




Florida Department of
Environmental Protection

Memorandum

TO: Michael G. Cooke

THRU: Trina Vielhauer 
J. F. Koerner 

FROM: Michael P. Halpin 

DATE: April 28, 2006

SUBJECT: Cedar Bay Generating Co., L.P.
5% TDF Combustion
DEP File No. 0310337-009-AC, PA 88-24

Attached is the final air construction permit for Cedar Bay Cogeneration Facility. This is an existing coal-fired facility which has three fluidized bed boilers (CFB's), feeding steam to one steam turbine.

The applicant has requested permission to fire a blend of up to 5% tire derived fuel (TDF). Based upon the submitted information and other readily available documentation, I believe that this type of boiler (a CFB) is well-suited to combusting such a fuel. Additionally, it has been determined that there should be no significant increase in the emissions of PSD pollutants.

According to the Scrap Tire Management Council, the standard assumption is that waste (also known as scrap) tires are generated at a rate of one tire per person per year. Given the magnitude of this nationwide issue, it does not seem unreasonable to allow a well-designed facility such as Cedar Bay to fire scrap tires as a fuel for heat recovery and electrical generation.

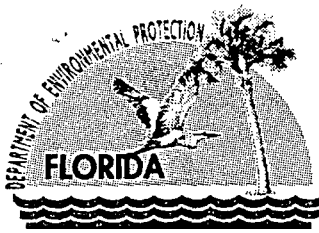
A joint Title V / AC Permit Notice was published in the Florida Times-Union on November 10, 2005. On December 9, 2005 we received a petition for administrative hearing from the Petitioner, CSX Transportation, Inc. On April 10, 2006 the Petitioner voluntarily withdrew their petition for administrative hearing. On April 11, 2006 the assigned administrative law judge issued an order closing their file, relinquishing jurisdiction back to the Department.

Comments were received from the City of Jacksonville (only) and these comments are addressed within the final permit.

I recommend your approval.

Attachments

/mph



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

April 28, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Martin Kreft
General Manager
Cedar Bay Generating Company, L.P.
9640 Eastport Road
Jacksonville, Florida 32218

Re: DEP File No. 0310337-009-AC, 0310337-010-AV and PA 88-24;
Modification of Permit No.'s PSD-FL-137 and 0310337-007-AV
Cedar Bay Generating Plant / Duval County

The applicant, Cedar Bay Generating Company, L.P., applied on August 2, 2005, to the Department for a modification to PSD permit number PSD-FL-137 and Title V permit number 0310337-007-AC for its Cedar Bay Generating Plant located in Duval County. The modification is to allow the facility to co-fire a blend of 5% tire-derived fuel (TDF) in its three circulating fluidized bed boilers (A, B and C) as well as to make changes with respect to the measurements of fuel-bound sulfur content and short-fiber reject throughput.

The Department has reviewed the modification request. The referenced air construction permit hereby modifies PSD-FL-137 as follows:

II.A. Emission Limitations for CBCP Boilers

I. 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. Tire-derived fuel (TDF) may be utilized as a co-firing fuel, and shall not exceed 5% fuel input by weight on a daily basis. Petroleum coke (petcoke) may be utilized as a co-firing fuel, and shall not exceed 35% fuel input by weight on a daily basis. {Permitting Note: The limitations on the coal charging rate include both coal, TDF and petcoke.}
 - b. The maximum charging rate to each of the two CFBs of short fiber recycle rejects from the SK recycling process shall not exceed ~~240 yd³/day wet, and 69,588 yd³/year wet~~ 420,000 lb/day and 69,600 tons/yr. This reflects a combined total of ~~420 yd³/day wet and 139,176 yd³/year wet~~ 840,000 lb/day and 139,200 tons/yr 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.
 - d. ~~The sulfur content of the coal shall not exceed 1.2%, by weight, on an annual basis. The sulfur content shall not exceed 1.7%, by weight, on a shipment (train load) basis. When co-firing coal and petcoke, the blended~~ The fuel input to the CFBs shall not exceed 3.2 lb/MMBtu equivalent SO₂ content. Compliance shall be determined on a monthly basis via a composite of daily fuel samples.
18. The permittee shall submit annual reports to EQD and DEP/BAR summarizing emissions for each calendar year. The reports will commence during the first year in which TDF is fired and continue for a total of five calendar years. Such reports are required in order to confirm Cedar Bay's projections of future actual emissions and to demonstrate to the Department's satisfaction that TDF co-firing did not result in a significant emissions increase. Reporting shall be as follows:

"More Protection, Less Process"

Printed on recycled paper.

Pollutant	Compliance Procedures
<u>NO_x</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 1791.91 TPY</u>
<u>CO</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 541.17 TPY</u>
<u>VOC</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 100.73 TPY</u>
<u>SO₂</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 2012.41 TPY</u>
<u>SAM</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 7.4 TPY</u>
<u>PM₁₀</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 108.86 TPY</u>

II. B. CBCP - Material Handling and Treatment

14. Solid Waste Conditions. The permittee shall comply with the following solid waste conditions for TDF:

1. The tire derived fuel (i.e. the processed tires) shall conform to nominal one-inch processed tire chip standards in which less than 10% by weight are retained on a 2-inch square sieve and less than 5% total by weight will pass through a #4 sieve as determined by testing method ASTM D 422-63.
2. The tire derived fuel (TDF) shall conform to nominal one-inch processed tire chip standards in which they shall be less than 1% free wire by weight and less than 3% of the particles contain bead wire.
3. Documentation of the conformance of the TDF with the nominal one-inch processed tire chip standards shall be maintained onsite and be readily available for inspection at all times.
4. The operator shall maintain records of the quantity of TDF received at the site, stored at the site, and shipped from the site.
5. No operations involving the use of open flames shall be conducted within 25 feet of the TDF.
6. TDF piles shall not be constructed, maintained or operated in or within 200 feet of any natural or artificial body of water, including wetlands within the jurisdiction of the Department, except for bodies of water contained completely within the property boundaries of the facility and which do not ordinarily discharge from the site to surface waters.
7. Stormwater control methods for the TDF piles site shall meet the requirements of Chapters 62-25 and 62-330, F.A.C. and shall be managed in such a way as to divert stormwater or flood waters around and away from the storage piles.
8. TDF piles shall be no larger than 50 feet in width, 10,000 square feet in area and 10 feet in height.
9. A 50-foot wide fire lane shall be placed around the perimeter of each TDF pile.
10. The TDF piles site shall be bermed or given other Department approved protection if necessary to keep liquid runoff from a potential TDF fire from entering water bodies.
11. The TDF piles shall be kept free of grass, underbrush, and other potentially flammable vegetation at all times.
12. The TDF inventory shall be no more than one month's projected usage, based on the design capacity for the first six months, and no more than two times the average actual monthly usage during the preceding six months at all times thereafter.
13. Only a registered waste tire collector shall transport the TDF to or from the facility.

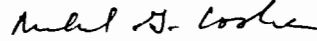
A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Also attached is a revision to the Draft Title V Air Operation Permit. For the Draft Title V Air Operation Permit Revision, the Permitting Authority will issue PROPOSED Permit conditions and subsequent FINAL Permit

conditions in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Executed in Tallahassee, Florida.



Michael G. Cooke, Director
Division of Air Resource
Management

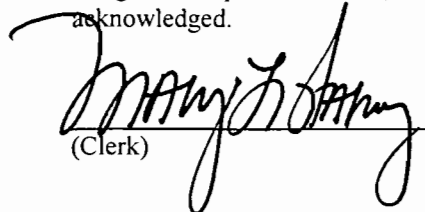
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5/2/06 to the person(s) listed:

Martin Kreft, Cedar Bay *
Jeff Walker, Cedar Bay
Ken Kosky, P.E., Golder Associates
Hamilton Oven, P.E., PPSO
Richard Robinson, P.E., City of Jacksonville EQD
Doug Neeley, EPA
John Bunyak, NPS
Chris Kirts, DEP-NED
Dot Mathias, Northside Civic Association

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


(Clerk) 5/2/06
(Date)



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

April 28, 2006

Martin Kreft
General Manager
Cedar Bay Generating Company, L.P.
9640 Eastport Road
Jacksonville, Florida 32226

Re: PROPOSED Title V Permit No.: 0310337-010-AV
Cedar Bay Generating Plant

Dear Mr. Kreft:

One copy of the "PROPOSED PERMIT DETERMINATION" for the Cedar Bay Generating Plant located at 9640 Eastport Road, Jacksonville, Duval County, is enclosed. This letter is only a courtesy to inform you that the DRAFT permit has become a PROPOSED permit.

An electronic version of this determination has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The document may be reviewed by entering the seven-digit facility ID at the following web site address:
<http://www.dep.state.fl.us/air/eproducts/airpermit/AirSearch.asp>

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Michael P. Halpin, P.E. at 850/488-1344.

Sincerely,

Trina Vielhauer
Chief
Bureau of Air Regulation

TV/JFK/mph

Jeff Walker, Cedar Bay
Ken Kosky, P.E., Golder Associates
Hamilton Oven, P.E., PPSO
Richard Robinson, P.E., City of Jacksonville EQD
Chris Kirts, DEP-NED
Dot Mathias, Northside Civic Association
USEPA, Region 4 (INTERNET E-mail Memorandum)

"More Protection, Less Process"

Printed on recycled paper.

PROPOSED PERMIT DETERMINATION

PROPOSED Permit No.: 0310337-010-AV

Page 1 of 1

I. Public Notice.

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" to Cedar Bay Generating Company, L.P. for the Cedar Bay Generating Plant located at 9640 Eastport Road, Jacksonville, Duval County was clerked on October 25, 2005. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was published in the Florida Times Union on November 10, 2005. The DRAFT Title V Air Operation Permit was available for public inspection at the Northeast District Office in Jacksonville. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was received on November 15, 2005.

II. Public Comment(s).

No comments were received from the public during the 30 (thirty) day public comment period, although a delay occurred due to a filing for Administrative Hearing which was later withdrawn. The City of Jacksonville had the following comments:

1. EQD assumes that the per boiler emission limitations in condition A.5. are not changing. If this is the case then shouldn't the proposed Sulfuric Acid Mist limit in condition A.66. be limited to 6.0 TPY (tons per year)?

RESPONSE: The PSD threshold for SAM is 7 TPY and the historical SAM emissions are 0.5 TPY. Therefore, the 7.4 TPY emission limit listed in then draft permit properly avoids a PSD review.

2. The table at the top of page 6 of the Technical Evaluation and Preliminary Determination indicates that the SO₂, 2003-2004 average is 1972.51 TPY plus the maximum allowable non-PSD emission increase of 39.9 TPY which should equal 2012.41 TPY instead of 2112.41 TPY. If this is correct then the proposed SO₂ limit in condition A.66. should be 2012.41 TPY.

RESPONSE: The Department agrees.

3. The emission limitation table in proposed condition A.66. does not have a PM limit but has a PM₁₀ limit. Is a PM limit not required because the facility's PM emissions are all PM₁₀?

RESPONSE: FDEP presumes that utilizing PM₁₀ and the PSD threshold of 15 TPY is adequately restrictive given that the PSD threshold for PM is 25 TPY.

4. Should condition A.65. (PSD avoidance emission limitations for petcoke co-firing) be removed from the permits since this condition has now been superseded by condition A.66.? If not, how does Cedar Bay demonstrate that the co-firing of petcoke, TDF and coal has not resulted in a significant net emissions increase?

RESPONSE: Both limits apply, and since there are likely going to be overlapping years, the most restrictive limit prevails.

III. Conclusion.

The above changes are made to the DRAFT Title V Permit and the permitting authority hereby issues the PROPOSED Permit No. 0310337-010-AV.

0310337-010-AV (Proposed Title V Permit):

A.3. Methods of Operation.

(b) Fuels.

1. Coal. 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. Tire-derived fuel (TDF) may be utilized as a co-firing fuel, and shall not exceed 5% fuel input by weight on a daily basis. Petroleum coke (pet coke) may be utilized as a co-firing fuel, and shall not exceed 35 % fuel input by weight on a daily basis. {Permitting Note: The limitations on the coal charging rate include both coal, TDF and pet coke.}
2. No. 2 Fuel Oil. Auxiliary fuel burners shall be fueled with only No. 2 fuel oil and shall normally only be used for start-ups. The maximum oil usage shall not exceed 8000 gals/hr and 1,900,000 gals/year.
3. Other. Other fuels or wastes shall not be burned in the CFB boilers without prior specific written approval of the Secretary of the Department of Environmental Protection.

- (c) Short Fiber Rejects. The maximum charging rate to CFB Boilers B & C of short fiber recycle rejects from the SCC recycling process shall not exceed ~~210 yd³/day (wet) and 69,588 yd³/yr (wet)~~ 420,000 lb/day and 69,600 tons/yr. This reflects a combined total of ~~420 yd³/day (wet) and 139,176 yd³/yr (wet)~~ 840,000 lb/day and 139,200 tons/yr for the two CFB boilers that fire recycle rejects. CFB Boiler A will not utilize recycle rejects, nor will it be equipped with handling and firing equipment for recycle rejects.

[PSD-FL-137(A), Title V permit application, and 0310337-005-AC and 0310337-009-AC]

A.7. Sulfur Dioxide - Sulfur Content.

1. Coal Fuel. ~~In order to ensure continuous compliance with the SO₂ limit stated in Specific Condition A.5., the coal sulfur content shall not exceed 1.7 percent, by weight, on a shipment (train load) basis and 1.2 percent, by weight, on an annual basis, as measured by applicable test methods (see Specific Condition A.36.). When co-firing coal and petcoke, the blended~~ The fuel input to the CFBs shall not exceed 3.2 lb/MMBtu equivalent SO₂ content. Compliance shall be determined on a monthly basis via a composite of daily fuel samples.

- A.66.** The permittee shall submit annual reports to EQD and DEP/BAR summarizing emissions for each calendar year. The reports will commence during the first year in which TDF is fired and continue for a total of five calendar years. Such reports are required in order to confirm Cedar Bay's projection of future actual emissions and to demonstrate to the Department's satisfaction that TDF co-firing did not result in a significant emissions increase. Reporting shall be as follows:

<u>Pollutant</u>	<u>Compliance Procedures</u>
<u>NO_x</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 1791.91 TPY</u>
<u>CO</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 541.17 TPY</u>
<u>VOC</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 100.73 TPY</u>
<u>SO₂</u>	<u>Five years of annual reporting by CEMS proving annual facility emissions do not exceed 2012.41 TPY</u>
<u>SAM</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 7.4 TPY</u>
<u>PM₁₀</u>	<u>Five years of annual reporting by stack test proving annual facility emissions do not exceed 108.86 TPY</u>

A.67. Solid Waste Conditions. The permittee shall comply with the following solid waste conditions for TDF:

1. The tire derived fuel (i.e. the processed tires) shall conform to nominal one-inch processed tire chip standards in which less than 10% by weight are retained on a 2-inch square sieve and less than 5% total by weight will pass through a #4 sieve as determined by testing method ASTM D 422-63.
2. The tire derived fuel (TDF) shall conform to nominal one-inch processed tire chip standards in which they shall be less than 1% free wire by weight and less than 3% of the particles contain bead wire.
3. Documentation of the conformance of the TDF with the nominal one-inch processed tire chip standards shall be maintained onsite and be readily available for inspection at all times.
4. The operator shall maintain records of the quantity of TDF received at the site, stored at the site, and shipped from the site.
5. No operations involving the use of open flames shall be conducted within 25 feet of the TDF.
6. TDF piles shall not be constructed, maintained or operated in or within 200 feet of any natural or artificial body of water, including wetlands within the jurisdiction of the Department, except for bodies of water contained completely within the property boundaries of the facility and which do not ordinarily discharge from the site to surface waters.
7. Stormwater control methods for the TDF piles site shall meet the requirements of Chapters 62-25 and 62-330, F.A.C. and shall be managed in such a way as to divert stormwater or flood waters around and away from the storage piles.
8. TDF piles shall be no larger than 50 feet in width, 10,000 square feet in area and 10 feet in height.
9. A 50-foot wide fire lane shall be placed around the perimeter of each TDF pile.
10. The TDF piles site shall be bermed or given other Department approved protection if necessary to keep liquid runoff from a potential TDF fire from entering water bodies.
11. The TDF piles shall be kept free of grass, underbrush, and other potentially flammable vegetation at all times.
12. The TDF inventory shall be no more than one month's projected usage, based on the design capacity for the first six months, and no more than two times the average actual monthly usage during the preceding six months at all times thereafter.
13. Only a registered waste tire collector shall transport the TDF to or from the facility.

TECHNICAL EVALUATION

FINAL DETERMINATION

and Title V Statement of Basis

Cedar Bay Generating Company, LP

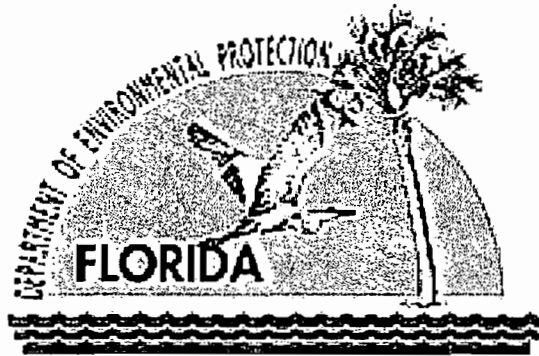
5% Co-Firing of Tire-Derived Fuel

Cogentrix / Cedar Bay Cogeneration Facility

Duval County

0310337-009-AC

0310337-010-AV



Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
North Permitting Section

April 28, 2006

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL INFORMATION

1.1 APPLICANT NAME AND ADDRESS

Cedar Bay Generating Company, L.P.
Cedar Bay Cogeneration Facility
9640 Eastport Road
Jacksonville, Florida 32218

Authorized Representative: Martin Kreft, General Manager

1.2 REVIEWING AND PROCESS SCHEDULE

August 2, 2005 Received permit application
August 19, 2005 Request For Additional Information
September 20, 2005 Application complete

2. FACILITY INFORMATION

2.1 FACILITY LOCATION

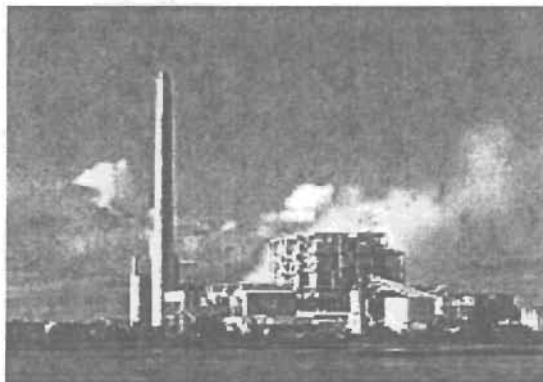
The facility is located in Jacksonville, Duval County. The UTM coordinates are Zone 17; 441.61 km E; 3365.552 km N. This site is approximately 54 kilometers from the Okefenokee National Wildlife Refuge and 98 kilometers from the Wolf Island National Wildlife Refuge, both Class I PSD Areas.

2.2 STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)

Industry Group No.	49	Electric, Gas and Sanitary Services
Industry No.	4911	Electric Services

2.3 FACILITY CATEGORY

This facility consists of three circulating fluidized bed (CFB) steam generators (boilers) designated as Boilers A, B, and C, a coal handling area, a limestone handling area, and an ash handling area. Crushed coal is the primary fuel for Boilers A, B and C with petcoke authorized up to 35%. The fuel for Boilers B and C can also be supplemented with short fiber recycle rejects received from Stone Container Corporation. No. 2 fuel oil is used as supplemental fuel in all three boilers normally only for start-ups. See figures below.



This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO) or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). Based upon the Title V permit, this facility is a major source of hazardous air pollutants (HAPs).

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

3. PROJECT DESCRIPTION

This project primarily addresses the following emissions unit(s):

Emissions Unit No.	Emissions Unit Description
001	Pyroflow [®] Circulating Fluidized Bed (CFB) dry bottom boiler designated as "CFB Boiler A"
002	Pyroflow [®] Circulating Fluidized Bed (CFB) dry bottom boiler designated as "CFB Boiler B"
003	Pyroflow [®] Circulating Fluidized Bed (CFB) dry bottom boiler designated as "CFB Boiler C"

The applicant proposes to combust up to 5% of its fuel (on a weight basis) as tire-derived fuel (TDF) "chips". The facility currently combusts coal as its primary fuel. The applicant indicates that this permit modification can be made in such a way that air emissions will not increase beyond historical levels, thus a PSD Review will not be triggered. The applicant further proposes to maintain and submit to the Department (FDEP) and the Air Quality Branch of the Environmental Quality Department of Jacksonville (EQD) on an annual basis for a period of 5-years from the date each emission unit begins firing 5% TDF, data demonstrating in accordance with 40 CFR 52.21(b)(21)(v) and 40 CFR 52.21(b)(33) that the operational change associated with the use of TDF did not result in significant emission increases for CO, NO_x, PM, SO₂, SAM and VOC (i.e., the WEPCO Rule). A general review of tire-derived fuel and a review of the future actual emissions and related emission analyses follow.

3.1 TDF DISCUSSION

Scrap tires are used as fuel because of their high heating value. Using scrap tires is not recycling, but is considered a beneficial use - it is better to recover the energy from a tire rather than landfill it. In 2003, 130 million scrap tires were used as fuel (about 45% of all generated) - up from 25.9 million (10.7% of all generated) in 1991.

There are several advantages to using tires as fuel:

- Tires produce the same amount of energy as oil and 25% more energy than coal.
- The ash residues from TDF may contain lower metals content than some coals.
- TDF results in lower NO_x emissions when compared to many U.S. coals, particularly the high-sulfur coals.

Tires are usually provided in one of three forms when utilized as a fuel:

Crumb: There are a number of advantages to utilizing this form. 1) The steel in the bead and radial bands can be removed via air classification; 2) The crumb can then be blown in with powdered coal fuel directly substituting for the powdered coal; and 3) The transportation storage and management of the crumb is very similar to managing coal fines, both the good and the bad aspects of such management.

Chips: Tire "chips" of varying size are routinely utilized as fuel. These chips range in size from ¼" up to 6" squares. A variation on this is a "quartering" of the tires. In all cases, the transportation, storage and management are essentially the same. Storage is generally in an open air pile similar to storage of coal or limestone. The feeding of the chips into a boiler is typically via a conveyor fed from a hopper. The use of tire chips has a couple of advantages. The feed rate can be continuous and carefully regulated. The wire in the bead and radial belts do not shear smoothly when the tires are chipped; consequently, the chips are ragged in appearance.

Whole Tires: The use of whole tires as a fuel is fairly common in the cement kiln industry. In this case, truck loads of whole tires, usually enclosed vans, are delivered to the end of a conveyor and the tires are manually unloaded from the truck onto the conveyor. The conveyor feeds the tires to a mechanism that inserts one tire at a time into the kiln at specified time intervals. The advantage of utilizing whole tires is that there are no processing costs in addition to the acquisition costs. However, transportation, storage and management of whole tires can require more logistical care and more manual labor than the management of the other TDF forms.

EPA supports the highest and best practical use of scrap tires in accordance with the waste management hierarchy, in order of preference: reduce, reuse, recycle, waste-to-energy, and disposal in an appropriate facility. Disposal of

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

scrap tires in tire piles is not an acceptable management practice because of the risks posed by tire fires, and because tire piles can provide habitats for disease vectors, such as mosquitoes.

In 2003, more than 290 million scrap tires were generated in the U.S. Nearly 100 million of these tires were recycled into new products and 130 million were reused as tire-derived fuel (TDF) in various industrial facilities. TDF is one of several viable alternatives to prevent newly generated scrap tires from inappropriate disposal in tire piles, and for reducing or eliminating existing tire stockpiles.

Based on over 15 years of experience with more than 80 individual facilities, EPA recognizes that the use of tire-derived fuels is a viable alternative to the use of fossil fuels. EPA testing shows that TDF has a higher BTU value than coal. That Agency supports the responsible use of tires in Portland cement kilns and other industrial facilities, so long as the candidate facilities: (1) have a tire storage and handling plan; (2) have secured a permit for all applicable state and federal environmental programs; and (3) are in compliance with all the requirements of that permit.

The following information was compiled from FDEP's "ARMS" database. It represents a summary of the facilities within Florida where the use of tires as a fuel is currently permitted. Where facilities have multiple emission units, each emission unit is listed on a separate line:

OWNER/COMPANY NAME	SITE NAME
FLORIDA ROCK INDUSTRIES, INC.	THOMPSON S. BAKER CEMENT PLANT
BAY COUNTY BOARD OF COUNTY COMMISSIONERS	MONTENAY BAY, LLC
BAY COUNTY BOARD OF COUNTY COMMISSIONERS	MONTENAY BAY, LLC
RINKER MATERIALS CORPORATION.	MIAMI CEMENT PLANT
MIAMI DADE RRF	MIAMI DADE RRF/MONTENAY
MIAMI DADE RRF	MIAMI DADE RRF/MONTENAY
MIAMI DADE RRF	MIAMI DADE RRF/MONTENAY
MIAMI DADE RRF	MIAMI DADE RRF/MONTENAY
CEMEX	CEMEX
FLORIDA CRUSHED STONE CO., INC.	BROOKSVILLE CEMENT AND POWER PLANTS
CITY OF TAMPA	MCKAY BAY REFUSE-TO-ENERGY FACILITY
CITY OF TAMPA	MCKAY BAY REFUSE-TO-ENERGY FACILITY
CITY OF TAMPA	MCKAY BAY REFUSE-TO-ENERGY FACILITY
CITY OF TAMPA	MCKAY BAY REFUSE-TO-ENERGY FACILITY
HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.	HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.
HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.	HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.
HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.	HILLSBOROUGH CTY. RESOURCE RECOVERY FAC.
BLACKLIDGE EMULSIONS INCORPORATED	BLACKLIDGE EMULSIONS INCORPORATED
COVANTA LAKE, INC.	COVANTA LAKE INC
COVANTA LAKE, INC.	COVANTA LAKE INC
PINELLAS CO. BOARD OF CO. COMMISSIONERS	PINELLAS CO. RESOURCE RECOVERY FACILITY
PINELLAS CO. BOARD OF CO. COMMISSIONERS	PINELLAS CO. RESOURCE RECOVERY FACILITY
PINELLAS CO. BOARD OF CO. COMMISSIONERS	PINELLAS CO. RESOURCE RECOVERY FACILITY
RIDGE GENERATING STATION, L.P.	RIDGE GENERATING STATION, L.P.
SUWANNEE AMERICAN CEMENT CO.	SUWANNEE AMERICAN CEMENT

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

4. PROJECT EMISSIONS

4.1 COMPARATIVE STATISTICS

The following table was provided within the applicant's submittal in order to provide a comparison of coal and TDF characteristics. Where applicable, a weight-based input of 5% TDF is assumed.

<u>Characteristic</u>	<u>Cedar Bay Coal</u>	<u>TDF</u>	<u>Combination</u>
<u>Proximate Analysis (% as received)</u>			
	2003 annual average		
Moisture	6.49	0.62	6.20
Ash	10.89	4.78	10.59
Volatile	33.21	66.64	34.87
Fixed Carbon	49.35	27.96	48.29
<u>Ultimate Analysis (% as received)</u>			
Carbon	68.85	83.27	69.56
Hydrogen	4.35	7.09	4.49
Nitrogen	1.32	0.24	1.27
Sulfur	0.96	1.83	1.00
Ash	11.14	4.78	10.83
Moisture	7.05	0.62	6.73
Oxygen	6.41	2.17	6.20
<u>CFB Performance</u>			
Heat Content (Btu/lb)	12,000	14,700	12,135
Mass Percentage	95.0%	5.0%	100.0%
Heat Input by Fuel (tons/hr)	41.6	2.2	43.8
Percentage by Heat Input	94%	6%	100%
Heat Input by Fuel (MMBtu/hr)	999.2	63.8	1,063.0
Unit heat Input (MMBtu/hr) - permitted	1,063		

4.2 FUTURE ACTUAL EMISSION PROJECTIONS

The following table summarizes the historical, consecutive 2-year emissions of criteria pollutants, based upon the applicant's submittals:

	<u>Boilers A, B, and C (TPY)</u>			
	<u>2000-2001</u>	<u>2001-2002</u>	<u>2002-2003</u>	<u>2003-2004</u>
Particulate Matter	195.06	136.91	82.21	101.88
PM ₁₀	128.79	78.13	69.36	93.96
Sulfur Dioxide	1,933.32	1,910.15	1,956.34	1,972.51
Nitrogen Oxides	1,717.99	1,649.57	1,675.08	1,752.01
Carbon Monoxide	500.26	470.56	447.90	441.27
Volatile Organic Compounds	32.96	53.10	59.49	60.83
Sulfuric Acid Mist	0.34	0.41	0.49	0.50

As a result, years 2003 – 2004 are presumed to be representative of normal operations and will form the baseline for ensuring conformance with 62-210.200(11)(d) of the Florida Administrative Code. In order to avoid a PSD review (as proposed by the applicant), the annual emissions of each of the criteria pollutants must remain less than the PSD Significant Emission Rate (SER). The below table summarizes this requirement quantitatively, based upon the baseline emissions above.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Criteria Pollutant	2003–2004 Average (TPY)	Maximum Allowable Non-PSD Emission Increase (TPY)	Maximum Allowable Threshold (TPY)
NO _x	1752.01	39.9	1791.91
CO	441.27	99.9	541.17
VOC	60.83	39.9	100.73
SO ₂	1972.51	39.9	2012.41
SAM	0.50	6.9	7.4
PM ₁₀	93.96	14.9	108.86

4.3 UNRELATED PERMIT REVISIONS

In addition to permission to combust 5% TDF, two unrelated permit modifications have been requested:

- 1) A change to the method by which the combustion of short fiber recycle rejects is measured (by weight rather than volume), and
- 2) Elimination of the percent sulfur limitation on coal fuel.

With regard to the above changes, the applicant has provided respectively:

- 1) A weight-basis for the measurement of short fiber recycle rejects which is equivalent to the volumetric basis, and
- 2) Rationale for demonstrating that current SO₂ emission levels and related limits are more a function of the SO₂ removal efficiency of the CFBs (limestone throughput) than the percent sulfur content of the coal. The applicant is seeking flexibility (for procurement reasons) in the coal's percent sulfur content and has adequately demonstrated through the co-firing of high-sulfur petcoke that the equivalent SO₂ content of the fuel input may be as high as 3.2 lb/MMBtu while meeting all existing emission constraints.

Accordingly, neither of the above revisions should prompt a change to the emissions of PSD pollutants and are otherwise considered as minor for the purpose of this evaluation.

5. RULE APPLICABILITY

This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for all pollutants. Rule 62-4.030, F.A.C., prohibits modification of any existing emissions unit without first receiving a permit. It further specifies that a permitted installation may only be modified in a manner that is consistent with the terms of such a permit. Rule 62-210.200, F.A.C., defines "modification" to mean generally a physical change or change in the method of operation that results in an increase in actual emissions of regulated air pollutants. Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C., also reiterate the requirement for construction permits. Additionally, Rule 62-210.300 requires an Air Construction permit for all new sources of air pollution unless specifically exempt.

FDEP deems that burning of TDF is a change in the method of operation. Given that the source is major with regard to PSD, a review will be performed to verify that the burning of 5% TDF is not likely to result in a significant net emissions increase and that, consequently, use of TDF is not a major modification subject to PSD review. The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein).

6. PSD POLLUTANT ANALYSIS

Prior to this review and earlier this year, Cedar Bay was given permission for and indeed conducted a test burn of 5% TDF on one of the 3 boilers (boiler C). The subject test burn report concluded that there were no changes in the emissions of the six criteria pollutants, based upon a statistical analysis of the actual test results. Additional emission testing was conducted to determine whether any increases could be detected for VOC's, Metals and Sulfuric Acid Mist. The report concluded that only the emissions of zinc had increased with an estimated emission rate of 1.2×10^{-6} lb/MMBtu. Based upon the average zinc content measured in the TDF samples, and a 5% by weight burn rate, an uncontrolled emission rate of 1.74×10^{-2} lb/MMBtu was estimated, suggesting that the removal efficiency of the scrubber was greater than 99.99%.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

As a means of corroborating the Cedar Bay test report and related conclusions, the Department reviewed EPA Report 600/R-97-115 entitled "Air Emissions From Scrap Tire Combustion". The following excerpt is quoted from the abstract:

"Based on the results of the RKIS test program, it can be concluded that, with the exception of zinc emissions, potential emissions from TDF are not expected to be very much different than from other conventional fossil fuels, as long as combustion occurs in a well-designed, well-operated and well-maintained combustion device. However, as with most solid fuel combustors, an appropriate particulate control device would likely be needed in order to obtain an operating permit in most jurisdictions in the United States. Test data, from 22 industrial facilities that have used TDF are presented: 3 kilns (2 cement and 1 lime) and 19 boilers (utility, pulp and paper, and general industrial applications). All sources had some type of particulate control. In general, the results indicate that properly designed existing solid fuel combustors can supplement their normal fuels, which typically consist of coal, wood, coke and various combinations thereof, with 10 to 20% TDF and still satisfy environmental compliance emissions limits."

Given the lack of any discrepancy between the EPA report and the Cedar Bay Report, FDEP finds no reason to reject the premise of Cedar Bay's application; specifically, it is unlikely that any increases in the emissions of criteria pollutants will be observed and a PSD Review is not required (i.e., WEPCO).

With regard to ancillary (or fugitive) emissions resulting from the increased lime throughput, the Department finds it unlikely that the transportation or storage of rubberized tire chips will cause increases in fugitive emissions. In fact, given the reductions in coal throughput which will occur from burning TDF, *reductions* in fugitive emissions are just as likely to occur.

6.1 SUMMARY – PSD REVISIONS

A preliminary review supports the applicant's contention that a preconstruction review is not triggered for the project. PSD regulations (under the provisions commonly known as the "WEPCO rule") allow a source undertaking a non-routine change that could affect emissions at an electric utility steam generating unit to lawfully avoid the major source permitting process by using the unit's representative actual annual emissions to calculate emissions following the change, if the source submits information for 5 years following the change to confirm its pre-change projection. Under the WEPCO rule, Cedar Bay must compute baseline actual emissions and must project the future actual emissions from the modified units for a period after the physical change. In addition, Cedar Bay must maintain and submit to the Department on an annual basis for a period of at least 5 years from the date the units resume regular operation, information demonstrating that the change did not result in a significant emissions increase. If Cedar Bay fails to comply with the reporting requirements of the WEPCO rule or if the submitted information indicates that emissions have increased above PSD thresholds as a consequence of the change, it will be required to obtain a PSD permit for TDF co-firing (meaning that a Best Available Control Technology Review would then be applicable). Finally, even though a PSD review is not triggered due to the co-firing project, Cedar Bay must meet all other applicable federal, state, and local air pollution requirements.

6.2 SUMMARY – TITLE V REVISIONS

As a result of the proposed changes, Title V conditions A.3., A.7., A.66. and A.67. will be revised according to the Draft Permit.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

7. ADDITIONAL COMPLIANCE PROCEDURES

The applicant shall be responsible for record-keeping and reporting as follows:

Pollutant	Compliance Procedures
NO _x emission limit	Five years of annual reporting by CEMS proving annual emissions do not exceed 1791.91 TPY
CO emission limit	Five years of annual reporting by CEMS proving annual emissions do not exceed 541.17 TPY
VOC emission limit	Five years of annual reporting by stack test proving annual emissions do not exceed 100.73 TPY
SO ₂ emission limit	Five years of annual reporting by CEMS proving annual emissions do not exceed 2012.41 TPY
SAM emission limit	Five years of annual reporting by stack test proving annual emissions do not exceed 7.4 TPY
PM ₁₀ emission limit	Five years of annual reporting by stack test proving annual facility emissions do not exceed 108.86 TPY

Specific permit conditions shall further describe these limitations. The reporting procedures are to begin during the first calendar year in which TDF is fired.

8. CONCLUSION

Based on the foregoing technical evaluation of the application, additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations.

Michael P. Halpin, P.E. Review Engineer
Department of Environmental Protection, Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Martin Kreft
 Cedar Bay Generating Company
 9640 Eastport Road
 Jacksonville, Florida 32218-2260

2. Article Number
 (Transfer from service label)

7000 1670 0013 3110 0802

PS Form 3811, February 2004

Domestic Return Receipt

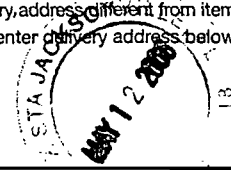
102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature
 X *Debra L Sumner* Agent Addressee

B. Received by (Printed Name) C. Date of Delivery
Debra L Sumner

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No



3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

**U.S. Postal Service
 CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)**

7000 1670 0013 3110 0802

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark
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Mr. Martin Kreft
 Cedar Bay Generating Company
 9640 Eastport Road
 Jacksonville, Florida 32218-2260



STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

CSX TRANSPORTATION, INC.,

Petitioner,

vs.

**CEDAR BAY GENERATING
COMPANY, L.P. and DEPARTMENT
OF ENVIRONMENTAL PROTECTION,**

**OGC Case No. 05-2690
DEP Permit No. 0310337-010-AV
OGC Case No. 05-2689
DEP Permit No. 0310337-009-AC**

Respondents.

ORDER CLOSING FILE

On December 9, 2005, the Florida Department of Environmental Protection (Department) received a petition for administrative hearing from the Petitioner, CSX Transportation, Inc. On April 10, 2006, the Petitioner voluntarily withdrew their petition for administrative hearing. On April 11, 2006 the assigned administrative law judge issued an order closing their file, relinquishing jurisdiction back to the Department. There being no further matters to consider,


IT IS ORDERED:

The Department's file in this matter is closed.

Any party to this order has the right to seek judicial review of the order under section 120.68 of the Florida Statutes by the filing of a notice of appeal under rules 9.110 and 9.190 of the Florida Rules of Appellate Procedure with the clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days from the date this order is filed with the clerk of the Department.

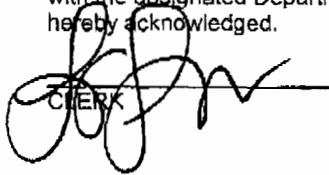
DONE AND ORDERED this 24 day of April, 2006, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



JACK CHISOLM, Deputy General Counsel
3900 Commonwealth Boulevard - MS 35
Tallahassee, Florida 32399-3000
850/245-2242 facsimile 850/245-2302

FILED on this date, pursuant to §120.52 Florida Statutes,
with the designated Department Clerk, receipt of which is
hereby acknowledged.


CLERK

April 24, 2006
Date

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via facsimile U.S. Mail ONLY this 21st day of April, 2006, to:

Lawrence N. Curtin
HOLLAND & KNIGHT, LLP
Post Office Drawer 810
Tallahassee, FL 32302

David S. Dee
YOUNG VAN ASSENDERP, P.A.
P.O. Box 1833
Tallahassee, FL 32302-1833



PATRICIA E. COMER, Assistant General Counsel
Florida Bar No. 0224146
Department of Environmental Protection
3900 Commonwealth Boulevard - MS 35
Tallahassee, Florida 32399-3000
Telephone 850/245-2242
Facsimile 850/245-2302

with courtesy copy to:

Trina L. Vielhauer, Chief
Bureau of Air Regulation

facsimile: 850/921-9533

Cedar Bay Generating Company, L.P
P. O. Box 26324
Jacksonville, FL 32226-6324

9640 Eastport Road
Jacksonville, FL 32218
904.751.4000
Fax: 904.751.7320

RECEIVED

NOV 22 2005

November 21, 2005

Mr. Michael Halpin, P.E.
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, Mail Station #5505
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

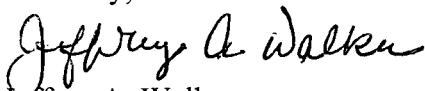
Re: Cedar Bay Public Notice of Intent to Issue Revised Air Construction Permit/Title V Air Operation Permit

Dear Mr. Halpin:

Pursuant to the instructions in the Department's letter dated October 20, 2005, Cedar Bay submits the notarized Affidavit of Publication for the "PUBLIC NOTICE OF INTENT TO ISSUE REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT" for Cedar Bay Generating Company's proposed air permit modifications. The notice was published in the legal ad section of the Florida Times Union on November 10, 2005.

If there are any questions or if any additional information is needed, please do not hesitate to contact me via phone or e-mail.

Sincerely,



Jeffrey A. Walker
Environmental Manager, Cedar Bay Plant

Cc: Martin Kreft, Cedar Bay
Mark Casper, Charlotte

BEST AVAILABLE COPY

THE FLORIDA TIMES-UNION
Jacksonville, Fl
Affidavit of Publication

Florida Times-Union

CEDAR BAY GENERATING CO.
PO BOX 26324
JACKSONVILLE FL 32236

REFERENCE: 0181153
R105926 Public Note

State of Florida
County of Duval

Before the undersigned authority personally appeared Tiffany Powell who on oath says she is a Legal Advertising Representative of The Florida Times-Union, a daily newspaper published in Jacksonville in Duval County, Florida; that the attached copy of advertisement is a legal ad published in The Florida Times-Union. Affiant further says that The Florida Times-Union is a newspaper published in Jacksonville, in Duval County, Florida, and that the newspaper has heretofore been continuously published in Duval County, Florida each day, has been entered as second class mail matter at the post office in Jacksonville, in Duval County, Florida for a period of one year preceeding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission, or refund for the purpose of securing this advertisement for publication in said newspaper.

PUBLISHED ON: 11/10

FILED ON: 11/10/05

Name: Tiffany Powell Title: Legal Advertising Repres
In testimony whereof, I have hereunto set my hand and affixed seal, the day and year aforesaid.

NOTARY:



TWILLA SHIPP
Notary Public, State of Florida
My comm. expires May 13, 2006
Comm. No. 00117248

PUBLIC NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V
AIR OPERATION PERMIT

Florida Department of Environmental Protection
Draft Air Construction Permit No. 0310337-009-AC
Draft Title V Air Operation Permit No. 0310337-010-AV
Cedar Bay Generating Company, L.P.
Duval County, Florida

Applicant: The applicant for this project is Cedar Bay Generating Company, L.P. The facility responsible official is Martin Kreff, General Manager.
Facility Location: The applicant's address is 9640 Eastport Road, Jacksonville, Florida 32218.

Revised Air Construction Permit: This project allows for the co-firing of 5% tire-derived fuel in Emission Units, 001, 002 and 003. The referenced Emission Units are more commonly known as Boilers A, B, and C. Each emission unit is a fluidized bed boiler, rated at 1,063 MMBtu per hour. All other permit conditions will remain the same, and calculated emission increases are less than the PSD significant thresholds of 40 tons per year (TPY) SO₂, NO_x and VOC, 100 TPY CO, 15 TPY PM₁₀ and 0.6 TPY lead.

Title V Air Operation Permit Revision: This project is to incorporate the above, applicable revisions to the Title V Air Operation permit for the facility.
Permitting Authority: Application for these permitting actions are subject to review in accordance with the provisions of Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and air permits are required for the revised air construction permit and to operate the facility. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making permit determinations regarding these projects. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, in Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850-922-6979.

Project Files: Complete project files are available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. For the Revised Air Construction Permit Project, the complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. For the Title V Air Operation Permit Project, the complete project file includes the Draft Permit, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit documents and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ords/>. Copies of the complete project files are also available at the Air Resources Section of the Department's Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville; Phone Number 904-807-3300; and the City of Jacksonville's Environmental Quality Division at 117 West Duval Street, Suite 225, Jacksonville; Phone Number 904-630-4900.

Notice of Intent to Issue Air Permits: The Permitting Authority gives notice of its intent to issue the Revised Draft Air Construction Permit and the Draft Title V Air Operation Permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the projects will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296 and 62-297, F.A.C. For the Draft Air Construction Permit, the Permitting Authority will issue a Final Permit in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change in terms or conditions. For the Draft Title V Air Operation Permit, the Permitting Authority will issue PROPOSED Permit conditions and subsequent FINAL Permit conditions in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Comments on the Air Construction Permit Project: the Permitting Authority will accept written comments concerning the Revised Draft Air Construction Permit for a period of fourteen (14) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address, email or facsimile. If written comments result in a significant change to the Draft permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Comments on the Draft Title V Air Operation Permit Project: The Permitting Authority will accept written comments concerning the Draft Permit for a period of thirty (30) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://1hora6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a Revised Draft permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decisions may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this "Written Notice of Intent". Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached "Public Notice" or within fourteen (14) days of receipt of this "Written Notice", whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall

period of thirty (30) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://flhraq6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a Revised Draft permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

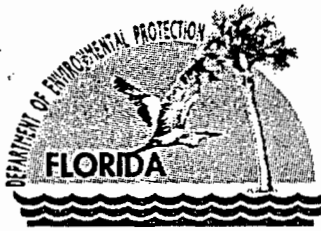
Petitions: A person whose substantial interests are affected by the proposed permitting decisions may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this "Written Notice of Intent". Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached "Public Notice" or within fourteen (14) days of receipt of this "Written Notice", whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this "Written Notice". Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on these applications have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Objections to the FINAL Title V Permit: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/airpermits/Florida.htm>.



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

October 20, 2005

Mr. Martin Kreft, General Manager
Cedar Bay Generating Company, L.P.
9640 Eastport Road
Jacksonville, Florida 32218

Re: DEP File No. 0310337-009-AC, 0310337-010-AV and PA 88-24
Modification of Permit No. PSD-FL-137 and 0310337-007-AV
Cedar Bay Generating Plant / Duval County

Dear Mr. Kreft:

On August 2, 2005, the Department received your application to co-fire 5% tire-derived fuel (TDF) in boilers A, B and C at the above facility, which is located in Duval County. Enclosed are the following related documents: "Technical Evaluation Preliminary Determination and Statement of Basis" and "Draft Permit Revision". The "Technical Evaluation Preliminary Determination and Statement of Basis" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue the permit. The "Draft Permit Revision" includes the specific changes to the above permit conditions that the Department intends to make.

The Department is providing its preliminary determination to issue revisions to these permits at the same time. Enclosed are the following combined documents related to these projects: "Written Notice of Intent to Issue Revised Air Construction Permit/Title V Air Operation Permit" and "Public Notice of Intent to Issue Revised Air Construction Permit/Title V Air Operation Permit". These documents revise both permits, allowing for a single Public Notice. The "Written Notice" provides important information regarding: the Permitting Authority's intent to issue the permits; the requirements for publishing the Public Notice of the Permitting Authority's intent to issue the air permits; the procedures for submitting comments on the Draft Permits; the requirements for requesting a public meeting; the process for filing a petition for an administrative hearing; and the availability of mediation. The "Public Notice" is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Michael P. Halpin, P.E., at 850/921-9519.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

**WRITTEN NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT**

*In the Matter of an
Application for Title V Air Operation Permit by:*

Mr. Martin Kreft, General Manager
Cedar Bay Generating Company, L.P.
9640 Eastport Road
Jacksonville, Florida 32218

Project No. 0310337-009-AC and 0310337-010-AV
Revision of Permit No. PSD-FL-137
Revision of Title V Air Operation Permit
Duval County, Florida

Facility Location: The Cedar Bay Cogeneration Plant is located at 9640 Eastport Road, Jacksonville, Duval County, Florida.

Revised Air Construction Permit Projects: The revision allows for the co-firing of 5% tire-derived fuel (TDF) in boilers A, B and C. Details are provided in the application and the enclosed "Technical Evaluation and Preliminary Determination".

Title V Air Operation Permit Project: The Draft Title V Air Operation permit revision incorporates the revised air construction permit for this facility.

Permitting Authority: Applications for these permitting actions are subject to review in accordance with the provisions of Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and air permits are required for the revised air construction permit and to operate the facility. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making permit determinations regarding these projects. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, in Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850/922-6979.

Project Files: Complete project files are available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. For the Revised Air Construction Permit Project, the complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. For the Title V Air Operation Permit Project, the complete project file includes the Draft Permit, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. Copies of the complete project files are also available at the Air Resources Section of the Department's Northeast District Office at 7825 Baymeadows Way, Jacksonville; Phone Number 904-807-3300; and the City of Jacksonville's Environmental Quality Division at 117 West Duval Street, Suite 225, Jacksonville; Phone Number 904-630-4900.

Notice of Intent to Issue Air Permits: The Permitting Authority gives notice of its intent to issue the revised Draft Air Construction Permit and the Draft Title V Air Operation Permit to the applicant for the projects described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the projects will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. For the Draft Air Construction Permit, the Permitting Authority will issue a Final Permit in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions. For the Draft Title V Air Operation Permit, the Permitting Authority will issue PROPOSED Permit conditions and subsequent FINAL Permit conditions in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Revised Air Construction Permit/Title V Air Operation Permit" (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5), F.A.C., the applicant shall provide proof of publication to the

**WRITTEN NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT**

Permitting Authority at the above address within seven (7) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments on the Air Construction Permit Project: The Permitting Authority will accept written comments concerning the Revised Draft Air Construction Permit for a period of fourteen (14) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address, email or facsimile. If written comments result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Comments on the Draft Title V Air Operation Permit Project: The Permitting Authority will accept written comments concerning the Draft Permit for a period of thirty (30) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://tlhora6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a Revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decisions may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this "Written Notice of Intent". Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached "Public Notice" or within fourteen (14) days of receipt of this "Written Notice", whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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**WRITTEN NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT**

Mediation: Mediation is not available in this proceeding.

Objections to the FINAL Title V Permit: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/air/permits/Florida.htm>.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

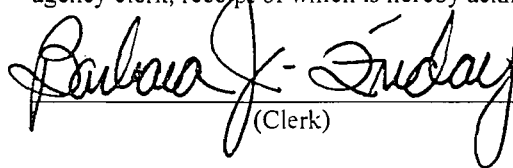
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Permit" package (including the Written Notice of Intent, the Public Notice, the Technical Evaluation and Preliminary Determination, the Draft Air Construction and Draft Title V Air Operation Permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 10/25/05 to the persons listed below.

Martin Kreft, Cedar Bay *
Jeff Walker, Cedar Bay
Ken Kosky, P.E., Golder Associates
Hamilton Oven, P.E., PPSO
Richard Robinson, P.E., City of Jacksonville EQD
Doug Neeley, EPA
John Bunyak, NPS
Chris Kirts, DEP-NED
Dot Mathias, Northside Civic Association

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

 10/25/05
(Clerk) (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT**

Florida Department of Environmental Protection
Draft Air Construction Permit No. 0310337-009-AC
Draft Title V Air Operation Permit No. 0310337-010-AV
Cedar Bay Generating Company, L.P.
Duval County, Florida

Applicant: The applicant for this project is Cedar Bay Generating Company, L.P. The facility responsible official is Martin Kreft, General Manager.

Facility Location: The applicant's address is 9640 Eastport Road, Jacksonville, Florida 32218.

Revised Air Construction Permit: This project allows for the co-firing of 5% tire-derived fuel in Emission Units 001, 002 and 003. The referenced Emission Units are more commonly known as Boilers A, B, and C. Each emission unit is a fluidized bed boiler, rated at 1,063 MMBtu per hour. All other permit conditions will remain the same, and calculated emission increases are less than the PSD significant thresholds of 40 tons per year (TPY) SO₂, NO_x and VOC, 100 TPY CO, 15 TPY PM₁₀ and 0.6 TPY lead.

Title V Air Operation Permit Revision: This project is to incorporate the above, applicable revisions to the Title V Air Operation permit for the facility.

Permitting Authority: Application for these permitting actions are subject to review in accordance with the provisions of Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and air permits are required for the revised air construction permit and to operate the facility. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making permit determinations regarding these projects. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, in Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850/922-6979.

Project Files: Complete project files are available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. For the Revised Air Construction Permit Project, the complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. For the Title V Air Operation Permit Project, the complete project file includes the Draft Permit, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit documents and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. Copies of the complete project files are also available at the Air Resources Section of the Department's Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville; Phone Number 904-807-3300; and the City of Jacksonville's Environmental Quality Division at 117 West Duval Street, Suite 225, Jacksonville; Phone Number 904-630-4900.

Notice of Intent to Issue Air Permits: The Permitting Authority gives notice of its intent to issue the Revised Draft Air Construction Permit and the Draft Title V Air Operation Permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the projects will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. For the Draft Air Construction Permit, the Permitting Authority will issue a Final Permit in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions. For the Draft Title V Air Operation Permit, the Permitting Authority will issue PROPOSED Permit conditions and subsequent FINAL Permit conditions in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Comments on the Air Construction Permit Project: The Permitting Authority will accept written comments concerning the Revised Draft Air Construction Permit for a period of fourteen (14) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address, email or facsimile. If written comments result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Comments on the Draft Title V Air Operation Permit Project: The Permitting Authority will accept written comments concerning the Draft Permit for a period of thirty (30) days from the date of publication of the Public Notice. Written

(Public Notice to be Published in the Newspaper)

**PUBLIC NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V AIR OPERATION PERMIT**

comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://tlhora6.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a Revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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Mediation: Mediation is not available in this proceeding.

Objections to the FINAL Title V Permit: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/air/permits/Florida.htm>.



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

August 19, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Martin Kreft
Cedar Bay Generating Company
9640 Eastport Road
Jacksonville, FL 32218-2260

Re: Request for Additional Information
5% TDF Co-firing
File No. 0310337-009-AC, PA 88-24, PSD-FL-137A
Cedar Bay Cogeneration Facility

Dear Mr. Kreft:

The Department is in receipt of your application dated August 1, 2005 and received August 2, 2005. The application is incomplete. In order to continue processing your application, the Department will need the additional information below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Please provide the Department with estimates for the change in emissions of any non-criteria pollutants which might be expected to increase as a result of the 5% TDF co-firing. The estimates should include polynuclear aromatic hydrocarbons (PAHs), dioxins, furans, hydrogen chloride, benzene, PCB's and any other pollutants for which Cedar Bay or its consultants might reasonably expect a change. Additionally, the analysis should estimate (where practical) related impacts to ambient air quality and corresponding health impacts.
2. The PSD regulations (under the provisions commonly known as the "WEPCO rule") allow a source undertaking a non-routine change that could affect emissions at an electric utility steam generating unit to lawfully avoid the major source permitting process by using the unit's representative actual annual emissions to calculate emissions following the change if the source submits information for 5 years following the change to confirm its pre-change projection. The Department wishes to confirm that Cedar Bay requests the application of the WEPCO provision, and commits to not exceeding PSD thresholds beyond the 2003-2004 emission levels for PM, PM₁₀, SO₂, NO_x, CO, VOC and SAM. Concerning the attendant application, should the Department gain reasonable assurance that the PSD thresholds will not be triggered, permit conditions will be crafted to ensure same.
3. The Department is appreciative of the analyses provided to help explain the requested permit change dealing with 3.2 lb/MMBtu as an equivalent SO₂ emission limit, in lieu of the existing coal sulfur limitations. Even so, the Department remains unclear as to the anticipated changes in scrubbing required. Please answer the following questions, based on coal-only combustion, except where otherwise specified:
 - A. Utilizing actual historical scrubbing efficiencies and the historical (average) coal heat content, estimate the controlled and uncontrolled lb/MMBtu SO₂ emissions based upon the 1.7% sulfur "shipment limitation".
 - B. Utilizing the same historical scrubbing efficiencies and heat content identified above, estimate the controlled and uncontrolled lb/MMBtu SO₂ emissions based upon the 1.2% sulfur "annual limitation".

"More Protection, Less Process"

Printed on recycled paper.

- C. Utilizing the same historical scrubbing efficiencies and heat content identified above, estimate the maximum percent sulfur content of coal which could be combusted in order to yield an uncontrolled 3.2 lb/MMBtu emission level.
 - D. Utilizing the same historical scrubbing efficiencies and heat content identified above, estimate the controlled and uncontrolled lb/MMBtu SO₂ emissions for coal plus 35% petcoke as compared to coal plus 5% TDF.
4. Please confirm that the purpose of the requested change in the short fiber rejects (SFR) condition is simply to make accounting easier and that 840,000 lb/day and 139,200 tons/yr are roughly equivalent to 420 yd³/day (wet) and 139,176 yd³/yr (wet).

The Department will forward any EPA comments as well as comments from our Waste Management Section once we have received them. Additionally, the applicant is advised that the Department intends to meet with representatives from the Northside Civic Association during the month of September and will forward any additional questions which arise as a result of that discussion.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): *"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department..... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."*

If you have any questions, please call Michael P. Halpin, P.E. at 850/921-9519.

Sincerely,



Michael P. Halpin, P.E. FDEP/DARM
Permitting North

Jeff Walker, Cedar Bay
Ken Kosky, P.E. Golder Associates
Hamilton Oven, P.E. PPSO
Richard Robinson, P.E. City of Jacksonville EQD
Chris Kirts, P.E. DEP-NED
Dot Mathias, Northside Civic Association

EH2 269E 1000 02E0 100L

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <i>[Handwritten Signature]</i></p> <p>B. Received by (Printed Name) <i>Shelly Ann Staslos</i></p> <p>C. Date of Delivery <i>8/25/01</i></p>
<p>1. Article Addressed to:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Mr. Martin Kreft Cedar Bay Generating Company 9640 Eastport Road Jacksonville, Florida 32218-2260</p> </div>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number (Transfer from service label)</p>	<p><i>7001 0320 0001 3692 2343</i></p>
<p>PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540</p>	

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7001 0320 0001 3692 2343

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
<p>Mr. Martin Kreft Cedar Bay Generating Company 9640 Eastport Road Jacksonville, Florida 32218-2260</p>		
<p>PS Form 3800, January 2001 See Reverse for Instructions</p>		

Cedar Bay Generating Company, L.P.
P. O. Box 26324
Jacksonville, FL 32226-6324

9640 Eastport Road
Jacksonville, FL
32218

904.751.4000
Fax: 904.751.7320

August 1, 2005

Florida Department of Environmental Protection
Title V Section; Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

RECEIVED

AUG 02 2005

BUREAU OF AIR REGULATION

Attention: Mr. Jeff Koerner, P.E., Administrator

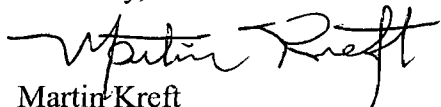
RE: Cedar Bay Cogeneration facility
Title V Permit # 0310337-007-AV; PSD-FL-137A
Conditions of Certification PA 88-24
Air Construction Permit Application

Dear Mr. Koerner:

Cedar Bay Generating Company, L.P. (Cedar Bay), is seeking authorization from the Florida Department of Environmental Protection (FDEP) to co-fire up to 5 percent (by weight) of tire-derived fuel (TDF) and change the coal sulfur limitation at the Cedar Bay Cogeneration Facility (Facility). Cedar Bay is also requesting an administrative change of the production limit for co-firing short fiber rejects (SFR) from a volume basis to a weight basis. Specifically, Cedar Bay requests FDEP to change the Prevention of Significant Deterioration (PSD) permit for the Facility [PSD-FL-137(A)] and Title V permit to modify the Conditions of Certification that were issued for the Facility under the Florida Electrical Power Plant Siting Act (PPSA; PA 88-24) for these changes. Although a change to the Facility's PSD permit is being requested to allow the co-firing of TDF and change the coal sulfur limit, there will not be any significant net emissions increase at the Facility, and thus the requirements of the PSD review process are not triggered.

Please find enclosed four copies of air construction permit applications for the requested changes. Please contact me at (904) 751-4000 or our environmental consultant Mr. Ken Kosky of Golder Associates (352-336-5600) if you have any questions on the application. Your expeditious handling is appreciated.

Sincerely,



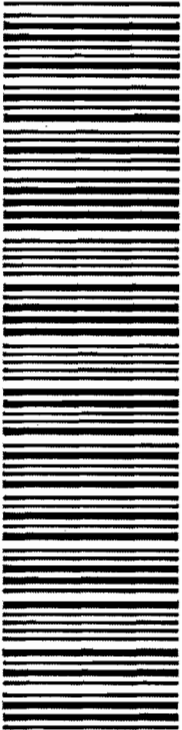


Martin Kreft
Cedar Bay Generating Company, L.P.

August 1, 2005
Page 2

Enclosures

cc: Kennard F. Kosky, P.E. Golder Associates
H. Oven, FDEP
S. Pace, ERMD-City of Jacksonville

		EXP		Parcels: 1/1	
Front DEP AIR RESOURCE MSMT P. Adams DIRECTOR OFFICE STE 23 111 S MAGNOLIADR TALLAHASSEE, FL 32301 UNITED STATES Tel:850-921-9505		ORIGIN: TLH Sender's ref: 37550201000 A7 AP255		32218 POSTCODE:	
To: Northside Civic Association Dot Mathias 341 Baisden Road Jacksonville, FL 32218 UNITED STATES		Tel: 904-757-4749			
Description: Cedar Bay application					
Weight: 2 lbs for 1 pcs Date: 2005-08-05 DHL standard terms and conditions apply.					
		JABD 5Y FSC			
		WAYBILL: 27343092254 (Non-Negotiable)			

▲ PEEL HERE PEEL HERE ▲

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SENDER'S RECEIPT

Waybill #: 27343092254

To(Company):
Northside Civic Association

341 Baisden Road

Jacksonville, FL 32218
UNITED STATES

Attention To: Dot Mathias
Phone#: 904-757-4749

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 6
Protection: Not Required
Description: Cedar Bay application

Weight (lbs.): 2
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Next Day 12:00 (Next business day by 12 PM)


Special Svc:

Date Printed: 8/5/2005
Bill Shipment To: Sender
Bill To Acct: 778941286

DHL Signature (optional) _____ Route _____ Date _____ Time _____

For Tracking, please go to www.dhl-usa.com or call 1-800-225-5345

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AUG 02 2005

BUREAU OF AIR REGULATION

**APPLICATION FOR MODIFICATION
CO-FIRING TIRE-DERIVED FUEL
COAL SULFUR CONTENT
SHORT FIBER REJECTS
CEDAR BAY COGENERATION FACILITY
JACKSONVILLE, FLORIDA**

**Prepared For:
Cedar Bay Generating Company, L.P.
9640 Eastport Road
Jacksonville, Florida 32218-2260**

**Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

July 2005

0537586

**DISTRIBUTION:
4 Copies – FDEP
2 Copies – Cedar Bay
1 Copy – Golder Associates Inc.**

APPLICATION



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

AUG 02 2005

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option)

– Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Cedar Bay Generating Company, L.P.	
2. Site Name: Cedar Bay Cogeneration Facility	
3. Facility Identification Number: 0310337	
4. Facility Location...: Cedar Bay Cogeneration Facility Street Address or Other Locator: 9640 Eastport Road City: Jacksonville County: Duval Zip Code: 32218	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Jeffery Walker, Environmental Manager	
2. Application Contact Mailing Address... Organization/Firm: Cedar Bay Generating Company Street Address: 9640 Eastport Road City: Jacksonville State: FL Zip Code: 32226	
3. Application Contact Telephone Numbers... Telephone: (904) 696-1547 ext. Fax: (904) 751-7320	
4. Application Contact Email Address: jeffwalker@cogentrix.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	8-2-05
2. Project Number(s):	0310337-009-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

Air construction permit.

Air Operation Permit

Initial Title V air operation permit.

Title V air operation permit revision.

Title V air operation permit renewal.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

Air construction permit and Title V permit revision, incorporating the proposed project.

Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is a request for the utilization of up to 5 percent by weight of tire-derived fuel (TDF) and change the coal sulfur limit from 1.7 percent by weight on a ship (train load) basis and 1.2 percent by weight on an annual basis. The alternate sulfur limitation requested is 3.2 lb/MMBtu, as is currently authorized for co-firing petroleum coke with coal. Cedar Bay is also requesting an administrative change of the production limit for co-firing short fiber rejects from a volume basis to a weight basis.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Circulating Fluidized Bed Boiler A – 1,063 MMBtu/hr		NA
002	Circulating Fluidized Bed Boiler B – 1,063 MMBtu/hr		NA
003	Circulating Fluidized Bed Boiler C – 1,063 MMBtu/hr		NA

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Martin Kreft, General Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Cedar Bay Generating Company Street Address: 9640 Eastport Road City: Jacksonville State: FL Zip Code: 32218-2260
3. Owner/Authorized Representative Telephone Numbers... Telephone: (904) 751-4000 ext. 143 Fax: (904) 751-7320
4. Owner/Authorized Representative Email Address: martinkreft@cogentrix.com
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i>  Signature <u>8-1-05</u> Date

APPLICATION INFORMATION

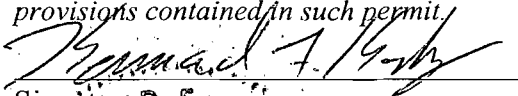
Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

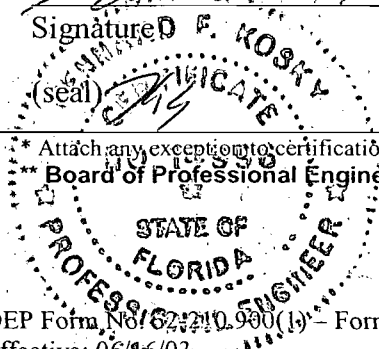
1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application. _____ Signature _____ Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 516 Fax: (352) 336-6603
4. Professional Engineer Email Address: kkosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> (1) <i>To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> (2) <i>To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> (3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> (4) <i>If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> (5) <i>If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  Signature D. F. KOSKY Date <u>7/26/05</u>

* Attach any exceptions to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670



II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 441.610 North (km) 3365.552		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 30/25/21 Longitude (DD/MM/SS) 81/36/23	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment: Applicant is seeking authorization to utilize TDF and change the coal sulfur limit. See Part II.			

Facility Contact

1. Facility Contact Name: Jeffery Walker, Environmental Manager
2. Facility Contact Mailing Address... Organization/Firm: Cedar Bay Generating Company Street Address: 9640 Eastport Road City: Jacksonville State: FL Zip Code: 32226
3. Facility Contact Telephone Numbers: Telephone: (904) 696-1547 ext. Fax: (904)751-7320
4. Facility Contact Email Address: jeffwalker@cogentrix.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: The applicable facility-wide conditions contained in the Title V permit will not change as a result of this application.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM - Particulate Matter Total	A	Y
PM₁₀ - Particulate Matter	A	Y
NO_x - Nitrogen Oxides	A	Y
SO₂ - Sulfur Dioxide	A	Y
CO - Carbon Monoxide	A	Y
VOC - Volatile Organic Compounds	A	Y
SAM - Sulfuric Acid Mist	B	Y

FACILITY INFORMATION

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]?(all units)	3. Emissions Unit ID Nos. Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>Jan 2004</u>
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>Jan 2004</u>
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>Jan 2004</u>

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: <input checked="" type="checkbox"/> Attached, Document ID: <u>See Part II</u>
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <u>See Part II</u>
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

- | |
|--|
| 1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
<input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility) |
|--|

Additional Requirements for Title V Air Operation Permit Applications

- | |
|--|
| 1. List of Insignificant Activities (Required for initial/renewal applications only):
<input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (revision application) |
| 2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
<input type="checkbox"/> Attached, Document ID: _____
<input checked="" type="checkbox"/> Not Applicable (revision application with no change in applicable requirements) |
| 3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
<input type="checkbox"/> Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing. |
| 4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
<input type="checkbox"/> Attached, Document ID: _____
<input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed
<input checked="" type="checkbox"/> Not Applicable |
| 5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
<input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |
| 6. Requested Changes to Current Title V Air Operation Permit:
<input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable |

Additional Requirements Comment

See Part II.

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler A

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 01/25/1994	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	---	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: _____ MW

11. Emissions Unit Comment:
Circulating Fluidized Bed (CFB) Boiler A with limestone injection for SO₂ emissions reduction. Ammonia injection for NO_x emissions reduction. Fuel is primarily bituminous coal with No. 2 fuel oil for startup. Combustion products are flue gas with fly ash and bed ash.

EMISSIONS UNIT INFORMATION

**Section [1]
CFB Boiler A**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouse

Efficiency = $(1 - \text{emission}) / \text{load} = 0.0055 \text{ gr/acr} / 19.5 \text{ gr/acr} = 99.97\%$

Ammonia injection

Efficiency = 54% for NO_x (estimated)

Dry limestone injection

Efficiency from 89 to 95% based on Quarterly Reports

Air preheater

Reduction Efficiency not determined.

Intake air is preheated via flue gas to reduce fuel requirements.

Control of Oxygen

Reduction Efficiency not determined.

2. Control Device or Method Code(s): 016, 032/107, 041, 027, 033

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: B1		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Boiler Stack (B1)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 001 = Boiler A; 002 = Boiler B; 003 - Boiler C			
5. Discharge Type Code: V		6. Stack Height: 403 feet	
		7. Exit Diameter: 13.26 feet	
8. Exit Temperature: 265 °F		9. Actual Volumetric Flow Rate: 1,004,000 acfm	
		10. Water Vapor: 5 %	
11. Maximum Dry Standard Flow Rate: 895,403 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 441.871 North (km): 3365.587		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: <p>The 3 CFB boilers share a common stack designated as point B1. Flue gas from the boilers is discharged through this stack. Prior to the stack, each flue gas stream is passed through a baghouse which removes fly ash.</p> <p>Stack information based on Title V Application.</p> <p>See Attachment CB-EU1-C15 for Applicable Regulations.</p>			

EMISSIONS UNIT INFORMATION

**Section [1]
CFB Boiler A**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Segment 1 of 2: Bituminous coal used in boiler.			
2. Source Classification Code (SCC): 1-01-002-17		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 52	5. Maximum Annual Rate: 390,000	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2%	8. Maximum % Ash: 11.6% (typical)	9. Million Btu per SCC Unit: 24	
10. Segment Comment: Maximum sulfur will be based on an equivalent 3.2 lb/ SO₂/MMBtu. See Part II.			

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Segment 2 of 2: Tire-Derived Fuel (TDF)			
2. Source Classification Code (SCC): 1-01-008-01		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 2.2	5. Maximum Annual Rate: 19,272	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2% (typical)	8. Maximum % Ash: 5% (typical)	9. Million Btu per SCC Unit: 29.4	
10. Segment Comment: Based on 5% TDF (by weight). See Part II.			

EMISSIONS UNIT INFORMATION

**Section [1]
CFB Boiler A**

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	016	027	EL
PM₁₀	016	027	EL
NO_x	032/107	027	EL
SO₂	041	027	EL
CO	033	027	EL
VOC	027		EL
SAM	041	027	EL

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Particulate Matter Total - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM (TSP)	2. Total Percent Efficiency of Control: 99.97
3. Potential Emissions: 19.1 lb/hour 78 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137A	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

Page [1] of [7]
Particulate Matter Total - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
CFB Boiler A

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Particulate Matter - PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀		2. Total Percent Efficiency of Control: 99.97	
3. Potential Emissions: 19.1 lb/hour 78 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137(A)		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.			

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Particulate Matter - PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited when co-firing petroleum coke with coal to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Sulfur Dioxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 318.9 lb/hour 866 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.30 lb/MMBtu* 0.20 lb/MMBtu** Reference: Permit PA-88-24A, PSD-FL-137B		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.3 lb/MMBtu = 318.9 lb/hr 1,063 MMBtu/hr x 0.2 lb/MMBtu x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 866 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 3-hour rolling average; ** 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. Increase in coal sulfur limit requested. See Part II.			

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Sulfur Dioxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Comment.	4. Equivalent Allowable Emissions: 318.9 lb/hour 866 tons/year
5. Method of Compliance: Continuous Emissions Monitoring	
6. Allowable Emissions Comment (Description of Operating Method): 3-hour rolling average for SO₂ = 0.30 lb/MMBtu 30-day rolling average for SO₂ = 0.20 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Nitrogen Oxides

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x	2. Total Percent Efficiency of Control: 54% (estimated)
3. Potential Emissions: 180.7 lb/hour 736.1 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.17 lb/MMBtu* Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.17 lb/MMBtu = 180.7 lb/hr 180.7 lb/hr x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 736.1 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
CFB Boiler A

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Nitrogen Oxides

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 180.7 lb/hour 736.1 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 7, 7A, B, C, D, or E.	
6. Allowable Emissions Comment (Description of Operating Method): 30-day rolling average for NO_x = 0.17 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

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CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Carbon Monoxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 186 lb/hour 649 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.175 lb/MMBtu Reference: PSD-FfL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.175 lb/MMBtu = 186 lb/hr Annual potential emissions based on maximum emissions for 3 boilers so that PSD is not triggered. See Part II.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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CFB Boiler A

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Carbon Monoxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 186 lb/hour 649 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Annual emissions limited for 3 boilers to not trigger PSD review. See Part II. 8-hour rolling average for CO = 0.175 lb/MMBtu.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

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CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.0 lb/hour 65 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.015 lb/MMBtu Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.015 lb/MMBtu = 16 lb/hr See Part II.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Part II.			

EMISSIONS UNIT INFORMATION

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CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 16.0 lb/hour 65 tons/year
5. Method of Compliance: Method 18 or 25.	
6. Allowable Emissions Comment (Description of Operating Method): See Part II. 0.015 lb/MMBtu VOC.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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CFB Boiler A

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Sulfur Acid Mist

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SAM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.50 lb/hour 2.0 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 4.66×10^{-4} lb/MMBtu Reference: PSD-FL-137(A)		7. Emissions Method Code: 0	
8. Calculation of Emissions: $1,063 \text{ MMBtu/hr} \times 0.000466 \text{ lb/MMBtu} = 0.5 \text{ lb/hr}$			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). See Part II.			

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

POLLUTANT DETAIL INFORMATION

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Sulfur Acid Mist

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 0.50 lb/hour 2.0 tons/year
5. Method of Compliance: Method 8.	
6. Allowable Emissions Comment (Description of Operating Method): 4.66 x 10⁻⁴ lb/MMBtu. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: COM, Method 9.	
5. Visible Emissions Comment: 27% opacity for oil-burning during startup. PSD-FL-137(A)	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: See Comment.	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Various Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Baghouse flue has CEMs for NO_x, SO₂, CO, CO₂, and VE. Manufacturers, models, and serial numbers previously submitted.	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]
CFB Boiler A

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

CFB Boiler A

Additional Requirements Comment

[Empty comment box]

ATTACHMENT CB-EU1-C15

LIST OF APPLICABLE REGULATIONS

ATTACHMENT CB-EU1-C15

LIST OF APPLICABLE REGULATIONS

40 CFR 60.40a	Applicability >250 MMBtu/hr
40 CFR 60.41a	Definitions
40 CFR 60.42a	Standard for particulate matter
40 CFR 60.43a(a)	Standard for sulfur dioxide
40 CFR 60.43a(g)	Compliance with the emission limitation and percent reduction requirements
40 CFR 60.44a	Standard for nitrogen oxides
40 CFR 60.46a	Compliance provisions
40 CFR 60.47a	Emission monitoring
40 CFR 60.48a	Compliance determination procedures and methods
40 CFR 60.49a	Reporting requirements
FAC 62-204.800	Standards of performance for New Stationary Sources
FAC 62-210.550	Stack Height Policy
FAC 62-210.700	Excess Emissions
FAC 62-212-300	General preconstruction review
FAC 62-212-400	Prevention of Significant Deterioration
FAC 62-296.405	Fossil Fuel Steam Generators with more than 240 MMBtu/hr heat input
FAC 62-296.570(4)(a)	Reasonable Available Control Technology - Requirements for major VOC and NO _x emission Facilities
FAC 62-296.702	Fossil Fuel Steam Generators
FAC 62-296.711	Material Handling, Sizing, Screening, Crushing, and Grinding Operations
FAC 62-297.401(5)	EPA Method 5
FAC 62-297.401(6)	EPA Method 6
FAC 62-297.401(7)	EPA Method 7
FAC 62-297.401(8)	EPA Method 8
FAC 62-297.401(9)	EPA Method 9
FAC 62-297.401(10)	EPA Method 10
FAC 62-297.401(12)	EPA Method 12
FAC 62-297.401(13)	EPA Method 13
FAC 62-297.401(15)	EPA Method 15
FAC 62-297.401(17)	EPA Method 17
FAC 62-297.401(19)	EPA Method 19
FAC 62-297.401(25)	EPA Method 25
FAC 62-297.401(32)(a)	EPA Method 101A
FAC 62-297.401(35)	EPA Method 104
FAC 62-297.401(41)	EPA Method 201
FAC 62-297.520	EPA Performance Specifications
FAC 62-297.570	Test Reports
FAC 62-297.620	Exceptions and Approval of Alternate Procedures and Requirements

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler B

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code: A	5. Commence Construction Date: 	6. Initial Startup Date: 01/25/1994	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	---	---	--	--

9. Package Unit:
Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

Circulating Fluidized Bed (CFB) Boiler B with limestone injection for SO₂ emissions reduction. Ammonia injection for NO_x emissions reduction. Fuel is primarily bituminous coal with No. 2 fuel oil for startup. Combustion products are flue gas with fly ash and bed ash.

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouse

Efficiency = $(1 - \text{emission}) / \text{load} = 0.0055 \text{ gr/acr} / 19.5 \text{ gr/acr} = 99.97\%$

Ammonia injection

Efficiency = 54% for NO_x (estimated)

Dry limestone injection

Efficiency from 89 to 95% based on Quarterly Reports

Air preheater

Reduction Efficiency not determined.

Intake air is preheated via flue gas to reduce fuel requirements.

Control of Oxygen

Reduction Efficiency not determined.

2. Control Device or Method Code(s): **016, 032/107, 041, 027, 033**

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 104,000 lb/hr coal; 39,000 ton/month coal; 390,000 TPY coal.
2. Maximum Production Rate:
3. Maximum Heat Input Rate: 1,063 million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: 24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment: Limits set by PSD-FL-137(A). CFB Boilers A, B, and C feed a common steam turbine with a nominal rating of 250 MW and supply steam to an adjacent recycled liner board mill.

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: B1		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Boiler Stack (B1)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 001 = Boiler A; 002 = Boiler B; 003 - Boiler C			
5. Discharge Type Code: V	6. Stack Height: 403 feet	7. Exit Diameter: 13.26 feet	
8. Exit Temperature: 265 °F	9. Actual Volumetric Flow Rate: 1,004,000 acfm	10. Water Vapor: 5 %	
11. Maximum Dry Standard Flow Rate: 895,403 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 441.871 North (km): 3365.587		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: <p>The 3 CFB boilers share a common stack designated as point B1. Flue gas from the boilers is discharged through this stack. Prior to the stack, each flue gas stream is passed through a baghouse which removes fly ash.</p> <p>Stack information based on Title V Application.</p> <p>See Attachment CB-EU1-C15 for Applicable Regulations.</p>			

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Segment 1 of 2: Bituminous coal used in boiler.			
2. Source Classification Code (SCC): 1-01-002-17		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 52	5. Maximum Annual Rate: 390,000	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2%	8. Maximum % Ash: 11.6% (typical)	9. Million Btu per SCC Unit: 24	
10. Segment Comment: Maximum sulfur will be based on an equivalent 3.2 lb/ SO ₂ /MMBtu. See Part II.			

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Segment 2 of 2: Tire-Derived Fuel (TDF)			
2. Source Classification Code (SCC): 1-01-008-01		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 2.2	5. Maximum Annual Rate: 19,272	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2% (typical)	8. Maximum % Ash: 5% (typical)	9. Million Btu per SCC Unit: 29.4	
10. Segment Comment: Based on 5% TDF (by weight). See Part II.			

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

E. EMISSIONS UNIT POLLUTANTS**List of Pollutants Emitted by Emissions Unit**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	016	027	EL
PM ₁₀	016	027	EL
NO _x	032/107	027	EL
SO ₂	041	027	EL
CO	033	027	EL
VOC	027		EL
SAM	041	027	EL

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [1] of [7]
Particulate Matter Total - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM (TSP)	2. Total Percent Efficiency of Control: 99.97
3. Potential Emissions: 19.1 lb/hour 78 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [1] of [7]
Particulate Matter Total - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
CFB Boiler B

Page [2] of [7]
Particulate Matter - PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀	2. Total Percent Efficiency of Control: 99.97
3. Potential Emissions: 19.1 lb/hour 78 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [2] of [7]
Particulate Matter - PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited when co-firing petroleum coke with coal to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [3] of [7]
Sulfur Dioxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 318.9 lb/hour 866 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.30 lb/MMBtu* 0.20 lb/MMBtu** Reference: Permit PA-88-24A, PSD-FL-137B		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.3 lb/MMBtu = 318.9 lb/hr 1,063 MMBtu/hr x 0.2 lb/MMBtu x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 866 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 3-hour rolling average; ** 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. Increase in coal sulfur limit requested. See Part II.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
CFB Boiler B

Page [3] of [7]
Sulfur Dioxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Comment.	4. Equivalent Allowable Emissions: 318.9 lb/hour 866 tons/year
5. Method of Compliance: Continuous Emissions Monitoring	
6. Allowable Emissions Comment (Description of Operating Method): 3-hour rolling average for SO₂ = 0.30 lb/MMBtu 30-day rolling average for SO₂ = 0.20 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [4] of [7]
Nitrogen Oxides

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x	2. Total Percent Efficiency of Control: 54% (estimated)
3. Potential Emissions: 180.7 lb/hour 736.1 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.17 lb/MMBtu* Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.17 lb/MMBtu = 180.7 lb/hr 180.7 lb/hr x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 736.1 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Nitrogen Oxides

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 180.7 lb/hour 736.1 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 7, 7A, B, C, D, or E.	
6. Allowable Emissions Comment (Description of Operating Method): 30-day rolling average for NO_x = 0.17 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Carbon Monoxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 186 lb/hour 649 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.175 lb/MMBtu Reference: PSD-FfL-137(A)		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.175 lb/MMBtu = 186 lb/hr Annual potential emissions based on maximum emissions for 3 boilers so that PSD is not triggered. See Part II.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.			

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Carbon Monoxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 186 lb/hour 649 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 10:	
6. Allowable Emissions Comment (Description of Operating Method): Annual emissions limited for 3 boilers to not trigger PSD review. See Part II. 8-hour rolling average for CO = 0.175 lb/MMBtu.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.0 lb/hour 65tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.015 lb/MMBtu Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.015 lb/MMBtu = 16 lb/hr See Part II.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Part II.			

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 16.0 lb/hour 65tons/year
5. Method of Compliance: Method 18 or 25.	
6. Allowable Emissions Comment (Description of Operating Method): See Part II. 0.015 lb/MMBtu VOC.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

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Sulfur Acid Mist

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SAM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.50 lb/hour 2.0 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 4.66×10^{-4} lb/MMBtu Reference: PSD-FL-137(A)		7. Emissions Method Code: 0	
8. Calculation of Emissions: $1,063 \text{ MMBtu/hr} \times 0.000466 \text{ lb/MMBtu} = 0.5 \text{ lb/hr}$			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). See Part II.			

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

POLLUTANT DETAIL INFORMATION

Page [7] of [7]
Sulfur Acid Mist

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 0.50 lb/hour 2.0 tons/year
5. Method of Compliance: Method 8.	
6. Allowable Emissions Comment (Description of Operating Method): 4.66 x 10⁻⁴ lb/MMBtu. See Part II.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: COM, Method 9.	
5. Visible Emissions Comment: 27% opacity for oil-burning during startup. PSD-FL-137(A)	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code: See Comment.	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Various Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Baghouse flue has CEMs for NO_x, SO₂, CO, CO₂, and VE. Manufacturers, models, and serial numbers previously submitted.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: _____ Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

CFB Boiler B

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

CFB Boiler B

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]
CFB Boiler B

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler C

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 01/25/1994	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	---	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: _____ MW

11. Emissions Unit Comment:
Circulating Fluidized Bed (CFB) Boiler C with limestone injection for SO₂ emissions reduction. Ammonia injection for NO_x emissions reduction. Fuel is primarily bituminous coal with No. 2 fuel oil for startup. Combustion products are flue gas with fly ash and bed ash.

EMISSIONS UNIT INFORMATION

**Section [3]
CFB Boiler C**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouse

Efficiency = $(1 - \text{emission}) / \text{load} = 0.0055 \text{ gr/acr} / 19.5 \text{ gr/acr} = 99.97\%$

Ammonia injection

Efficiency = 54% for NO_x (estimated)

Dry limestone injection

Efficiency from 89 to 95% based on Quarterly Reports

Air preheater

Reduction Efficiency not determined.

Intake air is preheated via flue gas to reduce fuel requirements.

Control of Oxygen

Reduction Efficiency not determined.

2. Control Device or Method Code(s): 016, 032/107, 041, 027, 033

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 104,000 lb/hr coal; 39,000 ton/month coal; 390,000 TPY coal.		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: 1,063 million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr	
	tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment:		
<p>Limits set by PSD-FL-137A.</p> <p>CFB Boilers A, B, and C feed a common steam turbine with a nominal rating of 250 MW and supply steam to an adjacent recycled liner board mill.</p>		

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: B1		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Boiler Stack (B1)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 001 = Boiler A; 002 = Boiler B; 003 - Boiler C			
5. Discharge Type Code: V	6. Stack Height: 403 feet	7. Exit Diameter: 13.26 feet	
8. Exit Temperature: 265 °F	9. Actual Volumetric Flow Rate: 1,004,000 acfm	10. Water Vapor: 5 %	
11. Maximum Dry Standard Flow Rate: 895,403 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 441.871 North (km): 3365.587		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: <p>The 3 CFB boilers share a common stack designated as point B1. Flue gas from the boilers is discharged through this stack. Prior to the stack, each flue gas stream is passed through a baghouse which removes fly ash.</p> <p>Stack information based on Title V Application.</p> <p>See Attachment CB-EU1-C15 for Applicable Regulations.</p>			

EMISSIONS UNIT INFORMATIONSection [3]
CFB Boiler C**D. SEGMENT (PROCESS/FUEL) INFORMATION****Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): Segment 1 of 2: Bituminous coal used in boiler.			
2. Source Classification Code (SCC): 1-01-002-17		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 52	5. Maximum Annual Rate: 390,000	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2%	8. Maximum % Ash: 11.6% (typical)	9. Million Btu per SCC Unit: 24	
10. Segment Comment: Maximum sulfur will be based on an equivalent 3.2 lb/ SO₂/MMBtu. See Part II.			

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Segment 2 of 2: Tire-Derived Fuel (TDF)			
2. Source Classification Code (SCC): 1-01-008-01		3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 2.2	5. Maximum Annual Rate: 19,272	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2% (typical)	8. Maximum % Ash: 5% (typical)	9. Million Btu per SCC Unit: 29.4	
10. Segment Comment: Based on 5% TDF (by weight). See Part II.			

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	016	027	EL
PM ₁₀	016	027	EL
NO _x	032/107	027	EL
SO ₂	041	027	EL
CO	033	027	EL
VOC	027		EL
SAM	041	027	EL

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Particulate Matter Total - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM (TSP)	2. Total Percent Efficiency of Control: 99.97
3. Potential Emissions: 19.1 lb/hour 78 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137A	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Particulate Matter Total - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Particulate Matter - PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀	2. Total Percent Efficiency of Control: 99.97
3. Potential Emissions: 19.1 lb/hour 78 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.018 lb/MMBtu Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.018 lb/MMBtu = 19.1 lb/hr 19.1 lb/hr x 8,760 hr/yr x ton/2,000 lbs x 0.93 (capacity factor) = 78 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [2] of [7]
Particulate Matter - PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II	4. Equivalent Allowable Emissions: 19.1 lb/hour 78 tons/year
5. Method of Compliance: Method 5 or 17; 40 CFR, Appendix A	
6. Allowable Emissions Comment (Description of Operating Method): 0.018 lb/MMBtu Annual emissions for 3 boilers limited when co-firing petroleum coke with coal to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

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CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [3] of [7]
Sulfur Dioxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂	2. Total Percent Efficiency of Control:
3. Potential Emissions: 318.9 lb/hour 866 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.30 lb/MMBtu* 0.20 lb/MMBtu** Reference: Permit PA-88-24A, PSD-FL-137B	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.3 lb/MMBtu = 318.9 lb/hr 1,063 MMBtu/hr x 0.2 lb/MMBtu x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 866 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 3-hour rolling average; ** 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. Increase in coal sulfur limit requested. See Part II.	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [3] of [7]
Sulfur Dioxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Comment.	4. Equivalent Allowable Emissions: 318.9 lb/hour 866 tons/year
5. Method of Compliance: Continuous Emissions Monitoring	
6. Allowable Emissions Comment (Description of Operating Method): 3-hour rolling average for SO₂ = 0.30 lb/MMBtu 30-day rolling average for SO₂ = 0.20 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

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CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Nitrogen Oxides

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x	2. Total Percent Efficiency of Control: 54% (estimated)
3. Potential Emissions: 180.7 lb/hour 736.1 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.17 lb/MMBtu* Reference: PSD-FL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.17 lb/MMBtu = 180.7 lb/hr 180.7 lb/hr x 8,760 hr/yr x ton/2,000 lb x 0.93 (capacity factor) = 736.1 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). * 30-day rolling average. Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [4] of [7]
Nitrogen Oxides

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 180.7 lb/hour 736.1 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 7, 7A, B, C, D, or E.	
6. Allowable Emissions Comment (Description of Operating Method): 30-day rolling average for NO_x = 0.17 lb/MMBtu Annual emissions for 3 boilers limited to not trigger PSD review. See Part II.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [5] of [7]
Carbon Monoxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 186 lb/hour 649 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.175 lb/MMBtu Reference: PSD-FfL-137(A)	7. Emissions Method Code: 0
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.175 lb/MMBtu = 186 lb/hr Annual potential emissions based on maximum emissions for 3 boilers so that PSD is not triggered. See Part II.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual emissions limited for 3 boilers to not trigger PSD review. See Part II.	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [5] of [7]
Carbon Monoxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 186 lb/hour 649 tons/year
5. Method of Compliance: Continuous Emissions Monitoring and Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Annual emissions limited for 3 boilers to not trigger PSD review. See Part II. 8-hour rolling average for CO = 0.175 lb/MMBtu.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

Page [6] of [7]
Volatile Organic Compounds

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.0 lb/hour 65tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.015 lb/MMBtu Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions: 1,063 MMBtu/hr x 0.015 lb/MMBtu = 16 lb/hr See Part II.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Part II.			

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 16.0 lb/hour 65tons/year
5. Method of Compliance: Method 18 or 25.	
6. Allowable Emissions Comment (Description of Operating Method): See Part II. 0.015 lb/MMBtu VOC.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Sulfur Acid Mist

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SAM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.50 lb/hour 2.0 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 4.66×10^{-4} lb/MMBtu Reference: PSD-FL-137(A)		7. Emissions Method Code: 0	
8. Calculation of Emissions: $1,063 \text{ MMBtu/hr} \times 0.000466 \text{ lb/MMBtu} = 0.5 \text{ lb/hr}$			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: PSD-FL-137(A). See Part II.			

EMISSIONS UNIT INFORMATION

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CFB Boiler C

POLLUTANT DETAIL INFORMATION

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Sulfur Acid Mist

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: See Part II.	4. Equivalent Allowable Emissions: 0.50 lb/hour 2.0 tons/year
5. Method of Compliance: Method 8.	
6. Allowable Emissions Comment (Description of Operating Method): 4.66 x 10⁻⁴ lb/MMBtu. See Part II.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: COM, Method 9.	
5. Visible Emissions Comment: 27% opacity for oil-burning during startup. PSD-FL-137(A)	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code: See Comment.	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Various Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Baghouse flue has CEMs for NO_x, SO₂, CO, CO₂, and VE. Manufacturers, models, and serial numbers previously submitted.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

**Section [3]
CFB Boiler C**

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date Jan 2004
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: See Part II <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]
CFB Boiler C

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

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CFB Boiler C

Additional Requirements Comment

[Empty box for Additional Requirements Comment]

PART II

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1.0 INTRODUCTION

Cedar Bay Generating Company, L.P. (Cedar Bay), is seeking authorization from the Florida Department of Environmental Protection (FDEP) to co-fire up to 5 percent (by weight) of tire-derived fuel (TDF) with coal and change the coal sulfur limitation at the Cedar Bay Cogeneration Facility (Facility). Cedar Bay is also requesting an administrative change of the production limit for co-firing short fiber rejects (SFR) from a volume basis to a weight basis. Specifically, Cedar Bay requests that FDEP change the Prevention of Significant Deterioration (PSD) permit for the Facility [PSD-FL-137(A)] and the Title V permit for the facility (Permit No. 0310337-007-AV) to modify the Conditions of Certification that were issued for the Facility under the Florida Electrical Power Plant Siting Act [(PPSA); PA 88-24]. Although a change to the Facility's PSD permit is being requested to allow the co-firing of TDF and change the coal sulfur limit, there will not be any significant net emissions increase at the Facility, and thus the requirements of the PSD review process are not triggered.

Cedar Bay received authorization to conduct a test burn to co-fire 5 percent of TDF with coal (FDEP Letter Authorization dated December 7, 2004). The co-firing test was performed using Boiler C during a 30-day test burn period. The results of the test burn indicated that TDF could be successfully co-fired with coal without any changes in operation or emissions performance.

Cedar Bay received authorization to co-fire petroleum coke with coal [PSD-FL-137 (A); 12/20/02]. This authorization limited the sulfur content of the blended fuel to an equivalent sulfur dioxide (SO₂) content of 3.2 pounds per million British thermal units (lb/MMBtu) (Title V Final Permit Condition A.7.). The sulfur limit for coal is 1.7 percent, by weight, on a shipment (train load) basis and 1.2 percent, by weight, on an annual basis. Cedar Bay is requesting that these limits be changed to an equivalent SO₂ content of 3.2 lb/MMBtu.

The existing Cedar Bay Cogeneration Facility is located at 9640 Eastport Road, Jacksonville, Duval County, Florida (Figure 1). The cogeneration facility consists of three circulating fluidized bed (CFB) boilers and associated facilities. The CFB boilers, designated as Boilers A, B, and C, use coal as the primary fuel. No. 2 fuel oil is only used as a supplemental fuel, primarily for start-ups. SO₂ emissions are controlled using limestone injection into the CFB boilers and emissions of nitrogen oxides (NO_x) are controlled using selective non-catalytic reduction (SNCR). The reaction products of

the limestone and SO₂, as well as particulate matter (PM) generated from combustion are controlled with baghouses.

Golder Associates Inc. (Golder) was contracted to prepare the necessary air permit application seeking authorization to co-fire up to 5 percent (by weight) of TDF with coal and change the coal sulfur content limitation. The air permit application consists of the appropriate application form [FDEP Form 62-210.900(1)], a technical description of the project (Part II Section 2.0), and rule applicability for the project (Part II Section 3.0).

2.0 PROJECT DESCRIPTION

2.1 CO-FIRING TDF

The disposal of used tires has been a significant environmental issue due to their resistance to degradation and poor compatibility with land filling. Indeed, in 1989, Florida implemented a waste tire management program resulting in the FDEP promulgating Chapter 62-711 to regulate the disposal of tires in Florida. Since 1990, significant progress has been made toward this environmental issue. However, Florida generates 19.5 million waste tires per year and disposal/recycling is still an on-going issue. This is summarized in FDEP's publication *Waste Tires in Florida*, State of the State Report, March 24, 2004 (see Attachment A). Although recycling opportunities are available, the market is currently insufficient to handle the large number of stockpiled tires. As such, the Bureau of Solid and Hazardous Waste of the FDEP identified Cedar Bay's boilers as being a suitable candidate to utilize processed tire chips as a supplementary fuel in the CFB boilers due to the inherent design to utilize various solid fuels.

TDF has useful energy and as shown in Table 1, with higher heat content and lower ash than coal, with only slightly higher sulfur content. Cedar Bay received authorization from FDEP and conducted a 30-day test burn of 5 percent TDF in Boiler C. The results of test burn are contained in Attachment B. The conclusions from this test burn are:

“Based on the results of the emissions test at a 5% coal substitution, by weight, with TDF, the emissions of the existing permitted parameters in Cedar Bay's Title V and PSD permits are not different than when firing 100% bituminous coal.

The operational results of the trial indicated essentially no changes to the operating characteristics of the boiler. No negative influences were noted due to the TDF substitution.

These results indicate that Cedar Bay's Circulating Fluidized Bed Combustors can supplement their normal fuel (Bituminous Coal) with 5% TDF and achieve the environmental compliance emission limits. This substitution provides a viable supplemental fuel for Cedar Bay.”

2.2 COAL SULFUR LIMITATION

Cedar Bay's Final Title V Permit (Permit No.:0310337-007-AV), Section A.7. (1) states:

Sulfur Dioxide - Sulfur Content.

1. Coal. In order to ensure continuous compliance with the SO₂ limit stated in Specific Condition A.5, the coal sulfur content shall not exceed 1.7 percent, by weight, on a shipment (train load) basis and 1.2 percent, by weight, on an annual basis, as measured by applicable test methods (see Specific Condition A.36). When co-firing coal and petcoke, the blended fuel input to the CFBs shall not exceed 3.2 lb/MMBtu equivalent SO₂ content. Compliance shall be determined on a monthly basis via a composite of daily fuel samples.

Cedar Bay desires to remove the coal sulfur limitation of 1.7 percent, by weight, on a shipment (train load) basis and 1.2 percent, by weight, on an annual basis. Cedar Bay is requesting that these limits be changed to an equivalent SO₂ content of 3.2 lb/MMBtu, which is the same sulfur input limitation previously approved by FDEP for the co-firing of petroleum coke with coal. Cedar Bay was authorized to co-fire up to 35 percent petroleum coke with coal [PSD-FL-137(A)] in 2002 by supplying technical information that demonstrated that the CFB units could remove SO₂ in the blended fuel with an equivalent sulfur content of 3.2 lb/MMBtu. This demonstration included information from the manufacturer of the CFB units, Foster Wheeler Energy Services, Inc. (Foster Wheeler). A feasibility study was conducted by Foster Wheeler for co-firing petroleum coke with coal in the three Cedar Bay CFB boilers (see Attachment C).

Table 2 provides information on the sulfur removal required with a coal sulfur limit equivalent to 3.2 lb/MMBtu. As shown, the sulfur content based on the typical coal heat content of 12,000 British thermal units per pound (Btu/lb) is about 2 percent, resulting in a removal of about 94 percent to achieve an SO₂ emission limit of 0.2 lb/MMBtu (Condition A.5, 12-month rolling average). Based on the Foster Wheeler report, an uncontrolled sulfur limit of 3.2 lb/MMBtu for coal is equivalent to co-firing 20 percent petroleum coke with coal (refer to Figure 3 of the Foster Wheeler report). On this basis, the amount of limestone required is 17,000 pounds per hour per unit (lb/hr/unit) (see Figure 4 of the Foster Wheeler Report). Note that the Foster Wheeler projections are based on an SO₂ emission limit of 0.16 lb/MMBtu. This provides a conservative basis for limestone use. As shown in Figure 3 of the Foster Wheeler report, at an input sulfur equivalent to 3.2 lb/MMBtu represents co-firing about 15-percent petroleum coke with coal, further demonstrating the conservative nature of the limestone use.

Table 2 also presents the calculations of the annual limestone and ash production. As shown, the projected limestone and ash production is within the limits in the Final Title V Permit (Condition B.1.b). The annual amounts were based on 90-percent heat input capacity factor, which is 90 percent of the maximum permitted heat input of 1,063 million British thermal units per hour (MMBtu/hr). The heat input capacity factors has averaged 81 percent based on the Annual Operating Report (AOR) data with a range of 78 to 83 percent. (Note: The heat input capacity in this calculation is different from electrical capacity.)

Table 3 was prepared based on the maximum heat input limit of 1,063 MMBtu/hr (Condition A.1) and the coal production limit 104,000 pounds per hour (lb/hr) [Condition A.3.(b)]. This results in a coal heat content of about 10,200 Btu/lb and a sulfur content of about 1.6 percent, for an equivalent uncontrolled SO₂ emission rate of 3.2 lb/MMBtu. Table 3 demonstrates that the limestone and ash will be within the limits.

Table 4 shows the effect of co-firing TDF with higher percent sulfur coal. As previously shown in Table 1, TDF co-fired at 5 percent by weight, will only change the SO₂ emission rate by 0.1 lb/MMBtu. TDF has an equivalent uncontrolled SO₂ emission rate of about 2.5 lb/MMBtu, which is less than that requested for coal and thus there will be no increase in the uncontrolled emission rate of the blend.

2.3 SHORT FIBER REJECTS (SFR)

The current condition for short fiber rejects states (Condition A.3):

- (c) Short Fiber Rejects. The maximum charging rate to CFB Boilers B & C of short fiber recycle rejects from the SCC 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 CFB boilers that fire recycle rejects. CFB Boiler A will not utilize recycle rejects, nor will it be equipped with handling and firing equipment for recycle rejects.

Cedar Bay requests an administrative change in the limitation from a volume basis to a mass basis. While the material is provided in 30 cubic yard boxes, accounting for the amount on a volume basis is not practical for determining operational and environmental parameters.

SFR is a by-product of the Smurfit Stone recycling process. Bales of corrugated cardboard are shredded, mixed with water and reduced to a pulp. Heavy trash material 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 additional heavy material. From the centrifuge, the slurry passes through a coarse screen, which removes additional contaminants such as wax or plastic. The slurry passes on to another centrifuge and then short and long fibers are separated using two fine mesh screens and a reverse cleaner. The short fibers are pressed to remove liquids and the SFR is transferred to roll-off containers for disposal.

The Cedar Bay facility was constructed to support combustion of the SFR in two boilers (Boilers B and C) with a dedicated material handling and conveyance system to transport the SFR to the boilers. A detailed description of the process and equipment is found in the facility's operating procedures.

SFR is collected from Smurfit Stone's process in dedicated 30 cubic yard capacity roll-off boxes for disposal. The roll-off boxes will be transported within Smurfit Stone's property to the location of Cedar Bay's fiber waste handling system. The SFR is unloaded into a receiving hopper. The receiving hopper is equipped with a live bottom via drag chain feeder and interfaces with Cedar Bay's distributed control system (DCS). The DCS system allows this system, as well as most of the Cedar Bay plant, to be controlled and monitored from Cedar Bay's Control Room.

SFR is discharged from the receiving hopper by a variable speed drag conveyor to a 24-inch wide conveyor belt (SFR conveyor). This conveyor is rated at 16 tons per hour at a belt speed of 75 feet per minute. The conveyor is equipped with skirt boards; hood covers, automatic vertical gravity take-up with grab safety devices, speed switch, and pull cord switches and belt alignment switches. Additionally, the conveyor is equipped with a Thermo Ramsey Belt Scale/Integrator System that measures the fiber reject materials in tons and communicates the tonnage to the boiler DCS and CEM systems.

SFR is discharged from the SFR conveyor into the SFR surge hopper. The surge hopper is sized for a minimum capacity of 20 cubic yards and is equipped with four variable speed screw conveyors, each with their own speed switch. The surge hopper also has three capacitance-type level switches. One switch monitors low level, one switch to monitor high level, and one switch for emergency high level. Upon actuation of the high level switch, the DCS system automatically run the drag chain feeder in the receiving hopper in low speed to prevent overflow of the surge hopper. The feeder returns to high speed when the high level switch is no longer actuated. The emergency high-level switch stops both conveyor and feeder immediately after actuation.

The feed system feeds the SFR to the loop seal feed points of Boiler C and discharges through air locks (rotary valves) to the coal drag chain conveyors feeding the loop seals. The coal conveyors introduce the coal/fiber waste mix into the loop seal fuel feed port.

The fiber waste provides less than 5 percent of the heat input to C boiler when the feed rate is 150 tons/day and the boiler is at full load.

2.4 HISTORICAL EMISSIONS FOR CEDAR BAY COGENERATION FACILITY

The production information and actual emissions reported in the Annual Operating Reports submitted to FDEP for the years 2000 through 2004 are summarized in Table 5. The reported emissions are for carbon monoxide (CO), nitrogen oxides (NO_x), SO₂, particulate matter (PM), volatile organic compounds (VOC), and sulfuric acid mist (SAM). These reported emissions are based on continuous emission monitoring (CEM) systems for CO, NO_x, and SO₂. Testing is conducted annually for the other pollutants.

As shown in the table, the emissions have been relatively constant over the last 4 years.

Cedar Bay is proposing that the last two years (2003-2004) be used as the emissions for future comparisons.

3.0 RULE APPLICABILITY AND PROPOSED CHANGES

Under Federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. EPA has approved Florida's State Implementation Plan (SIP), which contains PSD regulations, therefore, PSD approval authority has been granted to the FDEP. For projects approved under the Florida PPSA, the PSD program is delegated.

A "major facility" is defined as any 1 of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment. Once a new source is determined to be a "major facility" for a particular pollutant, any pollutant emitted in amounts greater than the PSD significant emission rates is subject to PSD review. For an existing source for which a modification is proposed, the modification is subject to PSD review if the net increase in emissions due to the modification is greater than the PSD significant emission rates.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in 40 Code of Federal Regulations (CFR) 52.21, *Prevention of Significant Deterioration of Air Quality*. The State of Florida has adopted the federal PSD regulations by reference [Rule 62-212.400, Federal Administrative Code (F.A.C.)]. Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

- Control technology review,
- Source impact analysis,
- Air quality analysis (monitoring),
- Source information, and
- Additional impact analyses.

The Cedar Bay Cogeneration Facility is a major source. Co-firing of TDF and changing the uncontrolled sulfur limit is an operational change based on past FDEP determinations. Therefore, the project is a modification as defined in the FDEP rules in 62-210.200, F.A.C., and under the PSD rules in 62-212.400, F.A.C. PSD review would be required for the project if there were a significant net

increase in emissions. For the proposed requested changes, there will be no significant net increase in actual emissions based on the requested conditions.

Determining the amount of the change, if any, in the Facility's emission should be performed by following the requirements in 40 CFR Parts 52.21(b)(21)(v) and 52.21(b)(33). These applicable rules are stated below:

52.21(b)(21)(v) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the source owner or operator maintains and submits to the Administrator on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed 10 years, may be required by the Administrator if he determines such a period to be more representative of normal source post-change operations.

52.21(b)(33) Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

These requirements have been included in many permits authorized by FDEP for operational changes. Cedar Bay requests that these requirements be included in a federally enforceable modification to the existing PSD and Title V permits for the Facility, and included in the PPSA Conditions of Certification for the Facility. The Facility has CEM systems for SO₂, NO_x, and CO that would demonstrate compliance with the requested condition. Individual stack tests, pursuant to the existing permit conditions, would be conducted for PM, particulate matter with aerodynamic size of

10 micrometers or less (PM₁₀), VOCs, and SAM when co-firing TDF. This mixture would not exceed 5 percent (by weight) TDF with coal.

The conditions requested are proposed as follows:

TDF Co-firing (Condition A.3 Method of Operation):

(b) Fuels.

1. Coal. 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. Petroleum coke (pet coke) may be utilized as a co-firing fuel, and shall not exceed 35 % fuel input by weight on a daily basis. Tire derived fuel (TDF) may be utilized as a co-firing fuel, and shall not exceed 5% fuel input by weight on a daily basis. {Permitting Note: The limitations on the coal charging rate include both coal, TDF and pet coke.}

Sulfur Coal Content (Condition A.7):

Sulfur Dioxide - Sulfur Content.

1. Coal Fuel. ~~In order to ensure continuous compliance with the SO₂ limit stated in Specific Condition A.5, the coal sulfur content shall not exceed 1.7 percent, by weight, on a shipment (train load) basis and 1.2 percent, by weight, on an annual basis, as measured by applicable test methods (see Specific Condition A.36). When co-firing coal and peteoke, the blended~~ The fuel input to the CFBs shall not exceed 3.2 lb/MMBtu equivalent SO₂ content. Compliance shall be determined on a monthly basis via a composite of daily fuel samples.

PSD Applicability: The proposed permit condition for demonstrating no significant increase is listed as follows:

Condition A.66. Upon co-firing TDF or implementing the 3.2 lb SO₂/MMBtu coal sulfur limit, the applicant shall maintain and submit to the Department on an annual basis for a period of five years from the date the units are initially co-fired with petroleum coke with coal greater than a 20 to 80 percent blend, information demonstrating in accordance with 40 CFR 52.21(b)(21)(v) and 40 CFR 52.21(b)(33) that operational changes did not result in emission increases of particulate matter, nitrogen oxides, carbon monoxide and sulfuric acid mist.

To provide guidance for this condition, Cedar Bay proposes that the following table be added to the technical evaluation. The annual emissions are based on actual emissions from 2003 and 2004 plus the PSD significant emission rate. For VOC and SAM, the annual emissions are based on the permit limits as the actual emissions plus significant emission rates are higher than the FDEP-authorized emission limits for these pollutants.

Pollutant	Compliance Procedures
NO _x	Five years of annual reporting by CEMS demonstrating annual emissions do not exceed 1,792.0 TPY
CO	Five years of annual reporting by stack test demonstrating annual emissions do not exceed 541.3TPY
VOC	Five years of annual reporting by stack test demonstrating annual emissions do not exceed 65 TPY
SO ₂	Five years of annual reporting by CEMS demonstrating annual emissions do not exceed 2,012.5 TPY
SAM	Five years of annual reporting by stack test demonstrating annual emissions do not exceed 2 TPY
PM	Five years of annual reporting by stack test demonstrating annual facility emissions do not exceed 126.9 TPY

Short Fiber Rejects:

Condition A.3.(c) Short Fiber Rejects. The maximum charging rate to CFB Boilers B & C of short fiber recycle rejects from the SCC recycling process shall not exceed 420,000 lb/day and 69,600 tons/yr ~~210 yd³/day (wet) and 69,588 yd³/yr (wet)~~. This reflects a combined total of 840,000 lb/day and 139,200 tons/year ~~420 yd³/day (wet) and 139,176 yd³/yr (wet)~~ for the two CFB boilers that fire recycle rejects. CFB Boiler A will not utilize recycle rejects, nor will it be equipped with handling and firing equipment for recycle rejects.

Note: The tonnage of SFR was based on a conservative density of 1 ton per cubic yard due to the potential range of moisture that can be included. Actual density was determined for several loads to be 0.6 tons per cubic yard. Thus, the 1-ton-per-cubic-yard density provides a worst-case estimate for SFR.

Table 1. Comparative Chemical and Emissions Characteristics for Coal and TDF

Characteristic	Cedar Bay Coal	TDF	Combination
<u>Proximate Analysis (% as received)</u>			
	2003 annual average		
Moisture	6.49	0.62	6.20
Ash	10.89	4.78	10.59
Volatile	33.21	66.64	34.87
Fixed Carbon	49.35	27.96	48.29
<u>Ultimate Analysis (% as received)</u>			
Carbon	68.85	83.27	69.56
Hydrogen	4.35	7.09	4.49
Nitrogen	1.32	0.24	1.27
Sulfur	0.96	1.83	1.00
Ash	11.14	4.78	10.83
Moisture	7.05	0.62	6.73
Oxygen	6.41	2.17	6.20
CFB Performance			
Heat Content (Btu/lb)	12,000	14,700	12,135
Mass Percentage	95.0%	5.0%	100.0%
Heat Input by Fuel (tons/hr)	41.6	2.2	43.8
Percentage by Heat Input	94%	6%	100%
Heat Input by Fuel (MMBtu/hr)	999.2	63.8	1,063.0
Unit heat Input (MMBtu/hr) - permitted	1,063		

Table 2. Coal Sulfur Content and SO₂ Removal, Limestone and Ash Amounts
Typical Coal Heat Content

Parameter	Units	Data	Basis and Limits ^a
Heat Input	MMBtu	1,063	Limit in Condition A.1.
Heat Content	Btu/lb	12,000	Typical heat content of coal
Coal Usage	lb/hr	88,583	Limit of 104,000 lb/hr, Condition A.3.(b)
Coal SO ₂	lb/MMBtu	3.2	Proposed
Coal Sulfur	%	1.92	Calculated sulfur content
Coal Ash	%	11.55	Typical ash
SO ₂ Emission Limit	lb/MMBtu	0.2	Limit in Condition A.5.
SO ₂ Removal	%	93.8%	Calculated removal
SO ₂ Removed	lb/hr	3,189	(3.2 - 0.2) x 1,063 lb/MMBtu
Limestone	lb/hr	17,000	Based on Foster Wheeler Report Figure 4
Ash	lb/hr	10,231	Ash % x Fuel Usage
Total Ash	lb/hr	27,231	Limestone + Ash
Annual			
Limestone	tons/yr/unit	67,014	Based on 90% heat input capacity factor ^b
	tons/yr/plant	201,042	275,000 tons/yr limit in Condition B.1.b.
Total Ash	tons/yr/unit	107,346	Based on 90% heat input capacity factor ^b
	tons/yr/plant	322,038	424,000 tons/yr fly ash and bed ash
Fly Ash ^c	tons/yr/plant	293,055	336,000 tons/yr limit in Condition B.1.b.
Bed Ash ^c	tons/yr/plant	28,983	88,000 tons/yr limit in Condition B.1.b.

^a Conditions refer to Final Title V Permit No. 0310337-007-AV

^b Conservative maximum based on historical average of 81% from 1997 through 2004; maximum was 84%

^c Based on average 2002 through 2004 of 91% fly ash and 9% bed ash of total ash; data based on truck scales.

Table 3. Coal Sulfur Content and SO₂ Removal, Limestone and Ash Amounts
Low Coal Heat Content

Parameter	Units	Data	Basis and Limits
Heat Input	MMBtu	1,063	Limit in Condition A.1.
Heat Content	Btu/lb	10,221	Typical heat content of coal
Coal Usage	lb/hr	104,000	Limit of 104,000 lb/hr, Condition A.3.(b)
Coal SO ₂	lb/MMBtu	3.2	Proposed
Coal Sulfur	%	1.64	Calculated sulfur content
Coal Ash	%	11.55	Typical ash
SO ₂ Emission Limit	lb/MMBtu	0.2	Limit in Condition A.5.
SO ₂ Removal	%	93.8%	Calculated removal
SO ₂ Removed	lb/hr	3,189	(3.2 - 0.2) x 1,063 lb/MMBtu
Limestone	lb/hr	17,000	Based on Foster Wheeler
Ash	lb/hr	12,012	Ash % x Fuel Usage
Total Ash	lb/hr	29,012	Limestone + Ash
Annual			
Limestone	tons/yr/unit	67,014	Based on 90% heat input capacity factor ^b
	tons/yr/plant	201,042	275,000 tons/yr limit in Condition B.1.b.
Total Ash	tons/yr/unit	114,365	Based on 90% heat input capacity factor ^b
	tons/yr/plant	343,096	424,000 tons/yr fly a fly ash 88,000 bed ash
Fly Ash ^c	tons/yr/plant	312,217	336,000 tons/yr limit in Condition B.1.b.
Bed Ash ^c	tons/yr/plant	30,879	88,000 tons/yr limit in Condition B.1.b.

^a Conditions refer to Final Title V Permit No. 0310337-007-AV

^b Conservative maximum based on historical average of 81% from 1997 through 2004; maximum was 84%

^c Based on average 2002 through 2004 of 91% fly ash and 9% bed ash of total ash; data based on truck scales.

Table 4. Comparative Chemical and Emissions Characteristics for Typical Coal and TDF
(With Proposed Coal Sulfur Limit Equivalent to 3.2 lb/MMBtu)

Characteristic	Cedar Bay Coal	TDF	Combination
<u>Proximate Analysis (% as received)</u>			
Moisture	6.49	0.62	6.20
Ash	10.89	4.78	10.59
Volatile	33.21	66.64	34.87
Fixed Carbon	49.35	27.96	48.29
<u>Ultimate Analysis (% as received)</u>			
Carbon	68.85	83.27	69.56
Hydrogen	4.35	7.09	4.49
Nitrogen	1.32	0.24	1.27
Sulfur	1.9	1.83	1.90
Ash	11.14	4.78	10.83
Moisture	7.05	0.62	6.73
Oxygen	6.41	2.17	6.20
CFB-C Performance			
Heat Content (Btu/lb)	12,000	14,700	12,135
Mass Percentage	95.0%	5.0%	100.0%
Heat Input by Fuel (tons/hr)	41.6	2.2	43.8
Percentage by Heat Input	94%	6%	100%
Heat Input by Fuel (MMBtu/hr)	999.2	63.8	1,063.0
Unit heat Input (MMBtu/hr) - permitted	1,063		
Sulfur Dioxide Emissions			
Sulfur dioxide (uncontrolled; lb/hr with TDF)	3,164.2	158.8	3,323.0
Sulfur dioxide Uncontrolled Emission Rate (lb/MMBtu)	3.2	2.5	3.1
Sulfur dioxide (uncontrolled; lb/hr coal only)	3,366.2	0.0	3,366.2
Difference (lb/hr)			-43.2

Table 5. Annual Emissions for Cedar Bay Cogeneration Facility

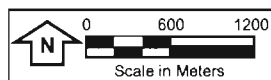
Parameter	Boiler A (TPY)				
	2000	2001	2002	2003	2004
Particulate Matter	58.72	64.36	22.63	13.43	21.46
PM ₁₀	48.09	21.34	21.24	8.51	29.70
Sulfur Dioxide	650.52	631.20	649.80	677.90	659.55
Nitrogen Oxides	594.40	551.40	561.80	581.10	618.14
Carbon Monoxide	179.16	177.60	173.79	189.28	178.32
Volatile Organic Compounds	4.97	25.02	24.19	26.41	25.92
Sulfuric Acid Mist	0.11	0.11	0.16	0.18	0.17
Parameter	Boiler B (TPY)				
	2000	2001	2002	2003	2004
Particulate Matter	66.06	68.41	27.72	50.38	67.52
PM ₁₀	60.22	32.48	22.53	48.29	62.16
Sulfur Dioxide	670.98	624.50	641.20	661.57	638.45
Nitrogen Oxides	597.58	544.64	534.40	555.06	571.30
Carbon Monoxide	157.65	150.70	137.81	114.61	126.07
Volatile Organic Compounds	8.93	11.70	21.57	22.61	22.28
Sulfuric Acid Mist	0.12	0.11	0.16	0.16	0.16
Parameter	Boiler C (TPY)				
	2000	2001	2002	2003	2004
Particulate Matter	63.42	69.15	21.56	28.70	22.26
PM ₁₀	56.91	38.54	20.12	18.03	21.23
Sulfur Dioxide	643.63	645.80	627.80	654.40	653.14
Nitrogen Oxides	587.06	560.90	546.00	571.79	606.62
Carbon Monoxide	179.20	156.20	145.03	135.29	138.96
Volatile Organic Compounds	3.35	11.96	11.75	12.45	12.00
Sulfuric Acid Mist	0.12	0.11	0.16	0.17	0.16
Parameter	Boilers A, B, and C (TPY)				
	2000	2001	2002	2003	2004
Particulate Matter	188.20	201.93	71.90	92.52	111.24
PM ₁₀	165.22	92.36	63.89	74.83	113.09
Sulfur Dioxide	1965.13	1901.50	1918.80	1993.87	1951.14
Nitrogen Oxides	1779.04	1656.94	1642.20	1707.95	1796.06
Carbon Monoxide	516.01	484.50	456.62	439.18	443.35
Volatile Organic Compounds	17.25	48.68	57.51	61.46	60.19
Sulfuric Acid Mist	0.35	0.34	0.48	0.51	0.50
Parameter	Boilers A, B, and C (TPY)				
	2000-2001	2001-2002	2002-2003	2003-2004	
Particulate Matter	195.06	136.91	82.21	101.88	
PM ₁₀	128.79	78.13	69.36	93.96	
Sulfur Dioxide	1,933.32	1,910.15	1,956.34	1,972.51	
Nitrogen Oxides	1,717.99	1,649.57	1,675.08	1,752.01	
Carbon Monoxide	500.26	470.56	447.90	441.27	
Volatile Organic Compounds	32.96	53.10	59.49	60.83	
Sulfuric Acid Mist	0.34	0.41	0.49	0.50	

Source: 2001 through 2004 Annual Operating Reports.



Figure 1
Cedar Bay Cogeneration Facility - Site Location

Source: Golder, 2001.



APPENDIX A

**FDEP PUBLICATION:
STATE OF THE STATE REPORT,
*WASTE TIRES IN FLORIDA***

WASTE TIRES IN FLORIDA
STATE OF THE STATE
MARCH 24, 2004



I. GENERATION RATE

Annually, 15,000,000 automobile, light truck, and smaller tires plus 900,000 medium truck and larger tires are removed from vehicles in Florida. Adjusted for weight, this is 19,500,000 passenger tire equivalents (PTE) or an estimated 195,000 tons of waste tires.¹ Throughout this report, all tire quantities are stated as passenger tire equivalents.

II. MARKETS

Before Florida's waste tire management program was implemented in 1989, almost all waste tires in the state were landfilled or stockpiled. Starting in 1989, tires had to be cut or shredded into at least 8 pieces prior to landfill disposal, thereby encouraging development of alternative uses. An increasing percentage has been diverted to a broad range of constructive applications. Table I shows the 2003 estimated usage of waste tires generated in Florida based on a detailed market survey. In total, 16.4 million (84.1%) of the 19.5 million waste tires generated in Florida in 2003 were constructively utilized. The 3.2 million tires listed within the disposal classification include 1.5 million tires landfilled in Dade County and 380,000 tires landfilled in Alabama due to its allowance of low-cost tire monofills. A limited quantity of shredded tires was imported into Florida from neighboring states for processing feedstock.

Florida's crumb rubber markets include asphalt modification, playground/sports surfacing, soil modification/cover and molded products. The Florida Department of Transportation (FDOT) consumes over 8,400 tons of crumb rubber annually as part of the interlayer, friction course and crack sealants used in roadway construction and maintenance. Manufacturing crumb rubber for this market consumes about 1.25 million tires. Florida is the only state that specifies rubber modified asphalt (RMA) for friction course pavement on all state-maintained roads, but polymers may soon displace crumb rubber in some road classes.

Playground surfacing, both loose-filled and poured-in-place, is a significant use of crumb rubber. This market increased significantly in 2001 as a result of new state grants supporting up to 50% of crumb rubber purchase costs associated with surfacing materials intended to enhance safety and accessibility of playgrounds. Although this market declined after completion of the grant program, innovative athletic fields utilizing crumb rubber within artificial turf surfaces increased significantly in 2003, partially off-setting playground losses. Crumb rubber is also used for soil modification to decrease compaction and enhance drainage on sports fields and other high-traffic grassed areas. Florida producers have also increased sales of crumb rubber to regional manufacturers of molded rubber products, such as tiles and mats.

¹ A 20 pound passenger tire is 1 PTE; a 100 pound truck tire is 5 PTE.

Florida utilized an estimated 4,200,000 waste tires in crumb rubber applications during 2003, representing 21.5% of total generation. National crumb rubber markets have not developed as rapidly. The crumb rubber industry has historically experienced excess capacity. There have been many business failures throughout the country, and some of the remaining companies are struggling to survive.

TABLE 1: 2003 ESTIMATED WASTE TIRE USAGE (in PTEs)

MARKET	2003 USAGE OF WASTE TIRES GENERATED IN FLORIDA (PTE)	APPLICATIONS	STATUS
Export of Used Tires	250,000	Primarily to Caribbean/Latin countries	Declining – now sold in US markets
Crumb Rubber Applications			
Highway Uses	1,250,000	Rubberized asphalt, crack sealants	Declining
Playground/Sports Safety Surfaces	800,000	Cushioning material	Increasing artificial sports fields offset by lower playground use
On-ground Uses	1,000,000	Soil amendments and mulch	Colored mulch is growing
Molded Products	1,150,000	Mats, tiles, outdoor tables	New markets being developed
Subtotal-Crumb Rubber	4,200,000		
Energy Use			
In-State Industrial TDF	4,830,000	Includes Ridge Generating, Rinker, Southdown and Florida Rock	Will increase if Cemex and Florida Rock optimize usage
In-State WTE Use	1,050,000	Supplemental energy use by 7 facilities	Variable
Out-of -State TDF	3,220,000	Paper/cement in Georgia and Alabama	Stable, but vulnerable to local suppliers
Subtotal-TDF	9,100,000		
Civil Engineering			
Drainfield Aggregate	740,000	Replaces rock/aggregate	Stabilizing after initial rapid growth
Landfill Daily Cover	840,000	Displaces soil	Low-value use
Other CE Uses	1,510,000	Drainage layer, gas collection	Continuing growth
Subtotal-CE	3,090,000		
Disposal	3,110,000	Landfill disposal of shredded tires, including 1,500,000 in Dade County	Will decrease as additional markets develop
TOTAL	19,500,000		

As shown in Table 1, use of the hydrocarbon resources contained in waste tires as a supplemental energy resource was the largest application, consuming 46.7% of Florida's waste tire generation. Seven waste-to-energy facilities consume tires to enhance their combustion temperature control and/or optimize electricity generation. Other industrial facilities utilizing tires as fuel within Florida and in neighboring states are economically supplied by Florida's well-

developed tire collection and processing industry. Nationally, use of waste tires as an energy resource is by far the largest application, mirroring Florida's experience.

Florida has been one of the pioneers in large-scale use of shredded tires as a replacement for natural soil and aggregate in civil engineering applications such as landfill drainage layers, methane gas collection systems, and septic system drainage trenches. These uses consumed approximately 3.09 million, or about 15.8%, of Florida's waste tires in 2003. As tire chips have become a proven, technically acceptable material for these applications, further market growth for tire chips will be dependent on comparative economics.

Continued market development is the controlling factor in diverting the remainder of unutilized waste tires from landfills and stockpiles. Cemex has interrupted tire usage as a supplemental energy resource at its cement facility in Brooksville, but could potentially use over 1,000,000 tires/year initially and up to 2,000,000 tires/year if both kilns ultimately use tires. Florida Rock Industries' new cement kiln in Alachua County has initiated use of waste tires and is capable of consuming 1,000,000 tires per year.

The Florida Department of Environmental Protection (DEP) is clearly interested in defining and initiating additional measures to enhance product markets in Florida. Possible examples intended to accelerate market development include identification and preliminary screening of manufacturing industries capable of utilizing crumb rubber, as well as paper mills capable of using tire-derived fuel (TDF) in a technically, economically and environmentally acceptable manner. DEP is also exploring obstacles to civil engineering applications such as drain field aggregate and highway construction applications. Constructive utilization of all waste tires generated in Florida remains a sound objective, and significant progress has been made toward this objective since the waste tire program was established.

III. RESEARCH, DEMONSTRATION AND SPECIAL PROJECTS

A. STATE SPONSORED RESEARCH AND DEMONSTRATION

1. Crumb rubber made from a small part of the tires from the Polk City Waste Tire Site was used to produce RMA for paving the Withlacoochee and Van Fleet trails in 1995. This was the first use of RMA for a trail in the U.S.
2. Research into the safety and effectiveness of using crumb rubber as a parking lot surface at a Florida Community College at Jacksonville facility in Nassau County was completed. The final report, issued in October 1999, found that this application is environmentally sound and identifies some design considerations, maintenance needs, and practical limitations of crumb rubber parking lots.
3. RMA was used to pave sections of the Nature Coast Trail in Dixie, Gilchrist, and Levy counties. A test section combining RMA with fine recycled glass cullet was completed in October 2000, demonstrating the first combined use of RMA and glass in paving.

B. SPECIAL PROJECT – 2003 SUPPLEMENTAL PROGRAM FOR ACCELERATED WASTE TIRE SITE REMOVAL

In 2003, a total of 30 Florida counties were placed under a medical alert for potentially serious diseases, namely West Nile Virus (WNV), Eastern Equine Encephalitis (EEE) and St. Louis Encephalitis (SLE). These diseases can be communicated to humans by mosquito

species known to breed in stagnant water in outdoor containers, such as waste tires. To remove small waste tire accumulations in counties affected by the medical alert, DEP continued its supplemental program in 2003 to enhance cooperative efforts by state and county governments.

The program uses the strengths of state and local governments to accelerate collection, transportation, and processing of waste tires. DEP used existing contracts with processors to provide trailers, transport and process collected waste tires for constructive applications. County governments used their capabilities to advertise the program, secure local collection sites and load trailers. The following table shows the three participating counties, tire quantities removed, and money expended for the program during 2003 program operation. Since 2001, almost 200,000 tires have been removed from 10 counties under this program during medical alerts.

TABLE 2: RESULTS OF SUPPLEMENTAL PROGRAM IN 2003

COUNTY	TRAILERS	TONS	TIRES (100 per TON)	COST	COMMENTS
Marion	22	315.19	31,519	\$41,605	
Nassau	2	23.88	2,388	\$3,080	
Holmes	6	78.35	7,835	\$9,480	
TOTALS	30	417.42	41,742	\$54,165	Avg. \$130/ton or \$1.30/tire

Merging the capabilities of governments in this partnership accelerated waste tire removal from small accumulations and reduced this breeding ground for dangerous mosquitoes. West Nile Virus is expected to be present in Florida again in 2004. As counties are designated with medical alert status, the waste tire resources available to the Department will be used for this program again.

C. SPECIAL PROJECT – MATCHING GRANTS FOR PLAYGROUND SURFACING PRODUCTS

The 2000 Legislature provided \$ 1.5 million for matching grants to counties to purchase surfacing products made from Florida waste tires. The objective was to improve playground safety in Florida parks and schools while also promoting waste tire recycling. Surfacing products purchased under these grants had to meet applicable national safety and accessibility guidelines and be made from whole waste tires collected and processed in Florida.

The funds were distributed to participating counties on the basis of population, with a \$4,000 minimum grant. A 50/50 match of funds was required. Only the direct costs of playground surfacing materials derived from recycled waste tires were reimbursed from grant funds, and not other materials, installation, or equipment. The grants were passed through to other local governments, school boards, and non-profit organizations via a competitive process.

At the end of the program in December, 2001, 22 counties had spent \$343,265 in state matching grant funds. The program was responsible for the purchase of 3,620,154 pounds of loose fill rubber granules and 37,896 square feet of poured-in-place surfacing containing crumb rubber. This represents the use of about 310,000 passenger tire equivalents based on average manufacturing yields and surfacing composition.

IV. LAW AND RULE CHANGES

The laws and rules governing Florida's waste tire management program have evolved since program inception. The 1995 Legislature expanded the allowable uses for waste tire grants-in-aid to counties to include operation of waste tire recycling and education programs, enforcement, and purchase of materials and products made from waste tires collected and recycled within the state. Small counties (under 100,000 population) were allowed to use their waste tire grants for any solid waste related purpose. The Waste Tire Rule, Chapter 62-711, Florida Administrative Code (F.A.C.), was changed in 1996 to reduce the number of rules. In 1999, the definition of a waste tire site was changed from 1,000 to 1,500 waste tires in one location. Facilities that consume processed tires as a fuel or as a material for making a product were no longer required to obtain a permit if the tire material, inventory management practices, and storage configuration meet the standards in the rule.

In 2001, the Legislature significantly reduced funding levels for waste tire grants from \$7.9 million in 2000 to \$1.2 million in 2001. In addition, the number of counties eligible to receive these grants was reduced from all 67 counties to those 34 "small" counties with under 100,000 in population. The Legislature also provided \$1.5 million for matching grants to counties to purchase surfacing products made from Florida waste tires, as discussed in the preceding section. The funding level for waste tire grants was increased to \$3.4 million in 2002 and these grants were made available to all 67 counties again. The program was modified again in 2003, dividing \$4 million dollars equally among 34 small counties to be used for general recycling purposes, including waste tire management.

V. PERMITS AND REGISTRATION

There are 19 permitted waste tire processors operating at landfills and other waste tire sites. Of the 19 processors, 13 are fixed site facilities and 6 are mobile. There were 745 companies registered as waste tire collectors, using 1760 trucks to haul waste tires in 2003.

VI. ABATEMENT

Currently, there are nine known illegal waste tire sites in Florida with a total of 60,500 tires, as summarized in Table 3. None of these sites contain over 5,000 waste tires. Abatement of the last known sites containing over 5,000 tires was completed in 2003, including one auto salvage yard with 140,000 waste tires.

Owners and operators of illegal waste tire sites are required to abate their own sites, and many have done so. A partial list of sites containing over 40,000 tires that have been abated by landowners or operators without expenditure of public waste tire account funds is provided in Table 4. Sites abated by owners are not necessarily reported to DEP if the action is taken in response to local government encouragement without DEP assistance.

In addition, counties have used waste tire grant funds to remove waste tires from public property and from the property of illegal dumping victims. Some counties have even abated major stockpiles, as illustrated by Table 5.

TABLE 3: EXISTING ILLEGAL SITE STATUS

SITE NAME	COUNTY	ESTIMATED TIRES	TIRES ABATED	REMAINING TIRES	STATUS
Budget Auto	Bay	27,500	24,500	3,000	Owner abating began 12/01
A-1 Tires	Manatee	5,000	0	5,000	Enforcement pending
A & A Auto	Manatee	5,000	0	5,000	Enforcement pending
Casey	Okaloosa	5,000	0	5,000	Enforcement pending
Central Discount	Manatee	5,000	0	2,500	Enforcement pending
Suggs Salvage	Desoto	5,000	0	5,000	Enforcement in progress
County Wide Tire	Levy	4,500	0	4,500	Enforcement pending
Hernandez	Hardee	3,000	0	3,000	Enforcement pending
Royal Auto	Manatee	3,000	0	3,000	Enforcement pending
TOTALS		60,500	24,500	36,000	

**TABLE 4: SITE ABATEMENT BY OWNERS OR OPERATORS
WITHOUT WASTE TIRE FUNDS
(Sites over 40,000 tires known to DEP)**

SITE	ESTIMATED TIRE QUANTITY	MARKET
Florida Tire Recycling	4,650,000	Landfill/fuel
Environmental Research	1,200,000	Landfilled
Anello - Celery Avenue	500,000	Unknown
OK Tire	350,000	Boiler Fuel
Conner Land	323,000	Waste to Energy
Shooting Range	250,000	Unknown
Caesar Street Warehouse	250,000	Unknown
Overland Road	200,000	Unknown
Calabrese	160,000	Landfilled
Pt. Everglades Warehouse	150,000	Landfill Cover
Burlington Street	150,000	Waste to Energy
Universal Tire	135,000	Waste to Energy
B & D Recycling	110,000	Waste to Energy
AB&B Auto Parts	90,000	Fuel
Florida Coastal Tire	90,000	Boiler Fuel
Tire Eagle	80,000	Landfilled
Snake Road Auto Parts	61,000	Landfilled
Anello	50,000	Unknown
Rainbow Industries	60,000	Unknown
Boehm's Warehouse	43,000	Waste to Energy
TOTAL	8,902,000	

**TABLE 5: SITE ABATEMENT BY COUNTIES
USING WASTE TIRE GRANT FUNDS
(Sites over 100,000 tires)**

SITE	TIRE QUANTITY	MARKET
Benton Yards	250,000	Landfill Cover
36th Street Acquisition	250,000	Landfill Cover
Port Everglades	250,000	Landfill Cover
Ricker Road	187,000	Landfill Cover
RC's Tri-county	130,000	Landfill Cover
TOTAL	1,067,000	

When the Department is forced to abate a site, it gains legal access and then assigns an experienced contractor the task of stabilizing and abating the site. When the contractor has completed the task, the Department must seek cost recovery from the owner and operator. In some cases, counties assist DEP by performing local contract/site management services. Table 6 lists sites abated under Department contracts.

TABLE 6: SITE ABATEMENT UNDER DEPARTMENT CONTRACTS

SITE	TIRE QUANTITY	COST	MARKET
Polk City	1,948,557	\$2,593,000	Boiler Fuel
National Tire Recycling	1,021,695	\$945,000	Boiler Fuel
Danco AQ	838,445	\$872,000	Boiler Fuel
Import Auto Parts	390,275	\$344,000	Landfill Construction
Narcoossee Road	176,939	\$187,000	Landfill Construction
Coast Auto Parts	172,874	\$218,000	Kiln Fuel
Gilliard Bros.	155,117	\$154,000	Boiler Fuel
A Auto Parts	145,000	\$202,000	Boiler Fuel
Bob's Garage	58,263	\$118,000	Kiln Fuel
Burke Site	45,038	\$47,000	Waste to Energy
Register	44,624	\$51,162	Kiln Fuel
Draper	42,457	\$59,824	Boiler Fuel
Florida State Tire	41,121	\$78,000	Road Base
Old Bradenton Road	24,887	\$33,590	Boiler Fuel
Thaggard	23,933	\$83,053	Boiler Fuel
Oxborough Property	18,497	\$51,000	Kiln Fuel
Curry	17,270	\$27,000	Landfill Construction
Pioneer Mat	14,051	\$19,521	Boiler Fuel
Griffin	13,847	\$16,111	Landfill Construction
Reynolds Road	4,734	\$7,158	Boiler Fuel
Swindle	2,035	\$963	Drainfield Chips
TOTAL	5,199,659	\$6,107,382	

Total waste tire site abatement activity from the preceding tables is summarized in Table 7. Over 15,168,659 waste tires have been removed from waste tire sites in Florida since program inception. Approximately 59% have been removed by landowners or operators, often with encouragement from impending state and/or local enforcement action. Counties have removed 7% of the abated waste tires utilizing waste tire grant funds from the program. When other alternatives had been fully exhausted, over 5 million tires (representing 34%) have been abated under DEP contracts at a total cost of \$6,107,382.

TABLE 7: SITE ABATEMENTSUMMARY
(From Tables 4-6)

ABATED BY	QUANTITY	% OF TOTAL TIRES
DEP	5,199,659	34%
County	1,067,000	7%
Owner or Operator	8,902,000	59%
TOTAL	15,168,659	100%

VII. SUMMARY

The Florida waste tire management program has made exceptional progress. Over 84% of the 19.5 million waste tires generated annually in Florida are constructively utilized in diverse applications, compared to virtually no usage in 1990. Use of tire shreds in septic tank drain fields has stabilized. High fuel prices have attracted additional use of tires as a supplemental energy resource in new and retrofitted cement kilns, with additional growth probable. The Department continues to explore methods of encouraging and accelerating additional market development to achieve full utilization of this resource.

Waste tire stockpiles have been reduced by more than 15 million tires through persuasion of site owners, financing of county abatement actions, or abatement under department contracts. With continuing permitting and enforcement activity on both state and local levels, few new stockpiles have been created and existing stockpiles are continuing to be abated. Stockpiles have declined dramatically over the years, with the current list of known stockpiles containing approximately 60,500 waste tires. The Department is continuing its efforts to identify and abate all remaining stockpiles.

APPENDIX B

RESULTS OF TEST BURN

Cedar Bay Tire Derived Fuel Test Burn

Executive Summary

Upon authorization from the Florida Department of Environmental Protection (FDEP), Cedar Bay Generating Plant conducted a performance test of burning a blend of 5% tire derived fuel (TDF) with coal in Boiler C designed to ascertain whether Cedar Bay's circulating fluidized bed boilers can burn the TDF as supplemental fuel without exceeding any of the limitations on air emissions and without violating any other environmental requirements. Per the Department's allowance of 30 full power burn days, the TDF performance test commenced February 9th, 2005 and concluded March 19th. Upon review of the data there were neither exceedances of environmental permit conditions nor any operational problems that would affect reliable operation of the circulating fluidized boilers.

Used tire disposal is problematic due to their resistance to degradation and are poorly compatible with land filling. Although recycling opportunities are available, the market is currently insufficient to handle the large number of stockpiled tires. As such, the Bureau of Solid and Hazardous Waste of the FDEP identified Cedar Bay's boilers as being a suitable candidate to utilize processed tire chips as a supplementary fuel in the circulating fluidized boilers due to the inherent design to utilize various solid fuels.

In October 22, 2004, after research and consultation with combustion consultants, Cedar Bay requested approval from the Department to perform a 30-day test burn of 5 percent tire derived fuel in Boiler C. Accompanying the request was a detailed Test Burn Protocol that Cedar Bay proposed to follow that included testing and analyses of fuel, ash and air parameters. On November 1, 2004, the Department issued a draft Air Construction Permit relative to Cedar Bay's request to test burn the tire derived fuel. The Public Notice of Intent to Issue Air Construction Permit was published in Jacksonville's Florida Times Union on November 22, 2004. The Department issued a final permit (attached) to conduct a performance test of tire derived fuel on December 7, 2004.

Conclusions

Based on the results of the emissions test at a 5 % coal substitution, by weight, with TDF, the emissions of the existing permitted parameters in Cedar Bay's Title V and PSD permits are not different than when firing 100% bituminous coal.

The operational results of the trial indicated essentially no changes to the operating characteristics of the boiler. No negative influences were noted due to the TDF substitution.

These results indicate that Cedar Bay's Circulating Fluidized Bed Combustors can supplement their normal fuel (Bituminous Coal) with 5% TDF and achieve the environmental compliance emission limits. This substitution provides a viable supplemental fuel for Cedar Bay.

Results

Criteria Pollutants – Sulfur Dioxide, Nitrogen Oxides and Carbon Monoxide

Cedar Bay utilizes a Continuous Emission Monitoring (CEM) system to monitor and record the emissions of Sulfur Dioxide (SO_x), Nitrogen Oxide (NO_x) and Carbon Monoxide (CO). Boiler C's CEM data for the TDF test burn indicates no changes in any of these parameters

SO_x

Prior to the test burn, the stoichiometric calculations indicated that the 5 per cent TDF fuel would have a theoretical increase of 6.86 lbs/hr of SO_x. However, the data indicates that there was no change in hourly Sox lbs/MMBTU or lbs/hr emissions. Subsequently, there was no change in either of the actual 3-hour rolling or 30-day rolling averages. The limestone feed system is controlled as a major loop of the total combustion control system. The speed of the limestone belt feeder is regulated in proportion to the rate of fuel feed to maintain the ratio of solid fuel feed to limestone as constant as possible. A control trimming action to adjust limestone feed is provided by the SO_x value from the CEM system. Any potential increase in SO_x production is compensated by a simultaneous increase in limestone feed. Additionally, as the 5 per cent TDF increment had, the nominal increase in the boiler SO_x inlet the SO_x reduction requirements were similarly enhanced.

NO_x

The TDF/Coal feed had no affect on Boiler C's NO_x emissions on either a lbs/MMBTU or lbs/hr basis. Cedar Bay uses a non-selective catalytic reduction system (SNCR) to control NO_x emission through the injection of 29 per cent ammonium hydroxide. The NO_x SNCR system is controlled as a loop of the combustion control system. The CEM system NO_x value will bias the ammonia feed pumps to maintain the appropriate NO_x levels below the permitted 0.17 lbs/MMBTU and 180.7 lbs/hr 30-day rolling averages.

CO

The TDF/Coal performance test had no noticeable impact on the actual CO emissions. Inherently, circulating fluidized combustors generate low levels of CO. The solid fuel is delivered to the combustion chamber by four variable speed coal feeders. The boiler demand signal developed by the boiler master is cross-limited with total air flow to assure an air-rich air/fuel ratio for it's demand set point to the solid fuel master. There were no exceedances of either the 0.17 lbs/MMBTU or 186.7 lbs/hr permitted limits, 8-hour rolling average. The brief excursions of these values occurred during two start-ups following shutdowns to repair two water wall tube leaks.

VOC's, Metals, Sulfuric Acid Mist/Stack Testing Parameters & Material Balance

TDF Metals and Stack Emissions Comparison

Table A summarizes the trace metal concentrations in TDF, the TDF/coal blend and in the coal from samples taken during the TDF/coal test period. Statistical parameters including the average, median, standard deviation (STDEV) and upper 95 percent confidence interval were determined. The procedure used to evaluate the differences between the TDF, and the TDF/coal blend and coal data was the same as specified in 40 CFR Part 60 Appendix C for determining an emission change under EPA New Source Performance Standard (NSPS) regulations. The upper and lower confidence intervals

were determined using Student's "t" test, which is commonly used to compare the means of small sample sizes. This procedure can account for operational variability associated with emission rates and provide statistical comparisons for determining whether differences between mean values exist at a specified confidence level. The results of the analysis indicate that the only trace metals higher in TDF than in the TDF/coal blend or coal is zinc. Zinc oxide is used in tires and can be found in the analyses conducted for the test burn. These results are similar to that found by EPA (1997). However, zinc is not a Hazardous Air Pollutant (HAP) and the air pollution control equipment is extremely effective in removing zinc since it is not a volatile metal. It should be noted that there were several parameters where the amount in the TDF/coal blend was higher than the TDF. These included chromium, arsenic, and selenium which are regulated as HAPs.

Table B presents a summary of the emissions observed for the TDF/coal test burn as well as a summary of previous test data obtained for the various parameters since the Cedar Bay facility began operation. The comparison of the observed test data clearly indicates that the emissions are not statistically different from the previous tests with coal only. Indeed, for most parameters the observed emissions were well below the averages observed for previous tests and well within the 95 percent confidence interval for all parameters.

There were no previous data on zinc emissions when firing coal. Given the higher concentration of zinc in the TDF than coal it is likely that the zinc emissions increased from that of coal firing. As mentioned previously, zinc is not a volatile metal and is effectively removed with the air pollution control equipment on the Cedar Bay facility. The data taken during the test burn indicate the uncontrolled potential zinc emission rate would be 0.0174 lb/MMBtu (based on average zinc concentration and heat contact in combined TDF/coal blend). The zinc emission rate observed during the test burn was 1.2×10^{-6} lb/MMBtu suggesting a control efficiency of 99.99+ percent through the entire system.

Operational Assessment

TDF Supply

The TDF was supplied by two suppliers for the trial. Product was shipped from Atlanta, Augusta and Jackson, Georgia and was of two different qualities.

The initial product, considered wire free, was a nominal 2" minus product with 90+% of the wire removed. This product was easily held in your hand without getting a wire stick and very few wires were visible. The supplier of this product has about a 60% yield on this product (40% is wire and entrained rubber to be sold off or disposed of.) The processing of this product through cutting and magnetic separation tends to produce fines (1/2" minus), which along with the 2" minus pieces make a very nice product. This product accounted for the first 1,000 tons consumed during the trial.

The second product was a nominal 2" minus product with 80 to 90% of the wire removed. This product could not be held in your hand without getting a wire stick and wires were visible. The supplier of this product has about an 80% yield on this product (20% is wire and entrained rubber to be sold off or disposed of.) Reducing the current on the magnet and not removing as much wire accomplish the processing of this product. The rim wire or bead wire is a large piece of wire with two in every tire and is typically the first picked up by the magnet. Very little bead wire was seen in this second product. This product accounted for the last 500 tons consumed during the trial.

A third product was available with no wire removed. It was elected not to trial this product due to the wire contaminants, predominantly the bead wire.

Cedar Bay burns approximately 1,000,000 tons per year of coal. At a 5% substitution, the 50,000 tons of tires is equivalent to the use of 1.2 to 1.6 million tires per year. This is the amount generated annually by a comparable amount of people.

Fuel Blending

The target blend ratio was 5%, by weight, with the coal feed to C Boiler. The typical crushing and bunkering rate is 300 tons per hour (TPH.) A TDF feeder was employed that could feed up to 30 TPH (variable speed) but was ran at 15 TPH during the blending operations. The discharge of the metering feeder was sent directly to the coal stream leaving the crusher to the bunkers (2) for C Boiler.

The coal from these two bunkers are used to feed four coal feeders that feed a total of six coal feed points of the boiler. Samples were evaluated from these coal feeders and showed that the silos were supplying a reasonable blend of Coal and TDF from the silos. The blending operation was very successful during the trial.

Boiler Operation and Combustion

The boiler operation before, during and after the trial was essentially seamless. The blend rate (5% by weight) would create a fuel that would be about 125 BTU/lb higher than the typical 12,000 BTU/lb Bituminous Coal. This change in BTU is not unusual to see as the range of the Cedar Bay coal supply is typically from 11,700 to 12,300. The boiler master (as seen in Table C) reacted during the trial to the richer fuel and dropped.

Temperatures throughout the boiler remained nearly the same. Control of SOx and NOx was not difficult and in fact the usage rates for limestone and ammonia was slightly lower than the pre and

post trial averages. This indicates the richer fuel did not create hot spots of combustion, which increase NOx production and lower the limestone reaction rates (SOx.)

The operational impact of the TDF:Coal blend were minimal and easily within the typical variations seen in fuel feed. This method of operation was very successful and poses no problem at this time.

Ash Removal

The ash removal considerations of the trial included the volume of ash produced, the tread wire from the TDF pieces and the loss of the TDF pieces themselves. The ash content of TDF is around 12 to 13%, whereas our coal may vary from 10% to 17%, therefore, the ash generation impact was not noticed.

The tread wire from passenger car tires is a small diameter and would only be an inch or two long in the TDF supplied. Other TDF burning facilities have seen these wires in the bottom ash system depending on the volume fed. These wires can cause problems by becoming entangled with each other and forming balls in the discharge piping. Cedar Bay has seen no wire or wire remnants in the ash system. The combustion chamber temperature of around 1,650 Deg. F is ideal for iron to turn from ferrite to austenite (softer material) and be broken down due to the agitation in the combustion zone. This along with the low coal substitution rate prevents the wire from accumulating.

Related to the low substitution rate is the absence of TDF pieces in the bottom ash at Cedar Bay. Some locations with high TDF feed rates have seen some TDF to be removed from the boiler via the ash drains with just the edges charred at other locations. This was not the case at Cedar Bay.

Physical Impacts on Boiler Internals

The Spring Outage was begun at Cedar Bay in early April soon following the TDF trial and afforded the opportunity to evaluate the impacts of the TDF on the boiler internals. Of particular interest was the impact of the wire. Evaluation of the three boilers during the outage showed all three to be free of the build-up or "pottery" normally found in an outage. At this time, this has been attributed to the coarse solids being circulated in all three boilers over the last several months due to Limestone Processing changes.

No additional changes could be directly attributed to the TDF at this time, but additional monitoring will be performed.

Table A. Summary of Trace Metal Analysis and Statistical Parameters

TDF												
Dry Basis, ug/g	CB-TDF-5(T)	CB-TDF-7(T)	CB-TDF-9	CB-TDF-10	-TDF	Maximum	Average	Median	STDEV	Upper CI ^a	Lower CI ^b	Significant Difference?
Cadmium, Cd	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	
Chromium, Cr	4	2	8	17	5	17	7.2	5	5.891	12.82	1.58	
Silver, Ag	4	4	0.5	0.5	0.5	4	1.9	0.5	1.917	3.73	0.07	
Lead, Pb	4	8	8	10	6	10	7.2	8	2.280	9.37	5.03	
Copper, Cu	47	29	36	22	62	62	39.2	36	15.738	54.21	24.19	
Beryllium, Be	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	
Zinc, Zn	3132	2548	5048	2072	2748	5048	3109.6	2748	1148.984	4205.11	2014.09	
Arsenic, As	9	7	0.5	0.5	0.5	9	3.5	0.5	4.168	7.47	-0.47	
Mercury, Hg	0.06	0.06	0.07	0.1	0.02	0.1	0.062	0.06	0.029	0.09	0.03	
Selenium, Se	0.5	0.5	0.5	1	0.5	1	0.6	0.5	0.224	0.81	0.39	
< is less than detection limit and assumed to be 0.5 of detection limit												
TDF/Coal												
Dry Basis, ug/g	CB-TDF-1	CB-TDF-3	CB-TDF-5	CB-TDF-7	Maximum	Average	Median	STDEV	from TDF			
Cadmium, Cd	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	NA	No difference
Chromium, Cr	21	23	21	25	25	22.5	22	1.915	24.75	20.25	24.75	Higher
Silver, Ag	0.5	0.5	1	1	1	0.75	0.75	0.289	1.09	0.41	1.09	No difference
Lead, Pb	12	27	11	9	27	14.75	11.5	8.261	24.47	5.03	24.47	No difference
Copper, Cu	0	29	28	23	29	20	25.5	13.589	35.99	4.01	35.99	No difference
Beryllium, Be	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	NA	No difference
Zinc, Zn	448	38	244	135	448	216.25	189.5	175.929	423.23	9.27	423.23	Lower
Arsenic, As	11	17	16	15	17	14.75	15.5	2.630	17.84	11.66	17.84	Higher
Mercury, Hg	0.05	0.06	0.05	0.04	0.06	0.05	0.05	0.008	0.06	0.04	0.06	No difference
Selenium, Se	1	1	1	1	1	1	1	0.000	NA	NA	NA	Higher
< is less than detection limit and assumed to be 0.5 of detection limit												
COAL												
Dry Basis, ug/g	CB-TDF-5	CB-TDF-7	Maximum	Average	Median	STDEV	from TDF					
Cadmium, Cd	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	NA	NA	NA	No difference
Chromium, Cr	22	26	26	24	24	2.828	41.86	6.14	41.86	6.14	41.86	No difference
Silver, Ag	1	1	1	1	1	0.000	NA	NA	NA	NA	NA	No difference
Lead, Pb	11	9	11	10	10	1.414	18.93	1.07	18.93	1.07	18.93	No difference
Copper, Cu	27	23	27	25	25	2.828	42.86	7.14	42.86	7.14	42.86	No difference
Beryllium, Be	0.5	0.5	0.5	0.5	0.5	0.000	NA	NA	NA	NA	NA	No difference
Zinc, Zn	27	22	27	24.5	24.5	3.536	46.82	2.18	46.82	2.18	46.82	Lower
Arsenic, As	16	15	16	15.5	15.5	0.707	19.96	11.04	19.96	11.04	19.96	Higher
Mercury, Hg	0.05	0.04	0.05	0.045	0.045	0.007	0.09	0.00	0.09	0.00	0.09	No difference
Selenium, Se	1	1	1	1	1	0	NA	NA	NA	NA	NA	Higher
< is less than detection limit and assumed to be 0.5 of detection limit												

^a Confidence Interval (C.I.) = $x \pm t_{\alpha/2} \times s / (n)^{-0.5}$

where: x = average; t = "Students-t" statistic at n-1 degrees of freedom (95%)

s = standard deviation; n = number of data points

Table B. Summary of TDF Tests, Boiler A, B and C Tests and Statistical Parameters

Parameter	Concentration	Permit Limit	Feb-05									
			Boiler C-TDF 5%	Boiler A	Boiler B	Boiler C	Boiler C	Boiler C	Boiler C	Boiler C	Boiler C	Boiler C
			Average	Average	Average	Maximum	Minimum	Stdev	Count	Upper CI ^a	Lower CI ^a	
			w/o rejects	w/o rejects	w/o rejects	w/o rejects	w/o rejects	w/o rejects	w/o rejects	w/o rejects	w/o rejects	
VOC	LBS/HR	16	0.9403	4	4.105	2.01	3.15	0.87	1.61220346	2	9.2080	-5.1880
VOC	LBS/mmBTU	0.015	0.0008	0.0036	0.0036	0.0019	0.0030	0.0008	0.0015	2	0.0088	-0.0049
Particulate (PM)	(LBS/HR)	19.1	4.49	12.2123	14.0863	12.6551	18.4500	5.8200	5.0898	11	15.4358	9.8743
Particulate (PM)	(LB/MMBTU)	0.018	0.004	0.0111	0.0123	0.0116	0.0170	0.0050	0.0050	11	0.0144	0.0089
PM10	(LBS/HR)	19.1	4.45	8.7445	11.0628	8.3778	14.7900	3.5500	4.2257	6	11.8540	4.9017
PM10	(LB/MMBTU)	0.018	0.004	0.0077	0.0093	0.0076	0.0150	0.0030	0.0043	6	0.0112	0.0041
Sulfuric Acid Mist	(LBS/HR)	0.5	0.062	0.0450	0.0430	0.0365	0.0430	0.0300	0.0092	2	0.0775	-0.0045
Sulfuric Acid Mist	(LBS/mmBtu)	4.6x10 ⁻⁴	0.0000413									
Lead	(LB/HR)	0.06	0.0019	0.00416	0.00353	0.00124	0.00180	0.00022	0.00088	3	0.0027	-0.0003
Lead	(LB/mmBTU)	6.03x10 ⁽⁻⁵⁾	1.18X(10⁻⁶)									
Mercury	(LB/HR)	0.03	<0.0013	0.00140	0.00315	0.00140	0.00150	0.00130	0.00014	2	0.0020	0.0008
Mercury	(LB/mmBTU)	2.89x10 ⁽⁻⁵⁾	<8.45x(10⁻⁷)									
Beryllium	(LB/HR)	0.01	0.0001	0.00004	0.00025	0.00010	0.00023	0.00002	0.00010	3	0.0003	-0.0001
Beryllium	(LB/mmBTU)	8.7x10 ⁽⁻⁶⁾	4.18x(10⁻⁸)									

^a Confidence Interval (C.I.) = $\bar{x} \pm t_{\alpha/2} \times s / (n)^{0.5}$

where: \bar{x} = average; t = "Students-t" statistic at n-1 degrees of freedom (95%)

s = standard deviation; n = number of data points

Table C

CEDAR BAY OPERATING DATA - C Boiler

(TDF TRIAL DATES - FEB 9, 2005, Midnight to FEB 26, 2005, Noon and
MAR 1, 2005, 0800 to MAR 19 at 2400 (Break in trial for air testing without TDF)
Full Day Data

	Coal Total KPPH	Fuel TDF Flow KPPH	Boiler Master %	Main Steam			Reheat Steam			
				Flow KPPH	Temp Deg. F	Press psig	Flow KPPH	Temp Deg. F	Press psig	Spraywater KPPH
Pre-Trial Feb 2-7, 2005	83.3	-	89.09	765	1,005	1,817	520	1,005	448	22.1
Trial Period #1 Feb 8-25, 2005	77.7	3.85	86.19	740	1,005	1,799	513	1,006	437	19.3
Trial Period #2 Mar 2-19, 2005	78.5	4.13	85.54	731	1,005	1,795	505	1,005	436	20.1
Post-Trial Mar 21-26, 2005	85.3	-	88.42	763	1,005	1,816	515	1,005	452	21.8

	Combustion Air					Bed Pressure In. WC	Combustor			
	Total Air KPPH	PA		SA			Lower Deg F	Middle Temperaure Deg F	Upper Deg F	Cyclone Out Deg F
		to Grid KPPH	Temp. Deg. F	Flow KPPH	Temp. Deg. F					
Pre-Trial Feb 2-7, 2005	1,065	612	428	293	415	36.1	1,653	1,604	1,685	1,620
Trial Period #1 Feb 8-25, 2005	1,055	602	426	278	419	37.1	1,642	1,616	1,670	1,620
Trial Period #2 Mar 2-19, 2005	1,049	586	425	280	417	38.3	1,589	1,652	1,650	1,637
Post-Trial Mar 21-26, 2005	1,087	607	432	286	422	38.4	1,655	1,642	1,701	1,659

	Backpass				Emissions/Control					
	RH II Out Gas Temperature Deg F	RH I Out Gas Temperature Deg F	Econ. Out Gas Temperature Deg F	A/H Out Gas Temperature Deg. F	Baghouse DP INWC	Opacity %	Limestone KPPH	SO2 lbs per MMBTU	Ammonia Flow GPM	NOx lbs per MMBTU
	Pre-Trial Feb 2-7, 2005	1,230	980	737	300	6.25	3.48	13,808	0.18	2.02
Trial Period #1 Feb 8-25, 2005	1,217	977	737	299	6.35	3.86	13,440	0.18	1.73	0.16
Trial Period #2 Mar 2-19, 2005	1,216	974	727	298	6.17	4.06	13,533	0.19	1.74	0.16
Post-Trial Mar 21-26, 2005	1,234	981	757	306	6.72	4.42	16,032	0.21	1.83	0.16

APPENDIX C

**FEASIBILITY STUDY FOR
CO-FIRING PETROLEUM COKE
WITH COAL IN THE
THREE CEDAR BAY CFB BOILERS
BY FOSTER WHEELER ENERGY SERVICES, INC.**



FOSTER WHEELER ENERGY SERVICES, INC.

**Report on Feasibility Study for Co-firing Petroleum Coke
in Cedar Bay CFB Boilers**

for

**PG&E National Energy Group
Cedar Bay Generating Company, L.P.
Jacksonville, Florida**



**Report on Feasibility Study for Co-firing Petroleum Coke
in Cedar Bay CFB Boilers**

for

**PG&E National Energy Group
Cedar Bay Generating Company, L.P.
Jacksonville, Florida**

Prepared by:

Song Wu, Principal Engineer
Engineering Technology Department, FWDC

Approved by:

PK Chelian
Manager Engineering / FWESI



EXECUTIVE SUMMARY

This is an engineering study by Foster Wheeler Energy Services Inc for the co-firing of petroleum coke and bituminous coal in the CFB boilers at PG&E National Energy Group's Cedar Bay Plant. The plant provided the fuel analyses of four candidate petroleum cokes for this study. The main objective of the study is to evaluate the potential impact of co-firing on the boiler capacity, emissions, CFB process as well as on the major auxiliary equipment.

Boiler "C" was designated for the study. Boilers A, B and C are similar. The process and operating conditions of the May 22, 1999 performance evaluation test on this boiler form the basis for the study.

The following are highlights of the study:

The boiler can deliver the same MCR capacity while co-firing petroleum coke at different blend ratios subject to equipment modifications / system improvements identified in this report. While co-firing petroleum coke all the emissions (SO_2 , NO_x , CO and particulate matter) can be maintained at the current levels. Due to the usually low concentrations of trace elements in the petroleum coke, the trace element emissions including mercury are also expected to be at the current level or lower.

The boiler as such can readily co-fire up to 20% petroleum coke by heat input. The equipment upgrades proposed for co-firing higher blend ratios are as explained below. For co-firing ratio in the range of 20% to 35% coke by heat input the changes are limited to limestone feed system. For blend ratio in the range of 35% to 65% modification to loopseal configuration and loopseal fluidizing nozzles would be necessary to increase the solids flow capacity. For blend ratios higher than 65% modification to boiler heating surfaces, upgrading of limestone preparation and transport system as well as bottom ash handling system would be required.

The conclusion of this study is co-firing petroleum coke up to 80% by heat input would be feasible by appropriate modifications to the present equipment. The boiler as such can co-fire petroleum coke up to 20% by heat input. All the emissions including trace elements could be maintained at the present level while firing coal only.



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1.0 INTRODUCTION

Foster Wheeler Energy Services, Inc. (FWESI) was awarded a contract for engineering study by Cedar Bay Generating Company, L.P. (CBGC) to evaluate co-firing of petroleum coke and bituminous coal in the CFB boilers at the Cedar Generating Plant. CBGC provided the fuel analyses of four candidate petroleum cokes for this study. The main objective of the study is to evaluate the potential for co-firing petroleum coke at different proportions without impacting the present level of boiler emissions. The limitations if any on the boiler process as well as on the major auxiliary equipment were identified to facilitate co-firing petroleum coke at the maximum proportion.

The plant has three identical CFB boilers (A, B & C). Boiler "C" performance data from the last performance evaluation test was selected as the basis for this study.

2.0 BOILER DESCRIPTION

PG&E national energy group operates three 745,000 lb/hr, 1005 °F main steam, 1005 °F reheat steam and 1980 psig Foster Wheeler CFB boilers at the Cedar Bay Cogeneration Facility in Jacksonville, Florida. The steam is used to generate power for sale to Florida Power and Light Co. Process steam is also sold to an adjacent recycled-liner board mill owned by Seminole Kraft Corp. The power plant is operated in an automatic dispatch mode which requires the plant to cycle load on a daily basis.

Each boiler has two cyclones with fuel being fed to the furnace from four 50% capacity feed systems through six feed points. Four feed points are located in the loopseal return legs and two are on the front wall. Limestone is pneumatically fed to the furnace through eight (8) injection points to control the SO₂ emission (permit level: 0.3 lb/MMBtu 3-hour average and 0.2 lb/MMBtu 30 day average and 318.9 lb/hr 30 day average). Bottom ash removal from the furnace is through three water-cooled screw coolers. Fly ash collected by the baghouse is transported to the main flyash silo. The boiler is also equipped with a fly ash reinjection system to improve sorbent utilization. An aqueous ammonia injection system is used to control the NO_x emissions (permit level 0.17 lb/MMBtu 30 day average and 180.7 lb/hr 30 day average).

3.0 BASIS FOR STUDY

The reference point for the study is the four-hour average data from the performance evaluation test on Boiler "C". The following are the main assumptions used for the study,

- Boiler load at 100% MCR corresponds to a main steam flow of 767,160 lb/hr;
- Coal and limestone analyses from the last test is used for this study;
- One coke (CBGC supplied analysis coke #4) is selected to be studied for 6 coke blend ratios (0%, 20%, 40%, 50%, 60%, 80% coke by heat input).
- Heat and mass balance data is provided for the case of 50% blend using coke #4 at the boiler



load of 745,000 klb/hr and 700,000 klb/hr .

- Heat and mass balance data is also provided for 50% coke/coal blend using Coke #1 and coke #3 at 767,160 lb/hr.

4.0 FEED STOCK EVALUATION

4.1 Petroleum Coke Analyses

The chemical analyses of four candidate coke samples are summarized in Table 1.

Table 1 Fuel Analysis Data (%as fired unless otherwise indicated)

FUEL TYPE	Coke #1	Coke #2	Coke #3	Coke #4	CB Bit Coal
Fixed C	84.83	80.57	85.89	82.34	49.98
Volatile	9.46	9.46	11.32	9.51	34.30
Ash	0.57	0.37	0.58	0.37	8.72
Moisture	5.14	9.6	2.21	7.78	7
Total.	100.00	100.00	100.00	100.00	100.00
S	4.09	5.84	5.17	5.45	1.52
H	3.53	3.52	3.76	3.37	4.94
C	84.58	80.57	85.88	81.23	72.79
N	1.59		1.61	1.66	1.35
O	0.50		0.78	0.14	3.68
Ash	0.60	0.37	0.58	0.37	8.72
H2O	5.14	9.60	2.21	7.78	7.00
Total	100.00	99.90	100.00	100.00	100.00
V, ppm	2410*	1815	808*	683*	
Ni, ppm	316*	340	217*	167*	
HHV, as fired, Btu/lb	14512.0	13712.0	14557.0	13923.0	12557.0
HHV, dry basis, Btu/lb	15298	15168	14886	15098	13502
VM, %daf	10.03	10.51	11.64	10.35	40.70
C/H Ratio, -	23.96	22.89	22.84	24.10	14.73
SO ₂ input, lb/MMBtu	5.64	8.52	7.10	7.83	2.42

*Calculated based on fuel ash analyses; may be lower than actual content in fuel

The four petroleum cokes have fairly similar C/H ratios and volatile matter contents (% daf) that are typical of delayed coke. The heating values on a dry basis also fall into a very narrow range (less than 3.0 % difference).

The main difference lies in the sulfur content, which in terms of lb/MMBtu of SO₂ input for coke #2 is 15% higher than coke #1. High sulfur content in the coke will require a high percent sulfur capture and greater limestone usage than current level.



In this project, since petroleum coke is co-fired with coal, the risk of vanadium related problems is low. Since all four petroleum cokes are similar in terms of fuel analysis, coke #4 is selected for detailed study because it has a typical and more complete chemical analysis. Coke #1 and coke #3 are studied only for a blend ratio of 50% coke by heat input.

4.2 Coal and Limestone

The coal and limestone compositions as determined based on the May 22, 1999 performance evaluation test are used for this study. The coal analysis is shown in Table 1. Table 2 gives the limestone analysis. Figure 1 is the size distribution of the limestone.

**Table 2 Limestone Analyses
(wt% as received)**

	Reference Limestone
CaCO ₃	95.84
MgCO ₃	0.52
Inert	3.28
Moisture	0.37
Total	100.00
RI, mol/mol	2.70



Limestone Size Distribution of 05/22/99 Test

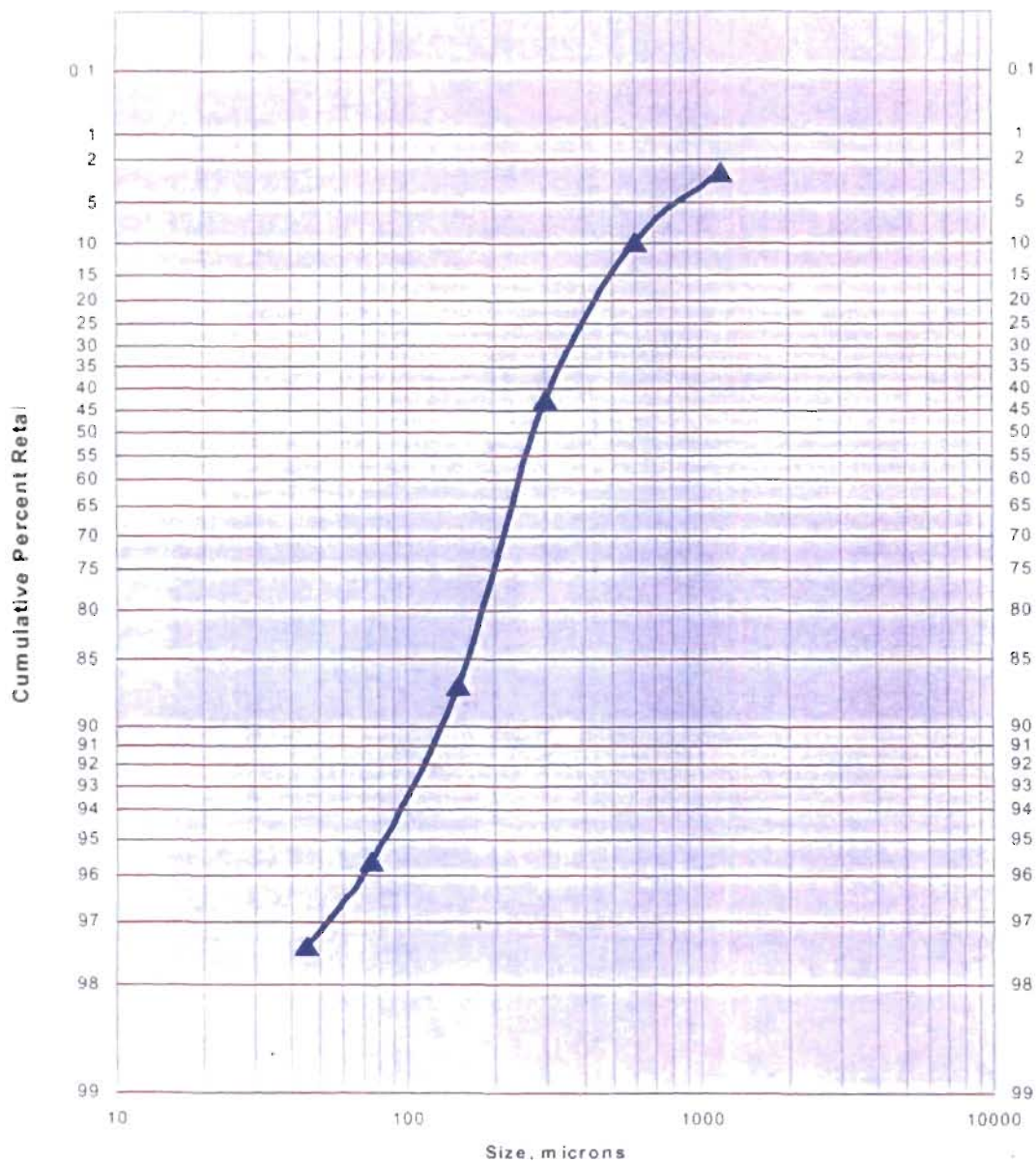


Figure 1



5.0 IMPACT ON BOILER PROCESSES

5.1 Boiler Emissions Overview

The projected stack emission levels of SO₂, NO_x, and CO are plotted in Figure 2. The SO₂ emission is controlled by limestone addition and the current level can be maintained for the entire range of blend ratios. More discussion on sulfur capture and limestone consumption is given in the next section.

The current level of NO_x can also be maintained with the existing ammonia injection system.

The predicted CO emission is lower while co-firing coke than the case of firing coal only. As shown in Figure 2, when firing 50% coke blend, about 40% reduction in CO can be expected, as compared to coal firing.

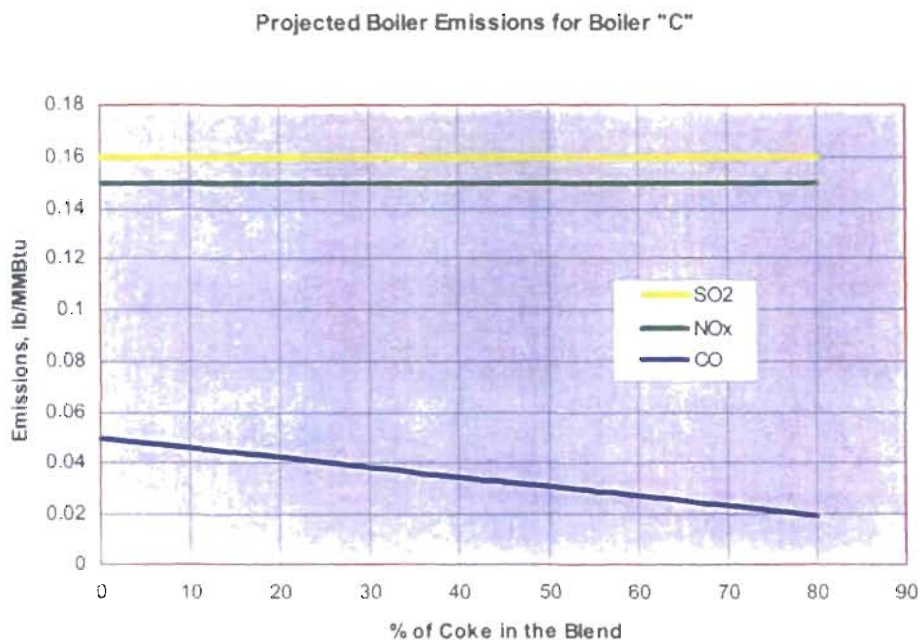


Figure 2

There should be no problem in maintaining the particulate matter emission rate when co-firing petcoke with coal. A detailed examination of the baghouse performance is given in section 6.5.

Currently, the plant is running with coal only and with very low levels of trace element emissions. Due to the various thermal processes occurring in an oil refinery, the trace element concentrations,



such as mercury, lead and fluoride in the heavy residue coke are extremely low (very significantly lower than that of typical coal). Considering the very low concentrations in petroleum coke, it is expected the trace elements emissions while co-firing petcoke will be lower than the present level.

5.2 Sulfur Capture and Limestone Requirement

Due to the high sulfur content in coke, the sulfur input increases rapidly while co-firing. Figure 3 shows the uncontrolled SO_2 levels and sulfur capture requirement for different blend ratios. For high blend ratios the percent sulfur capture in the high nineties are necessary in order to maintain the present level of emission.

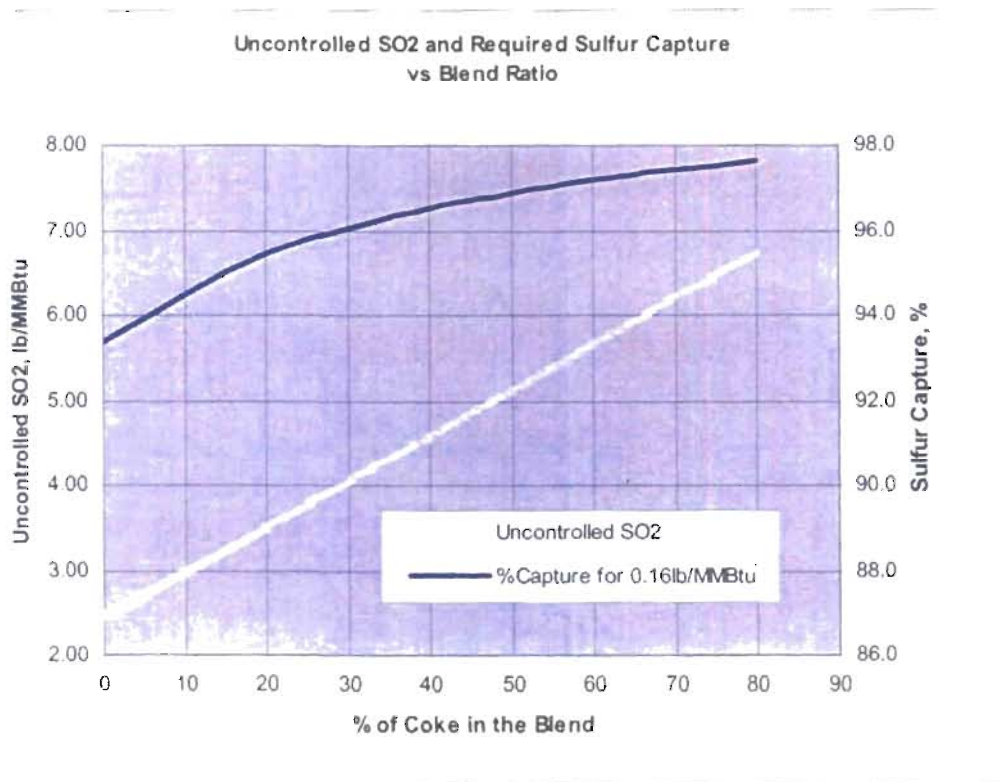


Figure 3

Figure 4 shows the projected limestone requirements at different blend ratios. When firing a 50% blend, the limestone flow rate is 25,600 lb/hr, or, 210% of the limestone flow when firing 100% coal.

Currently, the plant is controlling average SO_2 emissions at about 0.16 lb/MMBtu, or 80% of the permit level (0.20 lb/MMBtu). This control target is quite conservative. With a properly tuned SO_2 trim mechanism of the limestone feed rate control it is possible to smooth out the fluctuations in the feed rate. With these considerations, Foster Wheeler believes that the current level of SO_2 emission can be maintained.

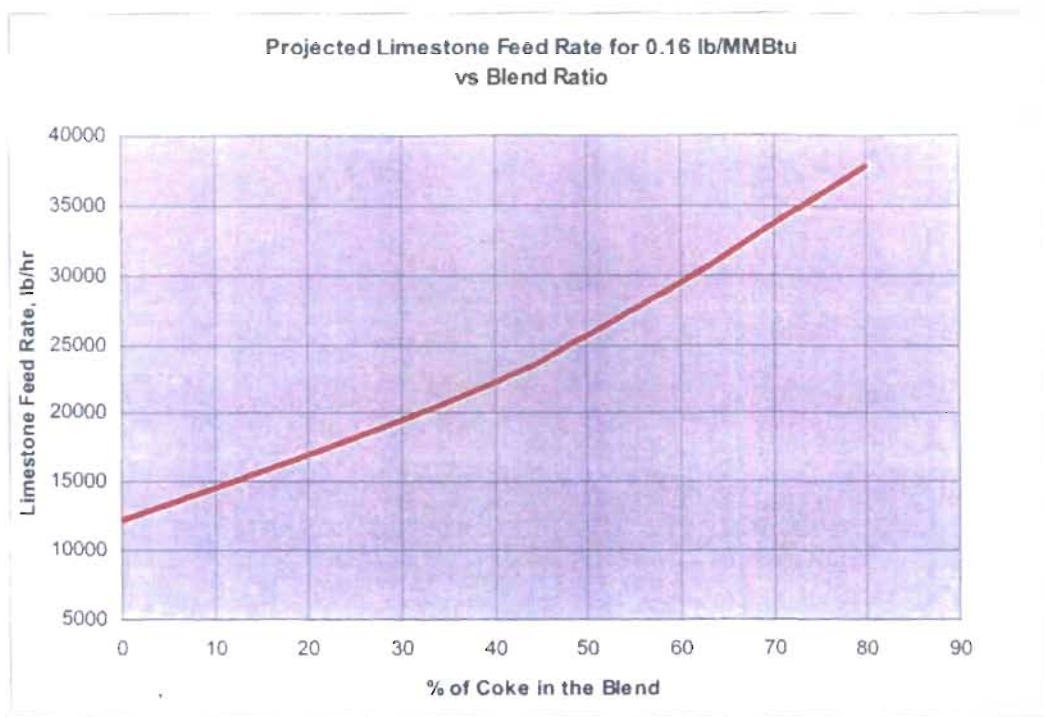


Figure 4

5.3 NO_x Emissions and NH₃ Consumption

Due to its low volatile matter content, petroleum coke combustion in CFBs usually generates low NO_x emissions. It is anticipated that NO_x emissions while co-firing will be lower than firing 100% bituminous coal. Figure 5 presents the projected uncontrolled NO_x emission levels developed based on commercial experience of CFB boilers firing petroleum coke. Also plotted in Figure 5 is the current control target of 0.15 lb/MMBtu of NO_x (permit level: 0.17 lb/MMBtu).

Figure 5 indicates that at higher coke blending ratios, the NO_x level before NH₃ injection and the required NO_x reduction percentage is lower. Therefore less ammonia injection is needed when more coke is fired. Figure 6 depicts the projected aqueous ammonia (30.3% purity) flow at various blend ratios. A 35% reduction in ammonia consumption can be expected by firing a 50% coke, 50% coal blend.



Projected NOx Emissions vs Blend Ratio

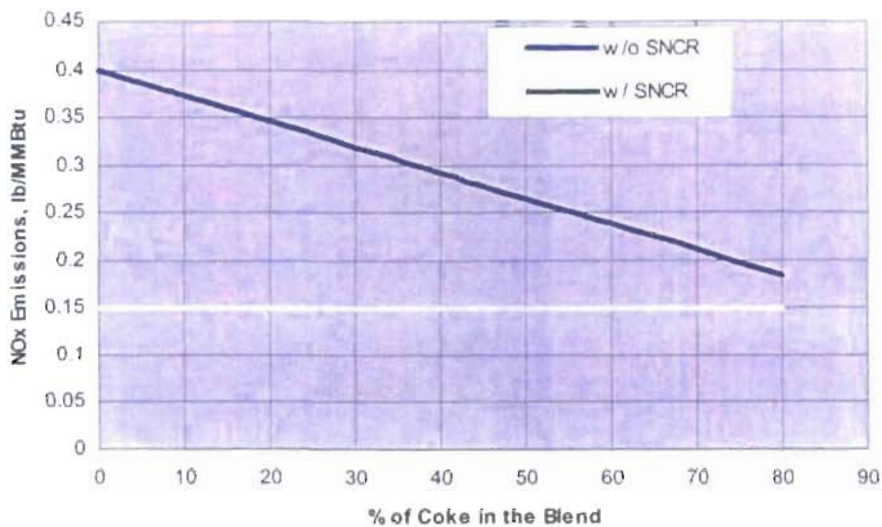


Figure 5

Projected NH3 Requirement vs Blend Ratio

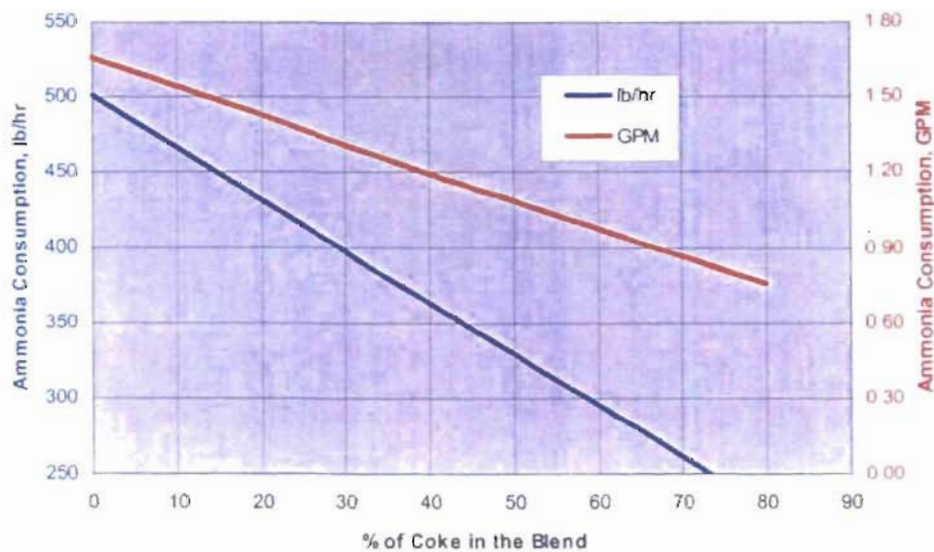


Figure 6



5.4 Other Process Impact

Solids Throughput and Ash Split: Due to the high sulfur content and large limestone requirement related to petroleum coke, the solids throughput of the CFB system will increase when co-firing coke (see Figure 7 for solids throughput). Therefore during co-firing, there is adequate amount of circulating material. However, because an increased portion of the circulating bed material will be limestone products, the limestone sizing becomes more critical. The limestone size distribution indicated in Figure 1 is suggested for the coke firing. The existing equipment should be capable of producing limestone of the appropriate size distribution.

The bottom ash fraction is also predicted and the results are shown in Figure 7.

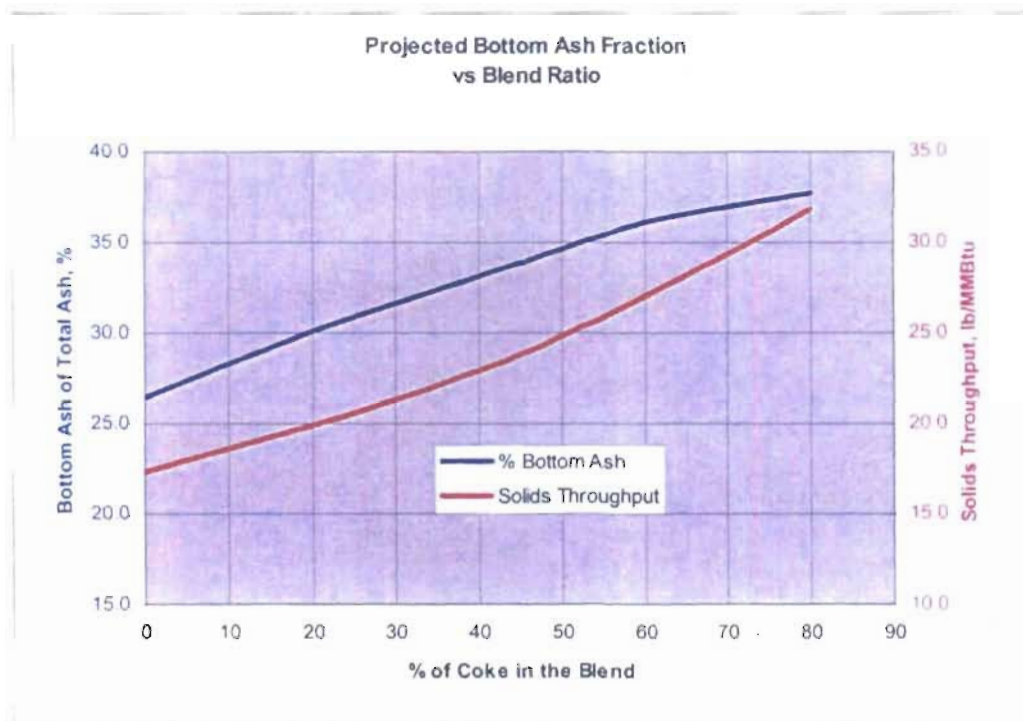


Figure 7

Furnace and Backend Heat Transfer, Temperatures and Fouling: On one hand, as discussed above, there will be an increased amount of solids throughput with coke co-firing, which should lead to higher solids circulating rate and better heat transfer, and thus lower furnace temperatures. On the other hand, coke-fired CFB boilers are known to have greater fouling tendency in the heat transfer surfaces than CFB boilers fired with only coal. Although in the furnace, the circulating material tends to scrub the tube surfaces to keep them clean, fouling could lead to reduced heat transfer and higher combustor temperature. Considering the above competing factors, it is expected that the combustor temperature will not be much different as compared to the 100% coal fired case. Other factors such as load, excess air and primary air to



total air ratio will have more dominant impact on furnace temperature.

When co-firing coke, deposit formation on tubes in the back pass may increase, more frequent sootblowing may be necessary to maintain adequate heat transfer.

Erosion Tendency: The main factors determining surface erosion rates are particle velocity (which depends on gas velocity), particle abrasiveness and solids loading. There is a slight reduction in gas velocity due to co-firing. Although solids throughput is higher for co-firing cases, because of the low ash content of the coke, the additional solids products are mainly spent limestone particles that are relatively soft. Therefore, surface erosion is not expected to accelerate during coke co-firing.

6.0 IMPACT ON BOILER AUXILIARY EQUIPMENT

6.1 Fuel Handling Equipment

The fuel feeding system consists of two fuel silos and four gravimetric belt feeders, of which two feed the two front wall feed points, the other two feed into chain conveyers (two for each side) which deliver fuel to the four feed chutes on the loopseal return legs. The maximum feeder capacity is 50,000 lb/hr per feeder. Each fuel silo feeds to one front wall and one rear wall feeder on the side of the boiler where the silo is located.

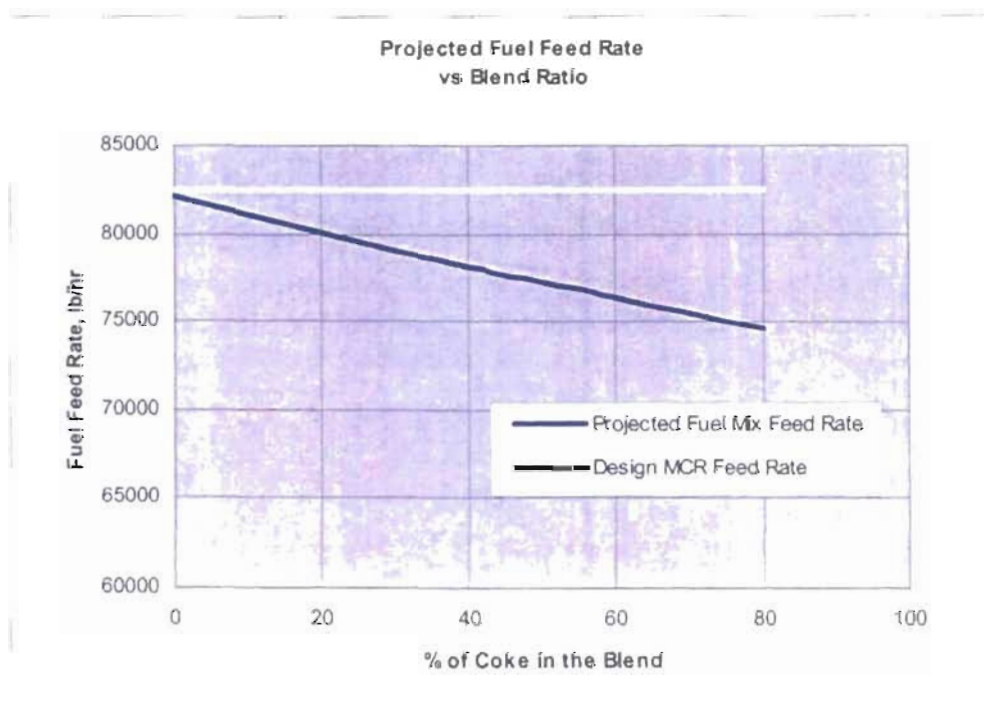


Figure 8

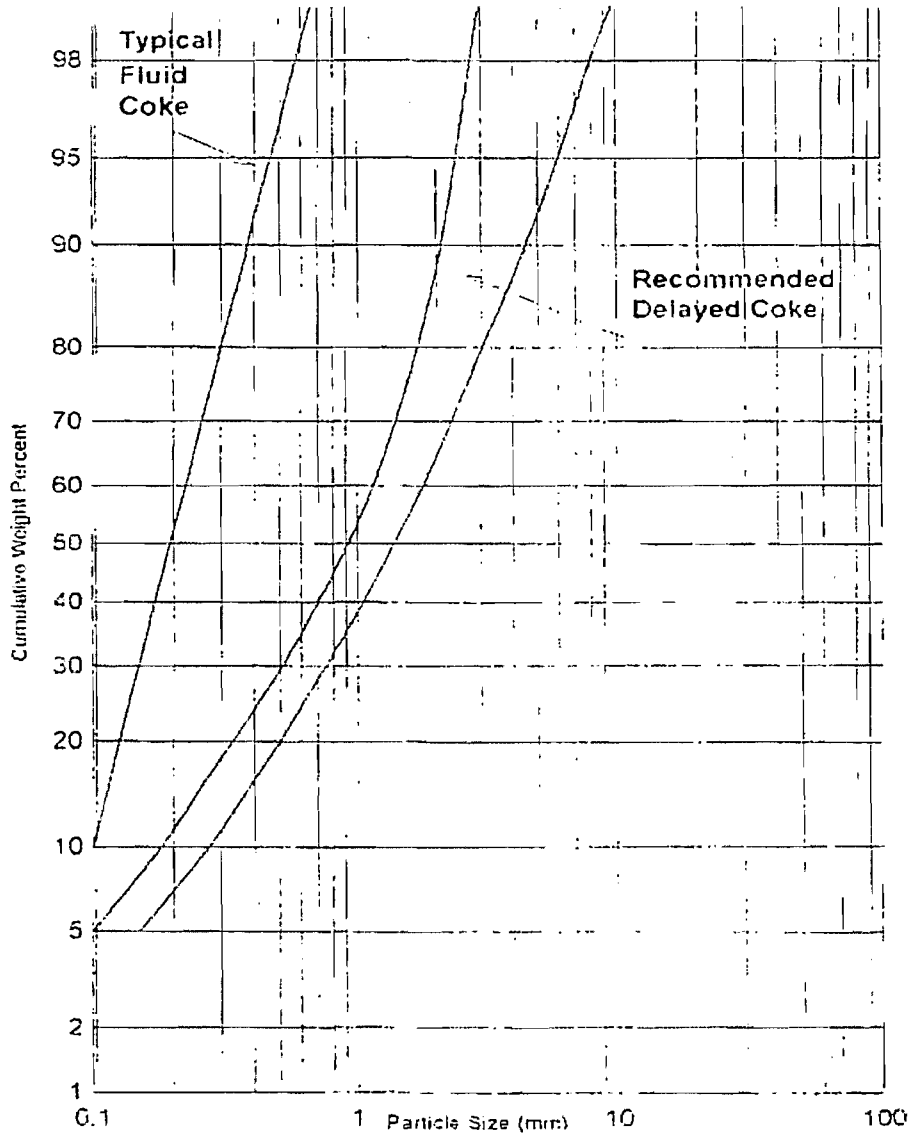


Figure 9 Typical Petcoke Size Distribution



Projected fuel feeding rates are plotted in Figure 8. Because coke has higher heating value, the feed rate reduces with increasing blending ratio and for all blend ratios the fuel feed rates are less than the design MCR coal feed rate. Therefore fuel feeding system capacity has plenty of redundancy for co-firing.

Handling of delayed coke is similar to that of coal. The main difference lies in the heating value, volatile matter and sulfur content. Ideally, in order to have good feed material consistency, the coal and coke should be premixed before loading to the fuel silo. This way all six feed points of the boiler will receive the same fuel blend to ensure uniform conditions in the furnace. Premixed fuel feeding is recommended for a co-firing test.

Figure 9 provides recommended size distribution range for delayed coke.

6.2 Limestone Handling System

The limestone system consists of limestone crushers, a limestone silo, two gravimetric belt feeders and two pneumatic transport trains that deliver limestone to eight feed points of the boiler (three front, three rear, one on each side). The design capacity of each feed chain is 16,000 lb/hr (8 ton/hr). However, the plant has reported that the actual feed rate is limited at 4.2 ton/hr per feeder by the rotary valve capacity.

The limestone feed rates for different blend ratios are shown in Figure 4. The current set up can provide limestone for a co-firing blend ratio of about 20%. For higher blend ratios, the rotary valves downstream of the belt feeders have to be modified to match the design capacity of the rest of the feed system (16,000 lb/hr each chain). The maximum feed capacity can cover the projected limestone feed rates for up to 65% coke co-firing.

As an alternative, a base amount of limestone can be premixed with fuel and fed through the fuel feeders (which has plenty of capacity), the rest of the required limestone can be fed through the limestone system for SO₂ emissions control. For long-term co-firing, the rotary valves need to be upgraded in capacity. A third limestone feed train of same capacity may be installed to provide necessary redundancy.



6.3 PA, SA and ID Fans

Projected flow rate requirements for the three fans are plotted in Figure 10. Air and gas flow decrease slightly with the increasing blend ratio. Therefore at the max load (767,000lb/hr main steam flow), the fans are not expected to be a limiting factor.

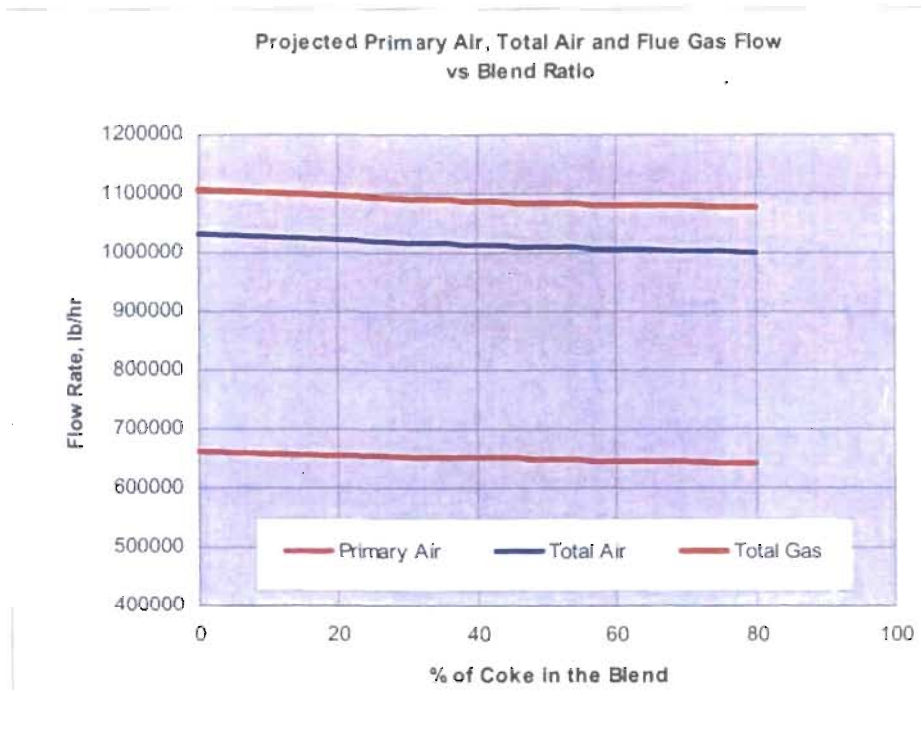


Figure 10

The flow requirement of high-pressure blowers for loopseals would be same as the current operation up to a coke blend of 35%.

6.4 Bottom Ash Handling

Bottom ash handling system consists of ash drains (3), ash cooling screws (3) and ash conveyers to transport ash to the ash silo. The ash drain/cooling screw design capacity is 2,950 lb/hr, and maximum capacity is 5,500 lb/hr.

The ash handling capacity of two cooling screws in service (with the third screw in standby) is used as reference in comparison with the projected bottom ash flow rates in Figure 11.

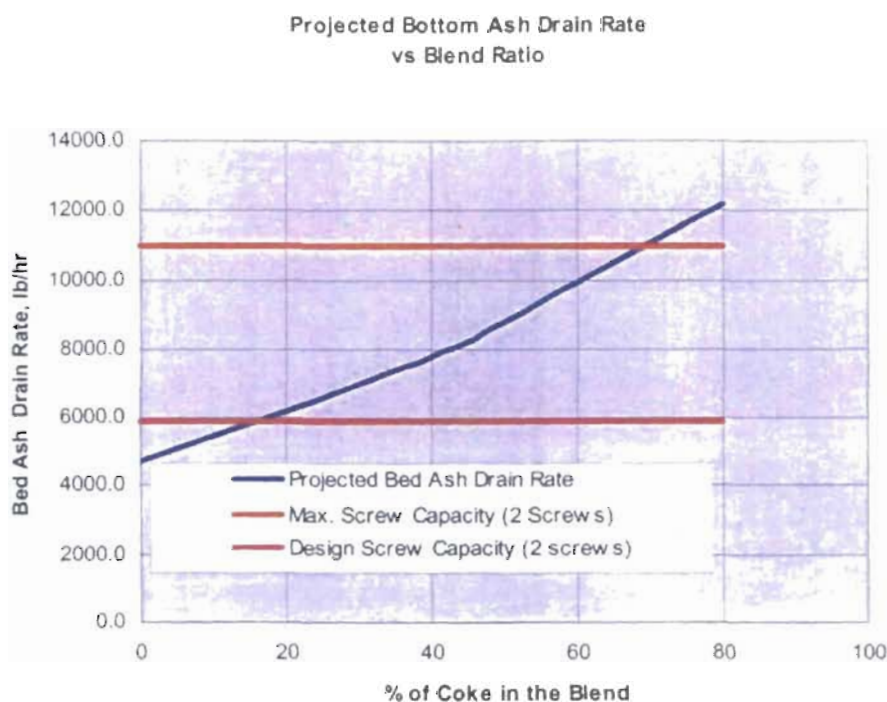


Figure 11

It appears that the maximum capacity of the two screws will allow up to 70% coke co-firing.

6.5 Flyash Handling Equipment

Fly ash system consists of the air heater hopper, baghouse, and pneumatic (vacuum) transport system that transport ash to the ash silo.

The impact on baghouse can be judged from the ash and gas flows. Figure 12 shows that the projected fly ash flow increases with increasing blend ratio, but the flue gas volume flow reduces slightly with co-firing. Although the flue gas volumes are higher than design flue gas volume (297,700 ACFM), the plant had often run with even higher volume flow without problems. The particulate loading for the 80% coke blend is 6.7 grains/ACF which is very low as compared to the design loading of 19.5 grains ACF specified by the baghouse vendor. The high design solids inlet loading of baghouse included the additional loading from fly ash re-injection (FAR) system. The FAR system is not being used at the plant. Based on the above, it is expected that the existing baghouse can maintain current emission levels, although more frequent back-purging/cleaning cycles may be necessary.

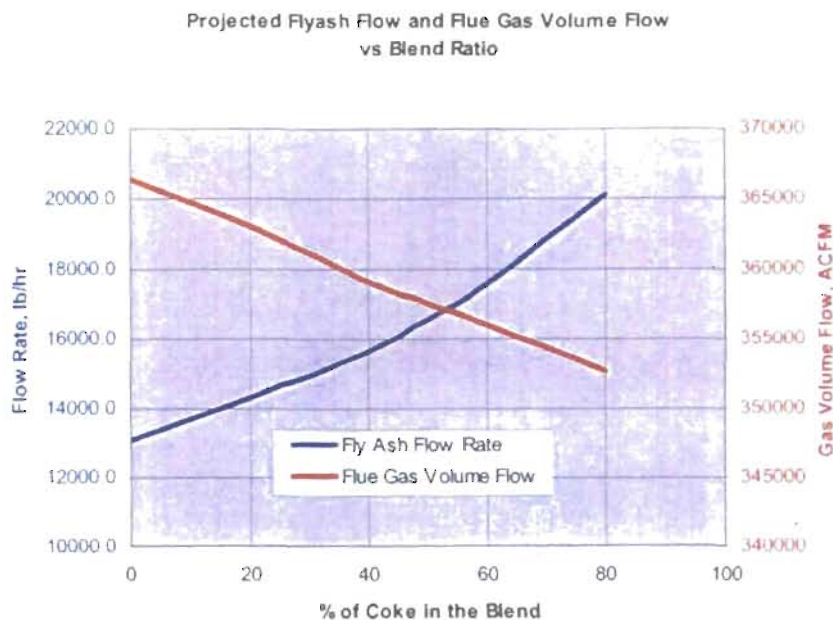


Figure 12

6.6 Start Up Burners

There are currently six #2 oil fired start up burners (1 on front wall, 3 on rear wall and 1 on each side wall). Each burner is 68 MMBtu/hr in capacity, making the total SUB capacity of 384 MMBtu/hr, or 37% of the heat input at the reference load. The burner capacity will be adequate for start-up.

7.0 CONCLUSIONS AND RECOMMENDATIONS

An engineering study has been completed for the co-firing of petroleum coke at PG&E National Energy Group's Cedar Bay Plant. Boiler "C" is designated for the study. The process and operating conditions of the May 22, 1999 performance evaluation test, including the test coal and limestone, form the basis for the study. Four candidates of petroleum coke were evaluated and one (coke #4) was selected for detailed engineering study. The following conclusions can be made,

1. On a dry basis, all four coke analyses have similar chemical compositions that are typical of delayed coke, except sulfur content, which has significant variation. Lower sulfur content is desirable due to associated limestone cost. On a normalized lb/MMBtu basis, coke #1 has the lowest sulfur content; #3 and #4 are higher; and #2 has the highest sulfur content.
2. When co-firing petroleum coke, SO₂, NO_x and particulate matter emissions can be maintained at the current levels with existing equipment. Reductions in CO emissions are expected for coke



co-firing. Due to the usually very low concentrations of trace elements in the petroleum coke, the trace element emissions, including mercury, are also expected to be similar to or less than the current levels.

3. Due to high sulfur content in coke, percent sulfur capture in the mid to high nineties will be required to meet SO₂ compliance for co-firing, which should not be a problem. Limestone feed rates will be much higher than the current level. For 50% coke by heat input case, the projected limestone flow is 210% of the current consumption rate.
4. The uncontrolled NO_x concentration before the DeNO_x system will be lower when co-firing coke. Thus a smaller percentage reduction is required for the DeNO_x system, resulting in a smaller ammonia consumption rate. A 35% reduction in ammonia consumption can be expected when firing a 50% coke blend.
5. The solids throughput and bottom ash fraction are expected to increase with higher coke blend ratios.
6. Furnace temperatures are expected to be close to the current levels. High levels of coke co-firing are known to have increased fouling tendency. The surfaces in the backpass are likely to have more ash deposit and more vigorous sootblowing may be needed.
7. Erosion rate of heat transfer surfaces when co-firing coke is not expected to exceed the current level at comparable boiler load.
8. Coke co-firing will require a lower fuel feed rate and slightly less combustion air and generates less flue gas. Therefore, fuel feeding system, PA, SA and ID fans are not expected to be limiting factors for co-firing at the reference load.
9. Startup burner capacity is adequate for start with coke blend.
10. Rotary valves downstream of the limestone feeders is a limiting factor in the limestone handling system which limit feeder capacity to 4.3 ton/hr, as compared to feeder design capacity of 8 ton/hr. The current limestone feeding system can support up to about 20% coke-co-firing. If the rotary valves are upgraded, the system maximum capacity could cover up to 65% coke co-firing. If all three boilers are co-firing coke in the future, capacity of limestone crushing and transport to the boiler house would also need to be upgraded.
11. Baghouse is expected to maintain the particulate emissions at current emission levels even though the solid loading at the baghouse inlet will be much higher than the current levels. More frequent back purging/cleaning is expected but is within the design capacity.
12. Bottom ash drain and cooling screw capacities are expected to be adequate for co-firing up to 70% coke by heat input.

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<p>1. Article Addressed to:</p> <p>Mr. Martin Kreft Cedar Bay Generating Company 9640 Eastport Road Jacksonville, Florida 32218-2260</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <i>ON US</i></p> <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
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<p>1. Article Addressed to:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Mr. Martin Kreft Cedar Bay Generating Company 9640 Eastport Road Jacksonville, Florida 32218-2260</p> </div>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
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Mr. Martin Kreft
Cedar Bay Generating Company
9640 Eastport Road
Jacksonville, Florida 32218-2260

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Waybill #: 27488266551

To(Company):
U.S. EPA Region 4
Air Permits Section
61 Forsyth Street

Atlanta, GA 30303
UNITED STATES

Attention To: Mr. Gregg M. Worley
Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 6
Protection: Not Required
Description: Cedar Bay application

Weight (lbs.): 2
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Next Day 12:00 (Next
business day by 12 PM)

Special Svc:

Date Printed: 8/17/2005
Bill Shipment To: Sender
Bill To Acct: 778941286

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REFERENCE: 0181153
R105926 Public Note

State of Florida
County of Duval

Before the undersigned authority personally appeared Tiffany Powell who on oath says she is a Legal Advertising Representative of The Florida Times-Union, a daily newspaper published in Jacksonville in Duval County, Florida; that the attached copy of advertisement is a legal ad published in The Florida Times-Union. Affiant further says that The Florida Times-Union is a newspaper published in Jacksonville, in Duval County, Florida, and that the newspaper has heretofore been continuously published in Duval County, Florida each day, has been entered as second class mail matter at the post office in Jacksonville, in Duval County, Florida for a period of one year preceeding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission, or refund for the purpose of securing this advertisement for publication in said newspaper.

PUBLISHED ON: 11/10

FILED ON: 11/10/05

Name: Tiffany Powell Title: Legal Advertising Representative
In testimony whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

NOTARY:



TWILLA SHIPP
Notary Public, State of Florida
My comm. expires May 13, 2006
Comm. No. DD 117248

**PUBLIC NOTICE OF INTENT TO ISSUE
REVISED AIR CONSTRUCTION PERMIT/TITLE V
AIR OPERATION PERMIT**

Florida Department of Environmental Protection
Draft Air Construction Permit No. 0310337-009-AC
Draft Title V Air Operation Permit No. 0310327-010-AV6
Cedar Bay Generating Company, L.P.
Duval County, Florida

Applicant: The applicant for this project is Cedar Bay Generating Company, L.P. The facility responsible official is Martin Kreft, General Manager.

Facility Location: The applicant's address is 9640 Eastport Road, Jacksonville, Florida 32218.

Revised Air Construction Permit: This project allows for the co-firing of 5% tire-derived fuel in Emission Units, 001, 002 and 003. The referenced Emission Units are more commonly known as Boilers A, B, and C. Each emission unit is a fluidized bed boiler, rated at 1,063 MMBtu per hour. All other permit conditions will remain the same, and calculated emission increases are less than the PSD significant thresholds of 40 tons per year (TPY) SO₂, NO_x and VOC, 100 TPY CO, 15 TPY PM₁₀ and 0.6 TPY lead.

Title V Air Operation Permit Revision: This project is to incorporate the above, applicable revisions to the Title V Air Operation permit for the facility. **Permitting Authority:** Application for these permitting actions are subject to review in accordance with the provisions of Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and air permits are required for the revised air construction permit and to operate the facility. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making permit determinations regarding these projects. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, in Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114 and facsimile number is 850-922-6979.

Project Files: Complete project files are available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. For the Revised Air Construction Permit Project, the complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. For the Title V Air Operation Permit Project, the complete project file includes the Draft Permit, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit documents and file electronic comments by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. Copies of the complete project files are also available at the Air Resources Section of the Department's Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville; Phone Number 904-807-3300; and the City of Jacksonville's Environmental Quality Division at 117 West Duval Street, Suite 225, Jacksonville; Phone Number 904-630-4900.

Notice of Intent to Issue Air Permits: The Permitting Authority gives notice of its intent to issue the Revised Draft Air Construction Permit and the Draft Title V Air Operation Permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the projects will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296 and 62-297, F.A.C. For the Draft Air Construction Permit, the Permitting Authority will issue a Final Permit in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change in terms or conditions. For the Draft Title V Air Operation Permit, the Permitting Authority will issue PROPOSED Permit conditions and subsequent FINAL Permit conditions in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Comments on the Air Construction Permit Project: the Permitting Authority will accept written comments concerning the Revised Draft Air Construction Permit for a period of fourteen (14) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address, email or facsimile. If written comments result in a significant change to the Draft permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Comments on the Draft Title V Air Operation Permit Project: The Permitting Authority will accept written comments concerning the Draft Permit for a period of thirty (30) days from the date of publication of the Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices at <http://flhor06.dep.state.fl.us/onw> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a Revised Draft permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decisions may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this "Written Notice of Intent". Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached "Public Notice" or within fourteen (14) days of receipt of this "Written Notice", whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this "Written Notice". Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on these applications have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Objections to the FINAL Title V Permit: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at <http://www.epa.gov/region4/airpermits/Florida.htm>.