers at Seminole Kraft is required in order to provide offsets for increases in pollutants from the cogeneration facility. It must be noted that for the emissions reductions to be creditable, they must be permanent. After the PSD permit is issued which incorporates these shutdowns and makes them federally enforceable, there will be no additional emissions reduction credit available from the shutdown of these boilers. Should Seminole Kraft decide to refurbish the dismantled bark boilers, the boilers would be treated as entirely new emissions units with none of the exemptions from applicability for existing units that are specified under PSD regulations being available.

With regard to NSPS, the existing boilers at Seminole Kraft would not become subject to NSPS if they remained intact and were merely restarted, without any physical or operational change.

If the boilers are dismantled in any fashion (i.e. key components removed) and the decision is later made to restart the boilers, then NSPS would apply. This is due to the fact that there would be an emission increase caused by a physical change to the boilers. Since the boilers were incapable of operating, the emissions would be zero immediately before the changes necessary for a restart and therefore, an emissions increase would have resulted thus triggering NSPS. This is consistent with the Wisconsin Electric Power Company decision. If changes are only necessary to accommodate a different fuel mix, then we would accept emission data just prior to the shutdown and compare with data after start up to determine if an emissions increase, and hence a modification, would result thus triggering NSPS. Furthermore, the composition of the fiber rejects would need to be evaluated to determine if the new combination of fuel would be classified as municipal solid waste (MSW). If so, then the newly promulgated NSPS regulations for municipal waste combustors would apply.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS NOT CERTIFIED

According to Mr. Cole, the bark boilers would not be subject to NSPS or PSD permit review when the fuel mixture for the bark boilers is changed from 100% bark to 75% bark/25% fiber reject mix. The basis for this determination is that the bark boilers were capable of firing the fiber rejects at the percentages anticipated as of January 6, 1975.

In order to determine the applicability of NSPS to the bark boilers due to the change in fuel type it must be ascertained if the bark boilers will have an increase in the emission rate, expressed as kilograms per hour, of a regulated pollutant and if the bark boilers could fire the fiber rejects as originally constructed. However, not enough information was provided to determine if an emission rate increase in a regulated pollutant would occur, therefore, we will assume that an increase in a regulated pollutant will occur.

Assuming that an increase will occur, then the second condition must be addressed. It is incorrect to use January 6, 1975, as the date to determine if the bark boilers were originally designed to burn the bark and fiber rejects simultaneously. The exemption to the modification provision at §60.14(e)(4) essentially states that if the existing facility could have fired the alternative fuel prior to the applicability date of

the NSPS Subpart, then the increase in the emission rate of a regulated pollutant due to the use of the alternative fuel would not be considered a modification as defined in §60.14. Since Mr. Cole indicated that on January 6, 1975, the bark boilers were capable of firing the 75% bark/25% fiber rejects mixture, the only possible applicable NSPS Subparts are Subparts D and E. If the bark boilers were capable of firing the alternative fuel prior to August 17, 1971, then neither Subpart would apply.

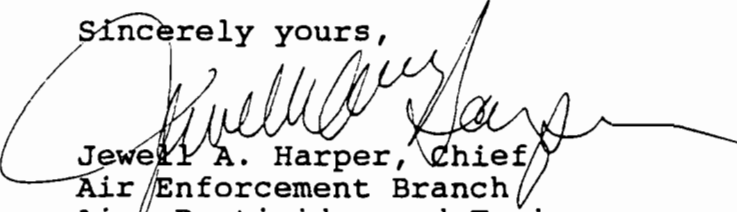
If the bark boilers were not capable of firing the alternative fuel prior to August 17, 1971, then they could be subject to either Subparts D or E or both if an increase in the emission rate of a regulated pollutant occurs. In addition, in order for Subpart E to apply, the combination of bark and fiber rejects would have to be determined to be MSW.

In addition, if the combination of bark and fiber rejects is considered to be MSW, then the bark boilers would be subject to emission standards for existing MSW combustors which will be established in accordance with the guidelines published in the February 11, 1991, Federal Register.

With regard to PSD, since the bark boilers were capable of firing bark and fiber refuse prior to January 6, 1975, then PSD review would not be required.

If you have any questions regarding this letter, please contact Mr. Brian Beals at 404/347-2904.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division



Stone Container Corporation

Technology and Engineering

Containerboard and Paper Division

2150 Parklake Drive
Suite 400
Atlanta, Georgia 30345

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404 621-6700

November 14, 1991

Mr. Clair Fancy, Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Fancy:

On November 6, 1991, you received a letter from Mike Riddle, Technical Director at the Seminole Kraft Paper Mill in Jacksonville, FL which addressed your concerns over the burning of recycled fiber rejects in the bark boilers.

Since sending the letter, we have discovered that the percent plastic value might be misleading. We stated that the plastic was 0.3% which was based on the total recycled fiber bale weight of 750 lbs. The actual reject portion of recycled fiber is approximately 15% or 112 lbs. out of a 750 lb. bale. Therefore, the actual, burnable recycled fiber reject feed contains 96.37% fiber, 1.4% inorganic (sand, glass, etc.) and 2.23% plastic which contains only 190 ppm of chlorine.

We apologize for any confusion that our original calculation may have caused and trust that this letter rectifies any deficiency.

Sincerely,

Craig Hurd
Regional Environmental Manager

bbm

cc: Curt Barton
Terry Cole
Mike Riddle
Larry Stanley



Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

November 6, 1991

904 751-6400

Mr. Clair Fancy, Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

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NOV 8 1991

Dear Mr. Fancy:

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

In September you met with Stone Container representatives, Mr. Curt Barton and Mr. Terry Cole, concerning Seminole Kraft Corporation's request to burn recycled fiber rejects in the bark boilers. This request was for the period of time between the mill conversion to recycled fiber operation in the Summer/Fall 1992 and AES Compliance testing (Spring 1994). In a July 23, 1991 letter to Mr. Steve Smallwood, it was stated that the rejects would be less than 25% of the fuel and would not result in the increase of allowable emissions or heat input.

At the meeting you expressed three concerns: 1) Of the estimated 10% plastic content, how much is chlorinated plastic, 2) is there a danger of increased metals emissions from the estimated 15% inorganic portion, and 3) will there be a significant increase in VOC emissions. During the past month, we have initiated several projects to help address these concerns.

Quantity of Chlorinated Plastic

Stone Container's Missoula, Montana mill has a new recycled fiber plant which is similar in operation, reject removal and burning, and raw material feed to the one being constructed at Seminole Kraft. A typical 750 pound bale of recycled fiber was broken open and hand sorted for plastic material. While most of the plastic could not be identified as to original use, nearly all of it fell into one of two categories; strapping or bags. Further, the total 2 1/2 pounds of retrieved plastic (0.3% of the bale weight) was nearly equally divided between the two fractions. These two samples were sent to Galbraith Laboratories for chlorine analyses and the results are included in Appendix I.

The average chlorine content, 190 ppm, is low and is comparable with the chlorine content of bark, 153 ppm, (Appendix II). Total chlorine contribution from the plastic is 190 ppm CH x 0.3% plastic = 0.0001%.

Mr. Clair Fancy, Chief
November 4, 1991
Page 2

Inorganic Fraction of Recycle Rejects

Again, our Missoula, Montana operation was used to provide the necessary data. Samples of actual recycle fiber reject material was taken from the collection bin just prior to burning. The samples were ashed and the results (Appendix III) revealed that the inorganic portion was 1.43% which is much lower than the original estimate of 15% and, in fact, is lower than the inorganic fraction found in bark, 3.4%, (Appendix II). As a second check, a sample of recycle fiber rejects from Stone Container's Florence, South Carolina mill was also ashed. The inorganic portion was found to be 1.23% (Appendix IV) which agrees with the Missoula results. This low ash content is similar to carbonaceous fuels presently being burned in the bark boilers, and indicates there should be no increase in metal emissions resulting from burning recycle fiber rejects.

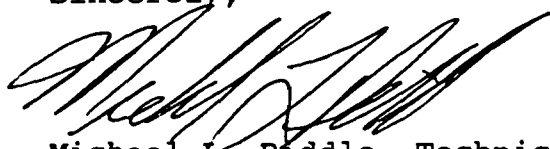
VOC Emissions

As you suggested at the September meeting, the best way of ascertaining that there will be no significant increase in VOC emission is to conduct a VOC stack test before and after the introduction of recycle fiber rejects to the bark boilers. Seminole Kraft agrees to conduct these tests.

Summary

In summary, our projects portray a burnable recycle fiber reject feed containing 98.3% fiber, 1.4% inorganic (sand, glass, etc.) and 0.3% plastic which contained only 190 ppm chlorine. We trust these data adequately answer your concerns and that we have demonstrated that this interim burning of recycle fiber rejects will have no environmental impact.

Sincerely,



Michael E. Riddle, Technical Director
Craig Hurd, Regional Environmental Manager

/pt

cc: L.A. Stanley
Terry Cole
Curt Barton



Stone Container Corporation

Missoula Mill

Mullan Road
P.O. Box 4707

Missoula, Montana 59806-4707

Containerboard and Paper Division

APPENDIX I

406 626-4451

Oct 2, 1991

Dear Mike:

Here it is. The plastic that was contained in a bale that weighed approximately 750 lb. Let me know what you find regarding percent PVC after your investigation is over.

Best Regards,
Jimmy Brown

Separated in two piles by Seminole.		
<u>straps/tape</u>	<u>bags</u>	
412.2 grams	737.7 grams	total 1149.9 grams
		or 2.5 pounds

cc. Craig Hord.

GALBRAITH

Laboratories, Inc.

QUANTITATIVE MICROANALYSES

ORGANIC — INORGANIC

PHONE 615/546-1335 FAX 615/546-7209

HARRY W. GALBRAITH, Ph.D.
CHAIRMAN OF THE BOARD
KENNETH S. WOODS
PRESIDENT
VELMA M. RUSSELL
SECRETARY-TREASURER
DAVID J. STROM
SENIOR VICE-PRESIDENT
GAIL R. HUTCHENS
EXECUTIVE VICE-PRESIDENT
WILLIAM M. LONGMIRE
VICE-PRESIDENT
TECHNICAL SERVICES

Mr. Gene Doss
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218

October 21, 1991

Received: Oct. 16th
PO#: 11423

Dear Mr. Doss:

Analysis of your compound gave the following results:

Your #,	Our #,	ppm Chlorine,
A <i>strap/tape</i>	T-3677	270
B <i>bags</i>	T-3678	109

Sincerely yours,

GALBRAITH LABORATORIES, INC.

Gail R. Hutchens
Gail R. Hutchens
Exec. Vice-President

GRH:sla

APPENDIX II

Average of 7 attached bark tests.

Ash = 3.4%

Chlorine = 153 ppm



TECHNICAL SERVICES, INC.
 ENVIRONMENTAL CONSULTANTS — INDUSTRIAL CHEMISTS
 OFFICE 2471 SWAN ST. — P.O. BOX 52329
 LABORATORIES 103-107 STOCKTON STREET
 JACKSONVILLE, FLORIDA 32201
 (904) 353-5761



Laboratory No. 82968

February 24, 19 88

Sample of Bark

Date Received 02/16/88

For Seminole Kraft Corporation, P.O. Box 26998, Jacksonville, Florida 32218
 Attention: Mr. Hodges

Marks: 02/16/88

CERTIFICATE OF ANALYSIS OR TESTS

		<u>Method</u>	<u>Date/Time</u>	<u>Analyst</u>
BTU/lb (Dry Basis)	6,971	ASTM D2015	02/17/88-1525	RK
Carbon (Dry Basis)	50.11 %			
Hydrogen (Dry Basis)	6.08 %			
Nitrogen (Dry Basis)	0.26 %			
Sulfur (Dry Basis)	0.012 %	ASTM D3177	02/18/88-0911	RK
Chloride (Dry Basis)	0.061 %	ASTM D808	02/18/88-1341	RK
Oxygen	41.67 %	By Difference		
Ash (Dry Basis)	1.804 %	ASTM D3174	02/17/88-1427	RK
Moisture (as received)	34.89 %	ASTM D3172	02/17/88-0912	RK

*368 ppm as Chlorine
 calculated by M. Riddle 10/31/91
 Assume Chloride = NaCl
 Chlorine = 60.3% of chloride*

Respectfully submitted,

TECHNICAL SERVICES, INC.

BY *Harvey C. Gray, Jr.*

GALBRAITH

Laboratories, Inc.

QUANTITATIVE MICROANALYSES

ORGANIC — INORGANIC

PHONE 615/546-1335 FAX 615/546-7209

HARRY W. GALBRAITH, Ph.D.
CHAIRMAN OF THE BOARD
KENNETH S. WOODS
PRESIDENT
VELMA M. RUSSELL
SECRETARY-TREASURER
DAVID J. STROM
SENIOR VICE-PRESIDENT
GAIL R. HUTCHENS
EXECUTIVE VICE-PRESIDENT
WILLIAM M. LONGMIRE
VICE-PRESIDENT
TECHNICAL SERVICES

Mr. G. Doss
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218

September 10, 1991

Received: August 28th
PO#: 10441

Dear Mr. Doss:

(Bark)

Analysis of your compound gave the following results:

Your #,	Our #,	Analyses,	
1	S-6602	As Received,	
		% Moisture	41.76
		% Ash	2.15
		Dry Basis,	
		% Carbon	51.13
		% Hydrogen	5.73
		% Kjeldahl Nitrogen	0.15
		ppm Sulfur	228
		ppm Chlorine	91
		% Ash	3.70
		% Oxygen (By Diff)	39.41
2	S-6603	As Received,	
		% Moisture	44.91
		% Ash	3.48
		Dry Basis,	
		% Carbon	46.61
		% Hydrogen	5.78
		% Kjeldahl Nitrogen	0.12
		ppm Sulfur	1247
		ppm Chlorine	336
		% Ash	6.31
		% Oxygen (By Diff)	41.14

Mr. Doss
Page 2
September 10, 1991

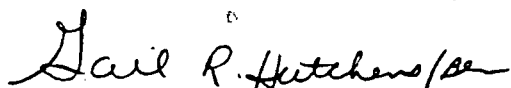
Your #,	Our #,	Analyses,	
3	S-6604	As Received,	
		% Moisture	40.99
		% Ash	1.28
		Dry Basis,	
		% Carbon	52.79
		% Hydrogen	5.72
		% Kjeldahl Nitrogen	0.19
		ppm Sulfur	272
		ppm Chlorine	97
		% Ash	2.17
		% Oxygen (By Diff)	39.28
4	S-6605	As Received,	
		% Moisture	40.16
		% Ash	1.96
		Dry Basis,	
		% Carbon	51.96
		% Hydrogen	5.65
		% Kjeldahl Nitrogen	0.15
		ppm Sulfur	245
		ppm Chlorine	80
		% Ash	3.27
		% Oxygen (By Diff)	39.09
5	S-6606	As Received,	
		% Moisture	63.15
		% Ash	1.69
		Dry Basis,	
		% Carbon	51.05
		% Hydrogen	5.50
		% Kjeldahl Nitrogen	0.27
		ppm Sulfur	663
		ppm Chlorine	79
		% Ash	4.58
		% Oxygen (By Diff)	38.80

Mr. Doss
Page 3
September 10, 1991

Your #,	Our #,	Analyses,	
6	S-6607	As Received,	
		% Moisture	57.49
		% Ash	0.87
		Dry Basis,	
		% Carbon	51.84
		% Hydrogen	5.59
		% Kjeldahl Nitrogen	0.34
		ppm Sulfur	348
		ppm Chlorine	19
		% Ash	2.04
		% Oxygen (By Diff)	40.49

Sincerely yours,

GALBRAITH LABORATORIES, INC.



Gail R. Hutchens
Exec. Vice-President

GRH:dse



Stone Container Corporation

Missoula Mill

APPENDIX III

Mullan Road
P.O. Box 4707
Missoula, Montana 59806-4707

Containerboard and Paper Division

October 30, 1991

406 626-4451

Craig Hurd
Regional Manager
Environmental Services
Stone Container Corporation
Technology and Environmental Center
2150 Parklake Drive, Suite 400
Atlanta, GA 30345

Dear Craig,

As you requested, I had a sample of our burnable wastes tested for ash content. The averaged ash content was 1.43%.

A representative sample of our burnable OCC rejects was collected from the central collection bin. These rejects are a combination of rejects from: 1) the hydrapurge/selectpurge system, 2) the Wandel vibration screens (rejects from the coarse screens) and 3) the hydradenser (rejects from the tertiary slotted screen and waxes and stickies from the Krofta clarifier). I have included a print out of the basic scheme of the Missoula OCC plant from the Honeywell computer controls for reference.

This sample was divided into three parts and dried for 24 hours and weighed on a bone dry basis. The samples were then brought gradually up to approximately 575 degrees Centigrade in our muffle furnace and burned at that temperature for approximately three hours. The samples were then cooled for about one hour in a desiccator and weighed. The weights, in grams, are recorded below along with the calculated inorganic fraction of the sample in percent.

	<u>Bone Dry</u>	<u>Ash</u>	<u>%Ash</u>
Sample 1	1.7913	0.0237	1.323
Sample 2	0.8943	0.0133	1.487
Sample 3	0.9651	0.0152	1.606
Average:	1.2169	0.0174	1.430 (using the average weights.)

If you have any questions, please let me know.

Sincerely,

Jenny Brown
Quality Control Engineer

APPENDIX IV

A representative sample off recycle fiber rejects from the Stone Container mill in Florence, South Carolina was dried and then ashed in a muffle furnace at 600°C.

Bone Dry Weight:

58.5604		53.6512
- <u>53.5902</u> (crucible)		- <u>53.5902</u>
4.9702 grams		0.0610
0.0610/4.9702	=	0.0123
	=	1.23% Ash

October 22, 1991
Gene Doss

AUG 1 - 1991



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 16, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

8/1/91
RECEIVED
M. RIDGE
P. BARON
A. KOCST
AUG 5 1991

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 Eastport Road
P. O. Box 26998
Jacksonville, Florida 32218-0998

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Dear Mr. Stanley:

Re: Request to Burn Recycle Fiber as a Fuel
Nos. 1 and 2 Bark Boilers

The Department has reviewed your letter with attachments received June 28, 1991, regarding the request to burn recycle fiber as a fuel in the above referenced combination (carbonaceous and fossil fuels) boilers. Based on a review of the letter and attachments, a construction permit for a modification will be required in order for the boilers to be allowed to burn recycle fiber as a fuel, because the boilers are not currently permitted to burn plastics and metals (other than the normal constituents of the fossil fuels permitted as fuels), which are components of the recycle fiber. Therefore, please submit the proper application form(s), including all assumptions, calculations and reference material, and the appropriate processing fee to the Department of Environmental Regulation; and, the evaluation of all pollutants should compare the current actual emissions versus the future potential/allowable emissions. Also, provide an ultimate analysis of the current fuel(s) and the proposed fuels on a bone dry, percent weight basis; and, provide the fuel utilization rates on a tons per hour and tons per day basis. Please explain where the plastics will come from and how it is part of the recycle fiber waste stream.

If there are any questions, please call Mr. Clair Fancy at (904) 488-1344 or write to me at the above address.

Sincerely,


STEVE SMALLWOOD, P.E.

Director

Division of Air Resources
Management

SS/BM/t

cc: A. Kutyna, NE District G. Smallridge, Esq., DER
R. Roberson, BESD

file 1003
Seminole K
Bark Boilers

Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

904 751-6400

June 25, 1991

Mr. Steve Smallwood, Director
Division of Air Resources Management
Florida Dept. of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

JUN 28 1991

OERTEL, HOFFMAN,
FERNANDEZ & COLE, P.A.

Re: Notice in the change of Mix of Carbonaceous Fuels for Seminole Kraft Bark Boilers

Dear Mr. Smallwood:

This letter is to notify the Department of an anticipated change in the mix of carbonaceous fuels for the Seminole Kraft Corporation No.1 and No.2 bark boilers for the period of time between conversion to recycled fiber operation (Summer/Fall 1992) and AES compliance testing (Spring, 1994). These boilers are authorized to burn carbonaceous fuel and oil. Carbonaceous fuel will remain the primary fuel with oil used during startup, shutdown upsets or malfunctions.

As you know, Seminole Kraft has been authorized to replace is existing kraft mill with a recycled fiber operation. Seminole Kraft is required to have that project completed and the recovery boilers shut down by November 12, 1992 under the state permit. In addition, in a settlement with the City of Jacksonville, Seminole Kraft has agreed to expedite that process.

Seminole Kraft hopes to start the new recycled fiber operation in the summer of 1992. At that time the bark boilers will continue to burn bark but, in addition, will need to burn a small amount, less than 25%, of recycled fiber rejects. These recycled fiber rejects consist of 75% wood fiber, 15% inorganic material (sand, grit, glass and metal), and 10% plastic. Hence, on a BTU basis, wood fiber will still account for over 90% of the carbonaceous fuel. There will be no increase in the allowable emissions or heat input. Please see Attachment A for more details.

The boilers will require no physical changes to accommodate the fuel and would have been capable of burning that mix of fuel prior to January 6, 1975, or prior to 1971. There is no change in the method of operation since the boilers were capable of accommodating an alternative fuel under the facility's

Mr. Steve Smallwood
Carbonaceous Fuels
June 25, 1991
Page Two

construction specifications. See 40 CFR 60.14(e)(4). Similarly, under F.A.C. Rule 17-2.500(2)(c)4, there is an exemption from the definition of "modification" for the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1979. This also would be outside the definition of "major modification" as an alternative fuel since the source was capable of accommodating the fuel prior to January 6, 1975. See 40 CFR 52.21(2)(d) and F.A.C. Rule 17-2.500(2)(c)4. Accordingly, we believe no permit is required to accommodate such a minor change in the mix of carbonaceous fuels. We would request that this letter be attached to the operating permit file.

We would like to continue to operate the two bark boilers in this fashion subject to renewal of its operating permit up until they are required to be shut down under terms of the AES Cedar Bay Certification Order. In the meantime, and most likely within the next three months, Seminole Kraft will apply for a construction permit to address operating requirements after the date on which the existing bark boilers are required to be shut down and their current operating permits surrendered. This will allow sufficient time to address all necessary information requirements of the Department in order to ensure their continued operation in accordance with applicable requirements of the Department and the City, as well as EPA. I have attached copies of significant correspondence regarding this matter, the operating permits for these sources and the relevant portion of the AES Cedar Bay conditions and certification.

In summary, we believe no special permitting is required to enable Seminole Kraft to continue to burn carbonaceous fuels in the bark boilers. We do intend to submit a full construction permit application for operation after AES Cedar Bay startup and testing and will submit such an application to you within the next two months.

If you have any questions regarding this, please let me know.

Sincerely,



L.A. Stanley
General Manager

ah
attachments

CC: Curt Barton
Terry Cole

Ernest Frey
James Manning

Clair Fancy
Mike Riddle

ATTACHMENT A

Seminole Kraft Corporation
Bark Boilers

I. Current Permit

A. Fuel

1. Carbonaceous Fuel (Bark)
2. No. 6 Fuel Oil (2.27% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr heat input

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel
(Startup, Shutdown, Malfunction, etc.)

E. Allowable Emissions

PM (Carbonaceous Fuel) 0.2 lb/mmBtu or 38.6 lb/hr
PM (Oil Fired) 0.1 lb/mmBtu or 19.3 lb/hr
PM (Combinations of Carbonaceous and Oil - Limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated on the sum of the individual calculations for carbonaceous and oil fuels.

II. Projected Fuel After Startup of Recycle Operation

A. Fuel

1. Carbonaceous Fuel (Bark & Wastepaper Rejects*)
2. No. 6 Fuel Oil (1.0% Sulfur)

B. Boiler Capacity

Max. Rate - 193 mmBtu/hr per boiler

C. Normal Operation - 100% Carbonaceous Fuel

D. Abnormal Operation - No. 6 Oil & Carbonaceous Fuel

* Wastepaper rejects consist of approximately 75% wood fiber, 15% inorganic material (sand, grit, glass and metal fragments) and 10% plastic.

E. Carbonaceous Fuel Data

1. Heat Value

Bark (Dry) - 6500 Btu/#

Wastepaper Rejects (Dry) - 8000 Btu/#

2. Fuel Quantity

Bark (Dry) - 11.15 Tons/hr

Wastepaper Rejects (Dry) - 3 Tons/hr

3. Firing Rate

Bark Heat Input = 6500 (11.15) 2000 = 145 mmBtu/hr

Wastepaper Rejects = 8000 (3) 2000 = 48 mmBtu/hr

Total Heat Input = 193 mmBtu/hr

F. Allowable Emissions

PM (Carbonaceous Fuel) = 0.2 lb/mmBtu or 38.6 lb/hr

PM (Oil Fired) = 0.1 lb/mmBtu or 19.3 lb/hr

PM (Combinations of Carbonaceous Fuel and Oil limited to 193 mmBtu/hr. Allowable PM emissions for any combination shall be calculated based on the sum of the individual calculations for Carbonaceous and Oil Fuels.



ATTACHMENT B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FEB 25 1991

4APT-AE

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
MAR 13 1991
DER-BAQM

Dear Mr. Fancy:

As requested in your November 16, 1990, letter, we have reviewed the analysis by Mr. Terry Cole of Oertel, Hoffman, Fernandez and Cole, P.A., regarding the applicability of NSPS and PSD to the boilers at Seminole Kraft and AES Cedar Bay (AESCB) in Jacksonville, Florida. In Mr. Cole's letter, two specific situations involving the boilers at Seminole Kraft and the AESCB project were addressed.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS CERTIFIED

Under the conditions of certification for the AESCB project, the shutdown of boilers at Seminole Kraft is required in order to provide offsets for increases in pollutants from the cogeneration facility. It must be noted that for the emissions reductions to be creditable, they must be permanent. After the PSD permit is issued which incorporates these shutdowns and makes them federally enforceable, there will be no additional emissions reduction credit available from the shutdown of these boilers. Should Seminole Kraft decide to refurbish the dismantled bark boilers, the boilers would be treated as entirely new emissions units with none of the exemptions from applicability for existing units that are specified under PSD regulations being available.

With regard to NSPS, the existing boilers at Seminole Kraft would not become subject to NSPS if they remained intact and were merely restarted, without any physical or operational change.

If the boilers are dismantled in any fashion (i.e. key components removed) and the decision is later made to restart the boilers, then NSPS would apply. This is due to the fact that there would be an emission increase caused by a physical change to the boilers. Since the boilers were incapable of operating, the emissions would be zero immediately before the changes necessary for a restart and therefore, an emissions increase would have resulted thus triggering NSPS. This is consistent with the Wisconsin Electric Power Company decision. If changes are only necessary to accommodate a different fuel mix, then we would accept emission data just prior to the shutdown and compare with data after start up to determine if an emissions increase, and hence a modification, would result thus triggering NSPS. Furthermore, the composition of the fiber rejects would need to be evaluated to determine if the new combination of fuel would be classified as municipal solid waste (MSW). If so, then the newly promulgated NSPS regulations for municipal waste combustors would apply.

APPLICABILITY OF NSPS AND PSD IF AESCB/SEMINOLE KRAFT PROJECT IS NOT CERTIFIED

According to Mr. Cole, the bark boilers would not be subject to NSPS or PSD permit review when the fuel mixture for the bark boilers is changed from 100% bark to 75% bark/25% fiber reject mix. The basis for this determination is that the bark boilers were capable of firing the fiber rejects at the percentages anticipated as of January 6, 1975.

In order to determine the applicability of NSPS to the bark boilers due to the change in fuel type it must be ascertained if the bark boilers will have an increase in the emission rate, expressed as kilograms per hour, of a regulated pollutant and if the bark boilers could fire the fiber rejects as originally constructed. However, not enough information was provided to determine if an emission rate increase in a regulated pollutant would occur, therefore, we will assume that an increase in a regulated pollutant will occur.

Assuming that an increase will occur, then the second condition must be addressed. It is incorrect to use January 6, 1975, as the date to determine if the bark boilers were originally designed to burn the bark and fiber rejects simultaneously. The exemption to the modification provision at §60.14(e)(4) essentially states that if the existing facility could have fired the alternative fuel prior to the applicability date of

the NSPS Subpart, then the increase in the emission rate of a regulated pollutant due to the use of the alternative fuel would not be considered a modification as defined in §60.14. Since Mr. Cole indicated that on January 6, 1975, the bark boilers were capable of firing the 75% bark/25% fiber rejects mixture, the only possible applicable NSPS Subparts are Subparts D and E. If the bark boilers were capable of firing the alternative fuel prior to August 17, 1971, then neither Subpart would apply.

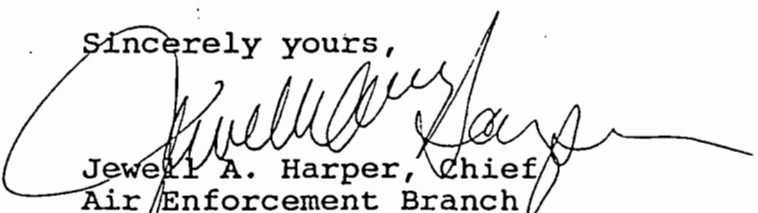
If the bark boilers were not capable of firing the alternative fuel prior to August 17, 1971, then they could be subject to either Subparts D or E or both if an increase in the emission rate of a regulated pollutant occurs. In addition, in order for Subpart E to apply, the combination of bark and fiber rejects would have to be determined to be MSW.

In addition, if the combination of bark and fiber rejects is considered to be MSW, then the bark boilers would be subject to emission standards for existing MSW combustors which will be established in accordance with the guidelines published in the February 11, 1991, Federal Register.

With regard to PSD, since the bark boilers were capable of firing bark and fiber refuse prior to January 6, 1975, then PSD review would not be required.

If you have any questions regarding this letter, please contact Mr. Brian Beals at 404/347-2904.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

ATTACHMENT C

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301
MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

October 26, 1990

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

The purpose of this letter is to confirm your previous discussion with Julie Blunden, Curt Barton, and me concerning refurbishment or replacement of existing bark boilers, or the use of such boilers to burn recycled fiber rejects as well as bark.

As you know, Seminole Kraft Corporation proposes to convert its Jacksonville mill to a 100% recycle operation. This will benefit the community in many ways, including reducing the need to landfill used corrugated containers and eliminating all TRS emissions.

In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
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that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

Permitting Requirements for Bark Boilers if AES Cedar Bay/Seminole Kraft Project Not Certified:

The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

Modification is defined in 40 CFR §60.2 (also found in Chapter 17-2, F.A.C.) as:

Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Mr. Steve Smallwood
October 26, 1990
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There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
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I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr

CITY OF JACKSONVILLE

***PRELIMINARY DOCUMENT SUBMISSION IN SUPPORT
OF MAYORAL REQUEST THAT THE
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
REOPEN THE SITE CERTIFICATION
IN THE CASE OF***

**AES/CEDAR BAY, INC./SEMINOLE KRAFT CORPORATION
CO-GENERATION PROJECT
JACKSONVILLE, FLORIDA**

CITY OF JACKSONVILLE

***PRELIMINARY DOCUMENT SUBMISSION IN SUPPORT
OF MAYORAL REQUEST THAT THE
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IN THE CASE OF***

**AES/CEDAR BAY, INC./SEMINOLE KRAFT CORPORATION
CO-GENERATION PROJECT
JACKSONVILLE, FLORIDA**



OFFICE OF THE MAYOR

ED AUSTIN
MAYOR

December 9, 1991

JACKSONVILLE, FLORIDA
32202

Secretary Carol Browner
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: AES/Cedar Bay, Inc. - Seminole Kraft Corporation
Co-Generation Project

Dear Secretary Browner:

I have reason to believe that Seminole Kraft Corporation, a co-applicant with AES/Cedar Bay, Inc. for a co-generation plant in Jacksonville, misled the Siting Board, your Department and the City of Jacksonville on a material point. One of the primary benefits of the AES project was the closure of Seminole Kraft's old bark and oil-fired boilers, which were to be replaced by AES/Cedar Bay's new coal-fired circulating fluidized bed boilers. It now appears that months before the Governor and Cabinet approved the application for site certification, Seminole Kraft Corporation had decided, and failed to disclose, plans to continue to use its old bark and power boilers. Accordingly, I request that you conduct any investigations you deem appropriate under Rule 17-17.221, Florida Administrative Code, with a view to suspending or revoking the site certification.

In November, 1988, AES and Seminole Kraft jointly applied for site certification for an electric power co-generation plant that included building a modern recovery boiler to replace two aging recovery boilers that could not economically meet the November, 1992, total reduced sulphur standards. At the time the application was submitted, Seminole envisioned continuing pulp and paper manufacturing, using the new recovery boiler to provide recovered chemicals, steam and electricity to the plant. Seminole would shut down its bark and oil-fired boilers and rely on AES's new circulating fluidized bed boilers for some of its steam needs. The applicants described the project in their application for site certification in the following terms:

The AES/Cedar Bay co-generation project is an integrated power complex to be built on an existing industrial site in Jacksonville, Florida. The co-generation plant will produce 225 MW of electricity for sale to Florida Power and Light



Carol Browner, Secretary
December 9, 1991
Page -2-

Company (FP&L), as well as process steam for sale to the adjacent Seminole Kraft Corporation paper mill.

The new kraft black liquor recovery boiler (KRB) system, owned and operated by Seminole Kraft, will burn black liquor solids, and produce 1,250 psig steam, replacing the three existing recovery boilers. A new automatic extraction condensing turbine generator will generate 42 MW of electric power for internal mill consumption as well as 600 psig and 175 psig steam for the kraft mill processes. The existing multiple effect evaporators and smelt dissolving tanks will also be replaced as part of this project.

Offsets from the elimination and replacement of old equipment with higher production levels at the mill will minimize the project's environmental impacts. Eight existing boilers at the mill will be shut down; three oil-fired and two bark-powered boilers and three kraft recovery boilers. The new CFB boilers will replace the power boilers processed steam generation, and the old kraft recovery boilers will be replaced with a modern low odor unit.

In August, 1989, Seminole applied to the Florida Department of Environmental Regulation for a construction permit to build the new recovery boiler described in the site certification application, and which was required to meet the reduced TRS standards.

In October, 1989, months before the first hearings on the site certification application, Seminole calculated it would cost more than \$230-million to build the new recovery boiler and modernize the pulp and paper machinery. It was determined that these improvements would make the company marginally profitable, at best. Accordingly, only months before the hearings on site certification, Seminole explored the possibility of converting the mill to a 100% recycle paper operation. The conversion would eliminate both the need for the new recovery boiler in the product process and the cost of modernizing the associated equipment. It would also reduce the internal steam and electrical requirements.

On January 4, 1990, weeks before the site certification hearings, Seminole amended the certification application to delete the new recovery boiler. At the hearing, Seminole Kraft explained that it planned to convert its facilities to a 100% recycling operation, and how recycling would eliminate the need for the recovery boilers and all other sources of TRS emissions. What was not explained was how Seminole Kraft would generate or obtain the 42 MW of electricity and 600 psig steam that the recovery boiler, eliminated under the 100% recycling operation, would have supplied.

Carol Browner, Secretary
December 9, 1991
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On February 16, 1990, Seminole Kraft wrote to the Department of Environmental Regulation requesting an amendment to the construction permit for the kraft recovery boiler that had once been part of the site certification package. Because the 100% recycle option was still under review, Seminole wanted to retain the flexibility of proceeding to construct the recovery boiler under the permit, or convert to recycling, shut down the old recovery boilers and retain the emission credits it would earn by eliminating the old TRS producing boiler system. The credits would be used to offset emissions from a power boiler if needed. In the request for amendment, Seminole stated "We hope to develop a project to use recycled fibre on the No. 1 paper machine in the future, and if AES cannot supply the required steam, we would like to use the credible emissions from the recovery boilers for our power boiler to supply steam to the No. 1 paper machine."

In April, 1990, Seminole notified DER that it had decided to convert the mill to a 100% recycle operation. That confirmed that a new kraft recovery boiler would not be built to provide steam and electricity. At a meeting on December 3, 1991, Mr. David Keheres, the AES/Cedar Bay Project Manager, told City counsel that Seminole had asked AES/Cedar Bay whether it could provide the electricity and steam Seminole had expected from its new kraft recovery boiler. Mr. Keheres explained that AES told Seminole that it could not. On December 4, 1991, Seminole Kraft General Manager Larry Stanley told City counsel that in April, 1990, after conferring with AES, the company decided to use the old bark and oil-fired boilers to meet that requirement. On December 6, 1991, Seminole Kraft issued a press release in which it stated "Environmental permitting agencies have been aware at least since October, 1990, of the likelihood that Seminole Kraft would seek permits for the refurbishing and reopening of two of its bark boilers."

Nevertheless, Seminole Kraft did not amend its application for site certification to alert the parties to the proceedings of its new plan to continue using the old boilers. (Yet, Seminole Kraft had amended its application for certification in January, 1990, when conversion to recycling was only an option in the evaluation stage). It did not alert the Governor and Cabinet, sitting as the State Siting Board, of this decision prior to the Board's meeting in February, 1991. Neither Seminole nor AES/Cedar Bay amended their air quality modeling data to reflect the projected emissions from the continued use of the old bark and oil-fired boilers and the elimination of the emissions from the new kraft recovery boiler. Moreover, the applicants agreed to Condition II.D, Contemporaneous Emission Reductions, which provides

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

Carol Browner, Secretary
December 9, 1991
Page -4-

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 AES/Cedar Bay 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 30 days after each individual shutdown of the above-referenced equipment. This requirement shall operate as a joint and individual requirement to assure common control for purpose of insuring that all commitments relied on are in fact fulfilled.

Unquestionably, the City of Jacksonville, the Governor and Cabinet and the Department of Environmental Regulation envisioned that those specifically named and numbered boilers would be "permanently shut down and made incapable of operation."

Seminole Kraft's decision to use the old boilers is inconsistent with the application as it was presented to the Governor and Cabinet, as well as the parties to the certification process. Therefore, as Mayor of the City of Jacksonville, I strongly urge you to investigate this matter thoroughly, suspend the site certification, and reopen the permitting process on AES to determine what the overall impact or air quality would be.

Sincerely,



Ed Austin, Mayor
City of Jacksonville

cc:
City Council Members
General Counsel
Terry Cole, Esq.
T. R. Hainline, Esq.

Page



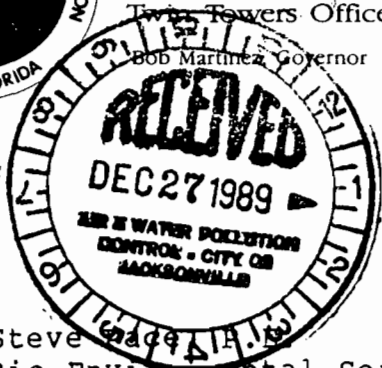
Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary



December 26, 1989

Steve
Bio-Environmental Services Division
421 West Church Street
Jacksonville, FL 32202-4111

Re: AES/Cedar Bay Cogeneration Project PA 88-24

Dear Mr. Pace:

Enclosed please find amendments 4 and 5 for the AES Cedar Bay Project.

Sincerely,

Hamilton S. Owen, Jr.

Hamilton S. Owen, Jr., P.E.
Administrator, Siting
Coordination Section
Division of Air Resources
Management

December 21, 1989

Mr. Hamilton S. Owen, Jr.
Administrator, Siting Coordination Section
Division of Air Resources Management
Department of Environmental Regulation
2000 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Owen:

Enclosed are the original and 45 copies of Amendment 5 to the Site Certification Application for the Cedar Bay Cogeneration Project. Also enclosed is a summary description of the changes made by this amendment.

This amendment includes a minor refinement of the project site arrangement. Figure 3.2-1 is revised. Other figures which show the proposed site arrangement should also be considered as incorporating these refinements.

The amendment also includes a revised construction dewatering plan. The dewatering water is now directed to the St. Johns River via the Seminole Kraft existing once through cooling water rather than to the Broward River via the construction runoff pond. Considerable additional detail is included to describe the estimates of construction dewatering water quality and the expected interactions with onsite test well data.

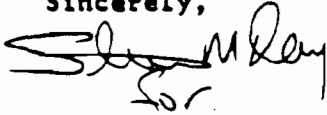
The variance and mixing zone requests associated with the construction dewatering discharges are revised through the use of the latest water quality sampling results from the onsite test wells and the Broward River. Existing water quality of the St. Johns River is also considered. Mixing zones calculations are not included with this letter, but will be submitted during the week of January 2, 1990.

This letter also serves as official notification that AES Cedar Bay, Inc., agrees to reduce NO_x emissions for the CFB boilers from 0.36 to 0.29 lb/MBtu. This reduced emission rate is made possible by the most recent guarantee of 0.29 lb/MBtu provided by the intended boiler manufacturer. This proposed limitation is revised on page 3-19 of the application, even though analyses within the application are based on 0.36 lb/MBtu. The currently proposed emissions of 0.29 lb/MBtu will reduce the NO_x emissions from the cogeneration plant given in Table 3.4-2 from 4,676 to 3,767 tons per year. In addition, the BACT evaluation will change so that the additional incremental cost for removal of NO_x , when comparing the CFB boilers alone and when equipped with SNCR, increases from about \$1,400 per ton to about \$2,000 per ton of NO_x removal. Ambient air quality impacts

AES/Cedar Bay Inc.

also will show an even greater improvement with this proposed lower emission limit. This reduced emission limit is possible through the use of CFB boilers and innovative combustion technology. The proposed emission rate is less than half of the applicable New Source Performance Standard (NSPS) and will be the lowest NO_x emission rate for any coal fired plant in Florida.

Sincerely,



Jeffrey V. Swain
Project Director

Enclosure

cc: Mr. Robert Cooper, Environmental Protection Agency (3 copies)
Mr. Steve Tribble, Florida Public Service Commission (3 copies plus
3 Volume 1 only)
Mr. Steven M. Day, Black & Veatch
Mr. Terry Cole, Esq., Oertel Hoffman Fernandez & Cole
Mr. Richard Maquire, Esq., City of Jacksonville
Ms. Kathryn Menella, Esq., St. Johns River Water Management District
Ms. L. Kathryn Funchess, Esq., Department of Community Affairs
Mr. William Bostwick, Esq.
Mr. Earl L. Barker, Jr., Esq.

10. Appendices.

The pertinent applicant information follows the Preface.

PROJECT INFORMATION

The AES Cedar Bay Cogeneration Project is an integrated power complex to be built on an existing industrial site in Jacksonville, Florida (Figure A). The cogeneration plant will produce 225 MW of electricity for sale to Florida Power and Light Company (FP&L) as well as process steam for sale to the adjacent Seminole Kraft Corporation paper mill. The project also includes installation of a new kraft recovery boiler system required to modernize the paper mill (Figure B).

The proposed cogeneration plant will burn fuel made up of approximately 96 percent coal and 4 percent bark in three circulating fluidized bed (CFB) boilers. These technically advanced boilers produce steam at 1,800 pounds per square inch gauge (psig) for a new double automatic extraction condensing turbine generator. This process will generate 225 MW as well as 640,000 lb/h of 175 psig and 75 psig process steam for the mill. These boilers will be owned and operated by AES-CB (Figure C).

The new kraft black liquor recovery boiler (KRB) system, owned and operated by Seminole Kraft, will burn black liquor solids, and produce 1,250 psig steam, replacing the three existing recovery boilers. A new automatic extraction condensing turbine generator will generate 42 MW of electric power for internal mill consumption as well as 600 psig and 175 psig steam for the kraft mill processes. The existing multiple effect evaporators and smelt dissolving tanks will also be replaced as a part of this project.

Offsets from the elimination and replacement of old equipment with higher pollution levels at the mill will minimize the project's environmental impacts. Eight existing boilers at the mill will be shut down; three oil-fired and two bark-fired power boilers and three kraft recovery boilers. The new CFB boilers will replace the power boilers process steam generation and the old kraft recovery boilers will be replaced with a modern low-odor unit.

PROJECT IMPACTS

Air

By shutting down old equipment at the paper mill, utilization of modern technology, and installation of stacks consistent with good engineering practices, the project will result in numerous benefits to the environment. Improvements will be observed in both the net annual emissions (the total amount of emissions from the project in one year), and in ambient impacts (the effects of the emissions on air quality). These improvements include reductions in the ambient concentration of sulfur dioxide (SO₂), particulate matter, volatile organic compounds (VOC), and total reduced sulfur (TRS), an odor-producing sulfur compound. Specific impacts include the following.

- SO₂--Maximum potential annual emissions will be lower than representative emissions from existing mill sources. In addition, maximum ambient impacts will be dramatically reduced as a result of this project.
- TRS--Odor causing emissions will be reduced by more than 70 percent from the current KRB's permitted emissions.
- Total Suspended Particulates (TSP)--Emissions will be significantly lower. Ambient impacts will also be significantly reduced.
- Particulate Matter Less Than 10 um (PM-10)--Emissions and ambient impacts will be reduced.
- VOC--Emissions will be reduced. Ambient impacts will be significantly reduced.
- NO_x--Emissions will increase, but will be well within the New Source Performance Standards. Ambient impacts will be significantly below applicable air quality standards.
- CO--Emissions will increase, but net ambient impacts will be significantly below applicable air quality standards.

Air emission control features on the new equipment will include the following.

- Circulating Fluidized Bed Boilers.
 - Limestone injection for SO₂ reduction.

existing internal generation and the 42 MW generation is below the 75 MW threshold in Section 403.506 Florida Statutes (1987).

In the following two orders, the FPSC applied the Section 403.519 criteria to determine the need for generating facilities not owned by electric utilities.

- Florida Crushed Stone--125 MW net, Order No. 11611, February 14, 1983¹.
- Pasco County Waste Resource Recovery Facility--29 MW net, Order No. 17752, June 26, 1987².

The Applicants request that the FPSC take administrative notice of these need determinations as providing guidance on applying the Section 403.519 criteria to the proposed project.

In addition to fulfilling the requirements of Rule 25-22.081 Florida Administrative Code, this chapter will demonstrate the following additional benefits which support the need for the project.

- Energy
 - Provides electricity to help meet increased needs in Florida.
 - Ratepayers benefit from below avoided cost pricing.
 - Project is consistent with Florida's goal to reduce dependence on oil and gas and move towards clean coal technology.
 - Cogeneration of steam and electricity results in higher thermal efficiencies, allowing a reasonable rate of return on capital while maintaining attractive product prices.
- Environmental
 - Significant reduction in total reduced sulfur emissions will improve the odor situation in Jacksonville.
 - Reductions in other air pollutants (SO₂, NO_x, particulate, etc.) due to offsets from existing oil fired boilers which will be shut down.
 - Land conservation due to location on existing industrial site.

The cogeneration plant will consist of three coal fired circulating fluidized bed boilers, an automatic extraction condensing turbine generator, and associated equipment. Net plant output will be approximately 225 MW while supplying normal steam load (approximately 640,000 lb/h) to the paper mill. Section 3.2 of this document provides a more detailed technical description of the cogeneration plant facilities. None of the power generated with the fluidized bed units will be sold to the mill.

The Cedar Bay project will also include new equipment to modernize the paper mill. The major components include a chemical recovery boiler, a 42 MW turbine generator (for the mill's internal load), concentrator, and multiple effect evaporators. Seminole Kraft will operate and maintain the new mill facilities as part of their mill operation.

A total of eight boilers in the existing facility will be shut down as part of the AES Cedar Bay Project. This old equipment will be replaced by three new coal fired fluidized bed boilers for electric and steam production and one chemical recovery boiler. The amount of steam production (used for internal chemical process applications) with the new equipment will remain approximately the same as with the old equipment.

Seminole Kraft will continue to own all of the plant site, but will lease to AES the land required for the new facilities. AES will operate and maintain only the fluidized bed power plant portion of the facility. AES is committed to close coordination and communication in establishing a well run and efficient production facility. The fluidized bed power plant portion of the facility is capable of independent operation if something were to happen to the paper mill.

The AES Cedar Bay Cogeneration Project Site is located in Duval County at 9469 Eastport Road, Jacksonville, Florida adjacent to the Seminole Kraft paper mill plant site (see Figures 2.1-1, 2.1-2, and 2.1-3). The plant location is north northeast of the center of the City of Jacksonville, approximately 9 miles from the downtown area. The plant site is between the Broward River on the west and Eastport Road on the east.

Financial Closing	November 1989
Commercial Operation	
Paper mill equipment	February 1992
Cogeneration plant	July 1992

1.3.8 Internal Benefits of the Project

Applied Energy Services' corporate strategy is to be a low-cost, long-term supplier of electricity and steam. The Cedar Bay project provides an ideal opportunity to serve two customers in need of our products at reasonable rates and with minimal environmental impact. Cogeneration of steam and electricity allows more efficient use of fuel, resulting in a profitable product while still maintaining attractive product prices. Use of coal will insulate our customers from the volatility of oil and gas prices.

Seminole Kraft Corporation, the paper mill operator, will reap many benefits from the project. The mill's long-term economic viability will be enhanced by the availability of low-cost steam; old inefficient oil fired boilers will be shut down, with the boiler output replaced by AES Cedar Bay's coal fired Circulating Fluidized Bed Cogeneration Project. Job security for the 350 mill employees will be strengthened and the area will continue to enjoy the indirect economic benefits (jobs, an annual payroll of \$23,000,000, purchases, taxes, etc.) from the mill.

The new paper mill equipment will replace high maintenance and low efficiency facilities currently at the mill. Most important, perhaps, will be the significant environmental improvements that will result from the project, which are discussed in the following section.

The power generation and steam production facility (electric generation sales to Florida Power & Light and steam sales to Seminole Kraft) is owned and operated separately from the Seminole Kraft facility and can fill the electric power sales commitments even if the paper mill is not operational.

1.3.9 Regional and State Benefits

The electricity produced at the AES Cedar Bay project will provide Florida ratepayers with many benefits.

Models used to project peak demand and energy for Peninsular Florida utilities are presented in the 1986 Annual Planning Hearing, Forecast Document¹².

The Peninsular Florida forecast was developed through an aggregation methodology which totaled the individual peninsular utility projections. This technique was chosen over a statewide forecast model in order to take advantage of the expertise of the individual utility forecasters. Individual utilities also are able to model and account for service territory specifics which may be overlooked in a state model forecast. Finally, a statewide model forecast would be difficult to disaggregate into individual utility forecasts.

The AES Cedar Bay Project will significantly contribute to the PSC's goal of reducing oil consumption. The AES Cedar Bay Project will reduce statewide oil consumption approximately 2.2 million barrels per year (based on the assumptions in Table 1.4-3) by displacing future oil consumption.

Additional oil backout from the shutdown of the oil fired boilers for site generated steam will result from the approval of the AES Cedar Bay Project. The annual consumption of oil in these existing boilers is approximately 0.8 million barrels per year.

In addition to reducing oil consumption, the AES Cedar Bay Project has the advantage of an effective heat rate for the electrical production of approximately 8,200 Btu/kWh which is a significantly better heat rate than can be obtained in any other coal burning technology. This lower heat rate implies lower air and thermal emissions, as well as lower Seminole Kraft pollution offsets than can be achieved through the separate production of electricity and steam.

The use of coal by the AES Cedar Bay Project is another factor supporting the need for the project. Using coal insulates the state's rate-payers from potential volatility in fuel prices that are historically linked to oil and gas pricing. Coal historically has been more stable and there is an abundant US supply. The use of coal also allows fuel to be obtained domestically, thus assuring the supply of electricity in the event of foreign supply interruptions.

it is also possible that the coal supply may change in the future with the renegotiation of coal supply contracts. To provide the necessary design flexibility to accommodate the use of coals with a wide range of properties, a generalized design-basis coal has been selected for use with the steam generators and particulate removal system. Designing these major components to handle this coal will provide the overall system design flexibility to burn other coals with similar properties. Properties of the design-basis coal are shown in Table 3.3-1.

The three steam generators will also be designed to burn wood waste, consisting primarily of bark, in conjunction with the primary fuel. Wood waste will be provided from the adjacent Seminole Kraft pulp and paper mill. Transport, storage, and firing equipment for wood waste combustion, however, will be provided for only two of the three steam generators. Each steam generator will be capable of firing wood waste at a rate equivalent to 10 percent of the total heat input to the steam generator at maximum continuous rating. Within the control range of the steam generator, the wood waste feed rate will be constant, with the load fluctuations handled by adjusting the primary fuel feed rate. Typical properties of wood waste are shown in Table 3.3-2.

The steam generators will be started with No. 2 fuel oil. During periods of low load operation, No. 2 fuel oil will also be used for stabilization. The emergency fire pump, mobile coal handling equipment, and other vehicles will use gasoline or diesel fuel.

3.3.2 Fuel Quantities

Based on the design coal in Table 3.3-1, the coal consumption rate will be 145 tons per hour. At the design capacity factor of 87 percent, the annual coal consumption for the cogeneration plant would be 1,105,000 tons per year.

Based on operation with a combination of design-basis coal and wood waste, the wood waste consumption rate for each steam generator will be approximately 8 tons per hour. The annual wood waste consumption, assuming

3.4 AIR EMISSIONS AND CONTROL

3.4.1 Air Emission Types and Sources

The cogeneration project is subject to the permitting requirements of the Prevention of Significant Deterioration (PSD) program. PSD permit requirements apply because the net emissions increase of at least one regulated pollutant exceeds the "significant" levels defined by EPA and FDER. The air quality assessment for all applicable pollutants must meet PSD permit requirements including a Best Available Control Technology (BACT) determination.

Net pollutant emissions are determined by comparing emission rates of the proposed facility against those of the existing Seminole Kraft sources to be replaced. The replaced sources will be three power boilers (PB), two bark boilers (BB), three kraft recovery boilers (KRB), and three smelt dissolving tanks (SDT). An emissions inventory of these sources was compiled for the years 1978 through 1987. Although below the maximum capacity of the mill, the period 1983-1984 was found to be the most representative back-to-back years of normal operating conditions. The 1979-1980 operating period was originally selected as the most representative operating period in the AES Power Plant Site Certification Application. However, additional examination of the mill's records determined that sharp increases in fuel costs during 1980-1981 had caused the plant to adjust fuel usage to minimize oil consumption and, as a result, reduced pulp production in 1982. Therefore, a period after 1982 is more representative of current operations.

Limited plant operating hours in 1985 and 1987, and a plant shutdown in 1986 preclude the 1985-1987 data from further consideration. The operating conditions in 1983-1984 best represent normal plant operations as evidenced by pulp production rates and fuel oil usage rates. Thus, the 1983-1984 data will be used as representative of the normal operating condition at the existing pulp mill. These rates are shown in Table 3.4-1.

The 1983-1984 emissions are shown in Table 3.4-1a. The total actual emissions of the existing sources have been adjusted to represent the effect of recent control techniques and an imposed particulate emission limit. Specifically, the SDT emissions are adjusted to reflect a reduction

Other wastewaters will be treated and disposed of as discussed in Section 3.5. No impacts are expected because the loading to the existing Seminole Kraft treatment system will not be increased as a result of the shutdown of the existing power, bark, and recovery boiler waste streams.

5.6 AIR QUALITY IMPACTS

The project will replace older, less environmentally efficient equipment with advanced kraft recovery boiler and clean coal technology, resulting in numerous environmental benefits. Major reductions are anticipated in ambient impacts of sulfur dioxide (SO₂), total suspended particulate matter (TSP), and particulates matter with aerodynamic diameters less than 10 microns (PM₁₀). In addition, the maximum total reduced sulfur (TRS) emission rate from the new recovery boiler will be lower than that from the existing kraft recovery boilers. This will result in a significant reduction in ambient air quality impacts and odor effects due to TRS emissions.

The air quality impacts resulting from the operation of the Cedar Bay Cogeneration Facility include the direct effects on pollution levels in the power plant vicinity and the further effects of those pollutants on human health and welfare. Subsections 5.6.1 through 5.6.4 describe the air quality impacts of the facility. This air quality assessment is used to support the PSD permit application.

5.6.1 Pollutant Applicability

Pollutant applicability is determined in Subsection 3.4.1 and is briefly summarized here. The pollutant applicability was determined by comparing emission rates of the proposed facility against those Seminole Kraft sources being replaced. An applicable pollutant is a regulated pollutant which has a net emission increase that exceeds "significant" levels defined by EPA and FDER.

Subsection 3.4.1 identified that nitrogen oxides (NO_x), carbon monoxide (CO), lead (Pb), beryllium (Be), mercury (Hg), fluorides, and sulfuric acid mist would be subject to the PSD permitting requirements. The permit requirements include BACT determination and air quality impact

existing sources. Although SO₂ was netted out, modeling was performed to show the benefit to sensitive air quality areas obtained by replacing the existing Seminole Kraft sources with more environmentally efficient sources. Also, because of the absence of specific standards, air quality impact assessments were not required for the applicable noncriteria pollutants.

3

Air dispersion modeling is based on the facility configuration as shown on Figure 3.2-1.

1

3

As previously described in Subsection 5.6.2.1, the concept of net emission impact modeling was used for each applicable pollutant. The permitted (maximum allowable) emission rates for those Seminole Kraft sources to be replaced were used to establish short-term air quality base impacts. The actual emissions were used for determining the annual base impacts. Modeling for the proposed sources to determine short-term impacts was based on the maximum expected emission rates. Annual modeling of the proposed sources was based on 1.70 percent sulfur content for the coal used in the CFB. The CFB was conservatively modeled at 100 percent capacity. The area of modeling interest is the significant impact area as defined by the proposed sources alone.

3

5.6.3.1 Sulfur Dioxide Concentrations. This assessment evaluates impacts at sensitive air quality areas. These areas include the SO₂ PSD Class I area and the three FDER modeled exceedance locations.

3

Mr. Stanley

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,
Petitioner,

CASE NO. 88-5740

vs.

DEPARTMENT OF ENVIRONMENTAL
REGULATION,
Respondent.

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC SERVICE
COMMISSION, and ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT, JACKSONVILLE
ELECTRIC AUTHORITY, CHARLES L. BOSTWICK,
BARNETT BANK TRUST COMPANY, IMESON
INTERNATIONAL PARK, INC., and INDUSTRIAL
PARK DEVELOPMENT CORPORATION,

STATE OF FLORIDA)

COUNTY OF DUVAL)

TESTIMONY and PROCEEDINGS before the Honorable
ROBERT T. BENTON, Hearing Officer, at 8050 Baymeadows
Road, Jacksonville, Duval County, Florida, on Monday,
Tuesday, and Wednesday, the 5th, 6th, and 7th days of
February, 1990, before Terry T. Hurley, a Notary Public
in and for the State of Florida at Large.

VOLUME I

(Pages 1 - 274)

DAWOOD & HOGAN
828 Blackstone Building
Jacksonville, Florida 32202
(904)353-5300

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the new recycling facility would you be replacing any permitted air sources that you're aware of now?

A No.

Q Would there still be a requirement for power and for steam for the mill?

A Absolutely. The steam requirements would exist for the manufacture of paper in the future as they do currently.

Q How would the proposed project effect the AES project?

A There would -- there would be a reduction in the amount of steam. I don't -- I don't have the exact numbers at this time, and won't have them until engineering is complete, based upon a one machine operation.

Q Would you still need steam from some source?

A Oh, yes.

Q In terms of the election of construction of a power boiler, or of shutting it down and going to the recycled operation, is there a change in whether this project is required?

A We still require the source of steam in order to operate the mill and manufacture paper. Steam is a basic requirement of paper manufacturing.

Q Do you currently generate steam in-house?

Mr. Nelson

1 eat early and be back at 1:20.

2 (At, thereupon, the hearing was recessed at
3 12:40 p.m. to be reconvened at 1:40 p.m. of the
4 same day.)

5

6

7

A F T E R N O O N S E S S I O N

8

February 7, 1990

1:45 p.m.

9

THE HEARING OFFICER: Call your next witness.

10

MR. COLE: Mr. Nelson.

11

12

DANIEL WILLIAM NELSON,

13

having been produced and first duly sworn as a witness,

14

testified as follows:

15

16

DIRECT EXAMINATION

17

BY MR. COLE:

18

Q Would you state your full name and business

19

address, please.

20

A My name is Daniel William Nelson, and my

21

business address is 11401 Lamar, Overland Park, Kansas.

22

Q Okay. Could you briefly summarize your

23

education and experience.

24

A Okay. I have a Bachelor of Science degree in

25

meteorology. That was in 1975. Since then I've worked

1 into the air.

2 So with -- we'll get into it a little bit
3 further, but by putting our facility in there we
4 have improved the dispersion capability of the
5 facility by replacing these older outdated power
6 boilers.

7 THE HEARING OFFICER: All right. The recovery
8 boilers are to be shut down in any case.

9 THE WITNESS: The recovery boiler, as I
10 understand, with Seminole Kraft changing their
11 operation to a recycling mode, they will no longer
12 be required. And that's a separate issue from what
13 we're doing here.

14 THE HEARING OFFICER: All right. And how
15 about the bark boilers, are they going to be used
16 to recycle paper into liner board?

17 THE WITNESS: The bark boilers will be
18 replaced with the Seminole Kraft facility, so they
19 won't need any of those boilers anymore, the power
20 boiler and the bark boiler.

21 Any steam requirements that they need will
22 come from the AES project.

23 THE HEARING OFFICER: I guess my question is
24 whether when they go to their new process they're
25 going to have any bark that they could have used in

**Seminole Kraft Corporation**

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

February 16, 1990

904 751-6400

Mr. C.H. Fancy, P.E.
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

This letter is to request an amendment to construction permit No. AC16-168607 (Kraft Recovery Boiler) for our mill in Jacksonville, As indicated earlier, Seminole Kraft has engaged in extensive engineering studies related to the proposed new recovery boiler installation as well as examining how best to position the mill for the future. These studies have concluded that the mill is a high cost operation in its current configuration and would remain so even after the installation of the new recovery boiler currently estimated to cost \$130,000,000.

Accordingly, three months ago, Seminole Kraft began an investigation to determine what technology alternatives to the recovery boiler project might provide an improved environment to the City of Jacksonville and a mill that would be more competitive in domestic and foreign markets in the future.

An alternative has been tentatively selected that will provide the business with the stability required to insure a long term viable operation. This alternative provides for reconfiguration of the existing mill to enable it to use 100% recycled fiber instead of virgin fiber to produce 1,200 tons per day of linerboard on our existing No.2 paper machine. The kraft pulp mill, old recovery boilers and associated facilities will be permanently shut down and the No.1 paper machine will be placed on cold standby. This alternative will result in the elimination of all regulated TRS (odor) emission sources prior to the stated November 12, 1992 deadline as well as substantial reductions in particulate emissions. This conversion will increase the use of recycled fiber at the mill from about 100 TPD to about 1,400 TPD and will substantially increase Florida's waste paper recycle rate.

Mr. C.H. Fancy, P.E.
February 16, 1990
Page 2

As we discussed, the best approach to providing regulatory approval of this alternative appears to be an amendment to the specific conditions in the new recovery boiler construction permit. We believe this new condition should relieve Seminole Kraft of the obligation of building a new recovery boiler if Seminole chooses to shut down the kraft pulping operation, old recovery boilers and related facilities by supplying recycled fiber to the paper machine instead of virgin wood pulp from the kraft pulp mill. In addition, this new condition would require Seminole Kraft to turn in the operating permits for the old recovery boilers once the recycle operation is up and running and to make the old recovery boiler incapable of operation. We believe this specific condition should also provide the mechanism for retaining the recovery boiler creditable emission reductions for potential use by Seminole Kraft pursuant to 17-2.500(2)(e) 3 & 4. As noted, our No.1 paper machine (presently making bag paper) will be placed on cold standby for the time being. However we hope to develop a project to use recycle fiber on the No.1 paper machine in the future and if AES cannot supply the required steam, we would like to use the creditable emissions from the recovery boilers for a power boiler to supply steam to the No.1 paper machine.

Finally, this specific condition should provide for notice to DER of Seminole Kraft's final decision to pursue this alternative or proceed with the new recovery boiler by a date certain.

To facilitate development of the language for this amendment, we have prepared the draft specific condition shown below for your consideration.

15. Seminole Kraft Corporation has indicated to the Department that as an alternative to replacing the three existing kraft recovery boilers with a new recovery boiler, it may choose to convert the mill to a 100% recycle fiber operation and close down the kraft pulp mill, recovery boilers and associated facilities. In the event that Seminole Kraft chooses this alternative, the following conditions apply:

- a. The existing kraft pulp mill, including three recovery boilers, three smelt dissolving tanks, digester system, three lime kilns and three multiple effect evaporators, will be permanently shut down and be made incapable of operation by November 12, 1992. Operating permits for these sources shall be turned into the BESD office by this same date.

Mr. C.H. Fancy, P.E.
 February 16, 1990
 Page 3

- b. Notice of Seminole Kraft's decision to proceed with construction of a new recovery boiler or to convert the mill to 100% recycle fiber operation shall be provided to DER and BESD by May 1, 1990.
- c. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation, it shall submit semi-annual progress reports to DER and BESD by June 30 and December 31 of each year until the recycle fiber project is completed and in operation.
- d. If Seminole Kraft chooses to convert the mill to 100% recycle fiber operation and shuts down the kraft pulp mill sources listed in a. above, the following creditable emission reductions are available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier.

CREDITABLE EMISSION REDUCTIONS (TPY)
 (1983-84)*

<u>Source</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>TRS</u>
3 existing Recovery Boilers	427.2	320.5	1481	321.1	2327.2	89.3
3 Existing Smelt Dissolving Tanks	122.6	109.7	8.6	-	-	8.9
3 Existing Lime Kilns	74.1	72.6	1.4	98.1	21.2	17.3
No.1 & No.2 Lime Slaker (shut down in 1988)	140.5	133.0	-	-	-	-
No.3 Lime Slaker	14.0	12.8	-	-	-	-

*Note that emissions for the recovery boilers, smelt dissolving tanks, and lime slakers are the same as in the PSD construction permit application (see Attachment A). The emissions for the lime kilns are based on 1983-84 operating hours, but today's control technology/emission limits. See Attachment B for details.

Mr. C.H. Fancy, P.E.
February 16, 1990
page 4

We hope this information will be adequate to proceed with processing the proposed amendment. Please let us know if you require any additional information. We would be happy to meet with the Department to help expedite the handling of this matter.

Sincerely,



L.A. Stanley
General Manager

ah

CC: Steve Smallwood
Dale Twachtmann
James L. Manning ✓
Richard Maguire
Mike Riddle
Curt Barton
Al Koleff

ATTACHMENT A

(Table 4-3 from Original Recovery Boiler PSD Application)

Table 4-3 Baseline Emissions (1983-1984) from Existing Recovery Boilers and Smelt Dissolving Tanks at Seminole Kraft

Pollutant	Annual Baseline Emissions (TPY)						Totals
	RB1	RB2	RB3	SDT1	SDT2	SDT3	
Particulate Matter (TSP)	143.8	144.4	139.0	31.3	48.4	42.9	549.8
Particulate Matter (PM10)	107.9	108.3	104.3	28.0	43.3	38.4	430.2
Sulfur Dioxide	429.5	519.8	531.7	2.5	3.0	3.1	1,489.6
Nitrogen Oxides	94.4	112.7	114.0	-	-	-	321.1
Carbon Monoxide	674.9	816.8	835.5	-	-	-	2,327.2
Volatile Organic Compounds	100.0	119.4	120.8	-	-	-	340.2
Total Reduced Sulfur	25.2	31.3	32.8	2.6	3.1	3.2	98.2
Lead	.012	0.13	0.12	-	-	-	0.37
Mercury	-	-	-	-	-	-	-
Beryllium	0.0090	0.0098	0.0090	-	-	-	0.0278
Sulfuric Acid Mist	6.18	6.76	6.19	-	-	-	19.1
Inorganic Arsenic	-	-	-	-	-	-	-
Fluorides	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-
Vinyl Chloride	-	-	-	-	-	-	-

Note: TPY = tons per year

ATTACHMENT B

Basis for Lime Kiln Creditable Emissions

Particulate Emissions - actual data from 1983-84 Annual Report
 PM₁₀ - used AP-42 Table 10.1-4 and particulate emissions from
 1983-84 Annual Report.

NO_x used NCASI Technical Bulletin No. 107, April 1988

Kiln

No.	<u>mmBTU/Year</u>		<u>Tons NO_x/Year</u>		<u>Average</u>
	83	84	83	84	
1	156150	89535	12.5	7.16	9.8
2	241883	322084	37.5	49.9	43.7
3	267245	308848	41.4	47.9	<u>44.6</u>
				Total	98.1

TRS emissions calculated from actual gas flow rates in 1983-84
 and at 20 ppm TRS as H₂S. This would correspond to permit limit
 today.

CO used AP-42 Table 10.1-1 (0.1 lbs/ADUP)

<u>Year</u>	<u>Pulp Produced</u>	<u>CO Emissions (TPY)</u>
	<u>(Tons-ADUP/Year)</u>	
1983	410,238	20.5
1984	436,032	<u>21.8</u>
		Avg. 21.2

For SO₂-use data compiled in 1989's operating permit application.

<u>Kiln</u>	<u>SO₂ Emission</u>	<u>Avg. Hours</u>	<u>SO₂</u>
	<u>Rate</u>		
No.1	0.16 lb/hr	3882	0.31
No.2	0.06 lb/hr	6829	0.21
No.3	0.24 lb/hr w/noncondensibles	7462	<u>0.90</u>
		Total	1.42

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STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

AES CEDAR BAY, INC., and
SEMINOLE KRAFT CORPORATION,
Petitioner,

vs.

Case No. 88-5740

DEPARTMENT OF ENVIRONEMNTAL
REGULATION,
Respondent.

CITY OF JACKSONVILLE, DEPARTMENT
OF COMMUNITY AFFAIRS, PUBLIC SERVICE
COMMISSION, and ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT, JACKSONVILLE
ELECTRIC AUTHORITY, CHARLES L. BOSTWICK,
BARNETT BANK TRUST COMPANY, IMESON
INTERNATIONAL PARK, INC., and INDUSTRIAL
PARK DEVELOPMENT CORPORATION.

STATE OF FLORIDA)
COUNTY OF DUVAL)

TESTIMONY and PROCEEDINGS before the Honorable
ROBERT T. BENTON, Hearing Officer, at 7071 103rd Street,
Jacksonville, Duval County, Florida on Tuesday,
the 20th day of February, 1990, 9:00 a.m., before
LeeAnne T. Roberto, a Notary Public in and for the State
of Florida at Large.

VOLUME IV
(Pages 803-1055)

DAWOOD & HOGAN
828 BLACKSTONE BUILDING
JACKSONVILLE, FLORIDA 32202
(904) 353-5300

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1 And the steam for the drying part of the paper
2 making process, I think -- but -- what, there are
3 only two boilers that are used to produce steam to
4 generate power; is that correct?

5 MR. COLE: Your Honor, there are -- there
6 are five power boilers and two bark boilers.

7 THE HEARING OFFICER: All right. Five
8 power boilers and two bark boilers. And the bark
9 boilers generate steam just for the paper making
10 process?

11 MR. COLE: Excuse me for one second, your
12 Honor. I apologize.

13 (Pause)

14 MR. COLE: Okay. Your Honor, there are a
15 total of five, five power boilers that are involved
16 in this proceeding in terms of being shut down, if
17 this project is approved. And there would be --
18 there is a condition in the D.E.R. Conditions of
19 Certification that would require those to be shut
20 down and made inoperable and the operating permits
21 surrendered. So that the offsets that are
22 authorized under 17.2 Florida Administrative Code,
23 the offsets of the emissions from those would
24 actually be realized.

25 D.E.R. would be concerned -- I'm looking

1 at you, Betsy, because I know that was one of the
2 major concerns of D.E.R. -- is that if this is
3 approved, that those old boilers not continue to
4 operate after these are commenced -- the new ones
5 are commenced operating.

6 THE HEARING OFFICER: All right. So
7 there are eight boilers now and you're only
8 proposing to shut down five?

9 MR. COLE: That's correct. If the other
10 part that you heard of -- and we'd make clear we're
11 not relying on this in this proceeding, but we felt
12 we needed to brief you on what was happening, as
13 well as other parties that had -- were somewhat
14 familiar with it.

15 Separate from this proceeding, Seminole
16 Kraft is -- whether -- it should not be an issue in
17 this proceeding. We're not relying on any of
18 those. But separate from this, it is proposing to
19 shut down the other air sources at the mill and
20 convert it to a recycling operation. That was the
21 testimony of
22 Mr. Stanley. And that would involve shutting down
23 the other three boilers that produce steam as well
24 as recover chemicals, which is why they're called
25 recovery boilers.

1 But the work has been done as if it was
2 burning bark.

3 THE HEARING OFFICER: Of course, if you
4 switched to this other process, the recycling, then
5 you wouldn't have bark to fuel the -- two of the
6 five existing boilers?

7 MR. COLE: That's correct, but they would
8 not -- they probably would operate -- they are
9 capable of burning oil, also. So they can burn oil
10 in those instead of bark and are permitted to do
11 so. So that would be, if the -- depending on the
12 steam requirements, that's something that they
13 might have to do. But they are permitted either
14 way, I believe.

15 THE HEARING OFFICER: All right. Now,
16 when built, there would be -- is it correct that
17 there will be two separate operations; that there
18 will be one operation to generate electricity for
19 Seminole Kraft and another operation to generate
20 electricity for resale?

21 MR. COLE: That is correct, the way it
22 was proposed prior to the amendment, your Honor.
23 The -- Seminole Kraft, if it built the new recovery
24 boiler, would also generate about forty-five
25 megawatts -- is that -- forty-two megawatts of

1 electricity for use in the mill.

2 If the recycle -- if the recovery boiler
3 was not built, then Seminole Kraft would buy
4 electricity from J.E.A. They would not buy
5 electricity from A.E.S. Cedar Bay. They would
6 still get steam --

7 THE HEARING OFFICER: So the forty-two
8 megawatts were anticipated from the replacement
9 recovery boiler?

10 MR. COLE: That's correct.

11 THE HEARING OFFICER: Which will only be
12 built if you do not switch to the recycling?

13 MR. COLE: That's correct.

14 I have an answer to your question more
15 precisely on stack heights, your Honor.

16 The oil fired units have a stack height
17 of one hundred and six feet. The bark boilers have
18 a stack height of one hundred and thirty-six feet.
19 And that's found in Table 5.6-4. And it's also --
20 the page number would be page 5-42 of Volume II of
21 the application.

22 THE HEARING OFFICER: Thank you.

23 All right. Now, so again, these -- the
24 analysis, where some parameter is netted out, all
25 right, so that before was the five non-recovery

HO Recommended order
APR 1990

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5. SJRWMD, the water management district with jurisdiction over consumptive uses in the area, contends that petitioners should not be permitted to use groundwater for cooling purposes for more than seven years, at least without demonstrating a need for an extension, at a later time. The City of Jacksonville and Jacksonville Electric Authority originally opposed certification, but now recommend that certification be granted on certain conditions to which the petitioners have agreed.

6. On these same conditions, the Department of Community Affairs, the state planning agency, concurs in the view that certification should be granted. A nominal intervenor only, the PSC has had no involvement in the case since entry of its order granting determination of need. The private intervenors, all land owners in the vicinity, have entered into stipulations with petitioners, and do not oppose certification.

Coal-fired Plant

7. The plan is to burn two 90-car train loads of soft coal a week to produce steam to generate electricity for use downstate, while reusing part of the steam for manufacturing paper, some of which may be used even further away. With some exceptions, adverse environmental effects will be more localized. Certain gaseous products of combustion may eventually become a component of much of the earth's atmosphere. The coal is to be mined in West Virginia. But other air pollutants will precipitate nearby, and (treated) wastewater will be dumped in the St. Johns River for the life of the plant.

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8. In addition to coal, the facility may burn a small amount of wood waste (or rejected recycling material) from the Seminole Kraft paper mill. (T.141, 170) The coal for which the applicants have contracted has by no means the lowest sulfur content commercially available, but a witness testified that it could be considered a low sulfur coal. (T.143)

9. Natural gas is far and away the cleanest fossil fuel. But cold weather can render supplies unreliable. For much of the year, natural gas, which is produced domestically, costs less than fuel oil, which may be imported. Not until hearing did the applicants seek leave to amend to use natural gas, and then only in auxiliary fuel burners. Although natural gas mains near the site make delivery feasible, designers of the plant did not originally take this into account.

10. The applicants adduced testimony that uncertainty about price and availability militate against choosing natural gas for a "base load" generating facility. But it is a simple matter to use fuel oil as a stop-gap, if necessary. At least one electrical generating plant in Florida already uses natural gas as its principal fuel. The evidence was not entirely clear why a 225-megawatt plant hundreds of miles from Florida Power and Light Company's vast service area should be deemed "base load." Or why natural gas's wintertime drawbacks should determine the fuel for this plant, given that Florida Power and Light Company experiences its peak loads in the summertime.

11. Construction of the new cogeneration facility will allow the existing bark boilers and oil-fired power boilers at

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the mill to be shut down. (T.683; AES Exhibit No. 6, SCA P.3-15, 5-34) Seminole Kraft is under orders to close down the most egregious of its several air pollution sources, in any event. At present, acid rain (whatever its cause) peels paint off cars in the vicinity, and the incidence of lung cancer is higher in Duval County than in any other county in Florida.

12. Construction plans call for digging a pit and lining it for coal storage. This would require "dewatering", i. e., pumping groundwater (presently contaminated) into the river until the pit could be lined, in order to prevent flooding the excavation. See paragraphs 21-34.

13. At least initially, the plan is to use millions of gallons of groundwater a day for cooling. Cooling water pumped through the power plant condenser will flow from the condenser to the top of and down through the cooling tower. The cooling tower can be smaller than a natural draft tower, because fans will create a steady flow of air. (AES Exhibit No. 6, SCA P.8-3) Part of the water evaporates and part flows to the cooling tower base to be used again for cooling. (T.363) In this open recirculating cooling system (T.363) constant evaporation of water in the cooling tower requires introduction of additional water or "make-up." (T.364)

14. Because the system is recirculating, dissolved solids tend to build up in the water, so that a portion of the recirculating water must be discharged as "blow-down." (T.365) Concentrations will increase about 4.5 times between "blow-downs." (AES Exhibit No. 6, SCA P.3-33) Average blow-down will

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be approximately 900,000 gallons per day. (T.366) Approximately 4 million gallons of water per day from the Floridan Aquifer are to be used for cooling tower make-up, when operations begin. (T.360) See paragraphs 61-75.

15. Three circulating fluidized bed boilers (CFBs) will supply steam to a single steam turbine that will drive the electrical generator. (AES Exhibit No. 6, SCA P.3-1) Thermodynamically very efficient, this technology is encouraged by both federal and state law. (T.141) Three CFBs of the size planned are more reliable than a single larger unit. (T.178, 179)

16. The CFB design makes for recirculation and reburning of ash, which allows the boilers to operate at a lower temperature, producing less nitrogen oxide. (T.172) Pulverized limestone will be injected into the boilers to react with sulfur dioxide produced during combustion. (T.171, 172, 1175) A cyclone at the boiler flue gas exit is designed to knock heavy ash particles down and reinject them into the boiler. (T.173, 175, 176) Flue gas from each boiler will then enter a "baghouse" with fabric filters which remove over 99% of particulate material. (T.174-176) A separate baghouse will be provided for each boiler (AES Exhibit No. 6, SCA P.3-1) but flue gas leaving the baghouses will be routed up a single stack. (T.196) See paragraph 35.

17. This stack will be approximately 425 feet high, to prevent downwash and promote good dispersion of air emissions. Stacks at the existing mill are relatively low (approximately 100

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control technology for control of emissions of carbon monoxide.
(T.689)

41. The CFBs are equipped with digital controls and emissions monitors that provide a continuous record of emissions of SO_2 , NO_x , and carbon monoxide. (T.692) Test points will be downstream from the emissions control devices but upstream from the stack. Continuous monitors will be tied in with systems controls. The SO_2 monitor will directly control how much limestone is injected into the boiler. An opacity monitor will make it possible to evaluate the efficiency of the fabric filters. (T.693) Because each boiler will have a spare filter compartment, (T.693) a problem compartment can be taken off line, without having to shut down the plant or suffer an emissions exceedance. (T.694)

42. The smokestack can also be expected to emit certain non-regulated, non-criteria pollutants. These include beryllium, chlorine, and sulfuric acid mist. But of these pollutants can be expected, instead of entering the atmosphere, to condense onto fly ash and be removed with fabric filters. (T.696) which represent best available control technology for control of these pollutants as well. (T.697).

43. An analysis was also performed to determine effects the proposed facility would have on ambient air quality (T.739) with specific reference to whether it would emit air pollutants above significance criteria established by the EPA. (T.750) Under EPA regulations to which DER also adheres, the applicants benefit from Seminole Kraft's abysmal history of air

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pollution in the sense that proposed emissions are evaluated only to the extent they alter the status quo. Emission rates for carbon monoxide, nitrogen oxide, lead, beryllium, mercury, fluorides and sulfuric acid mist will increase. Projected increases in emission rates for these pollutants are above EPA significant emission rates. AES Exhibit No. 22.

44. The country is divided into areas with different classifications, for purposes of the prevention of significant deterioration program. The Okefenokee Swamp National Wildlife Refuge or Okefenokee Wilderness Area, only 35 miles from the proposed facility at the nearest point, is the closest Class I area to the proposed facility. (T.752) The Jacksonville area, with the largest concentration of people in north Florida, is in a Class II area, in which greater degradation of air quality is allowed. (T.752, 753)

45. Modeling results indicated that replacing bark boilers and power boilers at Seminole Kraft's paper mill with the proposed cogeneration facility will result in significant reductions in concentrations of certain pollutants at ground level, near the new, higher smokestack. (AES Exhibit No. 6, P.5-52; AES Exhibit No. 23, diagrams and charts) Predicted concentrations of carbon monoxide, nitrogen oxide and lead do not exceed ambient air quality standards. Net improvement in some parameters was also noted at the Okefenokee Swamp Class I area boundary. (AES Exhibit No. 23, diagrams and charts) Modeling for Cedar Bay Road, St. Johns River Power Park, Arlington, and Jacksonville City Hall suggested reductions of approximately 90

percent in sulfur dioxide reaching those sites. (AES Exhibit No. 24; T.783)

46. If constructed and operated as planned, the facility would comply with state ambient air quality standards, and with the prevention of significant deterioration rules administered by the Department of Environmental Regulation and the Environmental Protection Agency. (T.785, 786, 788)

Noise

47. During construction, pile-driving, earth moving equipment, and, in the latter stages, steam blowing will cause loud noises. (T.826) Pile driving will only take place during the day, and mobile equipment would be muffled with standard silencing techniques. (T.836-837) A public awareness campaign prior to commencement will warn of noise from steam blowing. (DER Exhibit No. A, Proposed Conditions Section XXIV)

48. The Jacksonville Noise Ordinance specifies maximum allowable noise from operations (but not construction) (T.836) by octave band. (T.827) More noise is allowed in some areas than in others. The proposed facility is in a Class C industrial area and the surrounding areas are Class C (commercial/business) and Class B (residential). The ordinance proscribes different noise levels for night than for day. (T.828)

49. Using accepted procedures for estimating noise emissions and evaluating impacts on receptors in the community, the site layout proposed will meet the requirements of Jacksonville's noise ordinance. (AES Exhibit No. 6, SCA P.5-62; AES Exhibit No. 12 Attachments; T.829-834) Fans and material

handling equipment will be enclosed to minimize noise emissions.

(T.926, 935)

Water Quality: Effects From Operations

50. Operating the plant will require dealing with seven categories of wastewater (T.941): stormwater runoff from developed areas not devoted to storage, cooling tower "blow down," plant drain system effluent, regeneration waste water from the demineralizer, condensate polisher waste water, waste water from cleaning metal, and runoff from the area where coal, limestone and pelletized ash are to be stockpiled.

51. A retention pond will collect rain water running off the developed area of the plant not devoted to storage. Solids the runoff picks up will settle out there, under ordinary conditions, and be monitored in accordance with EPA and DER requirements prior to discharge, ultimately to the St. Johns River. (T.941) But a 24-hour 25 year return storm will cause the retention pond to overflow into the Broward River.

52. Waste water from the boilers will be used in the cooling tower system. As required by DER and EPA, cooling tower blow down will be monitored prior to being discharged to the St. Johns River, (T.942) via the existing Seminole Kraft outfall. (AES Exhibit No. 6, SCA pp. 5-10)

53. Plant drains will be routed to an oil-water separator for removal of oil picked up in the plant. After separation and monitoring, waste water will be sent to Seminole Kraft's clarifier and aeration pond system. (T.942-3) The demineralizer that purifies water for use as make up in the

9. Prior to commercial operation of each source, the permittees shall each submit to the BAR a standardized plan or procedure that will allow that permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible.

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.

III. WATER DISCHARGES

Any discharges into any waters of the State during construction and operation of AESCB shall be in accordance with all applicable provisions of Chapters 17-3, and 17-6, F.A.C., and 40 CFR, Part 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category, except as provided herein. Also, AESCB shall comply with the following conditions of certification:

A. Plant Effluents and Receiving Body of Water

For discharges made from the AESCB power plant the following conditions shall apply:

1. Receiving Body of Water (RBW) - The receiving body of water has been determined by the Department to be those waters of the St. John's River or Broward River and any other waters affected which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

2. Point of Discharge (POD) - The point of discharge has been determined by the Department to be where the effluent physically enters the waters of the State in the St. John's River via the SKC discharge outfall 001, which is the existing main outfall from the paper mill emergency overflow to the Broward River

3. Thermal Mixing Zones - The instantaneous zone of thermal mixing for the AESCB cooling system shall not exceed an area of 0.25 acres. The temperature at the point of discharge

Mayor Manning Hester DeLeon

*GREG
HADDEN
741
D...*
December 2, 1991

Honorable Ed Austin
Mayor
City of Jacksonville
14th Floor, City Hall
220 East Bay Street
Jacksonville, Florida 32202

RECEIVED
DEC 11 1991
MAYOR'S OFFICE
JACKSONVILLE, FLORIDA
Office of General Counsel
Environmental Division

Dear Mayor Austin:

We appreciate your consistent willingness to keep an open mind about AES/Cedar Bay, to thoroughly examine the issues and base your decisions on the facts. Several recent issues have been miscast by the media concerning AES/Cedar Bay's unchanged commitments to provide steam to Seminole Kraft and to cause the surrender of operating permits for 5 of Seminole Kraft's boilers. I am concerned that inaccurate information in the media has unfairly cast a shadow over the AES Cedar Bay project and am writing to provide you a complete picture of this issue.

ISSUE: AES/Cedar Bay cannot provide the amount of steam originally promised to Seminole Kraft ?

AES Cedar Bay has long maintained that it would provide approximately one-half of Seminole Kraft's steam needs. We have never intentionally misled anyone into thinking that we would supply all of the steam requirements of the mill. In fact the projects' Site Certification Application (SCA) clearly shows that Seminole Kraft intended to produce a portion of its own steam.

The original agreements between Seminole and AES were reached, and the SCA filed, during a time when the mill was, and planned to be, a kraft process pulp mill. As you are aware a kraft process pulp mill requires the operation of recovery boilers to process byproducts while producing steam. By necessity, these operating plans changed as a result of their recycle conversion.

ISSUE: AES/Cedar Bay is renegeing on promises to cause surrender of operating permits for 5 of Seminole Kraft's boilers?

AES Cedar Bay received its Site Certification based on the requirement that operating permits currently held by Seminole Kraft for two (2) bark boilers and three (3) power boilers would be surrendered to the State of Florida. As outlined above, the original agreements between Seminole and AES were reached and permits filed on the assumption that the mill would operate as a kraft pulp mill with an associated recovery boiler. Thus when Seminole Kraft made the decision to convert to a recycled fiber mill, the steam production from the recovery boiler had to be replaced as it would no longer operate.



Page 2 of 2

In order to determine how best to supply their share of steam, Seminole Kraft commissioned a study by Sandwell Engineering to evaluate many options for replacing the steam production from the recovery boiler and to burn waste fiber from the recycle process. That study was completed in September of 1991. Sandwell's recommendation was to upgrade and refurbish three of the boilers which will relinquish their permits when AES/Cedar Bay begins commercial operation.

In order for this to happen, Seminole Kraft must file applications, and undergo scrutiny from the regulatory agencies in the same fashion as any brand new source of air emissions. This process, the same as for any new source anywhere, must be followed in order to obtain new operating permits.

I hope that this letter more clearly explains what is happening with regards to the AES/Cedar Bay facility and its commitments to Seminole Kraft. AES/Cedar Bay is well aware of its obligation to supply 250,000 pounds per hour of steam to the mill and to cause the surrender of 5 operating permits for 1950's vintage boilers. And, AES/Cedar Bay intends to fully meet those commitments. We stand ready to meet with you and to answer any questions that you might have regarding the AES/Cedar Bay project.

Sincerely,


Jerry Varkonda
Plant Manager

12. DEC 09 '91 10:10 FLA D Y PM * ROGERS, TOWERS

5 p. 2

PRESS RELEASE

BEST AVAILABLE COPY

Seminole Kraft learned late this afternoon of the Mayor's press release regarding the possible reopening of boilers at Seminole Kraft and the site certification for AES Cedar Bay.

Seminole Kraft regrets the determination by the General Counsel's office which apparently was communicated to the Mayor today regarding the possible reopening of certain of Seminole Kraft's boilers.

Obviously, Seminole Kraft believes that it has not misled anyone. Environmental permitting agencies have been aware at least since October, 1990 of the likelihood that Seminole Kraft would seek permits for the refurbishing and reopening of two of its bark boilers. Seminole Kraft looks forward to the opportunity to demonstrate to the General Counsel's office that the City has not been misled.

The Mayor's decision to request suspension of the site certification for AES Cedar Bay will not interfere with Seminole Kraft's conversion to recycling and its commitment to the City to eliminate all odors from the mill by 1992.

For questions, call Larry Stanley at 751-6400.

Attn: Steve Patterson

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
MARTHA J. EDENFIELD
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
KENNETH G. OERTEL
HAROLD F. X. PURNELL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6307
TALLAHASSEE, FLORIDA 32314-6307

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

October 26, 1990

Post-It™ brand fax transmittal memo 7671		# of pages ▶
To <i>Chack Schron</i>	From <i>Curt Barton</i>	
Co.	Co.	
Dept.	Phone #	
Fax # <i>512 855 7312</i>	Fax #	

Mr. Steve Smallwood
Bureau of Air Quality Management
Department of Environmental Regula
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Refurbishment or replacement of
Seminole Kraft Bark Boilers; Changing Fuel Mix

Dear Steve:

The purpose of this letter is to confirm your previous discussion with Julie Blunden, Curt Barton, and me concerning refurbishment or replacement of existing bark boilers, or the use of such boilers to burn recycled fiber rejects as well as bark.

As you know, Seminole Kraft Corporation proposes to convert its Jacksonville mill to a 100% recycle operation. This will benefit the community in many ways, including reducing the need to landfill used corrugated containers and eliminating all TRS emissions.

In processing the recycled fiber a certain amount of rejects will be produced which must be burned or landfilled. Due to the volume of rejects generated over the long term, incineration is preferred. The fiber rejects have a high energy content and they can be efficiently burned with bark (also generated on-site) in boilers adequate for this purpose.

The DER permitting requirements for boilers used for this purpose would depend on whether the AES Cedar Bay/Seminole Kraft Co-generation Project is ultimately certified.

Permitting Requirements if AES Cedar Bay/Seminole Kraft Project is Certified:

If the Co-generation Project is certified, Condition IID of the proposed Conditions of Certification (revised 7-19-90) requires

Mr. Steve Smallwood
October 26, 1990
Page 2

that Power Boiler Nos. 1 through 3 and Bark Boiler Nos. 1 and 2 are to be "permanently shut down and made incapable of operation" at the time initial compliance tests on the AESCB boilers are completed. This provision constitutes a federally enforceable permit condition upon final action by the Siting Board and Secretary.

In light of this condition, the same permitting requirements apply irrespective of whether a new boiler is constructed to burn bark and fiber rejects or an existing boiler is refurbished for this purpose. These requirements would consist of the applicable federal and state New Source Performance Standard; assurance that ambient air quality standards will not be violated; and Prevention of Significant Deterioration (PSD) review in the absence of creditable emission reductions such as those resulting from the shut-down of the Kraft Recovery Boilers. See Rule 17-2.500, F.A.C. There is no prohibition against applying for a new source permit because of a federally enforceable condition requiring retirement of an existing source.

Permitting Requirements for Bark Boilers if AES Cedar Bay/Seminole Kraft Project Not Certified:

The permitting requirements are different, however, if the proposed Co-generation Project is not certified. The existing Bark Boiler(s) are capable of being used to burn the fiber rejects as well as bark.

It appears that the change in fuel content -- from 100% bark to a 75% bark/25% fiber reject mix -- does not constitute a modification for purposes of applying new source performance standards or PSD review. This is because of the way "modification" is defined and the specific exemption to that definition.

Modification is defined in 40 CFR §60.2 (also found in Chapter 17-2, F.A.C.) as:

Any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

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Page 3

There is, however, an exception to the definition which applies to use of an alternative fuel or raw material if prior to the applicable date of the regulation the existing facility was capable of accommodating an alternative fuel use. A "facility" is capable of accommodating an alternative fuel use if the use could be accomplished under the facility's construction specifications as amended prior to the change. 40 CFR §60.14(e)(4).

DER rules contain a similar exemption. Rule 17-2.500(2)(c)4, F.A.C., exempts the use of an alternative fuel which the facility was capable of accommodating before January 6, 1975, unless such change is prohibited under any federally enforceable permit condition established after January 6, 1975.

Since prior to January 6, 1975, the bark boilers were capable of burning the reject fibers in the percentages anticipated, and still are, they fall within the exception to the general NSPS requirement.

EPA and DER rules also subject "major modifications" of existing facilities to PSD review. Such modifications are generally defined as any physical change in, or change in the method of operation of, a major stationary source which would result in a significant net emissions increase of any pollutants subject to regulation. The rules also contain, however, an exemption for a physical change or change in method of operation for the use of an alternative fuel or raw material which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. 40 CFR 52.21(2)(d); see also §17-2.500(2)(c)4., F.A.C.

Consequently, under the situation described, the switch in fuel mixture would not be a major modification requiring PDS review. Seminole Kraft would, however, notify the Department before burning the reject fibers and answer any questions concerning it.

Mr. Steve Smallwood
October 26, 1990
Page 4

I would appreciate your confirming my understanding of our discussion. Please do not hesitate to provide corrections or clarification where needed. Thank you for your cooperation.

Sincerely,


Terry Cole

TC/kp

cc: Curt Barton
Julie Blunden

s-smallw.ltr

11-26-91

SEMINOLE KRAFT CORPORATION, PAST AND PRESENT

The Seminole Kraft paper mill is located on Eastport Road at Heckscher Drive. It is a fully integrated pulp and paper mill with two paper machines.

No.1 paper machine produces kraft paper utilized in the manufacture of grocery sacks at various converting plants across the United States including one nearby in Yulee, FL. The No.2 paper machine produces linerboard utilized in the manufacture of corrugated containers in domestic and foreign converting operations. Approximately 15% of our linerboard production is exported to Europe and the Far East.

The mill was built in the early 1950's by St. Regis Paper Co. No.1 paper machine and supporting equipment started up in 1952.

In 1957 a major expansion project was completed and the No.2 linerboard machine, the "Seminole Chief", commenced operation.

The Seminole Chief was the first linerboard machine in the world to produce over 1,000 tons in a 24-hour period. As you can see, Seminole Kraft Corporation took its name from the No.2 paper machine.

St. Regis shifted emphasis to bleached paper in the mid-1970's and sold the mill in 1983 to Ben Westby, who renamed and operated the mill as Jacksonville Kraft Paper Co. Westby sold to Abraham Zion in March 1985 who operated the mill until that October when it was abruptly shut down.

In early 1986, business leaders and elected officials of Jacksonville requested Roger Stone, CEO of Stone Container Corporation, to consider the possibility of restarting the mill to provide jobs and income for the citizens and business community of Jacksonville.

Shortly thereafter, Stone Container management determined that the mill could be restarted. Stone Container then engaged BE&K Engineering to thoroughly evaluate what would be required to accomplish the startup.

Seminole Kraft was incorporated and purchased the mill on October 31, 1986. Equity was 49% Stone Container and 51% ownership by a group of investors. A \$25 million recommissioning project with a four month time frame was implemented in November 1986.

75% of the total cost of recommissioning was spent in the Power and Recovery Boiler areas, including environmental controls.

No.1 paper machine started up on February 16, 1987. No.2 paper machine, the "Seminole Chief", started up on March 2, 1987. The project culminated with successful completion on time, and within budget, with commercial operations beginning on April 16, 1987.

Environmental agreements were reached with the State of Florida DER and City of Jacksonville Bio-Environmental Services Division. The digester TRS gas collection and incineration system was repaired and placed in operation. Equipment was installed on the multiple effect evaporator system for collecting and incinerating TRS gases from this system. This project, which was part of the \$25.0 million recommissioning effort, was completed in July 1987 and reduced TRS emissions 69% from 2,950 tons/year to 900 tons per year.

A Honeywell digester control system was installed to sequence and control all aspects of digester operation (a \$1.7 million

expenditure) further reducing TRS emissions. This project was completed in May of 1989 and resulted in a reduction of TRS emissions from 900 tons per year to about 550 tons/year or about 39%.

Next we installed new lime mud filters on each of three lime kilns resulting in additional reduction of TRS emissions. This project was completed in August 1989 at a cost of almost \$2.0 million resulting in a reduction of TRS emissions from 550 tons/year to 230 tons/year or an additional 58% reduction.

In the final analysis we have spent well over \$5.0 million on TRS emission reductions alone since the mill was restarted in 1987. The total impact has been reductions in TRS emissions from early 1987 by over 92%. With the exception of a very few upsets in operating conditions, we have operated well within our permitted limits. Unfortunately, these accomplishments are overlooked by the media.

Current EPA and Florida DER regulations require that TRS emissions be further reduced substantially by November 12, 1992.

Initially our plan was to install a large, new low odor emission high technology recovery boiler to replace the three existing small units to meet the new TRS emission standards that become effective in November, 1992. Preliminary engineering was completed and a construction permit issued. However, Seminole Kraft elected to study other alternatives due to the high level of capital investment in the new recovery boiler and the low return on that investment coupled with the need for capital investment in the paper machines. In our opinion, the timing was perfect to reconfigure the mill to a 100% recycle paper operation. While recycling technology has been around for years, especially in Europe and the Far East, the attitude of paper markets in the U.S. had been that virgin fiber products were of a better quality. Therefore, major U.S. mills got into recycling

only to provide supplemental fiber to increase production. In the past two years, we have seen a tremendous change in attitude toward recycled paper products in the United States. Following a feasibility study, we announced our current mill reconfiguration plan in January of 1990.

This project applies the latest technology that will convert the operations from a virgin fiber mill to a 100% recycle system. While we have reduced TRS emissions significantly thus far, this project will eliminate ALL regulated sources of TRS. The use of waste paper also will result in substantial reductions in solid waste to landfills, providing further environmental benefits.

The financing for this \$109 million project has been completed, critical equipment is on order, and construction is well underway. Target completion for the project is mid-1992.

The process has been designed by Simon Holder, a British firm located outside of Manchester, England, with a proven track record in recycle technology. The latest technology has been utilized in the design of this project with equipment manufactured in the United States and Europe.

The contractors performing the construction work are local businesses. Miller Electric, a firm based in Jacksonville, is performing the electrical work. Watkins Engineers and Constructors based in Tallahassee with offices here in Jacksonville are performing the civil and mechanical work of the project. In addition, many local shops and services are being utilized.

The project provides for two recycle process lines designed for a production rate of 700 tons per day each and rebuild of the linerboard machine to produce 1,200 tons per day. Our facility will consume up to 1,400 tons per day of Old Corrugated Containers in the recycling process and will be the largest

facility of its type in the world with the most current process technology available. It will reduce landfill requirements by 4,000 Cu.Yds/Day or the equivalent need of the population of Duval County. It is obvious that with our new capacity and additional recycling efforts, there is no reason any recyclable old corrugated containers (OCC) should reach a landfill in the State of Florida.

Fiber sourcing for our facility will be coordinated by Paper Recycling International. This is a company recently founded through a joint venture between Stone Container and Waste Management of North America. While we will have to reach out to other areas for recycle fiber, our goal is to utilize all available local fiber suitable for recycling first.

This project will be a major step toward accomplishment of the Stone Container and U.S. Paper Industry goal to recycle 40% by 1995. In addition, this project will result in a reduction in water usage from current levels at the mill.

Another development that we are proud of at Seminole Kraft is the "Good News Bag" paper. In early 1990, Stone Container Corporation recognized that through sudden public interest in recycling, more old newspapers were being collected than industry could process with facilities currently in operation. We were challenged to look for ways to utilize ONP in our process. Following several trials, we went commercial with the "Good News Bag" paper grade in May of 1990 that is manufactured with 20% old newspaper recycle fiber and 80% virgin kraft fiber. This was an exciting project for us and an immediate success in the market place.

In the past year, we have reprocessed over 26,000 tons of old newspapers making a product that meets all of the physical test requirements of the virgin sheet. Stone Container is now producing "Good News Bag" paper at our Florence, S.C. and Hodge,

LA mills. In addition, we have openly shared our technology with other paper companies in an effort to help meet the recycling goals of our industry and our nation.

We have successfully completed trials on our No.1 paper machine on 100% recycle fiber for bag production. Our plan now is for operation of this machine after the reconfiguration project utilizing recycled fiber. This project will provide greater potential for the company and allow us to retain more jobs than previously planned.

It is important to review the economic impact on Jacksonville and the First Coast area. The following are direct expenditures, much of which go right back into the local economy:

Payroll	- \$24.7 million - to approx. 500 employees
Raw Materials	- \$48.0 million - wood within 150 miles
Chemicals	- \$28.5 million - A major supplier is Betz PaperChem located in Jacksonville
Fuel	- \$18.4 million - purchased from local suppliers
Electricity	- \$6.6 million - JEA
Supplies	- \$6.3 million - local
Maintenance	- \$14.7 million - local shops/supply houses
Out Bound Freight	- \$14.0 million - CSX, JPA & local trucking
Local Tax Impact	- \$2.4 million

A recent study indicated that Seminole Kraft Corporation has a direct economic impact on the First Coast of \$148.0 million annually providing an indirect earnings impact of over \$29.0 million and an indirect employment impact of 1,460 jobs. This study does not take into consideration the \$109 million conversion project with the positive impact on local jobs and purchases over the next 18 months.

During the past five years the management staff at Seminole Kraft Corporation has worked very diligently to improve its operation

and environmental compliance. Millions of dollars have been spent to install environmental equipment in spite of the fact that part of this investment will be of no value once the mill's Reconfiguration Project has been completed. However, steps taken to correct what we consider to be an inappropriate designation in the 2010 Plan has resulted in a great deal of confusion and erroneous reporting in the media.

In the final hours of preparation for submission of the Comprehensive Plan by the Jacksonville City Council, an amendment was proposed to the Council's Community and Economic Development Committee. This amendment changed the designation of the Seminole Kraft Corporation Plant Site from its legal and proper "Heavy Industrial" status based on its current usage to "Light Industrial". This "Heavy Industrial" zoning has been in place for many years. This amendment was passed and incorporated in the 2010 Plan which was subsequently adopted by the City Council.

Seminole Kraft officials did not learn of the change until after adoption by the full Council. In the opinion of Seminole Kraft Corporation, this "Light Industrial" designation is not compatible to our current and future business. Therefore, in compliance with the appropriate rules, we have submitted application to the City of Jacksonville to redesignate the property as "Heavy Industrial" in the final 2010 Comprehensive Plan.

In the process of informing our neighbors, the Citizens Committee headed by Mrs. Barbara Broward, a separate issue surfaced regarding the future of three of the Seminole Kraft steam boilers. We explained that Seminole had always planned to operate boilers to generate process steam in conjunction with the AES steam supply. We also explained that any existing boilers utilized would have to be retrofitted and repermited to New Source Performance Standards requiring significant investment in additional environmental controls.

Additionally, we stressed that none of the proposed Seminole boilers would emit TRS and all regulated sources of Seminole TRS would be shut down as the Consent Agreement between Seminole Kraft and the City of Jacksonville stipulated.

However, by the time this information reached the various news media it was twisted to indicate that Seminole Kraft did not intend to honor the Consent Order dated November 14, 1990 dealing with the elimination of TRS emissions. This resulted in a front page headline in the Florida Times Union on Saturday which stated "Mill Drops Vow to Close Boilers". This is absolutely false. The Consent Agreement entered into with the City of Jacksonville was negotiated in good faith and complied with to date. Seminole Kraft Corporation has not and will not violate the terms of this agreement which was filed in the Circuit Court of the Fourth Judicial Circuit in and for Duval County, Florida.

The issue of repermitting any existing Seminole Kraft boilers is a separate matter that will require approval of all appropriate local, state and federal regulatory agencies based upon established rules and regulations. We anticipate that studies will be concluded within the next few weeks accounting for submission of applications in early 1991.

RECEIVED

JAN 3 1991

Office of General Counsel
Environmental Division

IN THE CIRCUIT COURT, FOURTH
JUDICIAL CIRCUIT, IN AND FOR
DUVAL COUNTY, FLORIDA

CASE NO: 88-12385-CA

DIVISION: DIVISION CV-G

CITY OF JACKSONVILLE, a municipal
corporation,

Plaintiff,

-vs-

SEMINOLE KRAFT CORPORATION, a
Florida corporation,

Defendant.

_____ /

CONSENT JUDGMENT

The above-styled cause having been settled by stipulation of the parties, as reflected in the attached Stipulation for Entry of a Consent Judgment, this Court having duly reviewed and considered the Stipulation and Motion, and having found that the settlement is in the best interest of all parties, and in the public interest, it is, therefore,

ORDERED AND ADJUDGED that:

1. The settlement of the above-styled cause among the parties shall be, and is hereby, approved.
2. The Stipulation for Entry of a Consent Judgment, executed by the parties, shall become, and is hereby made, a part of this Order by reference.
3. This Court retains jurisdiction over this cause and over the parties pending compliance with the terms of the Stipulation, and during its duration for enforcement of the same.

DONE AND ORDERED at Jacksonville, Duval County, Florida, this 19th
~~day of November~~ ^{December}, 1990.

C. K. Hensley
CIRCUIT JUDGE

cc:

Terry Cole, Esq.
R. L. Caleen, Esq.
Oertel, Hoffman, Fernandez & Cole
2700 Blair Stone Road, Suite C
P. O. Box 6507
Tallahassee, FL 32314
Attorneys for Defendant

Richard L. Maguire, Esq.
General Counsel's Office
421 West Church Street, Suite 715
Jacksonville, FL 32202
Attorney for Plaintiff

IN THE CIRCUIT COURT OF THE
FOURTH JUDICIAL CIRCUIT, IN
AND FOR DUVAL COUNTY, FLORIDA

CITY OF JACKSONVILLE, a
Municipal Corporation,

Plaintiff,

vs.

Case No.: 88-12385-CA-CV-G
Civil Division

SEMINOLE KRAFT CORPORATION,
A Delaware Corporation,

Defendant.

STIPULATION FOR ENTRY OF A CONSENT JUDGMENT

The Plaintiff, CITY OF JACKSONVILLE, a Municipal Corporation ("City") and the Defendant, SEMINOLE KRAFT CORPORATION ("Seminole Kraft"), a Delaware Corporation, stipulate to entry of a Consent Judgment based on the following:

1. The City operates an approved local pollution control program pursuant to Section 403.182, Florida Statutes, and is empowered to enforce the provisions of Chapter 376, Jacksonville Municipal Ordinance Code and Environmental Protection Board Rule 2.

2. Seminole Kraft is a Delaware Corporation, authorized to do business in Florida, which operates a pulp and paper mill located at 9469 Eastport Road in Jacksonville, Duval County, Florida. The mill is currently operating under valid Department of Environmental Regulation ("DER") air pollution operating permits.

performed on each RB within thirty (30) days of the effective date of this Stipulation. Compliance shall be demonstrated if the test results are equal to or less than 17.5 ppm by volume on a dry basis at standard conditions corrected to 8% oxygen. Failure to demonstrate compliance with the above specified limit shall result in the following:

1. Seminole Kraft shall pay a stipulated penalty of \$750.00 to the Environmental Protection Fund of the City of Jacksonville within 30 days of the test failure date.

2. Seminole Kraft shall perform additional testing as necessary within 45 days of the previous test to demonstrate compliance with the above specified limits. Seminole Kraft shall pay a stipulated penalty of \$750.00 to the Environmental Protection Fund for each subsequent failure of the above specified testing until such time as compliance is demonstrated.

(2) Continuous Emission Monitors (CEMs) shall be used to demonstrate continuous compliance with an emission limit of 20 ppm by volume on a dry basis at standard conditions corrected to 8% oxygen on a 12-hour basis (12 noon to 12 midnight and 12 midnight to noon) for each RB. If exceedence of the above limit is demonstrated by the CEMs on more than 5% of the operating periods of each RB during a calendar month, Seminole Kraft shall pay a stipulated penalty of \$750.00 for each 12-hour exceedence period in excess of 5%. This penalty shall be paid to the Environmental Protection Fund within 30 days of the end of the month during which the exceedence occurred. Seminole Kraft shall submit monthly reports by the 15th of the following month specifying the information listed below:

(a) 12-hour average TRS readings for each RB for each operating period;

(b) cause and corrective action taken for each exceedence of the 20 ppm limit.

- b. Cease emissions of TRS by September 12, 1992, and cease use as recovery boiler as provided in paragraphs 11 and 12. Surrender permits for use as recovery boiler. Any further use of the equipment shall require compliance with applicable rules, including obtaining new permits.
- c. CEMs data shall be available for 75% of the operating hours per RB on a monthly basis. Failure to maintain data for the required minimum time shall require that the EPA reference method 16 or 16A stack test be performed to demonstrate compliance within 30 days of the end of the month during which the data availability was below 75%.

2. Smelt Dissolving Tanks

a. Existing Smelt Dissolving Tanks

TRS - Interim and Final Limits - Meet existing source limit until shut down.

- b. Remove from Service and render inoperable by September 12, 1992 and surrender permit to the Department of Environmental Regulation by September 12, 1992.

3. All Lime Kilns

a.(1) Seminole Kraft shall comply with Chapter 17-2 Florida Administrative Code as applicable to lime kilns.

(2) In addition to Florida Administrative Code requirements, continuous emission monitors (CEMs) shall be used to demonstrate compliance with an emission limit of 20 ppm by volume on a dry basis at standard conditions corrected to 10% oxygen on a 12-hour basis (12 noon to 12 midnight and 12 midnight to noon) for each lime kiln. Exceedence of the above limit as demonstrated by the CEMs on

1 Introduced by Council Members Forshee and Carlucci:
2
3

4 RESOLUTION 89-401-199

5 A RESOLUTION EXPRESSING THE COUNCIL'S OPPOSITION
6 TO THE PLACEMENT OF A COGENERATION PLANT ON THE
7 NORTHSIDE OF JACKSONVILLE KNOWN AS THE CEDAR BAY
8 COGENERATION PROJECT; URGING AND REQUESTING THE
9 STATE DEPARTMENT OF ENVIRONMENTAL REGULATION
10 TO DENY ANY PERMIT APPLICATION BEFORE THEM WHICH
11 WOULD ALLOW SUCH A COGENERATION PLANT TO BE
12 CONSTRUCTED ON JACKSONVILLE'S NORTHSIDE;
13 PROVIDING AN EFFECTIVE DATE.
14

15 BE IT RESOLVED by the Council of the City of Jacksonville:

16 **Section 1.** The Council hereby expresses its opposition to the construction and/or
17 operation of a cogeneration project on Jacksonville's northside. In specific, the Council
18 is opposed to the Cedar Bay Cogeneration Project identified as DOAH Case No. 88-5740
19 currently being considered by the State of Florida Department of Environmental
20 Regulation.

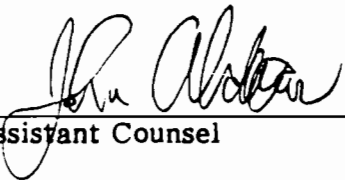
21 **Section 2.** The Council hereby urges and requests the Florida Department of
22 Environmental Regulation, the United States Environmental Protection Agency, the St.
23 Johns River Water Management District and any other permitting agency to deny a
24 permit for DOAH Case No. 88-5740 or any other application before them by AES Cedar
25 Bay, Inc. that would permit a cogeneration plant to be placed in Jacksonville's northside
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1 Section 3. The Council further urges that should the Governor and Cabinet be
2 requested to vote on any aspect of the project described in Section 2 of this Resolution
3 that the Governor and Cabinet vote against locating said Cedar Bay Cogeneration
4 Project in Jacksonville's northside.

5 Section 4. This resolution shall become effective upon signature by the Mayor or
6 upon becoming effective without the Mayor's signature.

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Form approved:


Assistant Counsel

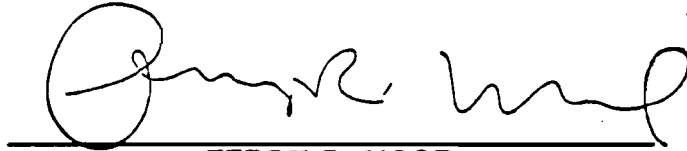
lmt 6/28/89

RESOLUTION 89-401-199

CERTIFICATE OF AUTHENTICATION

ADOPTED BY THE COUNCIL

June 27, 1989



TERRY R. WOOD
COUNCIL PRESIDENT

ATTEST:

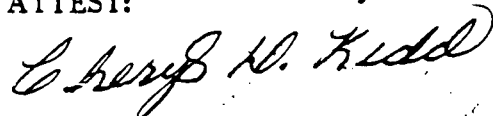


CHERYL D. KIDD
SECRETARY TO THE COUNCIL

I HEREBY CERTIFY that the foregoing Resolution 89-401-199 was delivered to the Mayor for approval or rejection on June 29, 1989.

BECAME EFFECTIVE without the Mayor's Approval on July 12, 1989.

ATTEST:



CHERYL D. KIDD
SECRETARY TO THE COUNCIL

1 Introduced by Council Members Darling, Forshee, Smith, Thibault, Carlucci, Daniel,
2 Davis, Fowler, Jarboe, Jones, Kravitz, Lee, Micks, Myrick, Reagan, Suggs and
3 Tullis and by the Council as a Whole:

RESOLUTION 90-767- 251

4
5 A RESOLUTION EXPRESSING THE COUNCIL'S OPPOSITION
6 TO THE PLACEMENT OF A COGENERATION PLANT ON THE
7 NORTHSIDE OF JACKSONVILLE KNOWN AS THE CEDAR BAY
8 COGENERATION PROJECT; URGING AND REQUESTING THE
9 GOVERNOR AND CABINET TO VOTE AGAINST ANY PERMIT
10 APPLICATION BEFORE THEM WHICH WOULD ALLOW SUCH
11 A COGENERATION PLANT TO BE CONSTRUCTED ON
12 JACKSONVILLE'S NORTHSIDE; PROVIDING AN EFFECTIVE
13 DATE.

14
15 WHEREAS, the Cedar Bay Cogenerating project will increase the amount of both
16 carbon monoxide, from 606 to 2,470 tons annually, and nitrogen oxides, from 1,201 to
17 3,774 tons annually, in our air; and

18 WHEREAS, this plant will also significantly increase the levels of lead, beryllium,
19 mercury, flourides and sulfuric acid mist in our air; and

20 WHEREAS, the Florida aquifer is a huge and plentiful reservoir, but not so
21 inexhaustible that the withdrawal of up to 7 million gallons per day for cooling the plant
22 would not pose a potential threat to our drinking water reserves; and

23 WHEREAS, the United States Environmental Protection Agency has acknowledged
24 this project could speed salt water intrusion into the aquifer and other wells within its
25 vicinity; and

26 WHEREAS, it has been determined by the Council that the environmental
27 detriments of this project far outweigh any economic benefit this plant might bring to
28 Jacksonville; now, therefore

29 BE IT RESOLVED by the Council of the City of Jacksonville:

1 **Section 1.** As previously stated in Resolution 89-401-199, the Council opposes the
2 construction and operation of the Cedar Bay Cogeneration Project. The Council urges
3 and requests the Governor and Cabinet to vote against the application before them by
4 AES Cedar Bay, Inc. that would permit a cogeneration plant to be placed in
5 *Duval County*
~~Jacksonville's northside.~~

6 **Section 2.** This resolution shall become effective upon signature by the Mayor or
7 upon becoming effective without the Mayor's signature.

8
9 Form approved:

10
11 *Phillip S. Cope*
Assistant Counsel

12 lmt 7/19/90
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1 Introduced by Council Members Carlucci, Reagan, Forshee, Tullis, Darling, Jones, Kravitz and
2 Suggs:

3
4 RESOLUTION 91-531-229

5 A RESOLUTION EXPRESSING THE COUNCIL'S
6 OPPOSITION TO THE OPERATION OF A COGENERATION
7 PLANT ON THE NORTHSIDE OF JACKSONVILLE KNOWN
8 AS THE CEDAR BAY COGENERATION PROJECT;
9 URGING AND REQUESTING THE UNITED STATES
10 ENVIRONMENTAL PROTECTION AGENCY TO HOLD A
11 PUBLIC HEARING IN JACKSONVILLE CONCERNING
12 MODIFICATIONS TO THE ENVIRONMENTAL IMPACT
13 STATEMENT FOR THIS PROPOSED PROJECT; PROVIDING
14 AN EFFECTIVE DATE.

15
16 WHEREAS, on two previous occasions, the Council has expressed its opposition to the
17 placement and construction of the AES Cedar Bay Cogeneration project; and

18 WHEREAS, the plant will generate and emit unacceptable amounts of carbon monoxide,
19 nitrogen oxides, sulfur dioxides, lead, beryllium, mercury, fluorides, sulfuric acid mist, and other
20 chemicals into our air; and

21 WHEREAS, the discharge of cooling water used in the operation of the plant into the St.
22 Johns River will have an unacceptable impact on the river; and

23 WHEREAS, because the granting of a National Pollutant Discharge Elimination System
24 (NPDES) permit to discharge that cooling water would be a major federal action, requiring an
25 Environmental Impact Statement pursuant to the National Environmental Policy Act; and

26 WHEREAS, the present Environmental Impact Statement was prepared assuming that
27 groundwater would be the source of cooling water; and
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1 WHEREAS, the plant is not permitted to use groundwater for cooling;

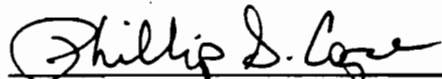
2 WHEREAS, the granting of an NPDES permit is crucial to the operation of the plant,
3 because the plant cannot operate without discharging cooling water; now, therefore

4 BE IT RESOLVED by the Council of the City of Jacksonville:

5 Section 1. The Council opposes the construction and operation of the Cedar Bay
6 Cogeneration project. Because the Environmental Impact Statement must be modified, the
7 Council urges and requests the United States Environmental Protection Agency to hold a public
8 hearing in Jacksonville concerning such modification at such time as such modification is
9 considered by the United States Environmental Protection Agency.

10 Section 2. This resolution shall become effective upon signature by the Mayor or upon
11 becoming effective without the Mayor's signature.

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13 Form Approved:

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15 Phillip S. Case
Assistant Counsel

16 Rev./jp
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RESOLUTION 91-531-229

CERTIFICATE OF AUTHENTICATION

ADOPTED BY THE COUNCIL

June 25, 1991


ERIC SMITH
COUNCIL PRESIDENT

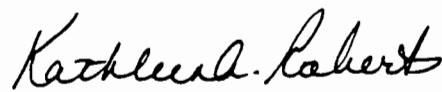
ATTEST:

CHERYL D. KIDD
SECRETARY TO THE COUNCIL

I HEREBY CERTIFY that the foregoing Resolution 91-531-229 was
delivered to the Mayor for approval or rejection on June 27, 1991.

BECAME EFFECTIVE without the Mayor's Approval on July 10,
1991.

Attest:


KATHLEEN A. ROBERTS
ASSISTANT COUNCIL SECRETARY-
LEGISLATIVE RECORDS

AMENDED 12/10/91

1 Introduced by Council Members Reagan, Leggett, Crescimbeni, Brown,
2 Carlucci, Kravitz, Draper, Davis and Tullis:

RESOLUTION 91-1408- 625

3
4
5 A RESOLUTION SUPPORTING THE MAYOR'S REQUEST
6 THAT THE FLORIDA DEPARTMENT OF
7 ENVIRONMENTAL REGULATION SUSPEND THE SITE
8 CERTIFICATION OF THE AES/CEDAR BAY, INC. AND
9 SEMINOLE KRAFT COGENERATION PROJECT AND
10 REOPEN THE CERTIFICATION PROCESS; PROVIDING
11 AN EFFECTIVE DATE.

12
13 WHEREAS in 1988 AES/Cedar Bay, Inc. and Seminole Kraft Corporation jointly
14 applied to the State of Florida for permission to build and operate a coal-fired electric
15 cogeneration plant in Jacksonville; and

16 WHEREAS one of the primary benefits of the proposal was the permanent shut
17 down of Seminole Kraft's bark and oil-fired boilers which are over thirty years old
18 with a sorry record of air pollution violations; and

19 WHEREAS the Jacksonville City Council has repeatedly opposed the project
20 because of numerous unresolved environmental concerns; and

21 WHEREAS the State Siting Board approved the cogeneration project, despite the
22 opposition of the Jacksonville City Council, upon the condition that the bark and oil-
23 fired boilers be permanently shut down and made inoperable; and

24 WHEREAS Seminole Kraft Corporation recently disclosed long-standing plans
25 to repower the boilers contrary to the letter and spirit of the Conditions of Site
26 Certification; and

27 WHEREAS the Mayor of the City of Jacksonville has asked the Florida
28 Department of Environmental Regulation to investigate Seminole Kraft's plans,
29

1 reopen the site certification process and suspend certification of the cogeneration
2 project; now therefore;

3 **BE IT RESOLVED** by the Council of the City of Jacksonville:

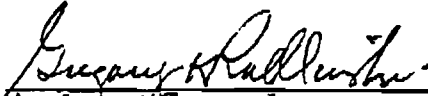
4 **Section 1.** The City Council remains opposed to the AES/Cedar Bay, Inc. and
5 Seminole Kraft Corporation Cogeneration Project.

6 **Section 2.** The City Council heartily applauds the Mayor's decision requesting
7 the Department of Environmental Regulation to reopen the site certification to fully
8 explore the applicants' intentions to protect the environment and permanently shut
9 Seminole Kraft's aged boilers.

10 **Section 3.** The City Council joins the Mayor in strongly urging the Department
11 of Environmental Regulation to thoroughly investigate Seminole Kraft Corporation's
12 commitments and reopen the site certification process, with a view toward
13 suspending certification of the cogeneration project.

14 **Section 4.** This resolution shall become effective upon signature by the Mayor
15 or upon becoming effective without the Mayor's signature.

16 Form Approved:

17 
18 Assistant Counsel
19 (ljs/12/10/91)
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RESOLUTION 91-1408-625

CERTIFICATE OF AUTHENTICATION

DECLARED AN EMERGENCY MEASURE AND
ADOPTED BY THE COUNCIL

December 10, 1991

Warren A. Jones
WARREN A. JONES
COUNCIL PRESIDENT

ATTEST:

Beverly S. Simmons
BEVERLY S. SIMMONS
SECRETARY TO THE COUNCIL

APPROVED 12-17-91, 19
Ed Austin
ED AUSTIN, MAYOR

