

Mr. Kent L. Fickett
Letter: Recycle Fiber Rejects Test Proposal
December 21, 1993
Page 2

rejects. This assumes that the one test would suffice for the two designated CFBS that will receive and fire the rejects. There is no provision in the regulations that allows the Department to do this. Therefore, each emissions unit must be tested for compliance, as stipulated in the referenced condition. Please note and revise.

- o The RESD has requested that the continuous emissions monitoring data generated during the compliance tests be submitted along with the test analysis and results.

If there are any questions, please call Mr. 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/rbm

Attachment

cc: E. Frey, NED
S. Pace, RESD
B. Oven, DEP
R. Donelan, Esq., DEP
J. Harper, EPA
J. Bunyak, NPS
B. Leetch, NED

*Reading File
B. Oven*

12/29/93 CC

Attachments

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy
Division of Air Resources Management

FROM: Buck Oven *9/13/93*
Siting Coordination Office

DATE: November 10, 1993

SUBJECT: Cedar Bay

RECEIVED

NOV 12 1993

Division of Air
Resources Management

Please have the appropriate staff review and comment on the attached proposal for a waste fiber test burn.

You may respond directly to Cedar Bay with a copy to me.

Should you have any question, please give me a call.

HO/ss

Attachment

cc: Bob Leetch, NED
Richard Donelan

**Cedar Bay Generating Company,
Limited Partnership**

November 8, 1993

Mr. Hamilton Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

NOV 09 1993

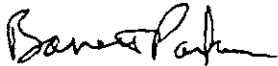
FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
SITING COORDINATOR

Dear Mr. Oven:

Enclosed please find a copy of the Plan for a 30-day test burn of Seminole Kraft's waste fiber recycle rejects at the Cedar Bay Generating Company (CBGC). This plan is submitted to fulfill the requirement given in Section II.A.1.h of the Conditions of Certification. This plan will be submitted to air emissions testing firms as part of a request for proposals to develop a specific protocol and perform appropriate testing.

Please contact me at (301) 718-6937 with any questions that you or your staff may have regarding this submittal.

Sincerely,



Barrett Parker
Environmental Specialist

Enclosure

cc: F. Stallwood
J. Kelly



**CEDAR BAY COGENERATION PROJECT, L.P.
30-DAY TEST PLAN FOR SEMINOLE KRAFT'S
SHORT FIBER RECYCLE REJECTS
NOVEMBER 1993**

1.0 INTRODUCTION

Condition II.A.1.h of the Florida Department of Environmental Protection (DEP) Conditions of Certification for the Cedar Bay Cogeneration Project (CBCP) requires CBCP to submit a plan to the DEP for conducting a 30-day test burn to assert whether the circulating fluidized bed coal-fired boilers (CFBs) can burn short fiber recycle rejects (rejects) generated by the Seminole Kraft Corporation (SK) without exceeding any of the following limitations:

- Emissions limitations contained in Condition II.A of the Conditions of Certification for CBCP.
- Fuel usage limitations contained in Condition II.A of the Conditions of Certification for CBCP.

In addition, the 30-day test should demonstrate that the fiber rejects can be burned 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 will coordinate the test activities and will contract with a qualified firm to conduct emission measurements. The contact person for test activities is:

Emissions Test Plan - Barrett Parker, US Generating Company
Telephone: 301-718-6937

2.0 SOURCE DESCRIPTION

Cedar Bay Cogeneration Facility

The Cedar Bay Cogeneration Facility (CBCF) is a coal and short fiber recycle reject fueled cogeneration facility located northeast of Jacksonville, Florida on thirty five acres of a four hundred twenty five acre site owned by SK. The CBCF is designed to provide up to 380,000 pounds per hour of process steam to the adjacent SK paper mill and up to 250 MW of electricity which will be sent to the Florida Power and Light Company.

Eastern Kentucky coal supplies over ninety nine percent of the fuel for the plant's three circulating fluidized bed steam generators; short fiber recycle rejects, which are a byproduct of recycled cardboard, account for less than one percent of the fuel. Very low sulfur number 2 fuel oil will be used as fuel for startup and flame stabilization at low load levels. Coal will be delivered via railcar, short fiber recycle rejects will be delivered from SK via conveyor, and fuel oil will be delivered by truck.

Limestone will be delivered by truck and injected with fuel in the steam generators' combustion chambers in order to aid in sulfur dioxide removal. Nitrogen oxides formation will be minimized through the use of a selective non-catalytic reduction process in which aqueous ammonia is added to flue gas. Fly and bottom ash consisting of coal ash, residual limestone, inert bed material, and sulfur dioxide reaction products will be collected in fabric filters, transferred to silos, pelletized, loaded in empty rail cars, and sent to a landfill near the mine site.

The plant contains a zero water discharge system in order to maximize the use of the lowest acceptable water quality for cooling. Specifically, the following sources of wastewater will be routed to the zero water discharge system for processing: SK treated wastewater; collected stormwater; cooling tower blowdown; coal, limestone, and ash storage area stormwater runoff; plant drains; and demineralizer regeneration. Boiler makeup water, plant service water, and potable water will come from existing SK water well systems. Sanitary wastewater will be pumped to SK's package treatment plant, and metals cleaning wastewater will be transported off site by a licensed waste hauler to a permitted treatment, storage, or disposal facility.

Sludges generated during the zero water discharge process will be collected on filters, pressed, and sent to a recycling facility, where possible, or to a licensed non-hazardous waste landfill. The facility is not expected to produce on a continuous, long term basis, any hazardous wastes. Should such wastes be generated during an intermittent, short duration process, the wastes will be transported to a licensed, permitted treatment, storage, or disposal facility.

Seminole Kraft

Seminole Kraft Corporation is based in Jacksonville, Florida, and SK owns and operates a fully integrated pulp and paper mill. This mill is designed to produce up to 1700 tons per day of recycled paper and linerboard using only used corrugated containers as raw material. SK's mill is the world's largest corrugated paper recycler. Current average recycled paper and linerboard production is 1400 tons per day; current average used corrugated container consumption is also 1400 tons per day.

Short fiber recycle rejects, which can be used as fuel in two of the Cedar Bay Cogeneration Facility's three circulating fluidized bed steam generators, are derived during the recycling process. Bales of recycled cardboard are shredded, mixed with water, and reduced to a pulp. Heavy trash materials, such as staples, glass, metal, and

stones, sink to the bottom of the pulp slurry and are removed. The slurry is then spun in a centrifuge to remove any heavy materials that were not removed during the detraging process. After leaving the centrifuge, the slurry passes through a coarse screen which removes many of the remaining contaminants such as wax or plastic. The slurry is centrifuged again, and short and long fibers are separated using two finer-meshed screens and a reverse cleaner. The short fiber recycle rejects are then pressed to remove liquids, stored in bins, and delivered to the CBCF via conveyor. CBCF's permit allows using up to 426 cubic yards of short fiber recycle rejects per day, on a wet basis, as fuel. This represents less than one percent of the total CBCF permitted fuel use. Current short fiber recycle reject production is about 200 cubic yards per day, on a wet basis.

Environmental benefits of SK's mill's conversion from virgin to recycled fiber include elimination of the mill's total reduced sulfur emissions and reduction of landfill requirements by as much as 4000 cubic yards per day. SK is owned by a group of investors and the Stone Container Corporation.

3.0 EMISSION LIMITS TEST PLAN

The 30-day test burn will include monitoring and testing of emissions to demonstrate that the CFBs can burn the rejects as fuel without exceeding limitations contained in Condition II.A of the Conditions of Certification.

Continuously-Monitored Pollutants

Compliance with the limitations for pollutants that are continuously monitored at the facility will be determined by the Continuous Emissions Monitoring System (CEMS). The continuously-monitored pollutants and their limitations are as follows:

<u>Pollutant</u>	<u>Emission Limitations (averaging times)</u>		<u>Tons per Year</u>
	<u>lbs./MMBtu</u>	<u>lbs./hr.</u>	
CO	0.175 (8-hr.)	186 (8-hr.)	758
NOx	0.17 (30-day)	180.7(30-day)	736.1
SO2	0.24 (3-hr.)	255.1 (3-hr.)	
SO2	0.20 (12-mo.)		866

Visible emissions (VE) shall not exceed 20 percent opacity (6-min. avg.), except for one 6-minute period per hour when VE shall not exceed 27 percent opacity.

Other Pollutants

Additional emission limitations contained in the Conditions of Certification include the following:

<u>Pollutant</u>	<u>Emission Limitations</u>		<u>Tons per Year</u>
	<u>lbs./MMBtu</u>	<u>lbs./hr.</u>	
PM	.018	19.1	78
PM10	.018	19.1	78
H2SO4 mist	4.66e-04	0.50	2.0
Fluorides	7.44e-04	0.79	3.2
Lead	6.03e-05	0.06	0.26
Mercury	2.89e-05	0.03	0.13
Beryllium	8.7e-06	0.01	0.04
VOC	0.015	16.0	65

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

Based on analyses of the SK process and the rejects and because the rejects represent a small portion of the total fuel input to the boilers, significant changes in emissions of these pollutants is not expected unless the introduction of the rejects significantly effects the operation of the boilers or pollution control equipment. Significant changes in the operation of the boilers or pollution control equipment would be detected by the continuous emission monitors or by other facility monitoring systems (see section 4.0).

Emission levels of particulate matter (PM) will be determined during a two-day test to be conducted during the 30-day test burn. The PM test would provide information necessary to determine whether baghouse operations are impacted by the combustion of rejects.

The tests will be conducted by a qualified firm on one unit while the unit is burning rejects at a rate that represents at least 50 percent of the rate necessary to achieve the maximum daily charging rate of 210 wet cubic yards.

4.0 OPERATIONS FEASIBILITY TEST PLAN

During the 30-day test burn, operations will be monitored to assert whether the CFBs can burn the rejects without causing any operational problems which would affect the reliable operation (with customary maintenance) of the CFBs. Factors to be evaluated include:

Material Handling and Transport

Facility personnel will monitor the performance of the reject handling systems to identify any operational problems that would interfere with the ability to properly

transport and feed all of the rejects from Seminole Kraft to the CFBs for combustion. Facility personnel will also monitor the performance of the baghouses and ash pelletizing systems.

Boiler Operation

Facility personnel will monitor boiler performance during the 30-day test burn and record data necessary to determine the impact of reject combustion on boiler performance and operation. Performance during the critical times of initial introduction of the rejects into the boiler and initial removal of rejects from the fuel mix will be closely monitored.

5.0 FUEL USAGE LIMITATIONS

Section II.A. of the Conditions of Certification contains the following limitations on fuel usage:

Rejects

210 cu. yd./day wet
69,588 cu. yd./yr. wet

Coal (per boiler)

104,000 lbs./hr.
39,000 tons /month
390,000 tons/year

Fuel Oil

380 MMBtu/hr. per boiler
1,900,000 gals./yr. total
To be normally only used for start up.

Fuel use will be monitored during the 30-day test to determine whether all of the rejects can be burned without exceeding any of these fuel usage restrictions.

6.0 TEST BURN REPORT

Within 30 days after the conclusion of the test burn, CBCP will report the results and analysis of the test burn to the DEP and the Regulatory and Environmental Services Department. This test burn report will include the results of the emissions testing and monitoring as well as an analysis of any significant operational problems noted during the 30-day test burn. Based on the testing and monitoring results and on the operations analysis, CBCP will conclude whether the test burn demonstrated that the rejects can be burned in compliance with the Condition of Certification and will identify any facility or operational changes necessary to achieve compliance.

7.0 TEST SCHEDULE

The 30-day test burn will be conducted within one year of the initial facility compliance test. The test will conclude after 30 total days of operation while burning rejects for some or all of each of the 30 days in at least one of the boilers. The Florida Department of Environmental Protection will be notified by CBCP at least 30 days prior to the beginning of the test and at the completion of the test.

PERMITTEE:
Cedar Bay Cogeneration, Inc.

Permit Number: PSD-FL-137A
County: Duval

GENERAL CONDITIONS cont.:

c. Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The person responsible for performing the sampling or measurements;
- The dates analyses were performed;
- The person responsible for performing the analyses;
- The analytical techniques or methods used; and,
- The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

II. SPECIFIC CONDITIONS:

General: The construction and operation of Cedar Bay Cogeneration Project (CBCP) shall be in accordance with all applicable provisions of Chapters 17-210 through 17-297, F.A.C. In addition to the foregoing, CBCP shall comply with the following conditions as indicated, which reflect the conditions of the Modification of Certification dated May 11, 1993:

A. Emission Limitations for 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 charging rate to each of two CFBs of short fiber recycle rejects from the Seminole Kraft Corporation (SKC) recycling process shall not exceed 210 yd³/day wet and 69,588 yd³/yr wet. This reflects a combined total of 420 yd³/day wet and 139,176 yd³/yr wet 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.

PERMITTEE:
Cedar Bay Cogeneration, Inc.

Permit Number: PSD-FL-137A
County: Duval

SPECIFIC CONDITIONS cont.:

4. Ammonia (NH₃) slip from exhaust gases shall not exceed 10 ppmvd when burning coal at 100% capacity and 30 ppmvd when burning oil.
5. Visible emissions (VE) shall not exceed 20% opacity (6 minute average), except for one 6 minute period per hour when VE shall not exceed 27% opacity pursuant to 40 CFR 60.42a.
6. Compliance with the emission limits shall be determined by EPA reference method tests included in the July 1, 1992 version of 40 CFR 60 and 61, Chapter 17-297, F.A.C., and listed in Specific Condition No. II.A.8. of this permit or by equivalent methods after obtaining prior written Department approval. In addition, compliance with the emission limitations in Specific Condition No. II.A.3. for CO, NOX and SO₂, and with the opacity requirements in Specific Condition No. II.A.5., shall be determined with the continuous emission monitoring systems (CEMS) identified in Specific Condition No. II.A.9.
7. The CFBs are subject to 40 CFR 60, Subparts A and Da; except that where requirements within this permit are more restrictive, the requirements of this permit shall apply.
8. Compliance Tests for each CFB
 - a. Initial and subsequent compliance tests for PM/PM₁₀, SO₂, NOX, CO, VOC, lead, fluorides, ammonia, mercury, beryllium and H₂SO₄ mist, shall be conducted in accordance with 40 CFR 60.8 (a), (b), (c), (d), (e) and (f).
 - b. Annual compliance tests shall be performed for PM, CO, SO₂ and NOX, 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 for each permitted fuel.
 - e. The following test methods and procedures pursuant to Chapter 17-297, F.A.C., and 40 CFR 60 and 61, or by equivalent methods after obtaining prior written Department 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.



Florida Department of Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

December 15, 1993

Mr. Barrett Parker
U.S. Generating Company
7500 Old Georgetown Road
Bethesda, Maryland 20814-1616

Re: Cedar Bay Cogeneration Project
PA 88-24

Dear Mr. Parker:

The Department of Environmental Protection has reviewed the SNCR maintenance manuals for the Cedar Bay Cogeneration facility as submitted by your letter of December 1, 1993. The Bureau of Air Regulation reviewed volumes 8 & 9 entitled "Pyropower Corporation Operation and Maintenance Manual for Pyroflow CFB Boilers for Cedar Bay Cogeneration Project". The Bureau has the following observations:

1. The O&M manual focused only on the ammonia stripper which converts an aqueous ammonia solution (29% ammonia) into "stripped ammonia solution" using steam. The stripped solution contains 10 ppm ammonia @247 degrees F. We have no adverse comments concerning the O & M manual (volumes 8 & 9 or the drawings) which were included.
2. To satisfy the permit specific condition requiring design specification for the SNCR system, other information should be submitted to the Bureau of Air Regulation on the remaining part of the system (metering, controls to maintain the NOx emission rates, etc.).

We appreciate your providing this information to the Department.

Sincerely,

Hamilton S. Oven
Hamilton S. Oven, P.E.
Administrator, Siting
Coordination Office

HSO/hso

cc: Clair Fancy
Preston Lewis

*Patty - for
file
GFL
12/15*

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

Date: 15-Dec-1993 07:05am EST
From: Preston Lewis TAL
 LEWIS_P
Dept: Air Resources Management
Tel No: 904/488-1344
SUNCOM:

TO: Hamilton Buck Oven TAL (OVEN_H)
CC: Bruce Mitchell TAL (MITCHELL_B)
CC: John Brown TAL (BROWN_J)
CC: Clair Fancy TAL (FANCY_C)

Subject: Cedar Bay SNCR System - Design Review

I have review^{ed} volume 8 & 9 entitled "Pyropower Corporation Operation and Maintenance Manual for Pyroflow CFB Boilers for Cedar Bay Cogeneration Project". I have the following observations:

1. The O&M manual **focused only on the ammonia stripper** which converts an aqueous ammonia solution (29% ammonia) into "stripped ammonia solution" using steam. The stripped solution contains 10 ppm ammonia @247 degrees F. **I have no adverse comments concerning the O & M manual (volumes 8 & 9 or the drawings) which were included.**
2. To **satisfy the permit specific condition** requiring design specification for the SNCR system, **other information should be submitted to the Bureau of Air Regulation** on the remaining part of the system (metering, controls to maintain the NOx emission rates, etc.).

We appreciate your providing this information to the permittee.

**Cedar Bay Generating Company,
Limited Partnership**

November 8, 1993

Mr. Hamilton Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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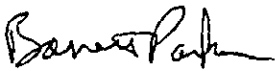
DEPT.
SITING COORDINATION

Dear Mr. Oven:

Enclosed please find a copy of the Plan for a 30-day test burn of Seminole Kraft's waste fiber recycle rejects at the Cedar Bay Generating Company (CBGC). This plan is submitted to fulfill the requirement given in Section II.A.1.h of the Conditions of Certification. This plan will be submitted to air emissions testing firms as part of a request for proposals to develop a specific protocol and perform appropriate testing.

Please contact me at (301) 718-6937 with any questions that you or your staff may have regarding this submittal.

Sincerely,



Barrett Parker
Environmental Specialist

Enclosure

cc: F. Stallwood
J. Kelly



**Cedar Bay Generating Company
Limited Partnership**

December 1, 1993

Via Federal Express

C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

DEC - 8 1993

Division of Air
Resources Management

**Re: Submission of the Cedar Bay Cogeneration Project's Design Specifications
for the Nitrogen Oxides Selective Non-Catalytic Reduction System**

Dear Mr. Fancy:

Enclosed please find a copy of the design specifications for the nitrogen oxides selective non-catalytic reduction ("SNCR") system which will be used at the Cedar Bay Cogeneration Project. The general process description provided below was included in the third quarter report submitted to Mr. Hamilton Oven, and Mr. Oven requested that I send the design specifications to your office.

An aqueous ammonia solution that is approximately 29% ammonia and that is at ambient pressure will be delivered via truck to a storage tank. The ammonia solution will then be pumped to the stripping system. Before entering the top of the stripping column, the solution will be preheated to 140 degrees Fahrenheit in a heat exchanger. The solution will be fed through the packing of the column and will contact a stream of countercurrent steam, which will strip off ammonia. The pressure of the ammonia stripper will be controlled at 65 pounds per square inch gauge ("psig").

The ammonia vapor will then be stored in a vapor reservoir, which will be set at a pressure of 55 psig. This pressure also controls the feed rate of the aqueous ammonia to the stripper. When the pressure of the vapor reservoir reaches 55 psig, ammonia vapor will start flowing through the valve rack, the injection manifolds, and the injection nozzles into the boilers.

The stripped ammonia solution will contain only 10 parts per million of ammonia and will flow out the sump of the column and through a heat exchanger, where the solution will be cooled to a temperature around 247 degrees Fahrenheit. The control panel will indicate the column's differential pressure; the aqueous ammonia feed rate; the stripper and reservoir pressures; and the stripper overhead, stripper sump, and feed temperatures.



December 1, 1993

Page 2

Should you or your staff have questions concerning the design specifications, please contact me at (301) 718-6937.

Sincerely,

A handwritten signature in black ink, appearing to read "Barrett Parker". The signature is written in a cursive style with some overlapping strokes.

Barrett Parker
Environmental Specialist

Enclosures (2 volumes)

cc (without enclosures): H. Oven, FDEP
J.F. Stallwood, CBGC
J.G. Kelly, USGC

copy Steve Pace - BSSD
Chris Kirtz - NE Dist
for permit file

**Cedar Bay Generating Company,
Limited Partnership**

Certified Mail

RECEIVED

November 24, 1993

DEC - 3 1993

Division of Air
Resources Management

Mr. Winston A. Smith, Director
Air, Pesticides and Toxics Management Division
Region IV
United States Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

File #: 66.7.2

Re: Initial Startup of the three circulating fluidized bed coal fired boilers

Dear Mr. Smith:

As required by 40 CFR 60.7(a)(3), we are pleased to notify your office of the initial startup of the circulating fluidized bed coal fired boilers at the Cedar Bay Cogeneration Project in Jacksonville, Florida on the following dates:

<u>Boiler</u>	<u>Initial Startup Date</u>
A	November 10, 1993
B	November 12, 1993
C	November 15, 1993

These boilers are subject to the requirements of 40 CFR Part 60, Subpart Da. Should you or your staff have questions, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

cc: Clare Fancy, FDEP
Frank Stallwood, CBGC
Janine Kelly, USGC
Kevin Grant, USOSC



Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy
Division of Air Resources Management

FROM: Buck Oven *HO*
Siting Coordination Office

DATE: November 10, 1993

SUBJECT: Cedar Bay

RECEIVED

NOV 12 1993

Division of Air
Resources Management

Please have the appropriate staff review and comment on the attached proposal for a waste fiber test burn.

You may respond directly to Cedar Bay with a copy to me.

Should you have any question, please give me a call.

HO/ss

Attachment

cc: Bob Leetch, NED
Richard Donelan

**Cedar Bay Generating Company,
Limited Partnership**

November 8, 1993

Mr. Hamilton Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

NOV 09 1993

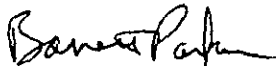
N. E. S.
SITING COORDINATION

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Environmental Specialist

Enclosure

cc: F. Stallwood
J. Kelly



**CEDAR BAY COGENERATION PROJECT, L.P.
30-DAY TEST PLAN FOR SEMINOLE KRAFT'S
SHORT FIBER RECYCLE REJECTS
NOVEMBER 1993**

1.0 INTRODUCTION

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Emissions Test Plan - Barrett Parker, US Generating Company
Telephone: 301-718-6937

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Sludges generated during the zero water discharge process will be collected on filters, pressed, and sent to a recycling facility, where possible, or to a licensed non-hazardous waste landfill. The facility is not expected to produce on a continuous, long term basis, any hazardous wastes. Should such wastes be generated during an intermittent, short duration process, the wastes will be transported to a licensed, permitted treatment, storage, or disposal facility.

Seminole Kraft

Seminole Kraft Corporation is based in Jacksonville, Florida, and SK owns and operates a fully integrated pulp and paper mill. This mill is designed to produce up to 1700 tons per day of recycled paper and linerboard using only used corrugated containers as raw material. SK's mill is the world's largest corrugated paper recycler. Current average recycled paper and linerboard production is 1400 tons per day; current average used corrugated container consumption is also 1400 tons per day.

Short fiber recycle rejects, which can be used as fuel in two of the Cedar Bay Cogeneration Facility's three circulating fluidized bed steam generators, are derived during the recycling process. Bales of recycled cardboard are shredded, mixed with water, and reduced to a pulp. Heavy trash materials, such as staples, glass, metal, and

stones, sink to the bottom of the pulp slurry and are removed. The slurry is then spun in a centrifuge to remove any heavy materials that were not removed during the detrashing process. After leaving the centrifuge, the slurry passes through a coarse screen which removes many of the remaining contaminants such as wax or plastic. The slurry is centrifuged again, and short and long fibers are separated using two finer-meshed screens and a reverse cleaner. The short fiber recycle rejects are then pressed to remove liquids, stored in bins, and delivered to the CBCF via conveyor. CBCF's permit allows using up to 426 cubic yards of short fiber recycle rejects per day, on a wet basis, as fuel. This represents less than one percent of the total CBCF permitted fuel use. Current short fiber recycle reject production is about 200 cubic yards per day, on a wet basis.

Environmental benefits of SK's mill's conversion from virgin to recycled fiber include elimination of the mill's total reduced sulfur emissions and reduction of landfill requirements by as much as 4000 cubic yards per day. SK is owned by a group of investors and the Stone Container Corporation.

3.0 EMISSION LIMITS TEST PLAN

The 30-day test burn will include monitoring and testing of emissions to demonstrate that the CFBs can burn the rejects as fuel without exceeding limitations contained in Condition II.A of the Conditions of Certification.

Continuously-Monitored Pollutants

Compliance with the limitations for pollutants that are continuously monitored at the facility will be determined by the Continuous Emissions Monitoring System (CEMS). The continuously-monitored pollutants and their limitations are as follows:

<u>Pollutant</u>	<u>Emission Limitations (averaging times)</u>		<u>Tons per Year</u>
	<u>lbs./MMBtu</u>	<u>lbs./hr.</u>	
CO	0.175 (8-hr.)	186 (8-hr.)	758
NOx	0.17 (30-day)	180.7(30-day)	736.1
SO2	0.24 (3-hr.)	255.1 (3-hr.)	
SO2	0.20 (12-mo.)		866

Visible emissions (VE) shall not exceed 20 percent opacity (6-min. avg.), except for one 6-minute period per hour when VE shall not exceed 27 percent opacity.

Other Pollutants

Additional emission limitations contained in the Conditions of Certification include the following:

<u>Pollutant</u>	<u>Emission Limitations</u>		<u>Tons per Year</u>
	<u>lbs./MMBtu</u>	<u>lbs./hr.</u>	
PM	.018	19.1	78
PM10	.018	19.1	78
H2SO4 mist	4.66e-04	0.50	2.0
Fluorides	7.44e-04	0.79	3.2
Lead	6.03e-05	0.06	0.26
Mercury	2.89e-05	0.03	0.13
Beryllium	8.7e-06	0.01	0.04
VOC	0.015	16.0	65

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

Based on analyses of the SK process and the rejects and because the rejects represent a small portion of the total fuel input to the boilers, significant changes in emissions of these pollutants is not expected unless the introduction of the rejects significantly effects the operation of the boilers or pollution control equipment. Significant changes in the operation of the boilers or pollution control equipment would be detected by the continuous emission monitors or by other facility monitoring systems (see section 4.0).

Emission levels of particulate matter (PM) will be determined during a two-day test to be conducted during the 30-day test burn. The PM test would provide information necessary to determine whether baghouse operations are impacted by the combustion of rejects.

The tests will be conducted by a qualified firm on one unit while the unit is burning rejects at a rate that represents at least 50 percent of the rate necessary to achieve the maximum daily charging rate of 210 wet cubic yards.

4.0 OPERATIONS FEASIBILITY TEST PLAN

During the 30-day test burn, operations will be monitored to assert whether the CFBs can burn the rejects without causing any operational problems which would affect the reliable operation (with customary maintenance) of the CFBs. Factors to be evaluated include:

Material Handling and Transport

Facility personnel will monitor the performance of the reject handling systems to identify any operational problems that would interfere with the ability to properly

transport and feed all of the rejects from Seminole Kraft to the CFBs for combustion. Facility personnel will also monitor the performance of the baghouses and ash pelletizing systems.

Boiler Operation

Facility personnel will monitor boiler performance during the 30-day test burn and record data necessary to determine the impact of reject combustion on boiler performance and operation. Performance during the critical times of initial introduction of the rejects into the boiler and initial removal of rejects from the fuel mix will be closely monitored.

5.0 FUEL USAGE LIMITATIONS

Section II.A. of the Conditions of Certification contains the following limitations on fuel usage:

Rejects

210 cu. yd./day wet
69,588 cu. yd./yr. wet

Coal (per boiler)

104,000 lbs./hr.
39,000 tons /month
390,000 tons/year

Fuel Oil

380 MMbtu/hr. per boiler
1,900,000 gals./yr. total
To be normally only used for start up.

Fuel use will be monitored during the 30-day test to determine whether all of the rejects can be burned without exceeding any of these fuel usage restrictions.

6.0 TEST BURN REPORT

Within 30 days after the conclusion of the test burn, CBCP will report the results and analysis of the test burn to the DEP and the Regulatory and Environmental Services Department. This test burn report will include the results of the emissions testing and monitoring as well as an analysis of any significant operational problems noted during the 30-day test burn. Based on the testing and monitoring results and on the operations analysis, CBCP will conclude whether the test burn demonstrated that the rejects can be burned in compliance with the Condition of Certification and will identify any facility or operational changes necessary to achieve compliance.

7.0 TEST SCHEDULE

The 30-day test burn will be conducted within one year of the initial facility compliance test. The test will conclude after 30 total days of operation while burning rejects for some or all of each of the 30 days in at least one of the boilers. The Florida Department of Environmental Protection will be notified by CBCP at least 30 days prior to the beginning of the test and at the completion of the test.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

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4APT-AEB

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

RE: Amendment/Revision of Permit PSD-FL-137 (Cedar Bay)

Dear Mr. Fancy:

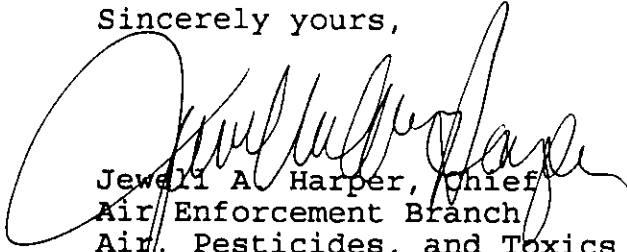
As requested in your letter dated September 24, 1993, we have reviewed the revised draft Prevention of Significant Deterioration (PSD) permit and technical evaluation for the above referenced source. The revised permit incorporates the modifications to the originally permitted project which are the result of proceedings under the State's Power Plant Siting Act. These revisions include the requirement for the addition of add-on NO_x controls, lowering the allowable sulfur content of fuels, utilizing continuous emissions monitors (CEMs) for compliance, and several operational changes which will result in reductions in most emission limits from those determined to be BACT in the original permit. We concur with your technical review and proposed permit conditions.

Your letter requested that EPA review and approve the revised permit in accordance with the partial delegation of authority for implementation of the PSD program for power plants located in Florida. Under the partial delegation agreement, your agency conducts the technical and administrative portions of the program while final permit issuance authority is retained by EPA until such time as necessary amendments to State statutes are made and full delegation is granted. By letter dated September 27, 1993, FDEP submitted amendments to the PPSA and requested full delegation of the PSD program for power plants located in Florida. By letter dated October 26, 1993, EPA granted full delegation of the PSD program to the State, including final permit issuance authority. Thus, it is appropriate that FDEP issue the revised final permit for Cedar Bay Cogeneration, Inc. (PSD-FL-137A).

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Resources Management

Thank you for the opportunity to review and comment on this package. If you have any questions on these comments, please contact Mr. Gregg Worley of my staff at (404) 347-5014.

Sincerely yours,



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

cc: K. Mitchell



ORIGINAL: CLEAR

YC: LARRY

from: Howards 11/9

Frank Owen Howards
Ken Platte

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

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D. E. R.

SITING COORDINATION

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Resources Management
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ENVIRONMENTAL PROTECTION

Division of Air
Resources Management

NOV 02 1993

OFFICE OF THE SECRETARY

Virginia B. Wetherell
Secretary
Florida Department of Environmental
Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Notice of Full Delegation of PSD Permitting Authority
for Power Plants

Dear Ms. Wetherell:

This is in response to your letter of September 27, 1993, requesting that the Environmental Protection Agency (EPA) grant full delegation of permitting authority for sources subject to both the federal Prevention of Significant Deterioration (PSD) regulations and the Florida Electrical Power Plant Siting Act (PPSA), §403.501 et seq., Florida Statutes (1991).

We have reviewed the pertinent laws of the State of Florida and the rules and regulations thereof, and have determined that they provide an adequate and effective procedure for full implementation of the PSD program by the State of Florida.

In 1985, EPA and the Florida Department of Environmental Regulation (FDER) recognized that Florida's original PSD State Implementation Plan (SIP) submittal and EPA's subsequent 1983 conditional SIP-approval for PSD did not apply to sources subject to the PPSA since the PPSA's Site Certification Board was, by State law, the sole permit-issuing authority for power plants in Florida. Accordingly, for power plants subject to the PPSA, the full delegation of PSD authority under which FDER had been operating since 1983 was revoked on November 5, 1985, and Florida was given partial delegation to conduct the technical and administrative portion of the federal PSD program. At that time, EPA resumed final PSD permit issuance and enforcement authority for PPSA sources only.

On July 1, 1986, the Florida Legislature amended the PPSA in an effort to extricate the implementation of PSD regulations and allow FDER to issue PSD permits to sources subject to the PPSA. On its face, the 1986 PPSA amendment appeared to provide FDER with authority to fully implement (i.e. issue and enforce) federal PSD regulations for sources subject to the PPSA. Thus, on September 25, 1986, EPA restored full PSD delegation authority to Florida for these sources.

A State appellate court decision in TECO Power Services Corp. v. Florida Department of Environmental Regulation, First DCA Case No. 91-300, December 20, 1991, declared that the 1986 PPSA amendment does not confer on FDER authority to issue a federally-enforceable PSD permit containing conditions which differ from those imposed by the PPSA Siting Board. The practical effect of the TECO decision was to render ineffective the 1986 PPSA amendment and to require, in the absence of further PPSA amendments, that EPA resume final permitting and enforcement authority over PSD permits for new PPSA sources. Consequently, by letter dated August 7, 1992, EPA revoked full delegation of PSD authority for power plants in Florida and returned to the partial delegation agreement outlined in the November 5, 1985, letter which granted the State the authority to implement the technical and administrative portions of the PSD program for PPSA sources.

Your letter presents amendments to the PPSA which took effect on April 22, 1993. These amendments expressly provide that the "[D]epartment's action on a federally required new source review or prevention of significant deterioration permit shall differ from the actions taken by the siting board regarding the certification if the federally approved state implementation plan requires such a different action to be taken by the department. Nothing in this part [the PPSA] shall be construed to displace the department's authority as the final permitting entity under the federally approved permit program." EPA has determined that the current PPSA statute gives the State the appropriate authority to issue and enforce PSD permits to sources subject to the PPSA.

We have determined that the procedures for new source review by the State of Florida provide an adequate and effective procedure for the implementation of the PSD program for the sources described above. Therefore, pursuant to 40 C.F.R. Subpart A (General Provisions), 40 C.F.R. §52.06 (Legal Authority), and 40 C.F.R. §52.21(u) (Delegation of Authority), we hereby delegate our authority for all portions of the Federal PSD program, as described in 40 C.F.R. §52.21, to the State of Florida for

sources subject to review under the PPSA located or to be located in the State of Florida and subject to review under the federal regulations for PSD, promulgated at 40 C.F.R. §52.21 as follows:

- A. EPA delegates its authority for the review of all sources which are subject to or reviewed under the Electrical Power Plant Siting Act located or to be located in the State of Florida and subject to review under federal regulations for the Prevention of Significant Air Quality Deterioration, promulgated in 40 C.F.R. §52.21.
- B. EPA delegates to the State of Florida its authority and procedures for technical review and evaluation of new sources and public participation pursuant to 40 C.F.R. §124.3-124.14, and its authority under 40 C.F.R. §124.15-124.19 to take final action on an application.
- C. For purposes of and in accordance with paragraph B above, the State of Florida shall follow the procedures in 40 C.F.R. §§124.3-124.19, except that the word "Director" and the phrase "Regional Administrator" shall mean "State Director." A copy of the State's preliminary determination, a copy of all materials submitted by the owner or operator of the source seeking the PSD permit, a copy or summary of the materials (if any) considered by the State in making its preliminary determination, and a copy of the notice shall be sent to the EPA Regional Office immediately upon issuance of a preliminary determination. Immediately upon issuance of a final determination, the state shall forward a copy of the final determination and final permit to the EPA Regional Office.
- D. This delegation is based upon the following conditions:
 1. Quarterly reports containing pertinent information relating to the status of sources subject to 40 C.F.R. §52.21 (or other reports as required by the Regional Administrator) will be submitted to EPA by the State of Florida as part of the existing reports normally submitted to EPA through program plan reporting.
 2. In accomplishing the delegated PSD review, the State of Florida will apply all applicable federal air permitting rules and follow the applicable federal permit processing procedures. If at any time it is determined that the state rules or statutes prohibit the Department from applying any such standard or procedure, the pertinent portion of the delegation may be revoked.

3. If the Regional Administrator determines that the state procedure for implementing the PSD program is inadequate, or is not being effectively carried out, this delegation may be revoked in whole or in part. Any such revocation shall be effective as of the date specified in a Notice of Revocation to the Florida Department of Environmental Protection.
4. Acceptance of this delegation of presently promulgated PSD regulations (40 C.F.R. §52.21, as amended 02/03/92) does not commit the State of Florida to accept responsibility for new federal standards or requirements promulgated after the effective date of this delegation.
5. Public availability of information shall be in accordance with 40 C.F.R. §52.21(g).
6. Enforcement of PSD in the State of Florida will be the primary responsibility of the Department of Environmental Protection. If the State determines that such enforcement is not feasible and so notifies EPA, or where the State acts in a manner inconsistent with the terms of this granted authority, EPA will exercise its concurrent enforcement authority pursuant to Sections 113 and 167 of the Clean Air Act, as amended, with respect to sources within the State of Florida subject to PSD requirements. In accordance with 40 C.F.R. 52.21(s) and Sections 113 and 167 of the Clean Air Act, 42 U.S.C. 7413 and 7477, the Environmental Protection Agency reserves the right to commence an enforcement action against any entity in violation of Prevention of Significant Deterioration should the State of Florida fail to take such an enforcement action or, in the opinion of EPA, fail to pursue a timely or appropriate enforcement action.
7. The State of Florida will ensure, through its interstate intergovernmental cooperation procedures, that all potential source interactions along State boundaries are properly determined.

The State and EPA will develop a system of communication sufficient to guarantee a program that includes the items described below:

- A. Each agency is informed of the current compliance status of subject sources in the State of Florida consistent with the State/EPA Enforcement Agreement.
- B. Prior EPA concurrence is obtained on any matter involving interpretation of 40 C.F.R. §52.21 (including unique questions of applicability of the standards).

This delegation of authority should not be construed as a transfer of PSD responsibility under Section 110(a)(2)(J) of the Clean Air Act, as amended. As you are aware, such transfer involves different procedures and considerations.

A notice announcing the granting of the full delegation of PSD authority to the State will be published in the Federal Register in the near future. The notice will state, among other things, that effective immediately, all reports required pursuant to PSD regulations by covered sources located in or to be located in the State of Florida should be submitted to the Bureau of Air Regulation, Department of Environmental Protection, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida, 32399-2400.

Since the delegation of authority is effective immediately, there is no requirement that the State notify EPA of its acceptance. Unless EPA receives from the State written notice of objections within ten (10) days of receipt of this letter, the State will be deemed to have accepted all of the terms of the delegation.

Sincerely yours,



Patrick Tobin
Acting Regional Administrator