



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

JUL 02 1990

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DER-BAQM

4APT-AE

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

RE: Ambient Air Quality Analysis Workplan
Applied Energy Services (AES)
Cedar Bay Cogeneration Project

Dear Mr. Fancy:

In a letter from Ms. Julie Blunden to Lewis Nagler of my staff dated June 8, 1990, we received a copy of the proposed air quality analysis workplan for the above referenced project. The proposed workplan appears acceptable to us (assuming that the emissions inventory to be used in the analysis is acceptable) with the following exceptions.

On page 3-5 of the workplan, AES states that ... "FDER has indicated that approximately 1,400 tpy of VOC are available as a new source allowance in Duval County." As you are aware, on May 26, 1988, EPA notified your Agency and the Governor that the Florida SIP was inadequate to achieve the ozone standard in six Florida counties, including Duval. Therefore, any growth allowances allotted by the SIP are no longer available. This policy has been clearly expressed in the March 10, 1986, memorandum from Darryl Tyler, Director, Control Programs Development Division (enclosed). It was also our understanding that any emissions offsets (VOC) or ambient offsets (SO₂) needed by AES would be obtained through various boiler shutdowns at the Seminole Kraft Corporation.

On pages 4-3 through 4-6, the workplan lists estimated particulate emission rates from various material handling and storage operations. Some of the control efficiencies referenced in this section suggest that precipitation will achieve a 100 percent control of fugitive emissions. This degree of control should be justified or corrected.

If you have any questions concerning this letter, please contact Mark Armentrout of my staff at (404) 347-2904.

Sincerely yours,



Brian L. Beals, Chief
Source Evaluation Unit
Air, Pesticides and Toxics
Management Division

Enclosure

cc: Julie Blunden
Development Manager
AES/Cedar Bay, Inc.
1001 North 19th Street
Arlington, VA 22209

B. Andrews
M. Finn
B. Owen
A. Kutyma, NE Dist.
R. Robinson, BESD
C. Shaver, NPS

JOINT PUBLIC NOTICE

U.S. Environmental Protection Agency
Region IV
Water Management Division - Facilities Performance Branch
345 Courtland Street, N.E.
Atlanta, Georgia 30365
404/347-3004

in conjunction with

Florida Department of Environmental Regulation
Twin Towers Office Building, 2600 Blair Stone Road
Tallahassee, Florida 32301
904/488-1344

Public Notice No. 90FL277

May 31, 1990

NOTICE OF PUBLIC INFORMATION HEARING

ON

NOTICE OF PROPOSED ISSUANCE OF NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM PERMIT, DRAFT ENVIRONMENTAL IMPACT STATEMENT,
AND NOTICE OF CONSIDERATION FOR STATE CERTIFICATION OF THE NPDES PERMIT

The U.S. Environmental Protection Agency (EPA) proposes to issue a National Pollutant Discharge Elimination System (NPDES) permit to AES Cedar Bay, Inc.; 1001 North 19th Street, Suite 2000, Arlington, VA 22209; for its Cedar Bay Cogeneration Project; 9469 Eastport Road, Jacksonville, FL 32218. The application, NPDES No. FL0041173, describes two point source and eight internal discharges from construction and operation of the facility to the Broward (approximate latitude 30° 25', longitude 81° 37') and St. Johns Rivers (approximate latitude 30° 25', longitude 81° 36'). All wastes to the St. Johns River will be via the Seminole Kraft Corporation discharge diffuser system (NPDES No. FL0000400). These reaches of the Rivers are classified as Class III Waters - Recreation - Propagation and maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife. The facility will generate and transmit electricity (SIC 4911).

A Draft Environmental Impact Statement (EIS) will be made available to the public on or about June 8, 1990, by the EPA.

In order to solicit further public participation on the proposed project, EPA will co-chair with FDER a public hearing on the Draft Environmental Impact Statement, the proposed issuance of the NPDES permit, and the Florida certification of the NPDES permit. The hearing will begin at 7:00 p.m. on July 12, 1990, at the Oceanway Community Center, 12216 West Sago Avenue, Jacksonville, FL. Individuals with handicaps requiring special assistance should contact Ms. Diane Barrett, Public Notice Coordinator, at 404/347-3004 by June 28, 1990, so that reasonable accommodations can be made.

Both oral and written comments will be accepted at the public hearing and a transcript of the proceedings will be made. For the accuracy of the record, written comments are encouraged. The Hearing Officer reserves the right to fix reasonable limits on the time allowed for oral statements.

The proposed NPDES permit contains limitations on the amounts of pollutants allowed to be discharged and was drafted in accordance with the provisions of the Clean Water Act (33 U.S.C. Section 1251 et seq.) and other lawful standards and regulations. The pollutant limitations and other permit conditions are tentative and open to comment from the public.

Persons wishing to comment upon or object to any aspects of permit issuance or the Draft Environmental Impact Statement are invited to submit same in writing, postmarked no later than July 23, 1990, to the Office of Public Affairs, Environmental Protection Agency, 345 Courtland Street, N.E., Atlanta, GA 30365, Attention: Ms. Diane Barrett. Pursuant to 40 CFR 124.13, any person who believes any condition of the permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments in full, supporting their position, by the close of the comment period. The public notice number and NPDES number should be included in the first page of comments.

A final EIS will be published after the close of the public comment period. Reviewers should be aware that EPA will not reprint the material contained in the Draft EIS for the Final EIS. The Final EIS will comprise a summary of the Draft EIS, the EPA decision on the preferred alternative, responses to comments received on the Draft EIS, the transcript of the public hearing (or a summary thereof), other relevant information or evaluations developed after publication of the Draft EIS, and a copy of the proposed NPDES permit.

After consideration of all written comments; all comments, statements and data presented at the public hearing; and of the requirements and policies in the Act and appropriate regulations, the EPA Regional Administrator will make a determination regarding the permit issuance. If the determination is substantially unchanged from that announced by this notice, the EPA Regional Administrator will so notify all persons submitting written comments and all persons participating in the hearing. If the determinations are substantially changed, the EPA Regional Administrator will issue a public notice indicating the revised determination. Request(s) for evidentiary hearing may be filed after the Regional Administrator makes the above-described determinations. No issues shall be raised by any party that were not submitted to the administrative record as part of the preparation of and comment on the draft permit, unless good cause for the failure to submit them in accordance with 40 CFR 124.76. Additional information regarding an evidentiary hearing is available in 40 CFR 124, Subpart E, or by contacting the Office of the Regional Counsel at the above EPA address or at telephone number 404/347-2335.

A fact sheet which outlines the applicant's proposed discharges and the EPA proposed pollutant limitations and conditions is available at no charge by writing the EPA address above. The administrative record, including (1) application, (2) the Draft Environmental Impact Statement (which includes items 3-5) (3) fact sheet, (4) draft permit, (5) a sketch showing the exact location of the discharges, (6) comments received, and (7) additional information on hearing procedures is available by writing the EPA address above, or for review and copying at 345 Courtland Street N.E., 3rd floor, Atlanta, Georgia, between the hours of 8:15 a.m. and 4:30 p.m., Monday through Friday. Copies will be provided at a minimal cost per page. Copies of the Draft EIS, fact sheet and other information will be available for review at reading rooms in the following locations in Jacksonville, Florida: (1) Public Library, Main Branch, 122 N. Ocean Street, 32202; (2) Highland Branch Public Library, 1826 Dunn Avenue; and (3) San Mateo Elementary School, 600

Baisden Road. A limited number of copies of the Draft EIS are available from Ms. Marion Hopkins, Federal Activities Branch, at the EPA address noted above (Telephone: 404/347-3776, FAX: 404/347-5056).

EPA has requested FDER to certify the discharge(s) in accordance with the provisions of Section 401 of the Clean Water Act (33 U.S.C. Section 1341). Comments on issuance of certification must be submitted to the FDER address above, Attn: Mr. H.S. Owen, Jr., Director, Siting Coordination Section, by July 23, 1990. As described above, the FDER will co-chair the hearing in order to receive comments relative to state certification.

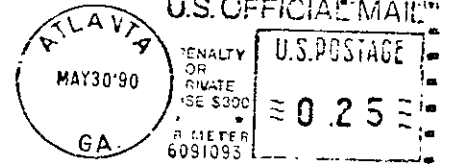
Please bring the foregoing to the attention of persons who you know will be interested in this matter. If you would like to be added to our public notice mailing list, submit your name and mailing address to the Office of Public Affairs at the EPA address above.

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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300



FAB-5

FIRST CLASS MAIL

PRADEEP RAVAL, ENGINEER
FLORIDA DEPT. OF ENVR. REGULATION
BUREAU OF AIR QUALITY MGMT
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399



151

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FEB 23 1990

DER - BAQM

February 16, 1990

Hamilton S. Oven
Chief, Power Plant Siting
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Buck:

During a call with Pradeep Raval earlier this week, he requested that I submit a summary of our concerns related to air with the Cedar Bay Cogeneration Project's Conditions of Certification. Although the transcript of last week's hearing is unavailable, I believe all substantive concerns with the air conditions are addressed below. At this time, I believe that AES Cedar Bay and DER have agreed on all of the air conditions with the incorporation of the modifications provided by Steve Wolf to you in a letter dated February 16, 1990.

The points of concern and their resolutions are as follows:

- II.A.1.a and b - These conditions as stated could potentially limit AES Cedar Bay's power production by restricting the fuel feed rates while the facility remains well within the annual emission limits.
Resolution - Change the fuel feed rates to reflect worst case coal quality as discussed in Steve Wolf's letter to you dated February 16, 1990.
- II.A.1.e - AES Cedar Bay wishes to remain flexible in the fuel used for the limestone dryers and during start-up. Therefore, we would like to have the option to use cleaner burning natural gas as an alternative to fuel oil.
Resolution - DER agrees.
- II.A.3 - Limiting emissions on each boiler at a 93% capacity factor rather than on the three CFB's combined limits our flexibility to perform maintenance and to run a more reliable boiler more than 93% of the time while limiting power production on a less reliable boiler.
Resolution - DER is unable to change this condition.
- II.A.9.b - In order to accommodate flexibility in our electric contract, AES Cedar Bay will maintain furnace heat load between 70% (rather than 80%) and 100% of design rated capacity during normal operations.
Resolution - DER agrees.
- II.B.2 - Again, the material handling usage rates could limit power production because these figures are not based on worse case coal.
Resolution - Incorporate worst case coal numbers provided in Steve Wolf's letter to you dated February 16, 1990.

AES/Cedar Bay Inc.

- II.B.4 - Calculation of the emission rates from the materials handling facility on a #/hr basis were of concern. To calculate hourly emissions by dividing the annual rates by the number of hours per year would be inaccurate as the materials handling facilities will not be operated on a continuous basis.
Resolution - It is AES Cedar Bay's understanding that the AP 42 emission factors are based on design capacities for the belts which would be an accurate method of calculation.
- II.B.6 - The limestone dryer emissions presented a concern similar to that concerning the materials handling emissions.
Resolution - It is AES Cedar Bay's understanding that the limestone dryer emissions are based on the oil firing rate which would be an accurate method of calculation.
- II.C.4 - 40 CFR 60 Subpart BB refers to kraft recovery boilers and should be deleted from the conditions of certification.
Resolution - DER agrees.

Thank you and the air staff for your diligent help in resolving all of these issues. Please do not hesitate to give me a call if you have any questions.

Sincerely,



Julie Blunden
Development Manager

cc: Betsy Hewitt, DER
Clare Fancy, DER
Richard L. Maguire, City of Jacksonville
Kathryn Mennella, St. Johns River Water Management District
William Bostwick, Esq.
Terry Cole, Oertel, Hoffman, Fernandez & Cole

TELEFAX

DATE: 2/16

TO: Buck Over

ORGANIZATION: DER

TELEFAX NUMBER: 904 487 4938

FROM: J Blunden

NUMBER OF PAGES TO FOLLOW: 4

MESSAGE: *see you Monday
evening or Tues.*

THE AES CORPORATION
1001 NORTH 19TH STREET
ARLINGTON, VA 22209
PHONE: 703/522-1315
FAX: 703/528-4510

February 16, 1990

Hamilton S. Owen
Chief, Power Plant Siting
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Buck,

AES Cedar Bay representatives met with the DER staff Thursday, February 8, 1990 to discuss conditions of certification regarding the Cedar Bay Cogeneration Project. As a result of that meeting, AES-CB has agreed to provide this written request for changes to certain conditions in order that the conditions reflect actual operating parameters that were not identified in the application.

1. The maximum coal feed rates currently written into the conditions (Section II.A.1.a and II.B.2) do not reflect the "worse case" coal quality that can be expected. AES-CB has reviewed the coal specifications and determined that the worse case coal provided will have a heat content of 11,500 Btu/lb at 10% moisture. Additional moisture can be absorbed by the coal while being stored on-site. Assuming that a reasonable maximum moisture content in the coal pile is 20%, the resulting heat content will be 10,250 Btu/lb.

The associated maximum coal feed rates follow. The maximum rates assume the worse case coal would exist 1 month each year.

- 104,000 lbs/hour each CFB
 - 312,000 lbs/hour all three CFB's
 - 39,000 tons/month each CFB
 - 117,000 tons/month all three CFB's
 - 390,000 tons/year each CFB
 - 1,170,000 tons/year all three CFB's
2. As discussed, the furnace heat load shall be maintained between 70% and 100% of design rated capacity during normal operations. (II.A.9.b)
 3. As an alternate in conditions II.A.1.e and II.B.7, AES-CB would like the opportunity to add the following flow rates for natural gas should it become available as an economical alternative to fuel oil for firing the limestone dryer and startup burners.

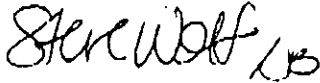
Auxilliary fuel burners:
22.4 million cubic feet per year

Limestone Dryers each:
16,800 cubic feet per hour
147 million cubic feet per year

Limestone Dryers total:
33,600 cubic feet per hour
294 million cubic feet per year

Thank you and the air staff for your cooperation in resolving the concerns of
AES Cedar Bay with these air conditions.

Sincerely,



Steve Wolf
Engineering Manager

February 16, 1990

Hamilton S. Owen
Chief, Power Plant Siting
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Buck:

During a call with Pradeep Raval earlier this week, he requested that I submit a summary of our concerns related to air with the Cedar Bay Cogeneration Project's Conditions of Certification. Although the transcript of last week's hearing is unavailable, I believe all substantive concerns with the air conditions are addressed below. At this time, I believe that AES Cedar Bay and DER have agreed on all of the air conditions with the incorporation of the modifications provided by Steve Wolf to you in a letter dated February 16, 1990.

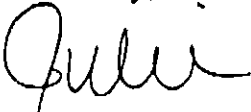
The points of concern and their resolutions are as follows:

- II.A.1.a and b - These conditions as stated could potentially limit AES Cedar Bay's power production by restricting the fuel feed rates while the facility remains well within the annual emission limits.
Resolution - Change the fuel feed rates to reflect worst case coal quality as discussed in Steve Wolf's letter to you dated February 16, 1990.
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- II.B.2 - Again, the material handling usage rates could limit power production because these figures are not based on worst case coal.
Resolution - Incorporate worst case coal numbers provided in Steve Wolf's letter to you dated February 16, 1990.

- II.B.4 - Calculation of the emission rates from the materials handling facility on a #/hr basis were of concern. To calculate hourly emissions by dividing the annual rates by the number of hours per year would be inaccurate as the materials handling facilities will not be operated on a continuous basis.
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Thank you and the air staff for your diligent help in resolving all of these issues. Please do not hesitate to give me a call if you have any questions.

Sincerely,



Julie Blunden
Development Manager

cc: Betsy Hewitt, DER
Clare Fancy, DER
Terry Cole, Oertel, Hoffman, Fernandez & Cole

PM
1-4-90
Arlington, Va.

File Copy

January 2, 1990

Mr. Steve Smallwood
Bureau Chief
Department of Environmental Regulation
Division of Air Resource Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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JAN 8 1990

DER - BAQM

Dear Mr. Smallwood:

In Jeff Swain's letter to Barry Andrews dated December 12, 1989, he officially notified the Department of Environmental Regulation of AES Cedar Bay's ability to reduce the proposed maximum NO_x emission rate from their cogeneration plant to 0.29 lb/MBtu from 0.36 lb/MBtu. In light of this change, the DER should find that AES Cedar Bay's use of innovative fuel combustion technology - circulating fluidized bed (CFB) boilers - is the Best Available Control Technology (BACT) from a top-down approach.

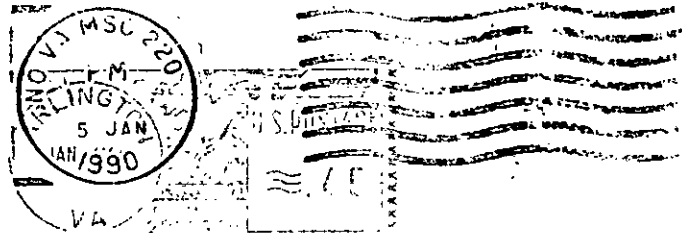
In AES Cedar Bay's original BACT analysis, use of Selective Non-Catalytic Reduction (SNCR) systems was found to be an uneconomical alternative for the Cedar Bay Cogeneration Project. With the new proposal for a NO_x emission rate of 0.29 lb/MBtu, the cost effectiveness of SNCR is further diminished. The total annual cost to AES Cedar Bay for an SNCR system is estimated to be \$4 million which is equivalent to about \$1,700 per ton of NO_x emission reduced.

An additional cost of \$4 million per year is not practicable for this project. AES Cedar Bay, as a qualifying facility regulated under PURPA, can not pass on additional costs to the ratepayer as a utility would. Independent power producers rely on long-term contracts with their customers and suppliers in order to finance their projects. AES Cedar Bay's electric contract, which will save Florida ratepayers \$2.7 billion over the term of the contract, has already been approved by the Florida Public Service Commission (FPSC). When structuring its contract with Florida Power & Light (FPL), AES Cedar Bay took into account the cost of using an innovative fuel combustion technology. The CFB boilers will emit NO_x at a rate less than half of new source performance

The logo for AES Cedar Bay Inc. features the letters "AES" in a bold, stylized font, followed by a vertical line and the words "Cedar Bay" in a serif font, with "Inc." in a smaller font to the right.

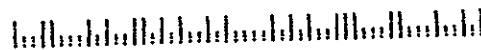
AS/Cedar Bay Inc.

1001 North 19th Street
Arlington, Virginia 22209



Barry Andrews
Clare Fancy
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attn: Bureau of Air Quality Management



standards and reduce ambient concentrations of NO_x in Jacksonville. However, an additional cost for NO_x emission reductions of more than \$4 million per year was not anticipated. This additional cost would render the project unfinacable, and thus result in project cancellation.

The Environmental Protection Agency and Florida definitions of BACT state that it be based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines to be achievable though application of production processes and available methods, systems and techniques for control of each pollutant. These systems and techniques may include fuel cleaning or treatment, or innovative fuel combustion techniques such as CFB boilers. In this case there are energy, environmental, economic and other costs to the State of Florida should this project be halted due to a requirement for the use of SNCR.

A determination of need for his facility has been found by the FPSC. This need for additional electric capacity was dramatically reinforced by the rolling blackouts during the recent cold snap which found many families without electricity on Christmas morning. Without this facility, FPL's capacity margin will be further reduced in the near term, threatening electricity supply during peak loads. In the long term, FPL would replace this facility with another elsewhere in Florida. This hypothetical facility is less likely to offer the environmental benefits associated with the Cedar Bay Cogeneration Project.

AES Cedar Bay provides the Seminole Kraft Corporation with an opportunity to retire the paper mill's outdated power boilers. Without AES Cedar Bay, Jacksonville will not benefit from the ground level improvements in NO_x, nor the ambient VOC, SO₂ or particulate matter improvements offered by the project. Also, a FPL replacement plant will emit additional NO_x elsewhere in the State. If the cogeneration facility is replaced by a base-load pulverized coal unit, this facility would be very likely to demonstrate NO_x control to be unpracticable due to the very high costs of applying SNCR to a PC unit and the fact that this technology is not proven on PC units. Actually, the AES Cedar Bay facility will not only reduce ambient NO_x in Jacksonville, produce 225 MW of power for

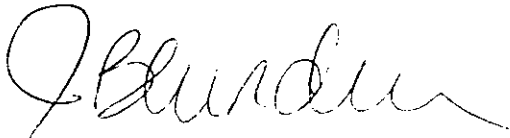
Florida, and use innovative fuel combustion technology, but will have the lowest permitted NO_x emission rate of any coal-fired unit in the State.

In addition, there are also environmental concerns associated with the use of SNCR. Units equipped with this technology have had problems with high ammonia slip. It is also likely that use of SNCR technology will increase PM 10 emissions and possibly CO emissions. It is unclear that a requirement for the use of an SNCR technology on this project would result in a net environmental benefit.

Accordingly, AES Cedar Bay has proposed BACT for this project to be the use of CFB boilers to meet a NO_x emission limitation of 0.29 lb/MBtu. This project is important for the State of Florida from both energy security and environmental perspectives. A requirement for the use of SNCR on AES Cedar Bay risks losing the Cedar Bay Cogeneration Project and its benefits to Florida.

We look forward to discussing this matter further with your staff on Friday, January 5.

Sincerely,



Julie Blunden
Development Manager

cc: Hamilton S. Oven
Clare Fancy
Barry Andrews ✓ cc rec'd 1-4-90 RRW
Terry Cole
Steve Day
Pradeep Raval
Max Linn
A. Kutyna - NE Dist.
S. Pace - AESD
CHF/BT/SP
W. Aronson - EPA
C. Shover - NPS

} 1-9-90 RRW