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May 12, 1995

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VIA HAND DELIVERY

Clair Fancy, Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Cedar Bay Generating Company, LP
Cedar Bay Cogeneration Project
PSD-FL-137 - Duval County

RECEIVED

MAY 12 1995

Bureau of
Air Regulation

Dear Mr. Fancy:

On behalf of Cedar Bay Generating Company (CBGC), I wish to request that the Department of Environmental Protection (DEP) make certain minor amendments to the above-referenced PSD Permit for the Cedar Bay Cogeneration Project (CBCP). This permit was originally issued on March 29, 1991, and subsequently amended on November 23, 1993 (PSD-FL-137A, attached). This letter discusses the particulate matter (PM) and fugitive emissions associated with the material handling systems for ash pelletization, coal unloading, dry ash loading and removal, and limestone pulverizer/conveyor from the site.

In addition to this request to amend the PSD permit, CBGC has recently submitted to DEP a request to modify the separate Power Plant Site Certification for the project, addressing the issues below, as well as other matters concerning the project. The Department's Office of Siting Coordination has issued a proposed order to grant the requested modification of site certification. CBGC has proposed that the amended conditions below be included in the Department's final PPSA modification order. These changes have been discussed recently with your staff as part of the PPSA modification. Inclusion of these amended conditions in the PSD permit will assure consistency between the two approvals. The appropriate PPSA modification fee for the requested certification modification has been submitted to the Department's Siting Coordination Office.

Clair Fancy, Chief
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The first proposed amendment to the existing PSD permit conditions addresses the list of material handling sources in Specific Conditions B.4.a. and b. During the original permitting and modification proceedings, CBGC identified and evaluated emissions from control devices for all material handling and treatment sources. Specific Conditions B.4.a. and b. contain lists of material handling and treatment area point sources, but specific control devices for these sources were not identified in the permit. Therefore, the sources listed in those Conditions may not directly correspond to the designations given to the individual control devices for those sources in the tables prepared during the original permitting summarizing the air emissions analysis for those sources.

The revised lists of sources in Conditions B.4.a. and b. are presented below. First, the Pelletizing Recycle Hopper should not be included in this list since it is not a source which vents directly to the atmosphere. Rather, this hopper vents into a partially enclosed room within the pelletizing structure. Since the Hopper's emissions are not released to the ambient atmosphere, CBGC proposes removing the Pelletizing Recycle Hopper from the list of sources in Specific Condition B.4.a.

In addition, four separate sources (a Bed Ash Separator, two Fly Ash Separators and Pelletizing Rail Loadout) whose emissions were previously identified, evaluated and permitted during the original PSD permitting and subsequent modification proceedings were not included expressly in the source list in Specific Condition B.4.a. To make the PSD permit comprehensive, CBGC recommends inclusion of these four sources in Specific Condition B.4.a. CBGC also proposes several indicated clarifications of the identification of the listed sources in Condition B.4.a.

Under Condition B.4.b., coal car unloading was included in the list in the Condition as a source of PM emissions. While the control devices for coal unloading use wet suppression techniques as provided in the Condition, none of the devices on the coal car unloading facility has a stack to vent the emissions to the atmosphere. Without a stack, emissions tests using the referenced EPA Methods 5 and 9 cannot be performed. Because the facility does not have stacks and since stacks are required to perform the listed emission tests, CBGC proposes to remove coal car unloading from the list of sources in Condition B.4.b. and insert it in the new Condition B.4.c. discussed separately below. Additionally, Condition 4.B.b. should be revised to identify the use of scrubbers to control PM emissions from the three other sources listed in the current Specific Condition B.4.b as using wet suppression controls. All of these changes to the permit are for clarification and are not associated with changes in PM emissions.

Specific Condition B.4.a. and b. are proposed to be revised as follows:

II. Air

B. CBCP - Material Handling and Treatment

4. Material handling sources shall be regulated as follows:

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

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

The emissions from the above listed sources are subject to the particulate emission limitation requirement of 0.003 gr/dscf (applicant-requested limitation which is more stringent than what is allowed by Rule 62 17-296.711, F.A.C.). Since these sources are RACT standard type then a one-time verification test on each source shall be required for PM mass emissions to demonstrate that the baghouse control systems can achieve the 0.003 gr/dscf. The performance tests shall be conducted using EPA Method 5 pursuant to Rule 62 17-297, F.A.C., and 40 CFR 60, Appendix A (July, 1991 version).

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

Coal-Car-Unloading	
Ash Pellet Hydrator:	<u>Scrubber</u>
Ash Pellet Curing Silos:	<u>Scrubber</u>
Ash Pelletizing Pan:	<u>Scrubber</u>

The above listed sources are subject to a visible emission (VE) and a particulate matter (PM) emission limitation requirement of 5 percent opacity and 0.01 gr/dscf (applicant-requested limitation, which is more stringent than what is allowed by rule), respectively, in accordance with Rule 62 47-296.711, F.A.C. Initial and subsequent compliance tests shall be conducted for VE and PM using EPA Methods 9 and 5, respectively, in accordance with Rule 62 47-297, F.A.C., and 40 CFR 60, Appendix A (July, 1991 version).

The second proposed amendment relates to the express inclusion of an alternate method for removal of ash from the project site. Originally, the primary method for removal of ash from the circulating fluidized bed boilers was pelletization in an on-site pelletizer for subsequent removal from the site by way of open rail cars. However, the pelletizer has not been able to process all of the ash on a reliable basis. CBGC plans to use as needed the alternate system for ash removal designed into the ash handling system: loadout of ash in a dry, non-pelletized form from the ash silos using telescoping discharge chutes with a removeable rail car cap and subsequent removal from the site by way of open rail cars. (The pelletizer will likely continue to be used to process a portion or all of the ash before removal from the site.) PM emissions during dry ash loadout into rail cars will be controlled with a removeable rail car cap and by maintaining a negative air pressure under the cap during transfer of ash. Because the captured PM will be recirculated back into the ash silos and because the control device serving the silo can continue to operate consistent with current permitted emission levels, operation of the dry ash loadout system will not affect emissions directly. Because dry ash loadout will reduce the throughput to the pelletizer, there will be an indirect effect on total PM emissions: they will not change or will decline. Fugitive emissions are further controlled after dry ash loadout with an internal water spray header underneath the removeable rail car cap. The surface layer of ash will also be sprayed to create a crust before the cap is removed.

The revised Condition B.4.c. below reflects the control of particulate matter from coal car unloading as a fugitive emission as explained above. In addition, the proposed new Condition identifies control of emissions from dry ash loadout. Consistent with CBGC's proposed modified conditions for the PPSA certification, CBGC proposes that the following Specific Condition B.4.c. be added to the PSD permit as follows:

- II. Air
- B. CBCP - Material Handling and Treatment
- 4. Material handling sources shall be regulated as follows:

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

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

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

The above listed sources are subject to a visible emissions (VE) limitation requirement of five percent (5%) opacity in accordance with Rule 62-296.711, F.A.C. Initial and subsequent compliance tests shall be conducted for VE using EPA Method 9 or other FDEP approved methods in accordance with Rule 62-297, F.A.C., and 40 CFR 60, Appendix A (July, 1991 version). Ash shipped in open rail cars will either be pelletized or be sprayed with water to create a crust on the top layer of non-pelletized ash. Removal of bottom and fly ash from the Project site by any means other than by rail shall require the prior approval of DEP and RESD of the method(s) of fugitive emissions control.

The third proposed permit amendment involves clarifying the expression of the limitation on PM emissions from the limestone preparation system which includes the Limestone Pulverizer/Conveyor and Limestone Dryer sources. This system consists of two identical units that each pulverize, dry and convey limestone as a single continuous process to storage bins for distribution to the boilers. By its function and design, these units combine the heated air from oil combustion in the dryer with the pulverized limestone to remove moisture from the limestone prior to being conveyed to the storage bins. Thus, the system's exhaust gas contains PM from both fuel oil combustion and the material handling in the pulverizer/dryer and passes through a common control device before entering the atmosphere. Separate PM emissions testing for fuel oil combustion in the dryer cannot be performed since there is no location upstream of the point at which the heated air mixes with pulverized limestone that meets the minimum emissions testing site requirements. Samples obtained from an appropriate PM emissions sampling point, located downstream of the emissions control device, will always contain PM from both limestone pulverization and fuel oil combustion.

Thus, the permit should be revised to reflect that the PM limit in Specific Condition B.4.a for the fabric filter serving the limestone pulverizer/conveyor applies not only to the emissions from the pulverizer/conveyor but to the sum of the PM emissions from the pulverizer/conveyor and the dryer. The current emission rate for these sources is 0.003 grains per dry standard cubic foot of exhaust gas. Using the design pulverizer/conveyor flow rate of 49,000 actual cubic feet per minute yields an emission rate of 1.26 pounds of particulate matter per hour for the combined streams. Thus, contrary to the impression of the current permit language, the total emissions from these two sources is limited to 1.26 lb/hr, and not 1.5 lb/hr (the sum of 1.26 and the 0.24 limit from Specific Condition 7 for the dryer, alone). Based on the allowable hours of operation of the system, the annual PM emission limitation for each limestone pulverizer/conveyors including limestone dryer, would be 1.68 tons per year. The total annual PM emissions limitation for both pulverizer/dryer units would be 3.36 tons per year. This change clarifying the role of the two previously permitted emissions for these two aspects of this material handling system does not represent any change in PM emissions from the limestone pulverizer/conveyor/dryer.

These changes are reflected in the proposed revised Condition B.7. as follows:

7. The maximum emissions from each of the limestone--dryers Limestone Pulverizer/Conveyors (including limestone dryer) while using oil shall not exceed the following (based on AP-42 factors, Table 1, 2-1, Industrial Distillate, 10/86) shall not exceed the following:

Estimated Limitations

Pollutant	lbs/hr.		TPY	for 2 dryers pulverizer/conveyors	
PM/PM ₁₀	0.24	<u>1.26*</u>	0.32	<u>1.68</u>	0.64 <u>3.36</u>
SO ₂	0.85		1.15		2.3
CO	0.60		0.81		1.62
NO _x	2.40		3.25		6.5
VOC	0.05		0.06		0.12

The emissions for SO₂, CO, Nox and VOC are based on AP-42 factors, Table 1, 2-1, Industrial Distillate, 10/86).

* This reflects the emission limitation in Condition II.B.4.a. and limits the emissions for the limestone pulverizer/conveyor and the dryer.

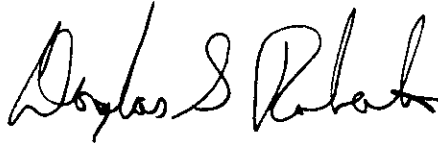
Additionally, construction of the ash pelletizer is ongoing to achieve its intended performance. The pelletizer design will include a bucket elevator to recirculate pellets within the ash pelletizing process to mitigate problems with pellet adherence in that process. PM emissions from the pellet recirculation system will be handled by the emission control system

Clair Fancy, Chief
May 12, 1995
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currently serving the pellet curing silos and will be consistent with the permitted limits for this system. Thus, there is no need for any changes to the existing PSD permit.

Your attention to this request is appreciated. Should you or your staff have any questions on this matter, please do not hesitate to contact either Mark Carney at U.S. Generating Company, telephone number 301/718-6899, or me.

Sincerely,



Douglas S. Roberts

cc: Hamilton S. Oven, DEP Office of Siting Coordination
Charles T. "Chip" Collette, OGC
Steve Pace, City of Jacksonville RESD
Bruce Mitchell, DEP BAR
C. Kirts, NE Dept.
Q. Harper, EPA
Q. Remyal, NPS
C. Holladay

Clair Fancy, Chief
May 12, 1995
Page 8

bcc: Mark Carney, U.S. Generating Company
Sandy Hartman, U.S. Generating Company
Frank Stallwood, Cedar Bay Cogeneration Project
John Keith, Earth Tech
Kevin Grant, Cedar Bay Cogeneration Project
Mike Teague, Hunton & Williams

Florida Department of
Environmental Protection

Memorandum

TO: Power Plant Siting Review Committee
FROM: Buck Oven *BO*
DATE: October 1, 1994
SUBJECT: Cedar Bay Cogeneration Project, PA 88-24
Module 8031

Please review the materials submitted in support of the requested modifications to the conditions of certification for the Cedar Bay Cogeneration Project. Please return your comments as to completeness/sufficiency of the supporting materials by November 30, 1994. Cedar Bay has sent three copies of the modification materials directly to the NE District Office for review by the Air and Water Facility programs. Copies will be distributed in Tallahassee today. We can use this opportunity to update any rule references that have been changed.

If you have any questions, I can be reached at 487-0472/
SC 277-0472.

cc: Al Rushanan
Clair Fancy
Craig Diltz
Ernie Frey
Chris Kirts
David Bolam
Richard Donelan

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NOV 2 1994

Bureau of
Air Regulation



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

November 15, 1994

Mr. John Bunyak, Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
P. O. Box 25287
Denver, CO 80225

Dear Mr. Bunyak:

RE: Ceder Bay Cogeneration
Duval County, PSD-FL-137A

The Department has received the above referenced PSD modification. Please review this package and forward your comments to the Bureau of Air Regulation by November 28, 1994. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Bruce Mitchell at (904)488-1344 or write to me at the above address.

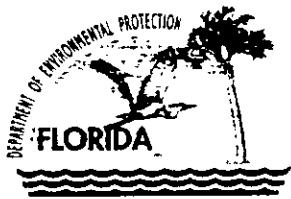
Sincerely,

Patricia G. Adams
for
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

cc: Bruce Mitchell



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

November 15, 1994

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Dear Ms. Harper:

RE: Cedar Bay Cogeneration
Duval County, PSD-FL-137A

The Department has received the above referenced PSD modification. Please review this package and forward your comments to the Bureau of Air Regulation by November 28, 1994. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G. Adams

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

cc: Bruce Mitchell