

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permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.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"

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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

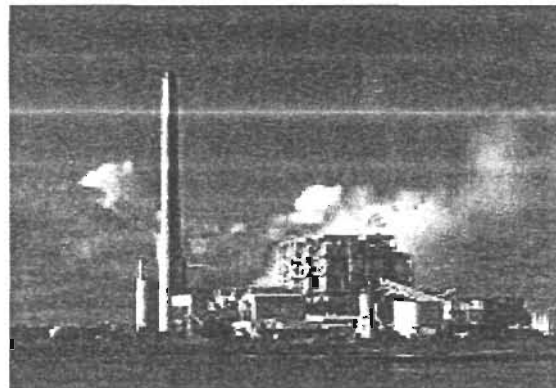
The facility is located in Jacksonville, Duval County. The UTM coordinates are Zone 17; 441.61 km E; 3365.552 km N. This site is approximately 54 kilometers from the Okefenokee National Wildlife Refuge and 98 kilometers from the Wolf Island National Wildlife Refuge, both Class I PSD Areas.

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 ¾" 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

Cedar Bay Generating Company, L.P.
Cedar Bay Cogeneration Facility

DEP File No. 0310337-009-AC
DEP File No. 0310337-010-AV

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.

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
<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:

	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

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.

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