


Florida Department of
Environmental Protection

Memorandum

To: Buck Oven, PPS

From: Clair Fancy, Chief. 
Bureau of Air Regulation

Date: February 21, 1995

Subject: Modification of the Cedar Bay Cogeneration Project's
Conditions of Certification: PA 88-24A

The Bureau has reviewed the above request dated January 20, 1995, and it is recommended that Condition II.A.1.b. be edited to reflect the language deletions and changes that are contained in Steve Pace's letter dated February 9, 1995.

Thanks for the opportunity to provide comments on this action. If there are any questions, please call Bruce Mitchell at (904)488-1344.

CHF/bm/m

**REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT**

Air Quality Division

February 9, 1995

RECEIVED

FEB 13 1995



Bureau of
Air Regulation

Mr. Hamilton Oven, P.E., Administrator
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

**RE: Duval County - Air Pollution
Cedar Bay Cogeneration Project - PA-88-24A
Request to Extend Time Frame for Short Fiber Recycle Reject Test Burn**

Dear Mr. Oven:

The Air Quality Division (AQD) has reviewed the referenced request dated January 20, 1995. AQD recommends Condition II.A.1.h. of Site Certification PA-88-24A be amended as follows:

"h. To the extent that it is consistent with Condition II.A.1.b. and the following, CBCP shall burn all of the short fiber rejects generated by Seminole Kraft in processing recycled paper. No less than ninety (90) days prior to completion of construction, CBCP shall submit a plan to DEP for conducting a 30-day test burn. ~~within one year after initial compliance testing.~~ The short fiber rejects test burn shall not be conducted until the test burn plan is approved by DEP and until such time as all other environmental requirements for the test burn can be met, including final approval of the ash disposal site. That test burn shall be

AQD appreciates the opportunity to participate in this review. If there are any questions, please contact me.

Very truly yours,

Robert S. Pace, P.E.
Division Chief

RSP/RLR/sa

c: Mr. Gregory Radlinski, Esquire, OGC
Mrs. Barbara Broward
Mr. Chris Kirts, P.E., FDEP/NED
Mr. Bruce Mitchell, FDEP/DARM/Tall
Mr. Barrett Parker, U.S. Generating Co.
Mr. Kevin Grant, U.S. Generating Co.
AQD File 1065A



421 West Church Street - Suite 412
Jacksonville, Florida 32202-4111

Area Code 904/630-3484



TO: Power Plant Siting Review Committee
FROM: Buck Oven *H3O*
DATE: January 27, 1995
SUBJECT: Cedar Bay Cogeneration Project, PA 88-24
Module 8031

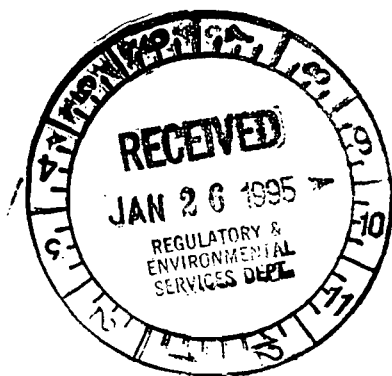
Please review the materials submitted in support of the requested extension of timeframe for short fiber recycle rejects test burn for the Cedar Bay Cogeneration Project. Please return your comments on the request by February 28, 1995. Cedar Bay has previously sent copies of the request directly to your offices for review.

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

cc: Clair Fancy
Chris Kirts
Bruce Mitchell
Steve Pace
Richard Donelan

**Cedar Bay Generating Company,
Limited Partnership**

January 20, 1995



File No.: 6.3.43.2

Mr. Hamilton Oven, P.E.
Administrator
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Cedar Bay Cogeneration Project - PA-88-24
Request to Extend Timeframe for Short Fiber Recycle Reject Test Burn

Dear Mr. Oven:

Condition II.A.1.h. of the Cedar Bay Generating Company, Limited Partnership's (CBGC) Site Certification requires CBGC to:

1. conduct a 30-day test burn of short fibers rejects within one year after initial compliance testing;
2. provide state and local regulatory agencies with at least 30 day prior notice of the test burn; and
3. combust the fibers without creating operational difficulties or violating any other environmental requirements.

In November 1993, CBGC submitted to the Department a test burn plan to evaluate whether the short fiber rejects could be burned as a supplemental fuel. Assuming that initial compliance testing was completed on February 4, 1994, the one-year period to conduct the test burn would conclude February 4, 1995.

In accord with Condition II.A.1.h., the environmental regulatory body with jurisdiction over the disposal site, the Kentucky Department for Environmental Protection (KYDEP), must approve the disposal of the fiber ash in the permitted out-of-state disposal facility before CBGC may provide the required notice to regulatory agencies and before it may conduct the test burn without violating environmental requirements.



January 20, 1995

Page 2

On December 19, 1994, KYDEP denied authorization to dispose of circulating fluidized bed boiler ash that contains ash from burning the short fiber rejects. Therefore, since CBGC cannot at this time meet the third requirement listed above, CBGC requests that the one-year period in which the test burn was to have occurred be extended by the Department until such time as all other environmental requirements for the test burn can be met, including final approval of the ash disposal site.

Should you or your staff have further questions concerning this request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

cc: C. Fancy, FDEPAir
R. Donelan, FDEP
J. Kelly, USGen
F. Stallwood, CBGC
K. Grant, CBGC
C. Kirts, NED, FDEP
R. Pace, RESD
J. West, SK



al

**Cedar Bay Generating Company,
Limited Partnership**

RECEIVED

JAN 27 1995

January 20, 1995

Bureau of
Air Regulation

File No.: 6.3.43.2

Mr. Hamilton Oven, P.E.
Administrator
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Cedar Bay Cogeneration Project - PA-88-24
Request to Extend Timeframe for Short Fiber Recycle Reject Test Burn

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January 20, 1995

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Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

cc: C. Fancy, FDEPAir
R. Donelan, FDEP
J. Kelly, USGen
F. Stallwood, CBGC
K. Grant, CBGC
C. Kirts, NED, FDEP
R. Pace, RESD
J. West, SK



Memorandum

TO: Power Plant Siting Review Committee

FROM: Buck Oven *HO*

DATE: January 27, 1995

SUBJECT: Cedar Bay Cogeneration Project, PA 88-24
Module 8031

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

cc: Clair Fancy
Chris Kirts
Bruce Mitchell
Steve Pace
Richard Donelan

Protection
~~Regulation~~

Department of Environmental
Routing and Transmittal Slip

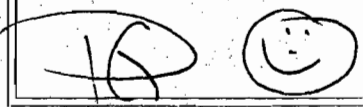
To: (Name, Office, Location)

- 1. ~~Chair Fancy~~
- 2. ~~MS 5505~~ *al*
- 3.
- 4.

Remarks:

Kim - who did you determine is Permit engineer on this? Give this to that person.

RECEIVED
JAN 31 1995
Bureau of
Air Regulation

From: 

Date
1-30-95
Phone
7-0472

RECEIVED

FEB 2 1995

Bureau of
Air Regulation

*Bob
Requested Same
Back Over
1-31-95*

**Cedar Bay Generating Company,
Limited Partnership**

DEPARTMENT OF
ENVIRONMENTAL PROTECTION

JAN 23 1995

SITING COORDINATION

January 20, 1995

File No.: 6.3.43.2

Mr. Hamilton Oven, P.E.
Administrator
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Cedar Bay Cogeneration Project - PA-88-24
Request to Extend Timeframe for Short Fiber Recycle Reject Test Burn

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January 20, 1995

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Should you or your staff have further questions concerning this request, please contact me at (301) 718-6937.

Sincerely,

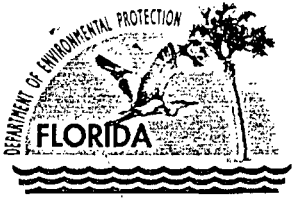


Barrett Parker
Environmental Specialist

BP/mm

cc: C. Fancy, FDEPAir
R. Donelan, FDEP
J. Kelly, USGen
F. Stallwood, CBGC
K. Grant, CBGC
C. Kirts, NED, FDEP
R. Pace, RESD
J. West, SK





Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

April 6, 1995

Mr. Don Beckham
Cedar Bay Cogenerating Company
7500 Old Georgetown Road
Bethesda, Maryland 20814-6161

Re: Cedar Bay Cogenerating Project, Pa 88-24, Mercury Test Program

Dear Mr. Beckham:

The Florida Department of Environmental Protection and the Air Quality Division of the Jacksonville Regulatory & Environmental Services Department have reviewed the Phase I Report on mercury control testing as submitted on November 22, 1994. It is our opinion that the test program demonstrated that the mercury emissions from the Cedar Bay Cogeneration Facility are sufficiently low to preclude further investigation. Your company has demonstrated compliance with Condition of Certification II.A.2.c. No further testing or demonstrations are necessary at this time.

Sincerely,

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

cc: Robert S. Pace, P.E.
Bruce Mitchell

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION) 3. _____
1. Bruce Mitchell 4. _____
2. MS 5805 5. _____

PLEASE PREPARE REPLY FOR:
 SECRETARY'S SIGNATURE
 DIV/DIST DIR SIGNATURE
 MY SIGNATURE
 YOUR SIGNATURE
 DUE DATE _____

COMMENTS:
RECEIVED
APR 07 1995
Bureau of
Air Regulation

ACTION/DISPOSITION
 DISCUSS WITH ME
 COMMENTS/ADVISE
 REVIEW AND RETURN
 SET UP MEETING
 FOR YOUR INFORMATION
 HANDLE APPROPRIATELY
 INITIAL AND FORWARD
 SHARE WITH STAFF
 FOR YOUR FILES

FROM: [Signature] DATE: 7-0472 PHONE: 4-6-95

**Cedar Bay Generating Company,
Limited Partnership**

March 31, 1995

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

DEPARTMENT OF
ENVIRONMENTAL PROTECTION

APR 3 1995

SITING COORDINATION

File #: 6.3.34.1

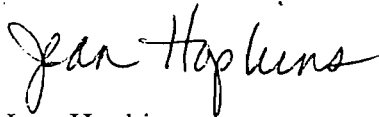
RE: Submittal of Construction Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company (CBGC) is pleased to submit the Construction Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and contains a summary of progress made on engineering design and purchase of major equipment from October 1994 through February 1995. The report mentions our malfunctioning Ash Pelletization System (APS) and unanticipated emission sources derived from the malfunction. As you know, CBGC is diligently identifying remaining problem areas and designing fixes for these problem areas. Should these proposed fixes involve process or emissions changes, CBGC will submit the proposed changes to your office for review and approval as modifications to the site certificate.

Should you have any questions concerning this report, please call me at (301) 718-6945.

Sincerely,



Jean Hopkins
Director, Regulatory Affairs

JH/mm

Enclosure

cc: S. Pace, RESD



Construction Status Report
October 1994 - February 1995

All major plant systems are in operation, but additional work has been performed on the four systems mentioned below.

1. Waste Water Treatment Facility

As identified in the site certification modification request dated 10/31/94, a nano and backwash filtration system were added, and the cooling tower make up line was routed to the wastewater holding tank. In this tank, the cooling tower make up water is subjected to pre-treatment chemicals such as ferric chloride, cationic polymer, and chlorine. The cooling tower chlorine injection system was modified to continuous feed. A crystallizer drain tank was added, as was an enclosure to protect and contain the new equipment. In order to prepare for reducing service water use, a pre-treated water line was routed to the ash pelletization system.

2. Boiler Water Makeup System

As identified in the site certification modification request dated 10/31/94, a regenerative heat exchanger and steam heater were added, and the condensate return line was routed to the demineralizer for polishing. In addition, two reverse osmosis units were added upstream of the demineralizer, a decarbonator was added after the reverse osmosis units, and two additional mixed bed demineralizer trains were installed. This expanded boiler water makeup system maintains the groundwater consumption within permitted levels and displaces consumption from rented demineralization trailers.

3. Short Fiber Recycle Reject Combustion

Plant equipment for the firing and conveyance of short fiber recycle rejects has been tested and will be ready for operation when all permitting is in place. As your office is aware, the Kentucky Department for Environmental Protection denied authorization to dispose of CBGC's ash pellets if they are contaminated with the ash of the short fiber recycle rejects. In response, CBGC sought from DEP an extension to the one year period in which the test burn was to have occurred.

4. Ash Handling, Pelletizing, and Storage

As previously mentioned to DEP in prior correspondence and consultations, malfunctions in the ash pelletization system (APS), specifically, ash agglomeration, continue to impede the performance of the APS. In an effort to eliminate the malfunction, many improvements in design and operation have been made. CBGC insulated the bucket elevator, the hydrated bed ash hopper, the recycle surge hopper, various chutework, and curing silo A. Other agglomeration reducing techniques included lining curing silo A with stainless steel, adding new screens, and installing a lumpbreaker. CBGC also installed additional valves in the pin mixer piping to facilitate cleaning the flow transmitters, and initiated installation of moveable dry ash railcar covers with integrated water spray systems under the ash silos to control dry ash emissions during loadout over the railroad line.

During this period of ash pelletization system malfunction, there was the need for additional handling and storage of ash and for unanticipated cycling of equipment in and out of service. As a result, there were sources of fugitive emissions not originally anticipated; however, point sources were substantially below permitted amounts. The unanticipated emission processes necessitated by this malfunction and construction are the discharge of material from the pellet screeners, the pelletizing area cleanup activity, the transfer of material to the temporary conveyor, the transfer of material to and from the storage pile, the wind erosion of the pile, the transfer of material at the temporary rail loadout site, the operation of front end loaders for pellet material transfer, the dry ash loadout, and the loadout of recycle material at the pellet rail loadout site. However, we believe that, due to the nature of these processes and CBGC's reasonable efforts to minimize fugitive dust caused by the malfunction of the APS, the total amount of particulate matter emissions from CBGC on an annual basis remains below the allowable particulate matter emissions. Particulate matter emissions were determined from initial performance testing for point sources, AP-42 emission factors for fugitive sources, and hours of operation. Moreover, total pelletizer emissions have been estimated to be less than allowable during the malfunction period because of our efforts to control fugitive emissions, as well as reduced pelletizer operations.

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

Date: 24-Feb-1995 10:57am EST
From: Morton Benjamin JAX
BENJAMIN M@A1@JAX1
Dept: Northeast District Offi
Tel No: 904/448-4310 Ext. 379
SUNCOM:

TO: Bruce Mitchell TAL (MITCHELL_B@A1@DER)

Subject: Ceder Bay Generating - Testing for SO2, NOX, CO

Bruce:

I need some help in interpreting the test requirements for the gaseous pollutants.

In PSD-FL-137A, Spec. Cond 8 b. compliance tests are called for SO2, NOX, CO.

Under Spec. Cond. 9, compliance is to be determined by the CEMS. Referance is then made to the old certification in terms of the required emissions.

These statements bring up several questions:

1. Since the compliance tests for the gaseous pollutants are three one hour tests. What standards do we use ? What is listed for CO under Spec. Cond. 3 is an 8 hour rolling average but the note refers to a one hour level (which is not specified). NOx is a thirty day rolling average and SO2 refers to a three hour and a 12 month rolling average.
2. Other power plants who determine SO2 and NOx compliance by CEMS do have annual tests that are used to challenge the CEMS or Relative Accuracy.

You can see why I have questions. Does Cedar Bay have to do Relative Accuracy tests or compliance tests ? . If compliance tests, what are the one hour emission limits ?

Please give these questions some thought. I need to give the test consultant and the source some information on how to present their recent test data.

Please reply via E mail. Next week I will be away all week

BEST AVAILABLE COPY

in training. I can review what you prepare when I get back.

2/24/95
~ 4:00 pm

mass compliance initials annuals,

Spencer Mart. My guess is that the tests should be used to certify the CEMs. I am not sure of the original intent package because it was created by Barry Andrews.

BAW

Bruce



Lawton Chiles
Governor

Florida Department of Environmental Protection

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

Virginia B. Wetherell
Secretary

April 13, 1994

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

Re: Cedar Bay Cogeneration Project, PA 88-24

Dear Mr. Parker:

The Department of Environmental Protection has reviewed the request for temporary operation of an air heater and conveyer to resolve ash handling problems for the Cedar Bay Cogeneration facility as outlined in your letter of April 7, 1994. We deem the request to be acceptable and require no further emissions review for approval. However, if the trial system does provide a solution to the existing problem(s), then a final proposal needs to be submitted for Department review prior to permanent installation(s). Please have Mr. Stallwood or other plant person to inform the Jacksonville Regulatory and Environmental Services Division when the heater and conveyer are installed and their operation is to take place.

Sincerely,

Hamilton S. Oven

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

cc: Morton Benjamin, DEP/NED
Richard Robinson, RESD
Clair Fancy, DEP/BAR

RECEIVED

APR 15 1994

Bureau of
Air Regulation

CEDAR BAY COGENERATION FACILITY

*ASH HANDLING,
ASH PELLETIZING,*

&

*OTHER MODIFICATION REQUEST
ISSUES*

*"no net ↑ in current permits and PPS certification
emission limits"*

MODIFICATION REQUEST BACKGROUND

- MODIFICATION REQUEST OCTOBER 1994
- COMMENTS DECEMBER 1994 & JANUARY 1995
- NOTICE OF INTENT MARCH 24, 1995
- COMMENT RESPONSE APRIL 12, 1995
- COMMENT PERIOD ENDS MAY 22, 1995

SUMMARY OF MODIFICATION REQUEST

- MODIFY ASH PELLETIZING SYSTEM (APS) OPERATIONS
 - » BUCKET ELEVATOR
 - » CONVEYORS

- ASH HANDLING OPTIONS
 - » CONTINUED ASH PELLETIZING
 - Nox* » ASH AGGREGATE
 - » DRY ASH LOADOUT TO RAILCARS
 - Nox Permanent* » DRY ASH LOADOUT TO TRUCKS - *only beneficial use*

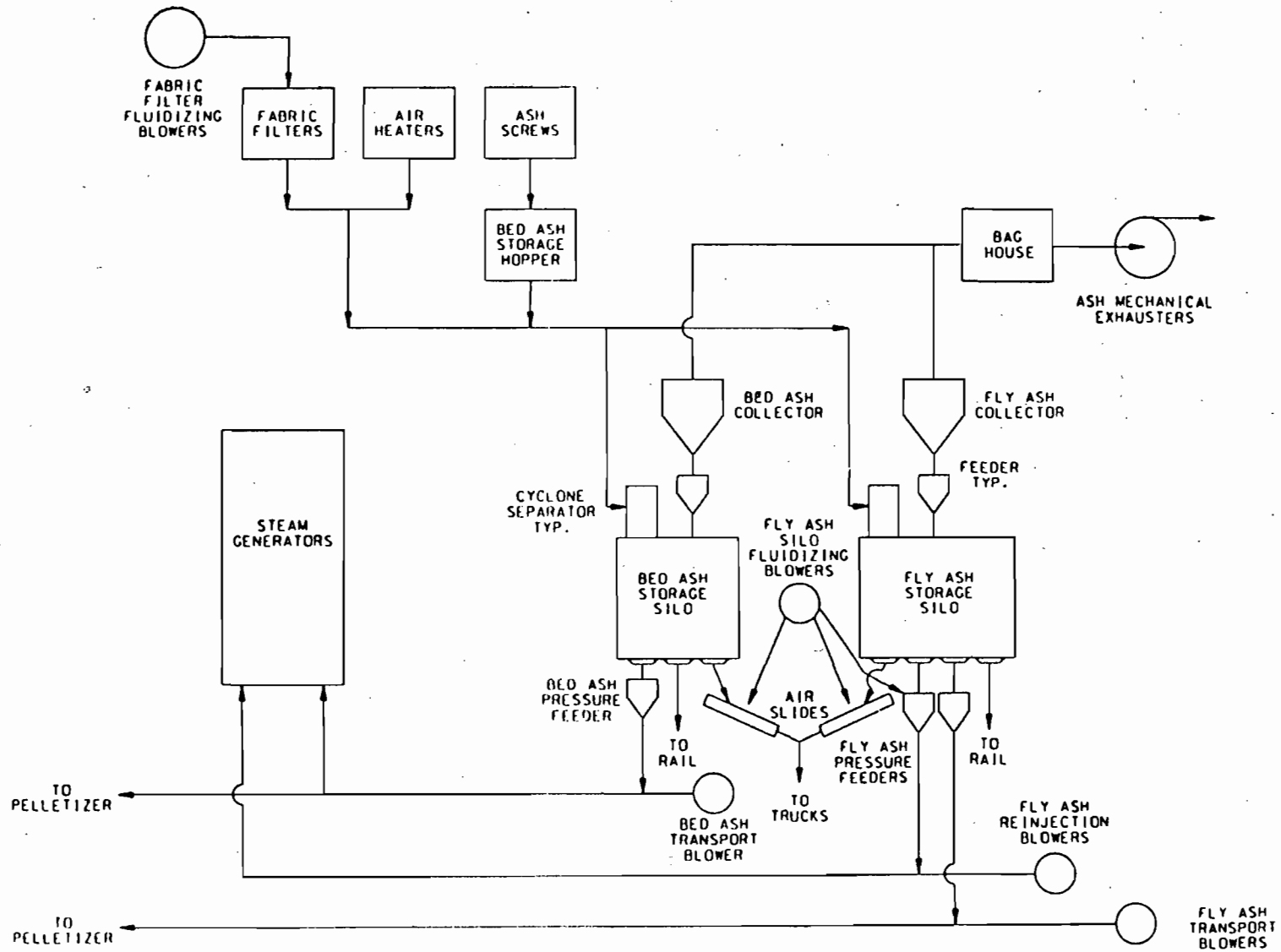
- ALLOW FOR PERMANENT DRY ASH LOADOUT

SUMMARY OF MODIFICATION REQUEST (CONCLUDED)

- MODIFY DEMINERALIZER SYSTEM
- MODIFY ZERO DISCHARGE SYSTEM
- CLARIFICATION OF:
 - » LIMESTONE DRYER/PULVERIZER CONDITIONS
 - » COAL CAR UNLOADING CONDITIONS
 - » APS SOURCES AND CONDITIONS

ASH HANDLING

- ASH PELLETIZING SYSTEM STATUS
- DRY ASH LOAD OUT ISSUES



2-2

Figure 2-1
Existing Ash Handling Diagram

Source: USGC



APS STATUS

- MATERIAL HANDLING CHANGES REQUESTED BY THE MODIFICATION
 - » BUCKET ELEVATORS
 - » ADDITIONAL CONVEYORS
 - » CONTINUED INVESTIGATION OF IMPROVEMENTS

- OPTIONS FOR APS IMPROVEMENTS
 - » MODIFY CURING SILO PELLET FLOW
 - » MODIFY PAN PELLETIZER AND PIN MIXERS
 - » ADD CURING SILOS
 - » CONDUCT TEST PROGRAMS

APS STATUS

- ALTERNATIVE ASH PELLETIZING SYSTEM
 - » DIFFERENT CHEMISTRY
 - » DIFFERENT CURING PROCESS
 - » EQUIPMENT MODIFICATIONS

DRY ASH LOAD OUT IN SEALED RAILCARS

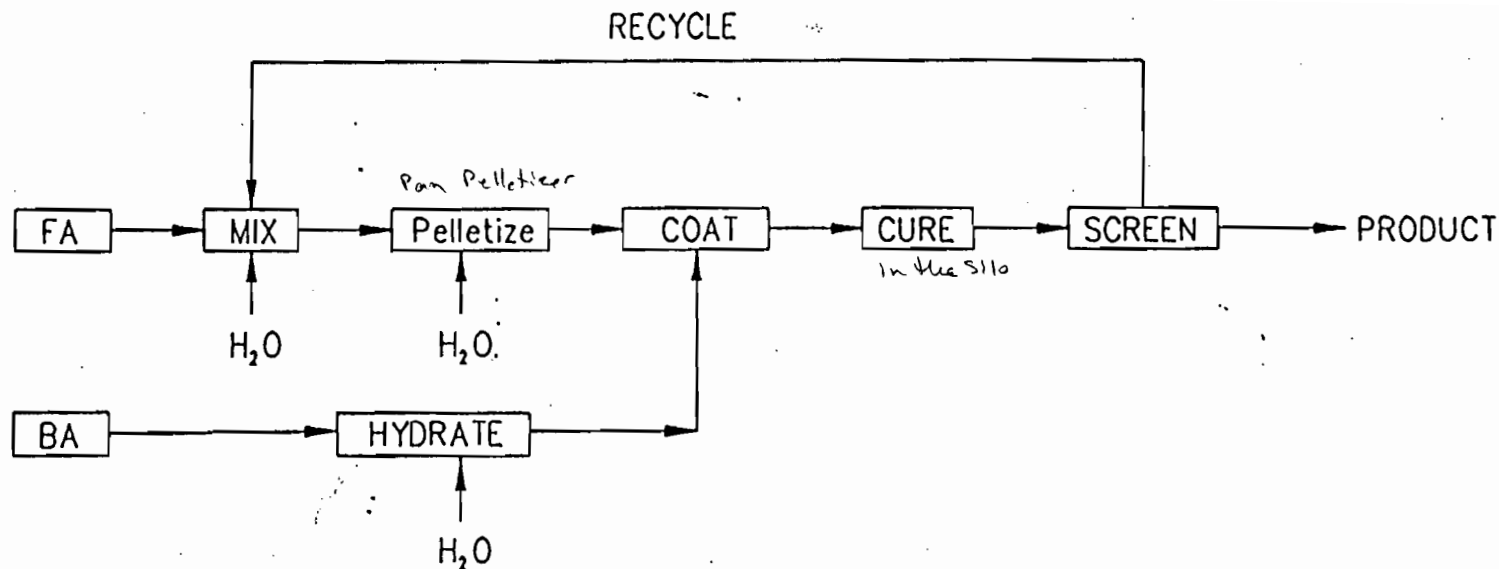
- PERMANENT OPERATION
 - » RAILCAR FOAM SEALANT FOR DOORS & EDGES
 - » RAILCAR CAP DURING LOADING
 - » WET SPRAY AFTER LOADING
- INCREASED RAILCAR TRAFFIC OF 1 TRAIN PER WEEK
- NO NET PARTICULATE EMISSIONS INCREASE
 - » DRY ASH LOADOUT
 - » APS

COMPARISON OF ASH HANDLING SOURCES

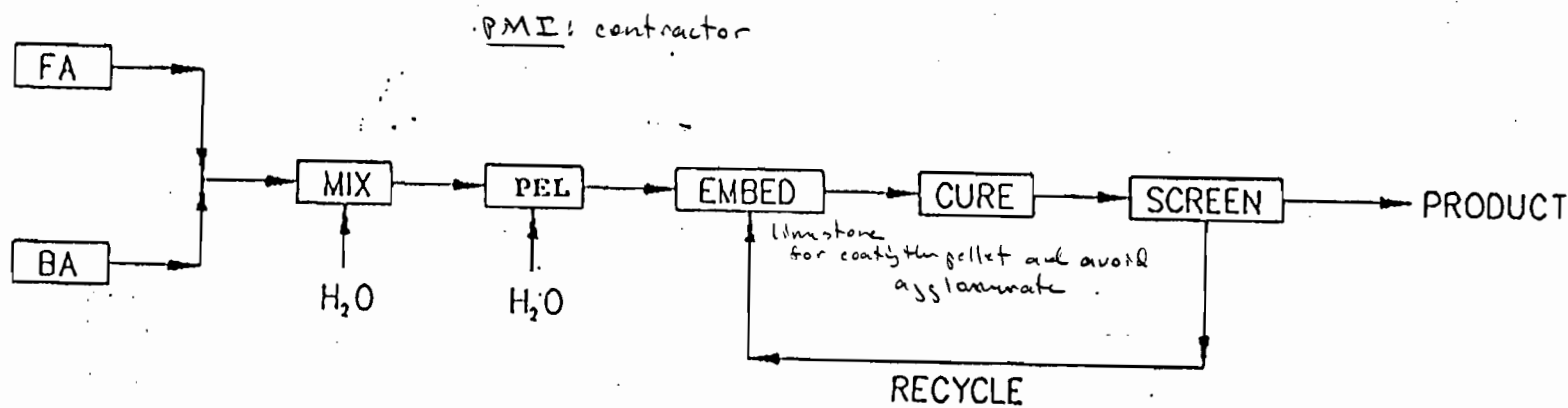
DRAFT

				PM	
				Emissions	
ENSR	Location /	B&V Tag			
ID No	Type	Number	Description	lb/hr	TPY
A1	Rail Silo	ASA-FLT-1	Bed Ash Surge Hopper Filter	0.015	0.064
A2	Rail Silo	ASA-CO-2	Bed Ash Separator	0.103	0.433
A3	Rail Silo	ASA-FLT-3	Bed Ash Silo Vent Filter	0.041	0.173
A4	Rail Silo	ASA-CO-1A	Fly Ash Separator	0.084	0.354
A5	Rail Silo	ASA-CO-1B	Fly Ash Separator	0.084	0.354
A6	Rail Silo	ASA-FLT-2	Fly Ash Silo Vent Filter	0.084	0.356
A7	APS	ASF-FLT-2	Bed Ash Receiver Baghouse	0.161	0.235
A8	APS	ASF-FLT-1	Fly Ash Receiver Baghouse	0.149	0.217
A9	APS	ASF-FLT-3	Recycle Surge Hopper Baghouse	0.012	0.018
A10	APS	ASF-DCO-2	Recycle Tank Baghouse	0.024	0.035
A11	APS	ASF-SCB-1	Venturi Scrubber	1.111	1.622
A12	APS	ASF-SCB-2	Impinjet Scrubber	1.213	1.771
A13	APS	ASF-SCB-3	Pellet Curing Silos scrubber	0.489	0.714
A14	APS	ASF-DCO-4	Pellet Curing Silos discharge belt baghouse	0.051	0.074
A15	APS	ASF-DCO-3	Rail hopper baghouse	0.111	0.162
A16	APS	ASF-DCO-5	Recycle Tank Elevator Baghouse	0.037	0.054
A17	APS	ASF-DCO-1	Pellet Screen / Rail Feed hoppers baghouse	0.364	0.531
			Dry Ash Loadout to Railcars	0.573	1.969
			APS Sources	4.133	7.167

is part of this number - is always in use no matter which system is used (i.e., FA or Pelletizer).

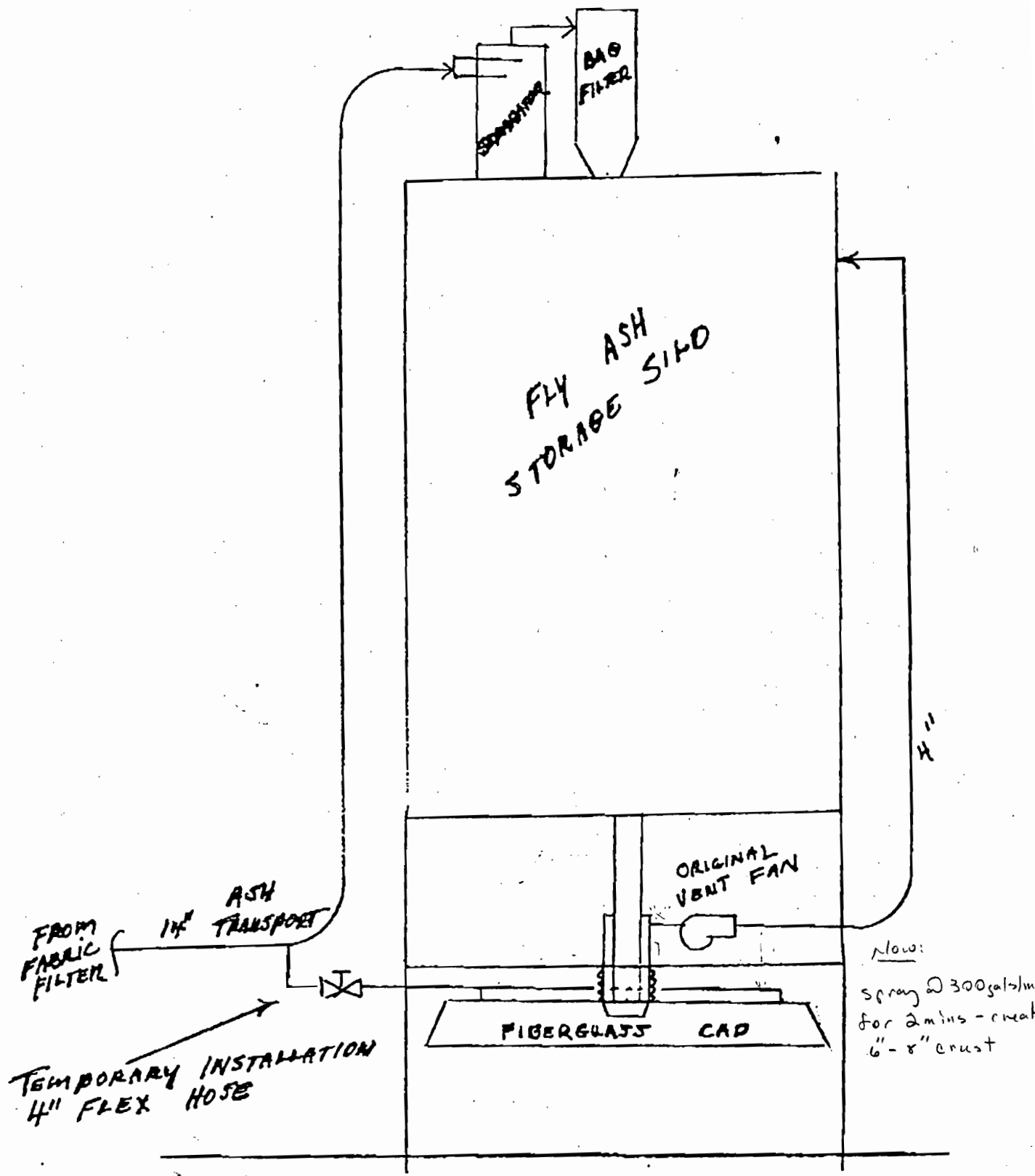


CURRENT PROCESS SCHEMATIC



PROPOSED PROCESS SCHEMATIC

DRAFT





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

**REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT**
Air Quality Division



September 26, 1994

Mr. Hamilton S. Oven, P.E., Administrator
Florida Department of Environmental Protection
Siting Coordination Office
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

**RE: DRY ASH REMOVAL PROCESS EXTENSION REQUEST
CEDAR BAY CO-GENERATION FACILITY
SITE CERTIFICATION # PA 88-24A**

Dear Mr. Oven:

The City of Jacksonville, Air Quality Division (AQD), has reviewed the referenced extension request outlined in the letter from Mr. Barrett Parker, Cedar Bay Generating Company, dated September 17, 1994. AQD has no objection to another extension and suggests the following conditions be included:

- 1) The alternative dry ash removal procedures be approved until such time as the DEP issues final orders on Cedar Bay Generating Company's request for modification to the Site Certification and PSD Permit #PSD-FL-137A.
- 2) Cedar Bay Generating Company shall submit a request for modification of conditions in accordance with condition XXI of the Site Certification (PA 88-24A) and in accordance with condition II.E. of the PSD Permit (PSD-FL-137A) by October 28, 1994.

AQD believes the above conditions for extension approval are necessary in order to avoid an open-ended approval and Mr. Parker, CBGC, has agreed to such in a telephone conversation with Mr. Richard Robinson, AQD, on September 23, 1994.



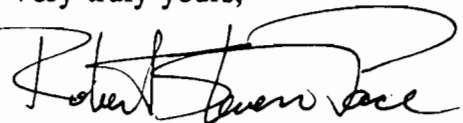
421 West Church Street - Suite 412
Jacksonville, Florida 32202-4111

Area Code 904/630-3484

Mr. Hamilton Oven, P.E.
September 26, 1994
Page 2

Should you have any questions concerning this matter, please contact me or Mr.
Richard Robinson, P.E., at (904) 630-3484.

Very truly yours,



Robert S. Pace, P.E.
Chief

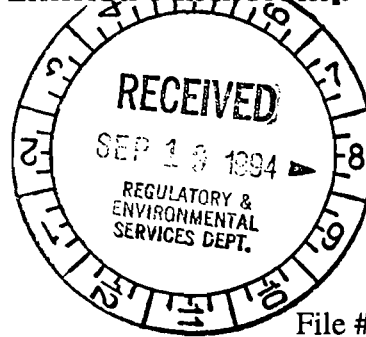
RSP/be

c: ✓ Mr. Bruce Mitchell, DEP/DARM/Talla
Mr. Chris Kirts, DEP/NED
Mr. Wayne Tutt, AQD
Mr. Barrett Parker, CBGC
AQD File - 1065-C

**Cedar Bay Generating Company,
Limited Partnership**

September 17, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000



File #: 6.3.2.5

RE: Alternative Dry Ash Removal Extension Request for Site
Certification Number PA 88-24A

Dear Mr. Oven:

Earlier this year, the Cedar Bay Generating Company, Limited Partnership ("CBGC") requested and received from your office an extension for using the alternative ash removal procedure in which dry ash is loaded into open-topped rail cars, sealed with water and a crusting agent, and sent to a permitted ash disposal facility. During this extension period, CBGC upgraded the ash pelletization system and investigated alternative means of ash removal. The purpose of this letter is to report on the progress towards pelletizer optimization and to request that the temporary approval be extended. In addition, since the pelletizer currently operates at below its maximum capacity, CBGC is submitting this draft request to modify the Conditions of Certification ("Conditions") to allow long-term removal of dry ash.

As you are aware, and as the copies of the quarterly reports provided to your office and enclosed with this letter show, CBGC has studied and corrected many ash pelletization system deficiencies. Since the ash pelletization system is not performing up to design specifications after upgrades, CBGC returned the day-to-day operations of the system to Transbulk, Incorporated, the ash pelletization system design and manufacturing firm. Under Transbulk's efforts, the system is currently able to pelletize, on a consistent basis, fifty to eighty percent of the ash generated. CBGC remains committed to improving the pelletizing system's performance to one hundred percent of the ash generated, and, as described in Section 2.2, is planning to incorporate additional enhancements.

Upon discussion and evaluation of Transbulk's results, CBGC convened a task force to identify reliable, long-term means to remove all ash. As part of the task force's charter, only those solutions that have emissions less than or equal to the current allowable emissions modeled from the use of control equipment associated with the ash pelletization system would be considered.

The task force found four removal methods that meet the criteria. Two methods - ash pelletization and aggregation - would be the easiest to implement, since they are currently allowed by the Conditions. However, the use of the other two methods for dry ash removal would require modifying the Conditions. ~~The enclosed draft modification request provides a preliminary description of the existing system, the need for system revisions, the potential~~



September 17, 1994

Page 2

solutions, and the environmental impacts of the potential solutions. At this time, all removal methods remain viable. The task force is currently evaluating environmental, economic and engineering aspects of each option. When the evaluation is completed, the final modification request will be submitted to your office for consideration. As discussed at our meeting on August 22, you will note that the Table of Contents to the draft modification request identifies other topics in the Conditions which we believe need clarification or revision.

As a result of the experience gained through operating the ash pelletizing system, CBGC is able to implement upgrades for the alternative ash removal procedure. Currently CBGC uses a portable rail car cover coupled with telescoping discharge chutes to control emissions during ash loadout. The portable cover is positioned on and removed from rail cars using a crane stationed adjacent to the silos. The process requires multiple positioning of each rail car. To seal ash for transport, a water spray is added after the cover is removed from the rail car.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each rail car and provide a more efficient method to control fugitive emissions. CBGC plans to install and operate this improvement within 90 days.

In summary, because pellet agglomeration currently impedes full output of the ash pelletization system and because the Conditions contain no provisions for dry ash removal, CBGC requests permission to continue using the alternative ash removal procedure until such time as the modification request is approved by your office.

Should you or your staff have questions concerning this update or extension request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

Enclosures

cc: J.F. Stallwood
J. Garvey
C. Fancy
C. Kirts
R. S. Pace
J. Kelly
K. Grant



FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**



August 4, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

File #: 6.3.34.1

RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from May through June 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,

A handwritten signature in cursive script, appearing to read "Barrett Parker".

Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
J. Garvey
J.G. Kelly



Quarterly Status Report April - June 1994

All major plant systems are in operation, but additional work has been performed on the four systems mentioned below.

1. Waste Water Treatment Facility

Organics continue to cause problems with operating the treatment equipment as intended in the original design. Addition of a nano-filtration system, currently scheduled for November, should allow the treatment equipment to operate as intended. However, a final removal mechanism for the organics taken in with the makeup water from Seminole Kraft's wastewater ponds has not been identified. Until a removal mechanism is identified and implemented, the crystallizer system will continue to experience upsets which result in a wet paste product instead of the expected dry salt cake. Efforts are underway to identify a mechanical, chemical, or biological process for removing these organics.

2. Boiler Water Makeup System

A regenerative heat exchanger which will improve the capability of the process condensate return system is scheduled to be installed in August. This addition will enable the plant to accept hot condensate return water from Seminole Kraft. A reverse osmosis system is scheduled to be installed in the demineralizer system in September. This addition will improve the efficiency of the demineralizer. Two mixed bed demineralizer vessels will also be added to the existing demineralizer system in September. This addition will expand the capacity of the demineralizer to handle all of the condensate returned by Seminole Kraft as well as the rest of the demineralizer makeup water required by the system. The expanded boiler water makeup system will maintain its groundwater consumption within permitted levels and displace consumption currently being used by rented demineralization trailers.

3. Fiber Waste Handling System

Construction has been completed on the fiber waste receiving, fiber waste delivery, and fiber waste feed systems to Boilers B and C. System equipment includes a 200 ton capacity live bottom receiving hopper and transfer station, which is located on Seminole Kraft's site; a conveyor belt that connects the receiving hopper with the plant's boiler building; and a surge hopper with a gravimetric feed system that will supply the fiber waste material to the boilers. This equipment has been tested and will be ready for operation when all permitting is in place. Combustion of the fiber waste material along with coal remains on hold pending state approval of the fiber waste ash for disposal in the Kentucky mine site. Regulatory approvals are anticipated to be in place by October 1, 1994.

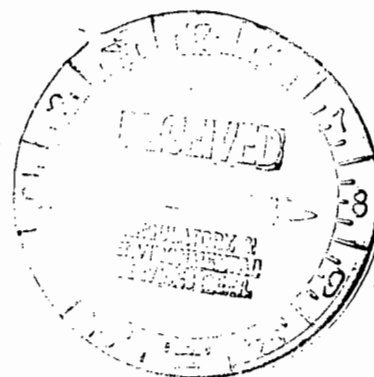
4. Ash Handling, Pelletizing, and Storage

As identified in the previous quarterly report, CBGC has explored the following approaches to reducing ash agglomeration: insulating the perimeter of the curing silos, adding heated air to the top of the silos, increasing pellet circulation, and adjusting the pellet screens. Insulation of Curing Silo A was completed in May, and insulation of Curing Silo B is expected by the end of July. CBGC is still evaluating the effect of insulation addition on ash agglomeration. The propane tank, burners, and miscellaneous equipment have been installed, and the heated air addition system was tested. The system is not in service while the test results are being evaluated. Initial test results do not appear favorable for reducing ash agglomeration. Because use of the temporary recharge conveyor to circulate pellets appeared to reduce ash agglomeration, CBGC initiated testing a pellet recirculation elevator. However, due to elevator component equipment failures, a complete and accurate system evaluation has not yet been performed. The recharge conveyor is used only as necessary to clean out the silos. Harp-type screens were installed in May, and the use of these screens appear to preclude the build-up of pellet fines that promote ash agglomeration.

FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**

May 4, 1994



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

File No.: 6.3.34.1

RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from January through March 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,

A handwritten signature in black ink, appearing to read 'Barrett Parker'.

Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
C.M. Staley
J.G. Kelly



May 4, 1994

**Quarterly Status Report
January - March 1994**

The Cedar Bay Cogeneration Facility declared commercial operation on January 25, 1994, and full steam output of 380,000 pounds per hour was supplied to Seminole Kraft on February 18, 1994. All major plant systems are in operation, but some additional design may be required for the four systems identified below.

1. Waste Water Treatment Facility

Under current conditions, i.e. cooler ambient temperatures, the waste water treatment facility has been aligned to bypass the reverse osmosis units and to use both evaporators to support full plant load. To address long term summer operations, however, the following system enhancements are planned:

1. Zero waste water discharge - adding a nano-filtration system to help remove organic material upstream of the reverse osmosis system and routing incoming waste water through the holdup tank to increase residence time for additives to break down organic material.
2. The crystallizer system, an integral part of the cooling water salt removal process, commenced operation in January. The nano-filtration system will remove the accumulated organic material before it reaches the crystallizer. Until this modification is installed, the crystallizer system will continue to experience upsets which result in a wet paste product being produced instead of the expected dry salt cake.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

2. Boiler Water Makeup System

Because of changes in the initial steam/water balance design for the cogeneration process, modifications to the boiler water makeup system are required. These modifications include:

1. An engineering evaluation of the installation of a regenerative heat exchanger and a condensate water purifying system to handle increased flow and temperature in the return water which is also not of adequate quality for use in the Cedar Bay high pressure boilers.

2. Preparations for the installation of a reverse osmosis system to restore demineralizer inlet water quality to design specifications and, thereby, restore some demineralizer system capacity. Due to increased steam supply to the cogeneration process, additional demineralizer capacity, beyond the initial design, is required. Modifications to the installed demineralizer system components are planned to provide the required capacity.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

3. Fiber Waste Handling System

Construction of the fiber waste handling system is complete. Final mechanical and electrical construction work is complete and operation of the system is targeted for the second quarter of 1994.

4. Ash Handling, Pelletizing and Storage

- A. Overview

As addressed in prior correspondence with the DEP and meetings with officials from the Jacksonville Regulatory and Environmental Services Division (RESO), pellet agglomeration, believed to be caused from excess moisture in the curing silos, has prevented reliable, continuous operation of the ash pelletizing system. As a result, Cedar Bay requested authorization during this quarter to address this malfunction with alternative processes for the ash handling system.

Three approaches to reducing agglomeration are being explored:

1. Insulating the perimeter of the curing silos.
2. Adding heated air to the top portion of the silos.
3. Installing a pellet recirculation elevator.

Use of the aforementioned approaches and replacement of the existing pellet screens with harp screens, which are more effective against blinding, are expected to rectify the problems associated with the operation of the ash pelletizing system. If none of these systems is demonstrated to resolve the challenges with the pelletizer, Cedar Bay will file with the DEP a plan for abandoning the pelletizer and for implementing an alternative ash handling system by October 1994.

All of this activity culminated in our meeting with Mr. Richard Robinson and Mr. Ronald Roberson of RESD and with the City of Jacksonville, Florida's Air Committee of the Environmental Protection Board on April 20, 1994. Based on all that has transpired, it appears that Cedar Bay has developed a workable plan to bring the pelletizer back into reliable service or to find another means for handling and disposing of ash that is consistent with Cedar Bay's site certification and DEP's subsequent authorizations.

B. The Initial Plan for Ash Handling

It was anticipated that ash produced from the operation of the CFBs at Cedar Bay would typically be handled as follows: Fly ash would be collected in the fly ash silo and bed ash would be collected in the bed ash silo. These silos are sized to store ash from 72 hours of operation. From these two silos, ash would be conveyed to the pelletizer. In the pelletizer, the ash would be processed to create pellets, which would be conveyed to the curing silo. After curing for about 12 hours in order to reach a strength of 1250 pounds per square inch, pellets would be removed from the bottom of the curing silo by means of a conveyor for loading onto rail cars for transport to the disposal site in Kentucky.

In recognition of the problems that can occur in the pelletizing and curing process, Cedar Bay was designed to permit alternative methods of ash handling. Each ash silo contains built-in, telescoping download chutes with pollution control for both truck and rail car loading. Should a major malfunction in the equipment downstream from the fly and bed ash silos occur, dry ash could be unloaded directly from the silos, bypassing the pelletizer. Should a malfunction occur in or after the pelletizer, pellets meeting the hardness specification, pellets not meeting the hardness specification, agglomerated material, and any fine material carried over could be placed on the lined pellet storage area between the pelletizer and the curing silos. From this storage area:

1. Specification pellets could be recycled back to the curing silo once the malfunction was corrected or could be disposed of by rail consistent with the standard handling process.
2. Non-specification pellets, the agglomerated material, and any fine material could be moved by front-end loaders to rail cars as soon as possible for disposal in West Virginia.

C. The Problems with the Ash Handling System

The problems that Cedar Bay has experienced with the pelletizer can be summarized as follows:

1. The ash feed system suffered from incorrect initial control settings, a gear box failure, improper sealing of the hydrator discharge doors and feed valves and seizing of the rotors.
2. Ash transport within pelletizer was impeded by plugging.
3. Formation of pellets was impaired by damaged scrapper pan, insufficient compressed air, misaligned conveyors, incomplete clinker removal, malfunctioning level indicators, variable speed distribution failure, and shaker screen blinding.
4. As a result, the movement of pellets through the pelletizer and to the curing silos was restricted.
5. With this restriction on mass flow, the ash silos began to reach capacity and curing silos began to fill up with agglomerated material, non-specification pellets, fine material, as well as specification pellets.
6. In addition to threatening continued operation of Cedar Bay, the growing amount of material in the curing silos precluded troubleshooting the problem.

Figure 1 shows the time trend of the pelletizer's performance. Despite intermittent operation, 232 cars of pelletized ash have been removed from Cedar Bay through April 12, for disposal in Kentucky.

D. The Response to this Malfunction

In addition to timely notice to the DEP, the first response to this malfunction was the development of a remedial plan and the request for permission to pursue it.

1. Interactions with DEP and RESD - Interactions with DEP and RESD have been accomplished by calls, correspondence, meetings, and inspections of the facility. The correspondence includes the following:
 - a. December 9, 1993 letter from Barrett Parker, Cedar Bay Generating Company to Hamilton S. Oven, Florida Department of Environmental Protection.
 - b. December 10, 1993 letter from Mr. Oven to Mr. Parker.
 - c. January 19, 1994 letter from Mr. Parker to Mr. Oven.
 - d. January 21, 1994 letter from Mr. Oven to Mr. Parker.

- e. March 7, 1994 letter from Mr. Parker to Mr. Oven.
- f. March 10, 1994 letter from Mr. Oven to Mr. Parker.
- g. April 7, 1994 letter from Mr. Parker to Mr. Oven.
- h. April 13, 1994 letter from Mr. Oven to Mr. Parker.
- i. April 15, 1994 letter from Mr. Parker to Mr. Oven.

On December 14, 1993, and March 29, 1994, representatives of RESD conducted site visits to Cedar Bay. During these visits, these gentlemen saw, among other things, the ash pelletization system, the alternative ash removal process, and the mound of ash being stored in the lined area.

2. Cedar Bay's Technological Response

Cedar Bay's response to the pelletizer malfunction has involved three processes. First, the pelletizer has been bypassed for certain periods, and the alternative ash removal procedure used to load as-produced ash directly into rail cars from these silos.

As you are aware, this non-pelletized ash has been sent to West Virginia for disposal. To minimize fugitive dust from the transportation of the non-pelletized ash, Cedar Bay has (a) selected open top rail hopper cars that have determined to be sealable, (b) sealed them, (c) covered these cars during the fill operation, and (d) added water and a crusting agent to seal the top of filled cars. Our December 1993 inspection confirmed that there are no visible emissions from these cars. Since this process was initiated, Cedar Bay has acquired a fiberglass top to replace tarpaulin initially used to cover the rail cars. A total of 310 rail cars of non-pelletized ash shipped through 4/11.

Second, when the curing silos became clogged, the silos were emptied. Initially, the agglomerated material, fines, and pellets were deposited adjacent to the silos, both on and off the lined storage area. Barriers were erected to direct stormwater runoff from this area to the lined storage pond. Although results from TCLP testing demonstrated that these materials were not hazardous, efforts were initiated to work around the clock either to remove these materials for off-site disposal or to move them onto the lined ash storage area. Upon removal of the pile not above the lined storage area, two feet of fill was removed and replaced with limerock. At present, a mound of these ash materials remains in the lined storage area. These materials should be completely removed by May 14. Cured pellets are being recirculated in system and/or sent to Kentucky via rail car. The fine material will be recycled or loaded onto rail cars by front end loaders together with off specification pellets and

agglomerated material for disposal in West Virginia. During this period, emissions from the pelletizer and curing silos have been reduced because they have been utilized less, while emissions from surface storage and handling operations have increased because more of both were required to troubleshoot the pelletization process and dispose of the surface-stored ash materials. Even so, consistent with guidance from Mr. Roberson of RESD and good engineering practice in the absence of any specific guidance, emissions from these processes were minimized with surface coatings and/or spraying, as appropriate. Cedar Bay has also covered the mound with an open-weave mesh.

Finally, and in the meantime, Cedar Bay has been troubleshooting the system and redesigning it, as appropriate. Cedar Bay believes that pellet agglomeration has been caused by excess moisture and has begun testing to determine whether heated air, silo insulation, and increased movement can control the agglomeration. In light of its findings, Cedar Bay has made these improvements in the ash pelletizer to date:

- a. Modified the fly ash feed control
- b. Modified the transport blowers
- c. Replaced the bed ash feed base plates
- d. Modified the bed ash feed rotors
- e. Modified the bed ash feed hydrator discharge doors
- f. Replaced a pelletizing plan system scraper plate
- g. Aligned the pellet handling conveyor belts
- h. Modified the pellet loadout screens
- i. Redesigned the pellet recycle conveyor drag chutework

Given this work, the pelletizer problems appear to be resolved.

Cedar Bay has also initiated the following improvements to the curing silo:

- a. Install curing silo insulation
- b. Install harp screen and fabricate enclosure
- c. Install recirculation bucket elevator and tie-ins

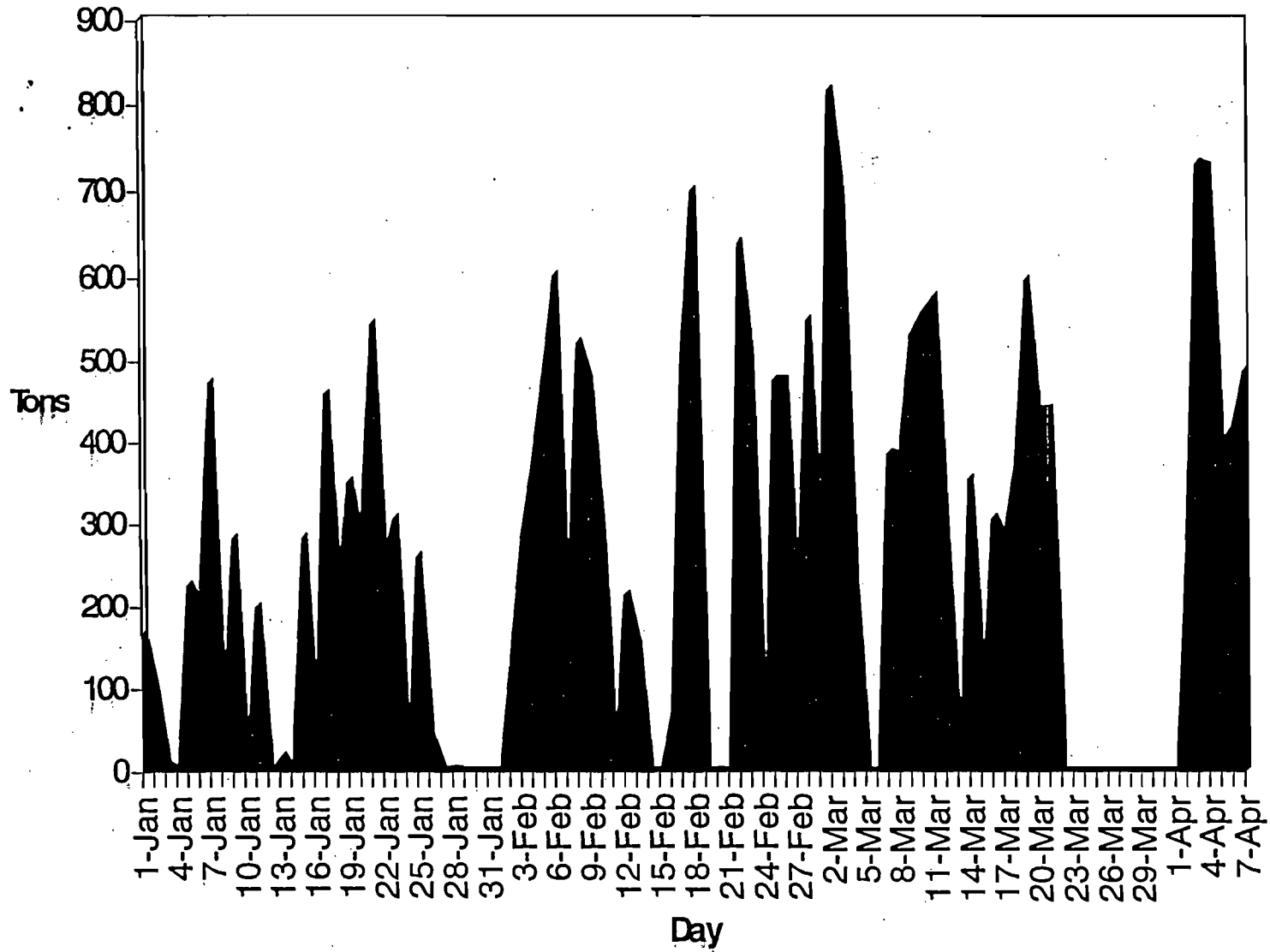
- d. Modify diverters and chutework
- e. Install hydrated bed ash/recycle surge hopper
- f. Modify and relocate pan dust collector control panel

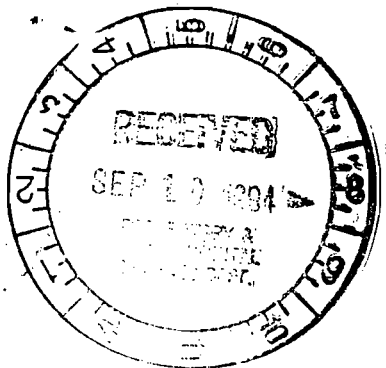
If these measures prove to be an effective and reliable solution to the problem of pellet agglomeration, Cedar Bay will prepare and submit a proposal for permanent installation. Of course, Cedar Bay would need authorization to continue using the temporary fixes while its proposal is being reviewed.

In the event that these steps are not successful, Cedar Bay will prepare and obtain approval for other modifications and/or will investigate other ash removal options. It may be that Cedar Bay will have to rely on ash removal by way of pressure differential (PD) rail cars and to abandon the ash pelletization system. In such a case, Cedar Bay would prepare and submit a proposal for employing this option.

In any event, a long-term proposal will be filed by October 1, 1994.

Pelletizer Productivity





DRAFT OUTLINE FOR MODIFICATION TO
THE CEDAR BAY GENERATING COMPANY'S
CONDITIONS OF CERTIFICATION

1.0 INTRODUCTION

2.0 REVISIONS TO ASH SYSTEM

2.1 Ash Handling System

2.1.1 Description of Existing Ash Handling System

2.1.2 Need for Revision to Existing Ash Handling System

2.1.3 Analysis of Proposed Alternatives

2.1.3.1 Ash Aggregate

2.1.3.2 Dry Ash Loading in Sealed Rail Cars

2.1.3.3 Dry Ash Loading in Sealed Trucks

2.1.3.4 Ash Pelletizing

2.1.4 Description of Preferred Options

2.1.5 Environmental Impacts of Preferred Options

2.1.5.1 Air

2.1.5.2 Water

2.1.5.3 Transportation

2.1.6 Proposed Language for Modification to Conditions of
Certification

2.2 Ash Pelletizing System

2.2.1 Description of Ash Pelletizing System

2.2.1.1 Ash Pelletizing

2.2.1.2 Pellet Curing

2.2.1.3 Recycle System

- 2.2.2 Need for Revision to Existing Pelletizing System
- 2.2.3 Analysis of Proposed Alternatives
- 2.2.4 Description of Preferred Option
- 2.2.5 Environmental Impacts of Preferred Option
- 2.2.6 Proposed Amendment to Conditions of Certification

3.0 REVISIONS TO DEMINERALIZER AND ZERO DISCHARGE SYSTEMS

3.1 Demineralizer System

- 3.1.1 Description of Demineralizer System
- 3.1.2 Need for Revision to Demineralizer System
- 3.1.3 Analysis of Proposed Alternatives
- 3.1.4 Description of Preferred Option
- 3.1.5 Environmental Impacts of Preferred Option
- 3.1.6 Proposed Amendment to Conditions of Certification

3.2 Zero Discharge System

- 3.2.1 Description of Zero Discharge System
- 3.2.2 Need for Revision to Zero Discharge System
- 3.2.3 Analysis of Proposed Alternatives
- 3.2.4 Description of Preferred Option
- 3.2.5 Environmental Impacts of Preferred Option
- 3.2.6 Proposed Amendment to Conditions of Certification

4.0 REVISIONS TO CONDITIONS OF CERTIFICATION LANGUAGE

4.1 CFB Maximum Heat Input

- 4.1.1 Description of CFB Maximum Heat Input Language
- 4.1.2 Need for Clarification of Language
- 4.1.3 Environmental Impact of Clarification
- 4.1.4 Proposed Modification to Conditions of Certification

4.2 Material Handling and Treatment Sources Identification

- 4.2.1 Description of Material Handling and Treatment Sources Identification

Draft

09/17/94

4.2.2 Need for Clarification Language

4.2.3 Environmental Impact of Clarification

4.2.4 Proposed Modification to Conditions of Certification

5.0 APPENDICES

5.1 Conditions of Certification

5.2 Kimley-Horne's Transportation Study

5.3 ENSR's Comparison Document

1.0 INTRODUCTION

Cedar Bay Generating Company ("CBGC") owns and operates the Cedar Bay Cogeneration Project ("CBCP") located in Jacksonville, Florida. The cogeneration facility generates approximately 250 megawatts ("MW") of steam electric power plus 380,000 pounds per hour of steam (for the host facility) using coal as the primary fuel. The facility is co-located with the Seminole Kraft Paper Mill (the cogeneration steam host) at the end of a peninsula that is bounded to the west by the Broward River, to the east by Dunn Creek, and to the south by the St. Johns River. All state, regional, and local environmental approvals for the cogeneration facility are incorporated under the State of Florida's Site Certification Approval ("SCA") Order for the CBCP (PA 88-24).

CBGC is seeking to modify the Conditions of Certification ("Conditions") for the CBCP pursuant to condition XXI Modification of Conditions and Section 403.516 (1)(b) Florida Statutes (F.S.) for revisions to the ash handling system, CFB maximum heat input language, and material handling and treatment source identification language. The other proposed revisions contained in this document - specifically, those concerning the ash pelletizing, demineralizer, and zero discharge systems - are amendments, not modifications, since their implementation could occur without requiring changes to the Conditions.

Note: Only the specific revisions being requested for the ash handling system are described in this draft document. The final version of this document submitted to your office for review will contain these and the other requested revisions.

2.0 REVISIONS TO ASH SYSTEM

CBGC is seeking to revise the existing ash system at the CBCP to provide additional flexibility for onsite ash handling and removal. These revisions include adding the ability to load and remove ash in dry form from the site in sealed rail cars or sealed trucks. Another option under consideration is the installation of an aggregate production process that would produce ash aggregate that could be removed in open-topped hopper rail cars for final reuse or disposal. The proposed revisions to the ash system will not increase overall particulate matter emissions from the CBCP.

2.1 ASH HANDLING SYSTEM

2.1.1 DESCRIPTION OF EXISTING ASH HANDLING SYSTEM

Combustion byproducts generated by the CBCP consist of fly ash and bed ash which are collected on site for temporary storage prior to removal. A portion of the fly ash can be reinjected into the combustion units for improved combustion efficiency while a portion of the bed ash can be reinjected into the combustion units when required for startup.

The existing ash handling system at the CBCP is presented in Figures 2-1 and 2-2. The maximum permitted handling rates in tons per year (tpy) for the system are 336,000 for fly ash and 88,000 tpy of bed ash.

Fly ash is collected in the fabric filters and pneumatically conveyed to the fly ash storage silo. This silo is equipped with fluidizing blowers with heaters to aid in the unloading of the fly ash silo to the pelletizing system. Mechanical ash conveyors transport bed ash from the boiler ash coolers to the bed ash storage

hopper. From the storage hopper, bed ash is pneumatically conveyed to the bed ash silo.

The fly ash and bed ash silos are equipped with telescoping discharge chutes designed to loadout dry ash to rail cars or trucks. These telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Fly ash and bed ash are conveyed from the storage silos to the ash pelletizer receiving hoppers. Fly ash and bed ash are stored separately. The pelletizing process consists of mixing the ash with water to form pellets, which are then cured in silos. The fines or "recycles" from this process are transferred to the recycle surge hopper for processing into pellets. Cured pellets are discharged to the cured pellet storage and loadout pile or to the pellet loadout conveyor. Pellets from the loadout pile are transferred to the rail car conveyor via a front end loader. The conveyor discharges to the rail loadout surge hopper, emptying into a telescoping spout for filling rail cars, which are used to remove the pellets.

Wet suppression/removal techniques and baghouse controls are utilized throughout the pelletizing process to control fugitive dust emissions. Based on the use of these techniques and controls, CBGC's maximum annual emissions of particulate matter from the pelletizing system were determined through modelling to be 2.48 tpy (ENSR, 1993).

CBGC's ash pelletization system is designed to process all of the ash generated during combustion, and the Conditions reflect this design preference. Currently, fifty to eighty percent of the ash generated by the facility is able to be pelletized for removal. The

balance of the generated ash is removed in dry, bulk form in open-topped hopper rail cars in accordance with conditions provided in an alternative ash removal procedure granted under a temporary waiver to Condition IX of the SCA.

2.1.2 NEED FOR REVISION TO THE EXISTING ASH HANDLING SYSTEM

CBCP needs a reliable, long-term method to remove all ash. Since the ash pelletization system is currently unable to process all of the generated ash, alternative means of ash removal -- including pelletization system improvements -- should be evaluated.

Implementation of the preferred alternative should ensure reliable operations of the CBCP.

In addition, the requested revisions are needed to increase the overall flexibility for the beneficial use of the ash in dry form, since many potential users do not have access to the rail system.

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The total capacity of ash does not change and equivalent emission controls are a condition of each option, therefore, no increase in emissions will occur.

2.1.3 ANALYSIS OF PROPOSED ALTERNATIVES

Of the alternatives considered for the ash handling system, four were found to be potentially acceptable. Two alternatives ash pelletizing and ash aggregation, are currently permitted by the Conditions. ~~The two other alternatives considered are loading ash in a dry form into a sealed rail car or into a sealed truck.~~ For the purposes of this discussion, "sealed" means rail cars or trucks that have tight-fitting doors or covers. Descriptions of the four alternatives considered are provided on the next page.

2.1.3.1 Ash Pelletizing

The ash pelletizing system has been designed to process all of CBGP's ash. However, the system has been currently operating at below maximum efficiency due to pellet agglomeration. CBGC continues to pursue additional measures that would reduce this agglomeration and allow the system to operate at full capacity. Proposed revisions to the pelletizing system are presented in Section 2.2.

2.1.3.2 Ash Aggregate

Ash aggregate is formed by mixing the fly ash and hydrated bed ash with water to form a slurry. The conditioned ash is compacted, cured and hardened to form aggregate. The aggregate is broken into large pieces, then crushed to the required size. The aggregate is then loaded into sealed, open-topped hopper car trains for transport offsite. Fines are screened and conveyed back into the ash processing system. Land requirements for production of ash aggregate are estimated at approximately 2.5 acres configured as a 280 X 400 area (see Figure 2-3). The ash aggregate processing would occur within an sealed, contained building to minimize potential fugitive dust emissions, and to prevent environmental impacts from leachate into groundwater, or surface water discharges. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. Proposed specifications by Reuse Technology, Inc. for the ash aggregate system are provided in Appendix A.

2.1.3.3 Dry Ash Loading in Sealed Rail Cars

The option of loading the ash in dry form into sealed rail cars can be accomplished without revision to the existing ash collection and handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the rail cars is currently in place.

The existing fly ash and bed ash silos are equipped with telescoping discharge chutes with negative air pressure collars to loadout ash to rail cars or trucks and control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Under the temporary waiver to Condition IX of the Conditions, a portion of the dry ash is loaded into sealed, open-topped hopper rail cars using the telescoping chutes described above and transported offsite. Fugitive emissions are controlled during the loading process through the use of a temporary rail car cover, a negative air pressure collar that surrounds the telescoping chutes, and the bin vent filter in the ash storage silo. Fugitive emissions from the rail cars are minimized by sealing the rail car edges, holes, and doors, and through application of water and a crusting agent to the exposed surface.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each railcar and provide a more efficient method to control fugitive emissions. Also, ~~this loadout procedure may prove suitable for permanent operation.~~

Three types of sealed rail cars have been considered for the transport of the dry ash offsite, and include:

- Pressure differential (PD) cars,
- Modified grain cars, and
- Modified coal cars that have been fitted with a cover and door mechanism.

The PD cars and grain cars would be of standard design, but would be supplied with tightly sealed loading and unloading doors to prevent the release of ash during transport from the site to the final disposal or reuse facility. The final design of the modified coal cars is currently ongoing. The basic design revision will consist of attaching a cover over the top of the coal cars to prevent losses of dry ash during transport. The cover will be constructed of ridged metal that will be attached to the top of the car and be equipped with one or more loading doors. The modified coal cars will also have tightly sealed loading and unloading doors.

Each of the modified rail car types will be designed to prevent particulate matter emissions, and each type will be filled using the same loading mechanism. This loading mechanism will consist of a telescoping discharge chute with a negative air pressure collar. An ash loading shroud, which surrounds the chute and encloses the chute and the rail car connection, will minimize fugitive emissions associated with the ash loading operations. Figure 2-4 provides a generalized diagram of an ash loading shroud. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.3.4 Dry Ash Loading in Sealed Trucks

The option of loading the ash in dry form into sealed trucks can be accomplished without revision to the existing ash collection and

handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the trucks is currently in place. The existing fly ash and bed ash silos are each equipped with a telescoping discharge chute to facilitate ash loadout to rail cars or trucks. The telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.4 DESCRIPTION OF PREFERRED OPTIONS

The preferred options for ash handling, storage and loading for the facility consist of varying combinations of all of the above alternatives. In summary, these preferred options consist of:

- Ash Pelletizing,
- Ash Aggregate,
- Dry Ash Loading by Sealed Rail Car, and
- Dry Ash Loading by Sealed Truck.

~~Utilizing combinations of the above options would significantly enhance flexibility in the ash handling system, thus providing the most efficient ash processing operations. Depending upon the equipment operational status and offsite transportation conditions, ash pellets, dry ash, and ash aggregate could be processed to meet the most efficient production and transport scenario. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.~~

2.1.5 ENVIRONMENTAL IMPACTS OF PREFERRED OPTIONS

2.1.5.1 Air

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The ash aggregate processing will occur within an enclosed building, and any emissions would be controlled by the use of a bag house or other appropriate emission-control devices. Loading of dry ash into sealed trains or trucks will not increase emissions due to the use of control measures described in Sections 2.1.3.2 and 2.1.3. Operating controls for the ash pelletizing system are currently effectively utilized to control emissions.

2.1.5.2 Water

By increasing the options and flexibility in the ash handling and transport operations, ash product will be more efficiently processed and transported offsite. This enhanced efficiency will result in smaller quantities of ash being stored onsite for shorter time periods. Thus, there would be no additional impacts from leachate into groundwater or surface water discharges. The ash aggregate processing will occur within an enclosed, contained structure, thus eliminating any discharges to water.

2.1.5.3 Transportation

Coal bottom and fly ash from the CBCP will be transported offsite via the railroad system. KBN has evaluated potential traffic impacts from rail transportation of ash from the facility.

Coal ash will be transported either in pelletized form or dry, bulk form. It is estimated that approximately 2 trains per week, or a total of 60 rail cars will be required for transport of pelletized ash offsite during normal facility production. Trains transporting

coal into the facility can be utilized for transport of pelletized ash out of the facility. If in dry form, covered cars will be required to prevent losses of dry ash during transport. Approximately 3 covered-car trains per week, or a total of 105 rail cars will be required for dry ash transport. These estimated quantities are based on information provided by USGCO.

Traffic impacts have been evaluated utilizing a scenario of 1 90-car train trip per day, or approximately 3 trains per week (Kimley-Horn, 1993). This is a more rigorous evaluation scenario than the actual project of 1 train every three days for transportation of coal to the facility. Baseline train traffic at rail-highway crossings without the trains from the facility was projected at 6 train trips per day at selected crossings. With train traffic from the facility, 7 train trips per day were projected.

Based on evaluation of 1 90-car train trip per day, it was concluded that:

- The additional train traffic would be relatively small compared with existing train traffic.
- There would be no significant change in operations at any of the railroad crossings due to the increase of one train trip per day from the facility.
- Average vehicular delay would be minimal.
- At-grade crossing would operate at Level of Service "C", well within the City of Jacksonville standards.

Based on the above analysis, it is concluded that utilization of 2 trains per week (60 rail cars) for offsite transport of palletized ash, or 3 trains per week (105 rail cars) for transport of dry ash would have minimal impact to rail/roadway traffic, and would be within Level of Service standards required by the City of Jacksonville.

The truck transportation analysis is currently under review.

2.1.6 PROPOSED LANGUAGE FOR MODIFICATION TO CONDITIONS OF CERTIFICATION

The following modifications to existing condition of the certification number IX, regarding the transportation and disposal of fly ash and bottom ash at the CBCP are proposed.

IX SOLID WASTE STORAGE AND DISPOSAL

CBCP shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the CBCP facility. Solid waste produced by the operation of the CBCP shall be removed from the site and disposed of in a permitted disposal facility, with the exception of bottom ash and fly ash. Bottom ash and fly ash will be ~~pelletized, or made into aggregate form, and either shipped back to the mine/~~utilizing the trains to deliver the ~~coal~~ or sold as an additive to concrete, or utilized by companies specializing in the marketing and utilization of combustion by-products. The bottom ash and fly ash shall not be disposed of in a landfill within Duvall County. If the CBCP decides to dispose of the bottom ash or fly ash by other than returning it to the mine site, they shall notify RESD and DEP.

John
Bruce

Cedar Bay Generating Company, Limited Partnership

September 17, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

File #: 6.3.2.5

RE: Alternative Dry Ash Removal Extension Request for Site
Certification Number PA 88-24A

Dear Mr. Oven:

Earlier this year, the Cedar Bay Generating Company, Limited Partnership ("CBGC") requested and received from your office an extension for using the alternative ash removal procedure in which dry ash is loaded into open-topped rail cars, sealed with water and a crusting agent, and sent to a permitted ash disposal facility. During this extension period, CBGC upgraded the ash pelletization system and investigated alternative means of ash removal. The purpose of this letter is to report on the progress towards pelletizer optimization and to request that the temporary approval be extended. In addition, since the pelletizer currently operates at below its maximum capacity, CBGC is submitting this draft request to modify the Conditions of Certification ("Conditions") to allow long-term removal of dry ash.

As you are aware, and as the copies of the quarterly reports provided to your office and enclosed with this letter show, CBGC has studied and corrected many ash pelletization system deficiencies. Since the ash pelletization system is not performing up to design specifications after upgrades, CBGC returned the day-to-day operations of the system to Transbulk, Incorporated, the ash pelletization system design and manufacturing firm. Under Transbulk's efforts, the system is currently able to pelletize, on a consistent basis, fifty to eighty percent of the ash generated. CBGC remains committed to improving the pelletizing system's performance to one hundred percent of the ash generated, and, as described in Section 2.2, is planning to incorporate additional enhancements.

Upon discussion and evaluation of Transbulk's results, CBGC convened a task force to identify reliable, long-term means to remove all ash. As part of the task force's charter, only those solutions that have emissions less than or equal to the current allowable emissions modeled from the use of control equipment associated with the ash pelletization system would be considered.

The task force found four removal methods that meet the criteria. Two methods - ash pelletization and aggregation - would be the easiest to implement, since they are currently allowed by the Conditions. However, the use of the other two methods for dry ash removal would require modifying the Conditions. The enclosed draft modification request provides a preliminary description of the existing system, the need for system revisions, the potential



September 17, 1994
Page 2

solutions, and the environmental impacts of the potential solutions. At this time, all removal methods remain viable. The task force is currently evaluating environmental, economic and engineering aspects of each option. When the evaluation is completed, the final modification request will be submitted to your office for consideration. As discussed at our meeting on August 22, you will note that the Table of Contents to the draft modification request identifies other topics in the Conditions which we believe need clarification or revision.

As a result of the experience gained through operating the ash pelletizing system, CBGC is able to implement upgrades for the alternative ash removal procedure. Currently CBGC uses a portable rail car cover coupled with telescoping discharge chutes to control emissions during ash loadout. The portable cover is positioned on and removed from rail cars using a crane stationed adjacent to the silos. The process requires multiple positioning of each rail car. To seal ash for transport, a water spray is added after the cover is removed from the rail car.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each rail car and provide a more efficient method to control fugitive emissions. CBGC plans to install and operate this improvement within 90 days.

In summary, because pellet agglomeration currently impedes full output of the ash pelletization system and because the Conditions contain no provisions for dry ash removal, CBGC requests permission to continue using the alternative ash removal procedure until such time as the modification request is approved by your office.

Should you or your staff have questions concerning this update or extension request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

Enclosures

cc: J.F. Stallwood
J. Garvey
C. Fancy
C. Kirts
R. S. Pace
J. Kelly
K. Grant



FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**

August 4, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

File #: 6.3.34.1


RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from May through June 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
J. Garvey
J.G. Kelly



Quarterly Status Report April - June 1994

All major plant systems are in operation, but additional work has been performed on the four systems mentioned below.

1. Waste Water Treatment Facility

Organics continue to cause problems with operating the treatment equipment as intended in the original design. Addition of a nano-filtration system, currently scheduled for November, should allow the treatment equipment to operate as intended. However, a final removal mechanism for the organics taken in with the makeup water from Seminole Kraft's wastewater ponds has not been identified. Until a removal mechanism is identified and implemented, the crystallizer system will continue to experience upsets which result in a wet paste product instead of the expected dry salt cake. Efforts are underway to identify a mechanical, chemical, or biological process for removing these organics.

2. Boiler Water Makeup System

A regenerative heat exchanger which will improve the capability of the process condensate return system is scheduled to be installed in August. This addition will enable the plant to accept hot condensate return water from Seminole Kraft. A reverse osmosis system is scheduled to be installed in the demineralizer system in September. This addition will improve the efficiency of the demineralizer. Two mixed bed demineralizer vessels will also be added to the existing demineralizer system in September. This addition will expand the capacity of the demineralizer to handle all of the condensate returned by Seminole Kraft as well as the rest of the demineralizer makeup water required by the system. The expanded boiler water makeup system will maintain its groundwater consumption within permitted levels and displace consumption currently being used by rented demineralization trailers.

3. Fiber Waste Handling System

Construction has been completed on the fiber waste receiving, fiber waste delivery, and fiber waste feed systems to Boilers B and C. System equipment includes a 200 ton capacity live bottom receiving hopper and transfer station, which is located on Seminole Kraft's site; a conveyor belt that connects the receiving hopper with the plant's boiler building; and a surge hopper with a gravimetric feed system that will supply the fiber waste material to the boilers. This equipment has been tested and will be ready for operation when all permitting is in place. Combustion of the fiber waste material along with coal remains on hold pending state approval of the fiber waste ash for disposal in the Kentucky mine site. Regulatory approvals are anticipated to be in place by October 1, 1994.

4. Ash Handling, Pelletizing, and Storage

As identified in the previous quarterly report, CBGC has explored the following approaches to reducing ash agglomeration: insulating the perimeter of the curing silos, adding heated air to the top of the silos, increasing pellet circulation, and adjusting the pellet screens. Insulation of Curing Silo A was completed in May, and insulation of Curing Silo B is expected by the end of July. CBGC is still evaluating the effect of insulation addition on ash agglomeration. The propane tank, burners, and miscellaneous equipment have been installed, and the heated air addition system was tested. The system is not in service while the test results are being evaluated. Initial test results do not appear favorable for reducing ash agglomeration. Because use of the temporary recharge conveyor to circulate pellets appeared to reduce ash agglomeration, CBGC initiated testing a pellet recirculation elevator. However, due to elevator component equipment failures, a complete and accurate system evaluation has not yet been performed. The recharge conveyor is used only as necessary to clean out the silos. Harp-type screens were installed in May, and the use of these screens appear to preclude the build-up of pellet fines that promote ash agglomeration.

FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**

May 4, 1994

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

File No.: 6.3.34.1

RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from January through March 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
C.M. Staley
J.G. Kelly



May 4, 1994

**Quarterly Status Report
January - March 1994**

The Cedar Bay Cogeneration Facility declared commercial operation on January 25, 1994, and full steam output of 380,000 pounds per hour was supplied to Seminole Kraft on February 18, 1994. All major plant systems are in operation, but some additional design may be required for the four systems identified below.

1. Waste Water Treatment Facility

Under current conditions, i.e. cooler ambient temperatures, the waste water treatment facility has been aligned to bypass the reverse osmosis units and to use both evaporators to support full plant load. To address long term summer operations, however, the following system enhancements are planned:

1. Zero waste water discharge - adding a nano-filtration system to help remove organic material upstream of the reverse osmosis system and routing incoming waste water through the holdup tank to increase residence time for additives to break down organic material.
2. The crystallizer system, an integral part of the cooling water salt removal process, commenced operation in January. The nano-filtration system will remove the accumulated organic material before it reaches the crystallizer. Until this modification is installed, the crystallizer system will continue to experience upsets which result in a wet paste product being produced instead of the expected dry salt cake.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

2. Boiler Water Makeup System

Because of changes in the initial steam/water balance design for the cogeneration process, modifications to the boiler water makeup system are required. These modifications include:

1. An engineering evaluation of the installation of a regenerative heat exchanger and a condensate water purifying system to handle increased flow and temperature in the return water which is also not of adequate quality for use in the Cedar Bay high pressure boilers.

2. Preparations for the installation of a reverse osmosis system to restore demineralizer inlet water quality to design specifications and, thereby, restore some demineralizer system capacity. Due to increased steam supply to the cogeneration process, additional demineralizer capacity, beyond the initial design, is required. Modifications to the installed demineralizer system components are planned to provide the required capacity.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

3. Fiber Waste Handling System

Construction of the fiber waste handling system is complete. Final mechanical and electrical construction work is complete and operation of the system is targeted for the second quarter of 1994.

4. Ash Handling, Pelletizing and Storage

A. Overview

As addressed in prior correspondence with the DEP and meetings with officials from the Jacksonville Regulatory and Environmental Services Division (RESO), pellet agglomeration, believed to be caused from excess moisture in the curing silos, has prevented reliable, continuous operation of the ash pelletizing system. As a result, Cedar Bay requested authorization during this quarter to address this malfunction with alternative processes for the ash handling system.

Three approaches to reducing agglomeration are being explored:

1. Insulating the perimeter of the curing silos.
2. Adding heated air to the top portion of the silos.
3. Installing a pellet recirculation elevator.

Use of the aforementioned approaches and replacement of the existing pellet screens with harp screens, which are more effective against blinding, are expected to rectify the problems associated with the operation of the ash pelletizing system. If none of these systems is demonstrated to resolve the challenges with the pelletizer, Cedar Bay will file with the DEP a plan for abandoning the pelletizer and for implementing an alternative ash handling system by October 1994.

All of this activity culminated in our meeting with Mr. Richard Robinson and Mr. Ronald Roberson of RESD and with the City of Jacksonville, Florida's Air Committee of the Environmental Protection Board on April 20, 1994. Based on all that has transpired, it appears that Cedar Bay has developed a workable plan to bring the pelletizer back into reliable service or to find another means for handling and disposing of ash that is consistent with Cedar Bay's site certification and DEP's subsequent authorizations.

B. The Initial Plan for Ash Handling

It was anticipated that ash produced from the operation of the CFBs at Cedar Bay would typically be handled as follows: Fly ash would be collected in the fly ash silo and bed ash would be collected in the bed ash silo. These silos are sized to store ash from 72 hours of operation. From these two silos, ash would be conveyed to the pelletizer. In the pelletizer, the ash would be processed to create pellets, which would be conveyed to the curing silo. After curing for about 12 hours in order to reach a strength of 1250 pounds per square inch, pellets would be removed from the bottom of the curing silo by means of a conveyor for loading onto rail cars for transport to the disposal site in Kentucky.

In recognition of the problems that can occur in the pelletizing and curing process, Cedar Bay was designed to permit alternative methods of ash handling. Each ash silo contains built-in, telescoping download chutes with pollution control for both truck and rail car loading. Should a major malfunction in the equipment downstream from the fly and bed ash silos occur, dry ash could be unloaded directly from the silos, bypassing the pelletizer. Should a malfunction occur in or after the pelletizer, pellets meeting the hardness specification, pellets not meeting the hardness specification, agglomerated material, and any fine material carried over could be placed on the lined pellet storage area between the pelletizer and the curing silos. From this storage area:

1. Specification pellets could be recycled back to the curing silo once the malfunction was corrected or could be disposed of by rail consistent with the standard handling process.
2. Non-specification pellets, the agglomerated material, and any fine material could be moved by front-end loaders to rail cars as soon as possible for disposal in West Virginia.

C. The Problems with the Ash Handling System

The problems that Cedar Bay has experienced with the pelletizer can be summarized as follows:

1. The ash feed system suffered from incorrect initial control settings, a gear box failure, improper sealing of the hydrator discharge doors and feed valves and seizing of the rotors.
2. Ash transport within pelletizer was impeded by plugging.
3. Formation of pellets was impaired by damaged scrapper pan, insufficient compressed air, misaligned conveyors, incomplete clinker removal, malfunctioning level indicators, variable speed distribution failure, and shaker screen blinding.
4. As a result, the movement of pellets through the pelletizer and to the curing silos was restricted.
5. With this restriction on mass flow, the ash silos began to reach capacity and curing silos began to fill up with agglomerated material, non-specification pellets, fine material, as well as specification pellets.
6. In addition to threatening continued operation of Cedar Bay, the growing amount of material in the curing silos precluded troubleshooting the problem.

Figure 1 shows the time trend of the pelletizer's performance. Despite intermittent operation, 232 cars of pelletized ash have been removed from Cedar Bay through April 12, for disposal in Kentucky.

D. The Response to this Malfunction

In addition to timely notice to the DEP, the first response to this malfunction was the development of a remedial plan and the request for permission to pursue it.

1. Interactions with DEP and RESD - Interactions with DEP and RESD have been accomplished by calls, correspondence, meetings, and inspections of the facility. The correspondence includes the following:
 - a. December 9, 1993 letter from Barrett Parker, Cedar Bay Generating Company to Hamilton S. Oven, Florida Department of Environmental Protection.
 - b. December 10, 1993 letter from Mr. Oven to Mr. Parker.
 - c. January 19, 1994 letter from Mr. Parker to Mr. Oven.
 - d. January 21, 1994 letter from Mr. Oven to Mr. Parker.

- e. March 7, 1994 letter from Mr. Parker to Mr. Oven.
- f. March 10, 1994 letter from Mr. Oven to Mr. Parker.
- g. April 7, 1994 letter from Mr. Parker to Mr. Oven.
- h. April 13, 1994 letter from Mr. Oven to Mr. Parker.
- i. April 15, 1994 letter from Mr. Parker to Mr. Oven.

On December 14, 1993, and March 29, 1994, representatives of RESD conducted site visits to Cedar Bay. During these visits, these gentlemen saw, among other things, the ash pelletization system, the alternative ash removal process, and the mound of ash being stored in the lined area.

2. Cedar Bay's Technological Response

Cedar Bay's response to the pelletizer malfunction has involved three processes. First, the pelletizer has been bypassed for certain periods, and the alternative ash removal procedure used to load as-produced ash directly into rail cars from these silos.

As you are aware, this non-pelletized ash has been sent to West Virginia for disposal. To minimize fugitive dust from the transportation of the non-pelletized ash, Cedar Bay has (a) selected open top rail hopper cars that have determined to be sealable, (b) sealed them, (c) covered these cars during the fill operation, and (d) added water and a crusting agent to seal the top of filled cars. Our December 1993 inspection confirmed that there are no visible emissions from these cars. Since this process was initiated, Cedar Bay has acquired a fiberglass top to replace tarpaulin initially used to cover the rail cars. A total of 310 rail cars of non-pelletized ash shipped through 4/11.

Second, when the curing silos became clogged, the silos were emptied. Initially, the agglomerated material, fines, and pellets were deposited adjacent to the silos, both on and off the lined storage area. Barriers were erected to direct stormwater runoff from this area to the lined storage pond. Although results from TCLP testing demonstrated that these materials were not hazardous, efforts were initiated to work around the clock either to remove these materials for off-site disposal or to move them onto the lined ash storage area. Upon removal of the pile not above the lined storage area, two feet of fill was removed and replaced with limerock. At present, a mound of these ash materials remains in the lined storage area. These materials should be completely removed by May 14. Cured pellets are being recirculated in system and/or sent to Kentucky via rail car. The fine material will be recycled or loaded onto rail cars by front end loaders together with off specification pellets and

agglomerated material for disposal in West Virginia. During this period, emissions from the pelletizer and curing silos have been reduced because they have been utilized less, while emissions from surface storage and handling operations have increased because more of both were required to troubleshoot the pelletization process and dispose of the surface-stored ash materials. Even so, consistent with guidance from Mr. Roberson of RESD and good engineering practice in the absence of any specific guidance, emissions from these processes were minimized with surface coatings and/or spraying, as appropriate. Cedar Bay has also covered the mound with an open-weave mesh.

Finally, and in the meantime, Cedar Bay has been troubleshooting the system and redesigning it, as appropriate. Cedar Bay believes that pellet agglomeration has been caused by excess moisture and has begun testing to determine whether heated air, silo insulation, and increased movement can control the agglomeration. In light of its findings, Cedar Bay has made these improvements in the ash pelletizer to date:

- a. Modified the fly ash feed control
- b. Modified the transport blowers
- c. Replaced the bed ash feed base plates
- d. Modified the bed ash feed rotors
- e. Modified the bed ash feed hydrator discharge doors
- f. Replaced a pelletizing plan system scraper plate
- g. Aligned the pellet handling conveyor belts
- h. Modified the pellet loadout screens
- i. Redesigned the pellet recycle conveyor drag chutework

Given this work, the pelletizer problems appear to be resolved.

Cedar Bay has also initiated the following improvements to the curing silo:

- a. Install curing silo insulation
- b. Install harp screen and fabricate enclosure
- c. Install recirculation bucket elevator and tie-ins

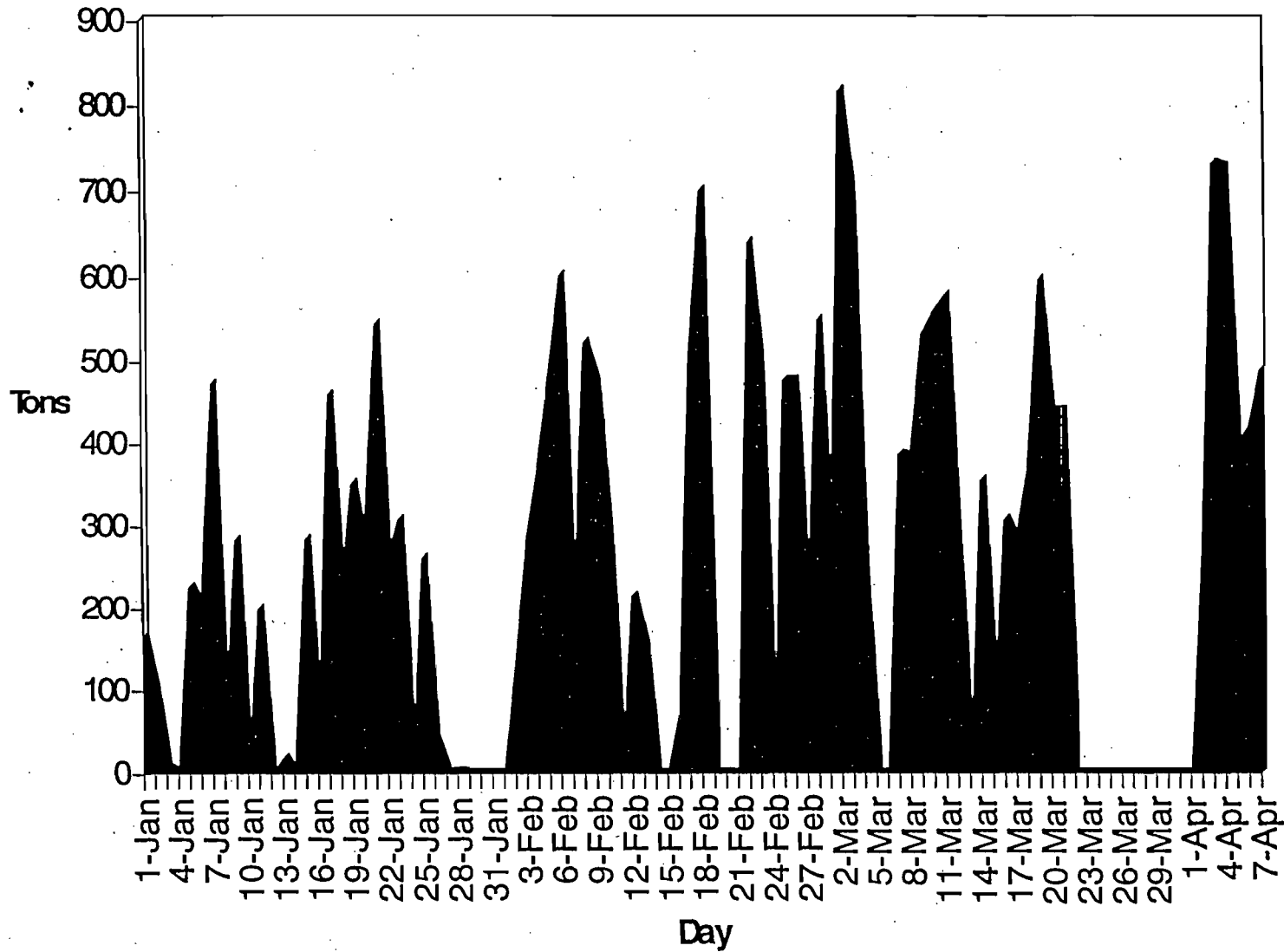
- d. Modify diverters and chutework
- e. Install hydrated bed ash/recycle surge hopper
- f. Modify and relocate pan dust collector control panel

If these measures prove to be an effective and reliable solution to the problem of pellet agglomeration, Cedar Bay will prepare and submit a proposal for permanent installation. Of course, Cedar Bay would need authorization to continue using the temporary fixes while its proposal is being reviewed.

In the event that these steps are not successful, Cedar Bay will prepare and obtain approval for other modifications and/or will investigate other ash removal options. It may be that Cedar Bay will have to rely on ash removal by way of pressure differential (PD) rail cars and to abandon the ash pelletization system. In such a case, Cedar Bay would prepare and submit a proposal for employing this option.

In any event, a long-term proposal will be filed by October 1, 1994.

Pelletizer Productivity



DRAFT OUTLINE FOR MODIFICATION TO
THE CEDAR BAY GENERATING COMPANY'S
CONDITIONS OF CERTIFICATION

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Draft

09/17/94

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1.0 INTRODUCTION

Cedar Bay Generating Company ("CBGC") owns and operates the Cedar Bay Cogeneration Project ("CBCP") located in Jacksonville, Florida. The cogeneration facility generates approximately 250 megawatts ("MW") of steam electric power plus 380,000 pounds per hour of steam (for the host facility) using coal as the primary fuel. The facility is co-located with the Seminole Kraft Paper Mill (the cogeneration steam host) at the end of a peninsula that is bounded to the west by the Broward River, to the east by Dunn Creek, and to the south by the St. Johns River. All state, regional, and local environmental approvals for the cogeneration facility are incorporated under the State of Florida's Site Certification Approval ("SCA") Order for the CBCP (PA 88-24).

CBGC is seeking to modify the Conditions of Certification ("Conditions") for the CBCP pursuant to condition XXI *Modification of Conditions* and Section 403.516 (1)(b) Florida Statutes (F.S.) for revisions to the ash handling system, CFB maximum heat input language, and material handling and treatment source identification language. The other proposed revisions contained in this document - specifically, those concerning the ash pelletizing, demineralizer, and zero discharge systems - are amendments, not modifications, since their implementation could occur without requiring changes to the Conditions.

Note: Only the specific revisions being requested for the ash handling system are described in this draft document. The final version of this document submitted to your office for review will contain these and the other requested revisions.

2.0 REVISIONS TO ASH SYSTEM

CBGC is seeking to revise the existing ash system at the CBCP to provide additional flexibility for onsite ash handling and removal. These revisions include adding the ability to load and remove ash in dry form from the site in sealed rail cars or sealed trucks. Another option under consideration is the installation of an aggregate production process that would produce ash aggregate that could be removed in open-topped hopper rail cars for final reuse or disposal. The proposed revisions to the ash system will not increase overall particulate matter emissions from the CBCP.

2.1 ASH HANDLING SYSTEM

2.1.1 DESCRIPTION OF EXISTING ASH HANDLING SYSTEM

Combustion byproducts generated by the CBCP consist of fly ash and bed ash which are collected on site for temporary storage prior to removal. A portion of the fly ash can be reinjected into the combustion units for improved combustion efficiency while a portion of the bed ash can be reinjected into the combustion units when required for startup.

The existing ash handling system at the CBCP is presented in Figures 2-1 and 2-2. The maximum permitted handling rates in tons per year (tpy) for the system are 336,000 for fly ash and 88,000 tpy of bed ash.

Fly ash is collected in the fabric filters and pneumatically conveyed to the fly ash storage silo. This silo is equipped with fluidizing blowers with heaters to aid in the unloading of the fly ash silo to the pelletizing system. Mechanical ash conveyors transport bed ash from the boiler ash coolers to the bed ash storage

hopper. From the storage hopper, bed ash is pneuamtically conveyed to the bed ash silo.

The fly ash and bed ash silos are equipped with telescoping discharge chutes designed to loadout dry ash to rail cars or trucks. These telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Fly ash and bed ash are conveyed from the storage silos to the ash pelletizer receiving hoppers. Fly ash and bed ash are stored separately. The pelletizing process consists of mixing the ash with water to form pellets, which are then cured in silos. The fines or "recycles" from this process are transferred to the recycle surge hopper for processing into pellets. Cured pellets are discharged to the cured pellet storage and loadout pile or to the pellet loadout conveyor. Pellets from the loadout pile are transferred to the rail car conveyor via a front end loader. The conveyor discharges to the rail loadout surge hopper, emptying into a telescoping spout for filling rail cars, which are used to remove the pellets.

Wet suppression/removal techniques and baghouse controls are utilized throughout the pelletizing process to control fugitive dust emissions. Based on the use of these techniques and controls, CBGC's maximum annual emissions of particulate matter from the pelletizing system were determined through modelling to be 2.48 tpy (ENSR, 1993).

CBGC's ash pelletization system is designed to process all of the ash generated during combustion, and the Conditions reflect this design preference. Currently, fifty to eighty percent of the ash generated by the facility is able to be pelletized for removal. The

balance of the generated ash is removed in dry, bulk form in open-topped hopper rail cars in accordance with conditions provided in an alternative ash removal procedure granted under a temporary waiver to Condition IX of the SCA.

2.1.2 NEED FOR REVISION TO THE EXISTING ASH HANDLING SYSTEM

CBCP needs a reliable, long-term method to remove all ash. Since the ash pelletization system is currently unable to process all of the generated ash, alternative means of ash removal - including pelletization system improvements - should be evaluated.

Implementation of the preferred alternative should ensure reliable operations of the CBCP.

In addition, the requested revisions are needed to increase the overall flexibility for the beneficial use of the ash in dry form, since many potential users do not have access to the rail system.

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The total capacity of ash does not change and equivalent emission controls are a condition of each option, therefore, no increase in emissions will occur.

2.1.3 ANALYSIS OF PROPOSED ALTERNATIVES

Of the alternatives considered for the ash handling system, four were found to be potentially acceptable. Two alternatives ash pelletizing and ash aggregation, are currently permitted by the Conditions. The two other alternatives considered are loading ash in a dry form into a sealed rail car or into a sealed truck. For the purposes of this discussion, "sealed" means rail cars or trucks that have tight-fitting doors or covers. Descriptions of the four alternatives considered are provided on the next page.

2.1.3.1 Ash Pelletizing

The ash pelletizing system has been designed to process all of CBGP's ash. However, the system has been currently operating at below maximum efficiency due to pellet agglomeration. CBGC continues to pursue additional measures that would reduce this agglomeration and allow the system to operate at full capacity. Proposed revisions to the pelletizing system are presented in Section 2.2.

2.1.3.2 Ash Aggregate

Ash aggregate is formed by mixing the fly ash and hydrated bed ash with water to form a slurry. The conditioned ash is compacted, cured and hardened to form aggregate. The aggregate is broken into large pieces, then crushed to the required size. The aggregate is then loaded into sealed, open-topped hopper car trains for transport offsite. Fines are screened and conveyed back into the ash processing system. Land requirements for production of ash aggregate are estimated at approximately 2.5 acres configured as a 280 X 400 area (see Figure 2-3). The ash aggregate processing would occur within an sealed, contained building to minimize potential fugitive dust emissions, and to prevent environmental impacts from leachate into groundwater, or surface water discharges. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. Proposed specifications by Reuse Technology, Inc. for the ash aggregate system are provided in Appendix A.

2.1.3.3 Dry Ash Loading in Sealed Rail Cars

The option of loading the ash in dry form into sealed rail cars can be accomplished without revision to the existing ash collection and handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the rail cars is currently in place.

The existing fly ash and bed ash silos are equipped with telescoping discharge chutes with negative air pressure collars to loadout ash to rail cars or trucks and control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Under the temporary waiver to Condition IX of the Conditions, a portion of the dry ash is loaded into sealed, open-topped hopper rail cars using the telescoping chutes described above and transported offsite. Fugitive emissions are controlled during the loading process through the use of a temporary rail car cover, a negative air pressure collar that surrounds the telescoping chutes, and the bin vent filter in the ash storage silo. Fugitive emissions from the rail cars are minimized by sealing the rail car edges, holes, and doors, and through application of water and a crusting agent to the exposed surface.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each railcar and provide a more efficient method to control fugitive emissions. Also, this loadout procedure may prove suitable for permanent operation.

Three types of sealed rail cars have been considered for the transport of the dry ash offsite, and include:

- Pressure differential (PD) cars,
- Modified grain cars, and
- Modified coal cars that have been fitted with a cover and door mechanism.

The PD cars and grain cars would be of standard design, but would be supplied with tightly sealed loading and unloading doors to prevent the release of ash during transport from the site to the final disposal or reuse facility. The final design of the modified coal cars is currently ongoing. The basic design revision will consist of attaching a cover over the top of the coal cars to prevent losses of dry ash during transport. The cover will be constructed of ridged metal that will be attached to the top of the car and be equipped with one or more loading doors. The modified coal cars will also have tightly sealed loading and unloading doors.

Each of the modified rail car types will be designed to prevent particulate matter emissions, and each type will be filled using the same loading mechanism. This loading mechanism will consist of a telescoping discharge chute with a negative air pressure collar. An ash loading shroud, which surrounds the chute and encloses the chute and the rail car connection, will minimize fugitive emissions associated with the ash loading operations. Figure 2-4 provides a generalized diagram of an ash loading shroud. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.3.4 Dry Ash Loading in Sealed Trucks

The option of loading the ash in dry form into sealed trucks can be accomplished without revision to the existing ash collection and

handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the trucks is currently in place. The existing fly ash and bed ash silos are each equipped with a telescoping discharge chute to facilitate ash loadout to rail cars or trucks. The telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.4 DESCRIPTION OF PREFERRED OPTIONS

The preferred options for ash handling, storage and loading for the facility consist of varying combinations of all of the above alternatives. In summary, these preferred options consist of:

- Ash Pelletizing,
- Ash Aggregate,
- Dry Ash Loading by Sealed Rail Car, and
- Dry Ash Loading by Sealed Truck.

Utilizing combinations of the above options would significantly enhance flexibility in the ash handling system, thus providing the most efficient ash processing operations. Depending upon the equipment operational status and offsite transportation conditions, ash pellets, dry ash, and ash aggregate could be processed to meet the most efficient production and transport scenario. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.5 ENVIRONMENTAL IMPACTS OF PREFERRED OPTIONS

2.1.5.1 Air

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The ash aggregate processing will occur within an enclosed building, and any emissions would be controlled by the use of a bag house or other appropriate emission-control devices. Loading of dry ash into sealed trains or trucks will not increase emissions due to the use of control measures described in Sections 2.1.3.2 and 2.1.3. Operating controls for the ash pelletizing system are currently effectively utilized to control emissions.

2.1.5.2 Water

By increasing the options and flexibility in the ash handling and transport operations, ash product will be more efficiently processed and transported offsite. This enhanced efficiency will result in smaller quantities of ash being stored onsite for shorter time periods. Thus, there would be no additional impacts from leachate into groundwater or surface water discharges. The ash aggregate processing will occur within an enclosed, contained structure, thus eliminating any discharges to water.

2.1.5.3 Transportation

Coal bottom and fly ash from the CBCP will be transported offsite via the railroad system. KBN has evaluated potential traffic impacts from rail transportation of ash from the facility.

Coal ash will be transported either in pelletized form or dry, bulk form. It is estimated that approximately 2 trains per week, or a total of 60 rail cars will be required for transport of pelletized ash offsite during normal facility production. Trains transporting

coal into the facility can be utilized for transport of pelletized ash out of the facility. If in dry form, covered cars will be required to prevent losses of dry ash during transport. Approximately 3 covered-car trains per week, or a total of 105 rail cars will be required for dry ash transport. These estimated quantities are based on information provided by USGCO.

Traffic impacts have been evaluated utilizing a scenario of 1 90-car train trip per day, or approximately 3 trains per week (Kimley-Horn, 1993). This is a more rigorous evaluation scenario than the actual project of 1 train every three days for transportation of coal to the facility. Baseline train traffic at rail-highway crossings without the trains from the facility was projected at 6 train trips per day at selected crossings. With train traffic from the facility, 7 train trips per day were projected.

Based on evaluation of 1 90-car train trip per day, it was concluded that:

- The additional train traffic would be relatively small compared with existing train traffic.
- There would be no significant change in operations at any of the railroad crossings due to the increase of one train trip per day from the facility.
- Average vehicular delay would be minimal.
- At-grade crossing would operate at Level of Service "C", well within the City of Jacksonville standards.

Based on the above analysis, it is concluded that utilization of 2 trains per week (60 rail cars) for offsite transport of palletized ash, or 3 trains per week (105 rail cars) for transport of dry ash would have minimal impact to rail/roadway traffic, and would be within Level of Service standards required by the City of Jacksonville.

The truck transportation analysis is currently under review.

2.1.6 PROPOSED LANGUAGE FOR MODIFICATION TO CONDITIONS OF CERTIFICATION

The following modifications to existing condition of the certification number IX, regarding the transportation and disposal of fly ash and bottom ash at the CBCP are proposed.

IX SOLID WASTE STORAGE AND DISPOSAL

CBCP shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the CBCP facility. Solid waste produced by the operation of the CBCP shall be removed from the site and disposed of in a permitted disposal facility, with the exception of bottom ash and fly ash. Bottom ash and fly ash will be ~~pelletized, or made into aggregate form, and either shipped back to the mine utilizing the trains to deliver the coal~~ or sold as an additive to concrete, or utilized by companies specializing in the marketing and utilization of combustion by-products. The bottom ash and fly ash shall not be disposed of in a landfill within Duvall County. If the CBCP decides to dispose of the bottom ash or fly ash by other than returning it to the mine site, they shall notify RESD and DEP.

**Cedar Bay Generating Company,
Limited Partnership**

September 17, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

RECEIVED

SEP 20 1994

Bureau of
Air Regulation

File #: 6.3.2.5

RE: Alternative Dry Ash Removal Extension Request for Site
Certification Number PA 88-24A

Dear Mr. Oven:

Earlier this year, the Cedar Bay Generating Company, Limited Partnership ("CBGC") requested and received from your office an extension for using the alternative ash removal procedure in which dry ash is loaded into open-topped rail cars, sealed with water and a crusting agent, and sent to a permitted ash disposal facility. During this extension period, CBGC upgraded the ash pelletization system and investigated alternative means of ash removal. The purpose of this letter is to report on the progress towards pelletizer optimization and to request that the temporary approval be extended. In addition, since the pelletizer currently operates at below its maximum capacity, CBGC is submitting this draft request to modify the Conditions of Certification ("Conditions") to allow long-term removal of dry ash.

As you are aware, and as the copies of the quarterly reports provided to your office and enclosed with this letter show, CBGC has studied and corrected many ash pelletization system deficiencies. Since the ash pelletization system is not performing up to design specifications after upgrades, CBGC returned the day-to-day operations of the system to Transbulk, Incorporated, the ash pelletization system design and manufacturing firm. Under Transbulk's efforts, the system is currently able to pelletize, on a consistent basis, fifty to eighty percent of the ash generated. CBGC remains committed to improving the pelletizing system's performance to one hundred percent of the ash generated, and, as described in Section 2.2, is planning to incorporate additional enhancements.

Upon discussion and evaluation of Transbulk's results, CBGC convened a task force to identify reliable, long-term means to remove all ash. As part of the task force's charter, only those solutions that have emissions less than or equal to the current allowable emissions modeled from the use of control equipment associated with the ash pelletization system would be considered.

The task force found four removal methods that meet the criteria. Two methods - ash pelletization and aggregation - would be the easiest to implement, since they are currently allowed by the Conditions. However, the use of the other two methods for dry ash removal would require modifying the Conditions. The enclosed draft modification request provides a preliminary description of the existing system, the need for system revisions, the potential



September 17, 1994

Page 2

solutions, and the environmental impacts of the potential solutions. At this time, all removal methods remain viable. The task force is currently evaluating environmental, economic and engineering aspects of each option. When the evaluation is completed, the final modification request will be submitted to your office for consideration. As discussed at our meeting on August 22, you will note that the Table of Contents to the draft modification request identifies other topics in the Conditions which we believe need clarification or revision.

As a result of the experience gained through operating the ash pelletizing system, CBGC is able to implement upgrades for the alternative ash removal procedure. Currently CBGC uses a portable rail car cover coupled with telescoping discharge chutes to control emissions during ash loadout. The portable cover is positioned on and removed from rail cars using a crane stationed adjacent to the silos. The process requires multiple positioning of each rail car. To seal ash for transport, a water spray is added after the cover is removed from the rail car.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each rail car and provide a more efficient method to control fugitive emissions. CBGC plans to install and operate this improvement within 90 days.

In summary, because pellet agglomeration currently impedes full output of the ash pelletization system and because the Conditions contain no provisions for dry ash removal, CBGC requests permission to continue using the alternative ash removal procedure until such time as the modification request is approved by your office.

Should you or your staff have questions concerning this update or extension request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

Enclosures

cc: J.F. Stallwood
J. Garvey
C. Fancy
C. Kirts
R. S. Pace
J. Kelly
K. Grant



FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**

August 4, 1994

Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Office of Siting Coordinator
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

File #: 6.3.34.1

RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from May through June 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
J. Garvey
J.G. Kelly



Quarterly Status Report April - June 1994

All major plant systems are in operation, but additional work has been performed on the four systems mentioned below.

1. Waste Water Treatment Facility

Organics continue to cause problems with operating the treatment equipment as intended in the original design. Addition of a nano-filtration system, currently scheduled for November, should allow the treatment equipment to operate as intended. However, a final removal mechanism for the organics taken in with the makeup water from Seminole Kraft's wastewater ponds has not been identified. Until a removal mechanism is identified and implemented, the crystallizer system will continue to experience upsets which result in a wet paste product instead of the expected dry salt cake. Efforts are underway to identify a mechanical, chemical, or biological process for removing these organics.

2. Boiler Water Makeup System

A regenerative heat exchanger which will improve the capability of the process condensate return system is scheduled to be installed in August. This addition will enable the plant to accept hot condensate return water from Seminole Kraft. A reverse osmosis system is scheduled to be installed in the demineralizer system in September. This addition will improve the efficiency of the demineralizer. Two mixed bed demineralizer vessels will also be added to the existing demineralizer system in September. This addition will expand the capacity of the demineralizer to handle all of the condensate returned by Seminole Kraft as well as the rest of the demineralizer makeup water required by the system. The expanded boiler water makeup system will maintain its groundwater consumption within permitted levels and displace consumption currently being used by rented demineralization trailers.

3. Fiber Waste Handling System

Construction has been completed on the fiber waste receiving, fiber waste delivery, and fiber waste feed systems to Boilers B and C. System equipment includes a 200 ton capacity live bottom receiving hopper and transfer station, which is located on Seminole Kraft's site; a conveyor belt that connects the receiving hopper with the plant's boiler building; and a surge hopper with a gravimetric feed system that will supply the fiber waste material to the boilers. This equipment has been tested and will be ready for operation when all permitting is in place. Combustion of the fiber waste material along with coal remains on hold pending state approval of the fiber waste ash for disposal in the Kentucky mine site. Regulatory approvals are anticipated to be in place by October 1, 1994.

4. Ash Handling, Pelletizing, and Storage

As identified in the previous quarterly report, CBGC has explored the following approaches to reducing ash agglomeration: insulating the perimeter of the curing silos, adding heated air to the top of the silos, increasing pellet circulation, and adjusting the pellet screens. Insulation of Curing Silo A was completed in May, and insulation of Curing Silo B is expected by the end of July. CBGC is still evaluating the effect of insulation addition on ash agglomeration. The propane tank, burners, and miscellaneous equipment have been installed, and the heated air addition system was tested. The system is not in service while the test results are being evaluated. Initial test results do not appear favorable for reducing ash agglomeration. Because use of the temporary recharge conveyor to circulate pellets appeared to reduce ash agglomeration, CBGC initiated testing a pellet recirculation elevator. However, due to elevator component equipment failures, a complete and accurate system evaluation has not yet been performed. The recharge conveyor is used only as necessary to clean out the silos. Harp-type screens were installed in May, and the use of these screens appear to preclude the build-up of pellet fines that promote ash agglomeration.

FILE COPY

**Cedar Bay Generating Company,
Limited Partnership**

May 4, 1994

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

File No.: 6.3.34.1

RE: Submittal of Quarterly Status Report

Dear Mr. Oven:

The Cedar Bay Generating Company is pleased to submit the Quarterly Status Report enclosed with this letter. This report is required by Section II.C.2. of the Conditions of Certification, and this report contains a summary of progress made on engineering design and purchase of major equipment from January through March 1994.

Should you have any questions concerning this report, please call me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

BP/mm

Enclosure

cc: J.F. Stallwood
C.M. Staley
J.G. Kelly



May 4, 1994

**Quarterly Status Report
January - March 1994**

The Cedar Bay Cogeneration Facility declared commercial operation on January 25, 1994, and full steam output of 380,000 pounds per hour was supplied to Seminole Kraft on February 18, 1994. All major plant systems are in operation, but some additional design may be required for the four systems identified below.

1. Waste Water Treatment Facility

Under current conditions, i.e. cooler ambient temperatures, the waste water treatment facility has been aligned to bypass the reverse osmosis units and to use both evaporators to support full plant load. To address long term summer operations, however, the following system enhancements are planned:

1. Zero waste water discharge - adding a nano-filtration system to help remove organic material upstream of the reverse osmosis system and routing incoming waste water through the holdup tank to increase residence time for additives to break down organic material.
2. The crystallizer system, an integral part of the cooling water salt removal process, commenced operation in January. The nano-filtration system will remove the accumulated organic material before it reaches the crystallizer. Until this modification is installed, the crystallizer system will continue to experience upsets which result in a wet paste product being produced instead of the expected dry salt cake.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

2. Boiler Water Makeup System

Because of changes in the initial steam/water balance design for the cogeneration process, modifications to the boiler water makeup system are required. These modifications include:

1. An engineering evaluation of the installation of a regenerative heat exchanger and a condensate water purifying system to handle increased flow and temperature in the return water which is also not of adequate quality for use in the Cedar Bay high pressure boilers.

2. Preparations for the installation of a reverse osmosis system to restore demineralizer inlet water quality to design specifications and, thereby, restore some demineralizer system capacity. Due to increased steam supply to the cogeneration process, additional demineralizer capacity, beyond the initial design, is required. Modifications to the installed demineralizer system components are planned to provide the required capacity.

As the engineering specifications for these system enhancements become available, they will be submitted to your office.

3. Fiber Waste Handling System

Construction of the fiber waste handling system is complete. Final mechanical and electrical construction work is complete and operation of the system is targeted for the second quarter of 1994.

4. Ash Handling, Pelletizing and Storage

- A. Overview*

As addressed in prior correspondence with the DEP and meetings with officials from the Jacksonville Regulatory and Environmental Services Division (RESO), pellet agglomeration, believed to be caused from excess moisture in the curing silos, has prevented reliable, continuous operation of the ash pelletizing system. As a result, Cedar Bay requested authorization during this quarter to address this malfunction with alternative processes for the ash handling system.

Three approaches to reducing agglomeration are being explored:

1. Insulating the perimeter of the curing silos.
2. Adding heated air to the top portion of the silos.
3. Installing a pellet recirculation elevator.

Use of the aforementioned approaches and replacement of the existing pellet screens with harp screens, which are more effective against blinding, are expected to rectify the problems associated with the operation of the ash pelletizing system. If none of these systems is demonstrated to resolve the challenges with the pelletizer, Cedar Bay will file with the DEP a plan for abandoning the pelletizer and for implementing an alternative ash handling system by October 1994.

All of this activity culminated in our meeting with Mr. Richard Robinson and Mr. Ronald Roberson of RESD and with the City of Jacksonville, Florida's Air Committee of the Environmental Protection Board on April 20, 1994. Based on all that has transpired, it appears that Cedar Bay has developed a workable plan to bring the pelletizer back into reliable service or to find another means for handling and disposing of ash that is consistent with Cedar Bay's site certification and DEP's subsequent authorizations.

B. The Initial Plan for Ash Handling

It was anticipated that ash produced from the operation of the CFBs at Cedar Bay would typically be handled as follows: Fly ash would be collected in the fly ash silo and bed ash would be collected in the bed ash silo. These silos are sized to store ash from 72 hours of operation. From these two silos, ash would be conveyed to the pelletizer. In the pelletizer, the ash would be processed to create pellets, which would be conveyed to the curing silo. After curing for about 12 hours in order to reach a strength of 1250 pounds per square inch, pellets would be removed from the bottom of the curing silo by means of a conveyor for loading onto rail cars for transport to the disposal site in Kentucky.

In recognition of the problems that can occur in the pelletizing and curing process, Cedar Bay was designed to permit alternative methods of ash handling. Each ash silo contains built-in, telescoping download chutes with pollution control for both truck and rail car loading. Should a major malfunction in the equipment downstream from the fly and bed ash silos occur, dry ash could be unloaded directly from the silos, bypassing the pelletizer. Should a malfunction occur in or after the pelletizer, pellets meeting the hardness specification, pellets not meeting the hardness specification, agglomerated material, and any fine material carried over could be placed on the lined pellet storage area between the pelletizer and the curing silos. From this storage area:

1. Specification pellets could be recycled back to the curing silo once the malfunction was corrected or could be disposed of by rail consistent with the standard handling process.
2. Non-specification pellets, the agglomerated material, and any fine material could be moved by front-end loaders to rail cars as soon as possible for disposal in West Virginia.

C. The Problems with the Ash Handling System

The problems that Cedar Bay has experienced with the pelletizer can be summarized as follows:

1. The ash feed system suffered from incorrect initial control settings, a gear box failure, improper sealing of the hydrator discharge doors and feed valves and seizing of the rotors.
2. Ash transport within pelletizer was impeded by plugging.
3. Formation of pellets was impaired by damaged scrapper pan, insufficient compressed air, misaligned conveyors, incomplete clinker removal, malfunctioning level indicators, variable speed distribution failure, and shaker screen blinding.
4. As a result, the movement of pellets through the pelletizer and to the curing silos was restricted.
5. With this restriction on mass flow, the ash silos began to reach capacity and curing silos began to fill up with agglomerated material, non-specification pellets, fine material, as well as specification pellets.
6. In addition to threatening continued operation of Cedar Bay, the growing amount of material in the curing silos precluded troubleshooting the problem.

Figure 1 shows the time trend of the pelletizer's performance. Despite intermittent operation, 232 cars of pelletized ash have been removed from Cedar Bay through April 12, for disposal in Kentucky.

D. The Response to this Malfunction

In addition to timely notice to the DEP, the first response to this malfunction was the development of a remedial plan and the request for permission to pursue it.

1. Interactions with DEP and RESD - Interactions with DEP and RESD have been accomplished by calls, correspondence, meetings, and inspections of the facility. The correspondence includes the following:
 - a. December 9, 1993 letter from Barrett Parker, Cedar Bay Generating Company to Hamilton S. Oven, Florida Department of Environmental Protection.
 - b. December 10, 1993 letter from Mr. Oven to Mr. Parker.
 - c. January 19, 1994 letter from Mr. Parker to Mr. Oven.
 - d. January 21, 1994 letter from Mr. Oven to Mr. Parker.

- e. March 7, 1994 letter from Mr. Parker to Mr. Oven.
- f. March 10, 1994 letter from Mr. Oven to Mr. Parker.
- g. April 7, 1994 letter from Mr. Parker to Mr. Oven.
- h. April 13, 1994 letter from Mr. Oven to Mr. Parker.
- i. April 15, 1994 letter from Mr. Parker to Mr. Oven.

On December 14, 1993, and March 29, 1994, representatives of RESD conducted site visits to Cedar Bay. During these visits, these gentlemen saw, among other things, the ash pelletization system, the alternative ash removal process, and the mound of ash being stored in the lined area.

2. Cedar Bay's Technological Response

Cedar Bay's response to the pelletizer malfunction has involved three processes. First, the pelletizer has been bypassed for certain periods, and the alternative ash removal procedure used to load as-produced ash directly into rail cars from these silos.

As you are aware, this non-pelletized ash has been sent to West Virginia for disposal. To minimize fugitive dust from the transportation of the non-pelletized ash, Cedar Bay has (a) selected open top rail hopper cars that have determined to be sealable, (b) sealed them, (c) covered these cars during the fill operation, and (d) added water and a crusting agent to seal the top of filled cars. Our December 1993 inspection confirmed that there are no visible emissions from these cars. Since this process was initiated, Cedar Bay has acquired a fiberglass top to replace tarpaulin initially used to cover the rail cars. A total of 310 rail cars of non-pelletized ash shipped through 4/11.

Second, when the curing silos became clogged, the silos were emptied. Initially, the agglomerated material, fines, and pellets were deposited adjacent to the silos, both on and off the lined storage area. Barriers were erected to direct stormwater runoff from this area to the lined storage pond. Although results from TCLP testing demonstrated that these materials were not hazardous, efforts were initiated to work around the clock either to remove these materials for off-site disposal or to move them onto the lined ash storage area. Upon removal of the pile not above the lined storage area, two feet of fill was removed and replaced with limerock. At present, a mound of these ash materials remains in the lined storage area. These materials should be completely removed by May 14. Cured pellets are being recirculated in system and/or sent to Kentucky via rail car. The fine material will be recycled or loaded onto rail cars by front end loaders together with off specification pellets and

agglomerated material for disposal in West Virginia. During this period, emissions from the pelletizer and curing silos have been reduced because they have been utilized less, while emissions from surface storage and handling operations have increased because more of both were required to troubleshoot the pelletization process and dispose of the surface-stored ash materials. Even so, consistent with guidance from Mr. Roberson of RESD and good engineering practice in the absence of any specific guidance, emissions from these processes were minimized with surface coatings and/or spraying, as appropriate. Cedar Bay has also covered the mound with an open-weave mesh.

Finally, and in the meantime, Cedar Bay has been troubleshooting the system and redesigning it, as appropriate. Cedar Bay believes that pellet agglomeration has been caused by excess moisture and has begun testing to determine whether heated air, silo insulation, and increased movement can control the agglomeration. In light of its findings, Cedar Bay has made these improvements in the ash pelletizer to date:

- a. Modified the fly ash feed control
- b. Modified the transport blowers
- c. Replaced the bed ash feed base plates
- d. Modified the bed ash feed rotors
- e. Modified the bed ash feed hydrator discharge doors
- f. Replaced a pelletizing plan system scraper plate
- g. Aligned the pellet handling conveyor belts
- h. Modified the pellet loadout screens
- i. Redesigned the pellet recycle conveyor drag chutework

Given this work, the pelletizer problems appear to be resolved.

Cedar Bay has also initiated the following improvements to the curing silo:

- a. Install curing silo insulation
- b. Install harp screen and fabricate enclosure
- c. Install recirculation bucket elevator and tie-ins

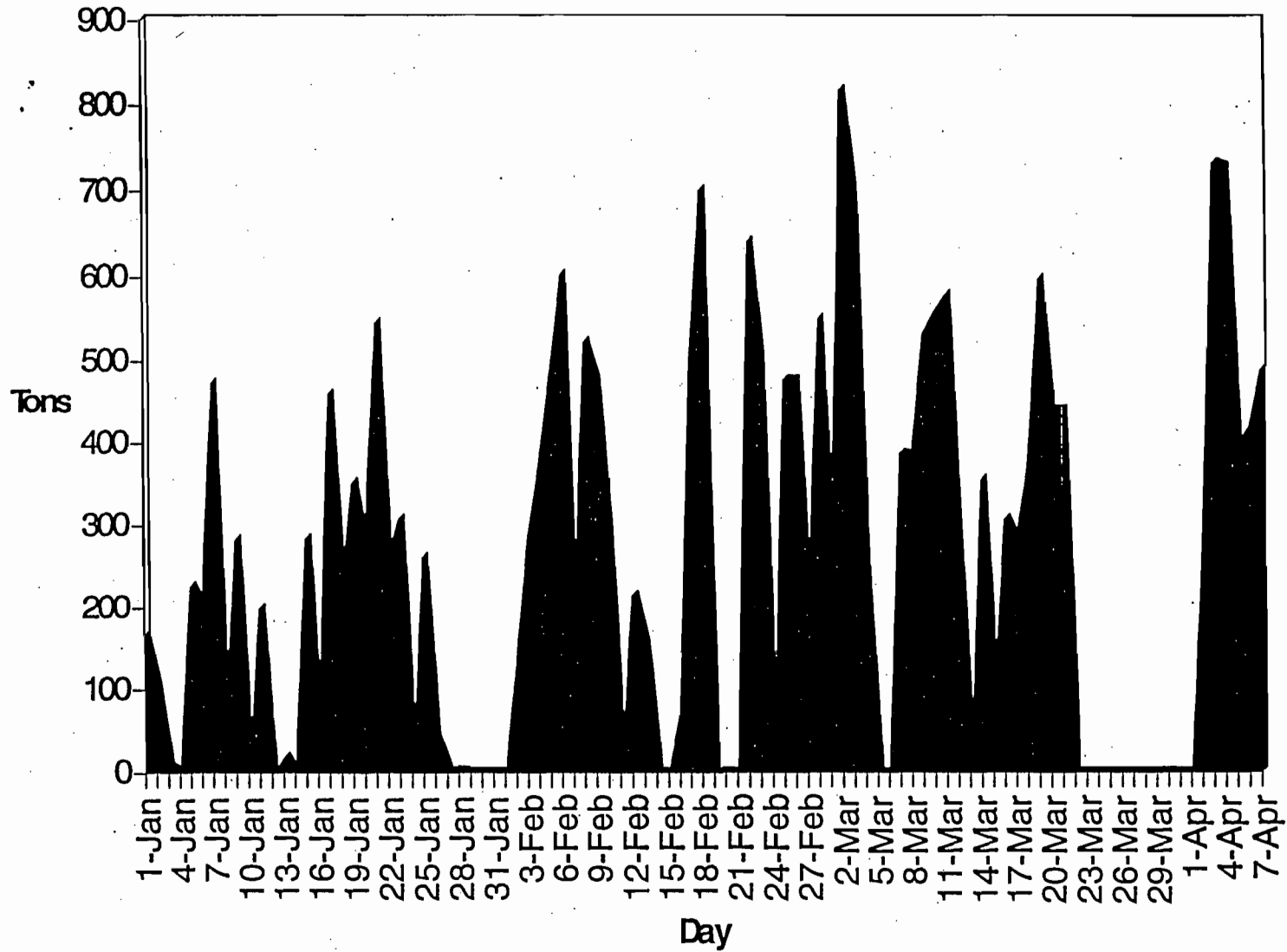
- d. Modify diverters and chutework
- e. Install hydrated bed ash/recycle surge hopper
- f. Modify and relocate pan dust collector control panel

If these measures prove to be an effective and reliable solution to the problem of pellet agglomeration, Cedar Bay will prepare and submit a proposal for permanent installation. Of course, Cedar Bay would need authorization to continue using the temporary fixes while its proposal is being reviewed.

In the event that these steps are not successful, Cedar Bay will prepare and obtain approval for other modifications and/or will investigate other ash removal options. It may be that Cedar Bay will have to rely on ash removal by way of pressure differential (PD) rail cars and to abandon the ash pelletization system. In such a case, Cedar Bay would prepare and submit a proposal for employing this option.

In any event, a long-term proposal will be filed by October 1, 1994.

Pelletizer Productivity



DRAFT OUTLINE FOR MODIFICATION TO
THE CEDAR BAY GENERATING COMPANY'S
CONDITIONS OF CERTIFICATION

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Draft

09/17/94

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1.0 INTRODUCTION

Cedar Bay Generating Company ("CBGC") owns and operates the Cedar Bay Cogeneration Project ("CBCP") located in Jacksonville, Florida. The cogeneration facility generates approximately 250 megawatts ("MW") of steam electric power plus 380,000 pounds per hour of steam (for the host facility) using coal as the primary fuel. The facility is co-located with the Seminole Kraft Paper Mill (the cogeneration steam host) at the end of a peninsula that is bounded to the west by the Broward River, to the east by Dunn Creek, and to the south by the St. Johns River. All state, regional, and local environmental approvals for the cogeneration facility are incorporated under the State of Florida's Site Certification Approval ("SCA") Order for the CBCP (PA 88-24).

CBGC is seeking to modify the Conditions of Certification ("Conditions") for the CBCP pursuant to condition XXI *Modification of Conditions* and Section 403.516 (1)(b) Florida Statutes (F.S.) for revisions to the ash handling system, CFB maximum heat input language, and material handling and treatment source identification language. The other proposed revisions contained in this document - specifically, those concerning the ash pelletizing, demineralizer, and zero discharge systems - are amendments, not modifications, since their implementation could occur without requiring changes to the Conditions.

Note: Only the specific revisions being requested for the ash handling system are described in this draft document. The final version of this document submitted to your office for review will contain these and the other requested revisions.

2.0 REVISIONS TO ASH SYSTEM

CBGC is seeking to revise the existing ash system at the CBCP to provide additional flexibility for onsite ash handling and removal. These revisions include adding the ability to load and remove ash in dry form from the site in sealed rail cars or sealed trucks. Another option under consideration is the installation of an aggregate production process that would produce ash aggregate that could be removed in open-topped hopper rail cars for final reuse or disposal. The proposed revisions to the ash system will not increase overall particulate matter emissions from the CBCP.

2.1 ASH HANDLING SYSTEM

2.1.1 DESCRIPTION OF EXISTING ASH HANDLING SYSTEM

Combustion byproducts generated by the CBCP consist of fly ash and bed ash which are collected on site for temporary storage prior to removal. A portion of the fly ash can be reinjected into the combustion units for improved combustion efficiency while a portion of the bed ash can be reinjected into the combustion units when required for startup.

The existing ash handling system at the CBCP is presented in Figures 2-1 and 2-2. The maximum permitted handling rates in tons per year (tpy) for the system are 336,000 for fly ash and 88,000 tpy of bed ash.

Fly ash is collected in the fabric filters and pneumatically conveyed to the fly ash storage silo. This silo is equipped with fluidizing blowers with heaters to aid in the unloading of the fly ash silo to the pelletizing system. Mechanical ash conveyors transport bed ash from the boiler ash coolers to the bed ash storage

hopper. From the storage hopper, bed ash is pneuamtically conveyed to the bed ash silo.

The fly ash and bed ash silos are equipped with telescoping discharge chutes designed to loadout dry ash to rail cars or trucks. These telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Fly ash and bed ash are conveyed from the storage silos to the ash pelletizer receiving hoppers. Fly ash and bed ash are stored separately. The pelletizing process consists of mixing the ash with water to form pellets, which are then cured in silos. The fines or "recycles" from this process are transferred to the recycle surge hopper for processing into pellets. Cured pellets are discharged to the cured pellet storage and loadout pile or to the pellet loadout conveyor. Pellets from the loadout pile are transferred to the rail car conveyor via a front end loader. The conveyor discharges to the rail loadout surge hopper, emptying into a telescoping spout for filling rail cars, which are used to remove the pellets.

Wet suppression/removal techniques and baghouse controls are utilized throughout the pelletizing process to control fugitive dust emissions. Based on the use of these techniques and controls, CBGC's maximum annual emissions of particulate matter from the pelletizing system were determined through modelling to be 2.48 tpy (ENSR, 1993).

CBGC's ash pelletization system is designed to process all of the ash generated during combustion, and the Conditions reflect this design preference. Currently, fifty to eighty percent of the ash generated by the facility is able to be pelletized for removal. The

balance of the generated ash is removed in dry, bulk form in open-topped hopper rail cars in accordance with conditions provided in an alternative ash removal procedure granted under a temporary waiver to Condition IX of the SCA.

2.1.2 NEED FOR REVISION TO THE EXISTING ASH HANDLING SYSTEM

CBCP needs a reliable, long-term method to remove all ash. Since the ash pelletization system is currently unable to process all of the generated ash, alternative means of ash removal - including pelletization system improvements - should be evaluated. Implementation of the preferred alternative should ensure reliable operations of the CBCP.

In addition, the requested revisions are needed to increase the overall flexibility for the beneficial use of the ash in dry form, since many potential users do not have access to the rail system.

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The total capacity of ash does not change and equivalent emission controls are a condition of each option, therefore, no increase in emissions will occur.

2.1.3 ANALYSIS OF PROPOSED ALTERNATIVES

Of the alternatives considered for the ash handling system, four were found to be potentially acceptable. Two alternatives ash pelletizing and ash aggregation, are currently permitted by the Conditions. The two other alternatives considered are loading ash in a dry form into a sealed rail car or into a sealed truck. For the purposes of this discussion, "sealed" means rail cars or trucks that have tight-fitting doors or covers. Descriptions of the four alternatives considered are provided on the next page.

2.1.3.1 Ash Pelletizing

The ash pelletizing system has been designed to process all of CBGP's ash. However, the system has been currently operating at below maximum efficiency due to pellet agglomeration. CBGC continues to pursue additional measures that would reduce this agglomeration and allow the system to operate at full capacity. Proposed revisions to the pelletizing system are presented in Section 2.2.

2.1.3.2 Ash Aggregate

Ash aggregate is formed by mixing the fly ash and hydrated bed ash with water to form a slurry. The conditioned ash is compacted, cured and hardened to form aggregate. The aggregate is broken into large pieces, then crushed to the required size. The aggregate is then loaded into sealed, open-topped hopper car trains for transport offsite. Fines are screened and conveyed back into the ash processing system. Land requirements for production of ash aggregate are estimated at approximately 2.5 acres configured as a 280 X 400 area (see Figure 2-3). The ash aggregate processing would occur within an sealed, contained building to minimize potential fugitive dust emissions, and to prevent environmental impacts from leachate into groundwater, or surface water discharges. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. Proposed specifications by Reuse Technology, Inc. for the ash aggregate system are provided in Appendix A.

2.1.3.3 Dry Ash Loading in Sealed Rail Cars

The option of loading the ash in dry form into sealed rail cars can be accomplished without revision to the existing ash collection and handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the rail cars is currently in place.

The existing fly ash and bed ash silos are equipped with telescoping discharge chutes with negative air pressure collars to loadout ash to rail cars or trucks and control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos.

Under the temporary waiver to Condition IX of the Conditions, a portion of the dry ash is loaded into sealed, open-topped hopper rail cars using the telescoping chutes described above and transported offsite. Fugitive emissions are controlled during the loading process through the use of a temporary rail car cover, a negative air pressure collar that surrounds the telescoping chutes, and the bin vent filter in the ash storage silo. Fugitive emissions from the rail cars are minimized by sealing the rail car edges, holes, and doors, and through application of water and a crusting agent to the exposed surface.

CBGC proposes to improve this temporary loadout system by placing fixed covers in each silo. Covers would be mechanically lowered and raised onto rail cars, and the covers would contain an integrated water spray which would be employed after loading but before the covers were removed. This system will reduce the time and effort required to load each railcar and provide a more efficient method to control fugitive emissions. Also, this loadout procedure may prove suitable for permanent operation.

Three types of sealed rail cars have been considered for the transport of the dry ash offsite, and include:

- Pressure differential (PD) cars,
- Modified grain cars, and
- Modified coal cars that have been fitted with a cover and door mechanism.

The PD cars and grain cars would be of standard design, but would be supplied with tightly sealed loading and unloading doors to prevent the release of ash during transport from the site to the final disposal or reuse facility. The final design of the modified coal cars is currently ongoing. The basic design revision will consist of attaching a cover over the top of the coal cars to prevent losses of dry ash during transport. The cover will be constructed of ridged metal that will be attached to the top of the car and be equipped with one or more loading doors. The modified coal cars will also have tightly sealed loading and unloading doors.

Each of the modified rail car types will be designed to prevent particulate matter emissions, and each type will be filled using the same loading mechanism. This loading mechanism will consist of a telescoping discharge chute with a negative air pressure collar. An ash loading shroud, which surrounds the chute and encloses the chute and the rail car connection, will minimize fugitive emissions associated with the ash loading operations. Figure 2-4 provides a generalized diagram of an ash loading shroud. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.3.4 Dry Ash Loading in Sealed Trucks

The option of loading the ash in dry form into sealed trucks can be accomplished without revision to the existing ash collection and

handling systems at the CBCP. The loading facilities required for transferal of the dry ash to the trucks is currently in place. The existing fly ash and bed ash silos are each equipped with a telescoping discharge chute to facilitate ash loadout to rail cars or trucks. The telescoping chutes are equipped with a negative air pressure collar designed to control particulate matter emissions during loading operations. Recaptured particulate matter is recirculated back into the ash silos. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.4 DESCRIPTION OF PREFERRED OPTIONS

The preferred options for ash handling, storage and loading for the facility consist of varying combinations of all of the above alternatives. In summary, these preferred options consist of:

- Ash Pelletizing,
- Ash Aggregate,
- Dry Ash Loading by Sealed Rail Car, and
- Dry Ash Loading by Sealed Truck.

Utilizing combinations of the above options would significantly enhance flexibility in the ash handling system, thus providing the most efficient ash processing operations. Depending upon the equipment operational status and offsite transportation conditions, ash pellets, dry ash, and ash aggregate could be processed to meet the most efficient production and transport scenario. In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system.

2.1.5 ENVIRONMENTAL IMPACTS OF PREFERRED OPTIONS

2.1.5.1 Air

In all cases, the total combined emissions from each option and the pelletizer will be less than or equal to the allowable emissions from the pelletizer and the loading system. The ash aggregate processing will occur within an enclosed building, and any emissions would be controlled by the use of a bag house or other appropriate emission-control devices. Loading of dry ash into sealed trains or trucks will not increase emissions due to the use of control measures described in Sections 2.1.3.2 and 2.1.3. Operating controls for the ash pelletizing system are currently effectively utilized to control emissions.

2.1.5.2 Water

By increasing the options and flexibility in the ash handling and transport operations, ash product will be more efficiently processed and transported offsite. This enhanced efficiency will result in smaller quantities of ash being stored onsite for shorter time periods. Thus, there would be no additional impacts from leachate into groundwater or surface water discharges. The ash aggregate processing will occur within an enclosed, contained structure, thus eliminating any discharges to water.

2.1.5.3 Transportation

Coal bottom and fly ash from the CBCP will be transported offsite via the railroad system. KBN has evaluated potential traffic impacts from rail transportation of ash from the facility.

Coal ash will be transported either in pelletized form or dry, bulk form. It is estimated that approximately 2 trains per week, or a total of 60 rail cars will be required for transport of pelletized ash offsite during normal facility production. Trains transporting

coal into the facility can be utilized for transport of pelletized ash out of the facility. If in dry form, covered cars will be required to prevent losses of dry ash during transport. Approximately 3 covered-car trains per week, or a total of 105 rail cars will be required for dry ash transport. These estimated quantities are based on information provided by USGCO.

Traffic impacts have been evaluated utilizing a scenario of 1 90-car train trip per day, or approximately 3 trains per week (Kimley-Horn, 1993). This is a more rigorous evaluation scenario than the actual project of 1 train every three days for transportation of coal to the facility. Baseline train traffic at rail-highway crossings without the trains from the facility was projected at 6 train trips per day at selected crossings. With train traffic from the facility, 7 train trips per day were projected.

Based on evaluation of 1 90-car train trip per day, it was concluded that:

- The additional train traffic would be relatively small compared with existing train traffic.
- There would be no significant change in operations at any of the railroad crossings due to the increase of one train trip per day from the facility.
- Average vehicular delay would be minimal.
- At-grade crossing would operate at Level of Service "C", well within the City of Jacksonville standards.

Based on the above analysis, it is concluded that utilization of 2 trains per week (60 rail cars) for offsite transport of palletized ash, or 3 trains per week (105 rail cars) for transport of dry ash would have minimal impact to rail/roadway traffic, and would be within Level of Service standards required by the City of Jacksonville.

The truck transportation analysis is currently under review.

2.1.6 PROPOSED LANGUAGE FOR MODIFICATION TO CONDITIONS OF CERTIFICATION

The following modifications to existing condition of the certification number IX, regarding the transportation and disposal of fly ash and bottom ash at the CBCP are proposed.

IX SOLID WASTE STORAGE AND DISPOSAL

CBCP shall be responsible for arranging for the proper storage, handling, disposal, or reuse of any solid waste generated by the CBCP facility. Solid waste produced by the operation of the CBCP shall be removed from the site and disposed of in a permitted disposal facility, with the exception of bottom ash and fly ash. Bottom ash and fly ash will be ~~pelletized, or made into aggregate form, and either shipped back to the mine utilizing the trains to deliver the coal~~ or sold as an additive to concrete, or utilized by companies specializing in the marketing and utilization of combustion by-products. The bottom ash and fly ash shall not be disposed of in a landfill within Duvall County. If the CBCP decides to dispose of the bottom ash or fly ash by other than returning it to the mine site, they shall notify RESD and DEP.

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

Date: 13-Sep-1994 10:14am ES
From: Bruce Mitchell TAL
MITCHELL_B
Dept: Air Resources Manageme
Tel No: 904/488-1344
SUNCOM:

TO: Hamilton Buck Oven TAL (OVEN_H)
CC: Christopher Kirts JAX (KIRTS_C @ A1 @ JAX1)
CC: Mike Harley TAL (HARLEY_M)
CC: Richard Donelan TAL (DONELAN_R)

Subject: RE: Cedar Bay Compliance Testing

September 13, 1994

Dear all,

This is a response to the IM received August 15. I do not feel that the conclusion stated is totally correct. Condition B.4.a. clearly requires that each source be tested at least one-time only for demonstration of compliance. Condition B.9. also requires that each source in the material handling and treatment area be tested for demonstration of compliance. Based on the testing done, it appears that the company did not read and understand the permit/certification conditions nor did the company seek clarification on the requirements/conditions; in addition, they appear very clear to me and the testing did not comply with the requirements/conditions of the permit/certification. If the test results can be interpolated such that the emissions can be separated for each source (I would like to know how this can be done), then maybe the Department can accept the test results. However, I do not feel that this can be done and that the company has not demonstrated compliance with the requirements/conditions contained in the permit/certification.

If there are any questions, please give me a call or send me an E-mail.

Sincerely,

Bruce Mitchell
(904)488-1344
SC/278-1344
direct/(904)921-9506

9-12-94

*Moore said that he had given
this to Markle.*

Ra

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

Date: 15-Aug-1994 01:27pm EST
From: Christopher Kirts JAX
KIRTS_C@A1@JAX1
Dept: Northeast District Office
Tel No: 904/448-4310 Ext. 377
SUNCOM:

TO: Hamilton Buck Oven TAL (OVEN_H @ A1 @ DER)

CC: Howard Rhodes TAL (RHODES_H @ A1 @ DER)

CC: Ernie Frey JAX (FREY_E@A1@JAX1)

Subject: Cedar Bay Gen. Co., Boiler & Limestone Dryer Testing

In January and February, 1994, Cedar Bay (CBGC) conducted PM10 testing of Boilers 2 & 3, and Limestone Dryer 2, (B). In April, 1994 the Air Quality Division of Duval County requested the opportunity to initiate enforcement action against CBGC for what they believed were excess emissions. Following this request, it was determined that the Department would initiate enforcement, on this issue, if it was deemed necessary. Since this time the Northeast District NED Office has met with CBGC and at this time it appears that the apparent excess emission in relation to the Boilers may have been due to testing procedural problems. There is PM data that supports the contention that the Boilers were in fact in compliance and subsequent PM10 testing demonstrated compliance. Additional documentation is forthcoming from CBGC to NED.

While all of this previous presentation is of a compliance nature, this next paragraph will deal with a question of compliance as it may relate to an interpretation of the Site Certification and the Permit.

When CBGC tested the Limestone Dryer/Crusher they tested the emissions from the bag house, a point of control for the system as a whole. The test results were 0.0022 gr/dscf for both the dryer and crusher operating simultaneously while the allowable limit, as presented on page 8 of the 4/12/93 modified permit, is 0.003 gr/dscf. The 0.003 gr/dscf applies to the Limestone Pulverizer/Conveyer (Crusher), listed as a material handling and treatment area source. In reporting the test results, CBGC had taken 0.003 gr/dscf times the design flow and arrived at 1.26 lbs/hr for the Crusher and then added 0.24 lbs/hr, as listed on page 9 of the permit, as an "Estimated Limitation" for the Dryer. CBGC then went on to compare this composite value of 1.5 lbs/hr, for the entire system, to the test result of 0.76 lbs/hr (0.0022 gr/dscf). Duval County AQD has evaluated the test results in relation to what they (AQD), believe are the requirements for the Dryer, and not the system as a whole.

Now, here is where we get to the interpretation of permit

requirements. In reading pages 8,9, & 10 of the 4/12/93 modified permit the testing of the separate components is not required and it is the testing of the system as a whole as required in paragraph B. 9., page 10, as listed in paragraph B. 4. a. on page 8 and as stated at the end of this same paragraph.

We at NED believe that it is quite clear that CBGC has demonstrated compliance with our interpretation of the permit and we want to know if you read the permit the same way.

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

Date: 16-Aug-1994 10:58am EST
From: Hamilton Buck Oven TAL
OVEN_H
Dept: Office of Secretary
Tel No: 904/487-0472
SUNCOM: Room 953-A

TO: Christopher Kirts JAX (KIRTS_C @ A1 @ JAX1)
TO: Bruce Mitchell TAL (MITCHELL_B)
TO: Mike Harley TAL (HARLEY_M)
CC: Richard Donelan TAL (DONELAN_R)

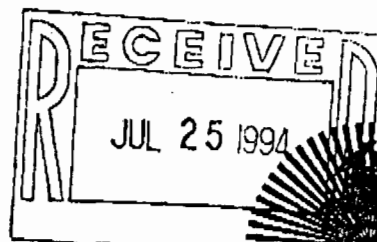
Subject: Cedar Bay Compliance Testing

Chris, - I think your interpretation is correct. By copy of this message, I am asking Bruce & Mike to review and to comment.

**REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT**

Air Quality Division

July 22, 1994



Mr. Barrett Parker
Environmental Specialist
Cedar Bay Generating Company (CBGC)
7500 Old Georgetown Road
Bethesda, MD 20814-6161

RECEIVED**AUG 15 1994****Bureau of
Air Regulation**

**Re: Percent SO₂ Reduction Report
No. 1 - No. 3 CFB Boilers
Permit No. PSD-FL-137A
1st Quarter, 1994**

Dear Mr. Parker:

This is to acknowledge receipt and acceptance of the above captioned test report, submitted July 14, 1994.

CBGC has fulfilled the requirements of SO₂ percent reduction, as measured on a 30-day rolling average basis, for all 3 of the above listed sources.

The Air Quality Division (AQD) concurs with CBGC's plan to submit this data with all future quarterly emissions reports.

If there are any questions concerning this matter, please contact Mr. Wayne Walker at (904) 630-3484.

Very truly yours,

A handwritten signature in cursive script that reads "Wayne E. Tutt".

Wayne E. Tutt
Associate Engineer

WET/WWL/ecr

c: AQD File 1065-B
Mr. Kevin Grant, USOSC



421 West Church Street - Suite 412
Jacksonville, Florida 32202-4111

Area Code 904/630-3484



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 2, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Generating Company
7500 Old Georgetown Road
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Coal Sampling and Analysis Requirements

The Department has reviewed Mr. Robert S. Pace's letter to Mr. Buck Oven dated July 6, 1994, which addressed a proposal by Cedar Bay Generating Company on coal sampling and analysis. Based on this letter and a review of the requirements pursuant to 40 CFR 60, Subpart Da, the following points are pertinent:

o Subsection 60.43a(a)(2) says that the owner of an affected facility shall not discharge gases which contain sulfur dioxide in excess of: "30 percent of the potential combustion concentration (70 percent reduction) when emissions are less than 260 ng/J (0.6 lb./million Btu) heat input." The fact that the requirements of the federal NSPS applies to the Cedar Bay facility is obvious from the keywords "when emissions are less than . . ."

o 40 CFR 60.45a [Commercial Demonstration Permits] provides evidence that the EPA intended for the reduction requirements to be applicable to circulating fluidized bed boilers. Subsection 60.45a(c) requires circulating fluidized bed units permitted as commercial demonstration units to achieve emissions of less than 1.2 lb./MMBtu and an 85% reduction in potential combustion concentrations. Under the commercial demonstration provisions, affected units must achieve at least 85% reduction regardless of the lb./MMBtu achieved.

o The provisions of 40 CFR 60.47a(b)(3) allow the owner to use an "as fired" fuel monitoring system to determine sulfur dioxide concentrations prior to control. 40 CFR 60.46a(e) states, "After the initial performance test . . . compliance with the sulfur dioxide emission limitations and percentage reduction requirements . . . is based on the average emission rate for 30 boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for sulfur dioxide . . . and a new percent reduction for sulfur dioxide are calculated

Mr. Kent L. Fickett
Letter regarding coal sampling and analysis
August 2, 1994
Page 2

to show compliance with the standards." Based on 40 CFR 60.46a, the sulfur content of the fuel is to be determined on a daily basis when an "as fired" fuel monitoring system is used. 40 CFR 60.46a(g) states, ". . . Compliance with the percentage reduction requirement for SO₂ is determined based on the average inlet and average outlet rates for the 30 successive boiler operating days."

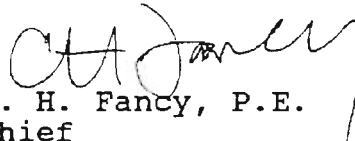
o Pursuant to 40 CFR 60.49a(b)(3), each quarterly report is required to include the percent reduction of potential sulfur concentrations.

The company's failure to provide the required information is a reportable violation of the federal NSPS and would be a potential case for an enforcement action.

The proposal to alter the fuel sampling schedule requires both federal and state approval. It would probably require a variance at the state level pursuant to Chapter 403, F.S. The proposal to switch from the analysis of a daily fuel sample to the analysis of a weekly composite fuel sample may be inappropriate. Analysis of a weekly composite may artificially dampen or flatten variations indicative of noncompliance. Considering the variability of the sulfur content in solids, it may not be appropriate to grant the request.

If there are any questions, please call Mr. Bruce Mitchell or Mr. Mike Harley at (904)488-1344 or write to me at the above address.

Sincerely,



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

CHF/BM/rbm

Enclosures

cc: B. Oven, DEP
J. Brown, DEP
R. Donelan, Esq., DEP
B. Parker, USGC


R. Pace, RESD
M. Harley, DEP
J. Braswell, Esq., DEP

Florida Department of
Environmental Protection

Memorandum

TO: Bruce Mitchell

DATE: July 13, 1994

FROM: Buck Oven 

SUBJECT: Cedar Bay Generating Company (CBGC)
Coal Sampling and Analyses

Please review the enclosed material and respond directly to the Regulatory & Environmental Services Department. Also, please send Barrett Parker with U.S. Generating Company, 7500 Old Georgetown Road #1300, Bethesda, MD 20814 and myself a copy of your response. If you have any questions you may contact me at 487-0472. Thank you very much.

DEPARTMENT OF
ENVIRONMENTAL PROTECTION

JUL 06 1994

SITING COORDINATION



REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT
Air Quality Division

July 5, 1994

Mr. Hamilton S. Oven, P.E., Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**RE: Cedar Bay Generating Company (CBGC)
Coal Sampling and Analyses**

Dear Mr. Oven:

Jacksonville's Air Quality Division (AQD) has reviewed a proposal by CBGC addressed to Mr. Mort Benjamin of the Florida Department of Environmental Protection (FDEP), Northeast District, to conduct weekly analyses of coal sulfur content and BTu values. AQD has also recently completed its review of the CBGC quarterly Excess Emissions Report (EER) for the first quarter of 1994.

It is noted that CBGC did not report data showing the thirty (30) day rolling average percent sulfur reduction. AQD is accustomed to seeing this information as part of the quarterly EER from the St. Johns River Power Park which is also a NSPS Subpart Da source. This is because the CEMs data is used to demonstrate compliance in Da sources.

In their letter of June 7, 1994 to Mr. Richard Robinson, P.E., of this office (copy enclosed), CBGC categorically states that "Cedar Bay does not need to determine potential SO₂ emissions (from coal analyses) for percent SO₂ reduction calculations. Cedar Bay's permit applies more strict limits on SO₂ emissions than Subpart Da rules which require only a 70% reduction in potential SO₂ emissions averaged over a 30-day period".

AQD disagrees with that analysis. Section 60.43a CFR prohibits the discharge of any gases which contain SO₂ in excess of "(2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/v (0.60 lb/million BTu) heat input". CBGC does have an SO₂ emission limit less than the 1.20 lbs./million BTu heat input required by Subpart Da. Nevertheless, AQD interprets S. 60.43a to mean that the minimum 70% SO₂ reduction is an independent requirement that applies no matter how low the actual SO₂ emission limit is set. The very language of S. 60.43a(2) states "...when emissions are less than 260 ng/v (0.60 lbs./million BTu) heat input".



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Mr. Hamilton S. Oven, P.E.

Page 2

July 5, 1994

In addition, AQD anticipated possible later debate about the applicability of the percent SO₂ requirement during the certification process and sought, unsuccessfully, to have this requirement explicitly stated in the conditions of certification. Enclosed is a copy of AQD's comments, dated September 21, 1992, addressing this issue. These comments were provided to CBGC and to FDEP. Also attached is the CBGC "Response to City of Jacksonville Regulatory and Environmental Services Department (RESO) Memorandum of September 21, 1992, regarding Air and Water Issues". In Section A.3., CBGC states "We will also determine the sulfur content of the coal on a daily basis. This in turn will be used with the data produced by the CEM system to calculate a percent reduction for that day. Each day, the 30-day rolling average will be recalculated by the CEM data management system".

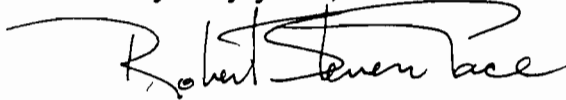
In conclusion, AQD believes that:

1. The NSPS requirement to demonstrate a minimum 70% SO₂ reduction applies, regardless of how low the SO₂ emission limit is set;
2. Cedar Bay was put on notice of this requirement during the Site Certification proceedings; and
3. Cedar Bay acknowledged in writing that they would calculate and report this information on a 30-day rolling average basis.

Please review this matter and advise AQD as to FDEP's position concerning the applicability of the SO₂ percent reduction requirement to CBGC. If you agree that the requirement applies to CBGC, please advise AQD of the preferred course of action to address the failure of CBGC to thus far report this information.

Your assistance in this matter will be appreciated. If you wish to discuss this issue, please contact me or Mr. Wayne Tutt at (904) 630-3484.

Very truly yours,



Robert S. Pace, P.E., Chief
Air Quality Division

RSP/WT/sa

Attachments

c: Mr. Chris Kirts, P.E., FDEP, NED
Mr. Kevin Grant, CBGC
Ms. Dana Brown, AQD
Mr. Wayne Walker, AQD
AQD File 1065

June 7, 1994

Mr. Richard Robinson, P.E.
Air Quality Division
RESD
Towncentre, Suite 412

Dear Mr. Robinson:

As we discussed today, I am sending an informal summary of our coal data FYI.

Permit Requirements

Cedar Bay does not need to determine potential SO₂ emissions (from coal analyses) for percent SO₂ reduction calculations. Cedar Bay's permit applies more strict limits on SO₂ emissions than Subpart Da rules which require only a 70 % reduction in potential SO₂ emissions averaged over a 30 day period. Moreover, the rule purports that analyses of coal sulfur is necessary for emission calculations, where as, coal sulfur is not a factor in calculation of Cedar Bay permitted emissions.

Coal Data

As explained in the attached discussion paper, characterization of Cedar Bay coal to date demonstrates that weekly analyses of daily composite samples is representative of "as fired" coal. EPA rules do provide for coal sampling periods far beyond one day for lots of "as bunkered coal" on the presumption of the bunker being representative of as fired coal (although the facility doesn't bunker coal shipments, coal is taken from the same lot on most occasions).

As noted in the discussion paper, the characterization of 74 daily consecutive coal samples shows that the analyses of weekly composite samples, as compared to the daily analyses would have insignificant impact on the reporting of SO₂ emissions, contributing less than ± 0.01 lbs./MBtu error to daily emission calculations (the average error would be less than .005 lbs./MBtu/day). It should also be noted that the calculation of SO₂ emissions in pounds will not be effected by the number or frequency of coal samples collected or our weekly analyses plan.

Respectfully,



Kevin Grant, C.E.P., R.E.M.

NOV. 6th

RESPONSE TO CITY OF JACKSONVILLE REGULATORY AND ENVIRONMENTAL SERVICES DEPARTMENT (RES D) MEMORANDUM OF SEPTEMBER 21, 1992 RE: AIR AND WATER ISSUES

A. Air Issues - Paragraph A of July 22, 1992 RESD Memorandum

1. Method For Testing Coal Sulfur Content In Unit Train Deliveries

Air Permit No. AC PSD-FL-137 specifies in Specific Condition C.6 and the Conditions of Certification specify in Condition II.^C.6. that "Coal sulfur content shall be determined and recorded in accordance with 40 CFR 60.47a," which refers to Method 19. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the coal.

2. Method For Testing Sulfur Content of No. 2 Fuel Oil

Although the air permit does not specify a test method, it does require that samples be taken of each fuel oil shipment and that sulfur content and heating value be determined. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the samples.

3. Specification of Averaging Periods and CEM Data Use For Compliance Demonstration

Sulfur Dioxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, we will determine SO₂ on a short term basis (i.e. 3 hour average) by the CEMs and by the annual compliance test. The CEM system samples the flue gas every few minutes and will calculate the average SO₂ emitted over the averaging time specified, in this case 3

(3 ln.)

hours. On a long term basis (30 day and 12 month rolling averages), we will use the CEMs and coal sampling data. We will also determine the sulfur content of the coal on a daily basis. This in turn will be used with the data produced by the CEM system to calculate a percent reduction for that day. Each day, the 30 day rolling average will be recalculated by the CEM data management system. In order to calculate a 12 month rolling average, the Cedar Bay Cogeneration Project will have to start with monthly block averages and then calculate the first true "rolling average" in the 13th month of operation.

We do not agree that any future misunderstanding could result from not repeating the requirements of the NSPS. We are aware of the requirements of the NSPS and will comply fully.

Nitrogen Oxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, CEMs will be used to monitor NO_x continuously and determine compliance with the allowable emissions rate on a 30-day rolling average.

In order to comply with the NSPS requirement to determine a 30 day rolling average, NO_x emissions data from the CEM will be combined into a 24 hour average. The 30 day rolling average will be determined from the daily NO_x emissions. The 24 hour average will be determined from 24 one hour averages produced by the CEM system. This is consistent with Specific Condition A.8.e. of the Air Permit and Condition II.A.8.e. of the Conditions of Certification that "gaseous CEM data shall be reduced to 1-hour averages..."

Carbon Monoxide

Although there is no NSPS requirement for CO, we will handle the data and compliance reporting as described above for NO_x.

B. Air Issues - Paragraph B of July 22, 1992 RESD Memorandum

1. (a) Support Documentation For Modified Emissions

The Cedar Bay Cogeneration Facility Air Quality Analysis (November 1992) being prepared by ENSR Consulting and Engineering for the Cedar Bay cogeneration facility will provide the requested information pertaining to the air quality impacts resulting from modification of the facility's emissions. A draft copy of Sections 1 through 3 of the referenced report is being provided with this submittal. Information pertaining to the mechanisms and control technologies by which these emission modifications will be achieved will be presented in the Air Emission Control Review currently being prepared by ENSR.

(b) Air Quality Modeling Submittal

The Cedar Bay Cogeneration Facility Air Quality Analysis will document the modeling conducted of the Cedar Bay operational impacts for combustion sources during normal full power operation. To facilitate the AOD's review of the air quality modeling, computer discs of the analyses conducted will be provided by ENSR. ENSR has been directed by the Cedar Bay Cogeneration Project to work closely with the AOD's scientists during their technical review of Cedar Bay's air impacts.

2. NO_x Emission Rate Backup

An Air Emissions Control Review Report being prepared by ENSR will present data on the NO_x emission rate for other cogeneration plants. The emission data base in the Air Emissions

DEPARTMENT OF REGULATORY &
ENVIRONMENTAL SERVICES
Office Of The Director



M E M O R A N D U M

DATE: September 21, 1992

TO: Mr. Greg Radlinski, Esq.
Chief Environmental Law Division
Office of General Counsel

FROM: Alton W. Yates, Director
Regulatory and Environmental Services Department (RESD)

RE: AES Response Dated August 27, 1992

In general RESD feels that the response of August 27, 1992 was not adequate. RESD has reformulated many of its previous questions in an effort to better communicate what *informatics* is being sought.

INFORMATION

The following RESD questions follow the same order as presented in RESD's memo of July 22, 1992.

Air Issues:

Paragraph A:

1. AES indicates that each train load of coal will be tested for sulfur content, but does not indicate by what method. The main point of the original AQD comment was to specify a test method. Does AES stipulate that EPA Reference Method 19, Section 5.2.1, 40 CFR 60, Appendix A, is appropriate, and should be specified in the conditions of certification?
2. Again, AES has not stipulated to a specific test method, nor agreed that the method should be specified in the conditions of certification.
3. AES states that it will be "capable" of demonstrating compliance with 12 month and 30 day rolling averages for SO₂, NO_x, and CO, and with the 3 hour average for SO₂. This is good to know, but AQD's main point in its comments was that these averaging periods be specified in the conditions of certification, along with a more explicit declaration that CEMs data will be used to demonstrate compliance with all of these emission limits. AES should stipulate to such clarifying language in the conditions of certification.



The 70% minimum reduction requirement for SO₂ has not been specified, except by reference to 40 CFR Part 60, Subpart Da. Compliance with maximum sulfur content of coal, and with maximum stack emission limits does not guarantee at least 70% SO₂ reduction. Section II C.6, conditions of certification, requires that "coal fired in the CFBs shall have a sulfur content not to exceed 3.3 percent by weight." There is no minimum sulfur content of coal, i.e., the sulfur content can be as low as possible. Subpart Da still requires a 70% reduction, regardless of how low the content of the coal. Also, there must be specified in the conditions of certification, a test method, as well as an averaging period. AES has not responded on this issue. 40 CFR 60, Subpart Da, requires a 30-day rolling average, and "as fired" fuel sampling and analysis pursuant to 40 CFR 60.47(a)(3). AES should stipulate to explicitly stating these requirements in the conditions of certification.

Paragraph B

1. AES has now stated that the means / calculations for reduction of their emissions has been supplied to the Department of Environmental Regulation (DER), and are available to AQD upon request. AQD herein formally requests the calculations, spreadsheets, computer disk, etc. that justify the proposed modifications reduction in emissions.

In view of AQD's past participation in the review proposed why wasn't the above data supplied to AQD, when it was provided to DER?

Further, to expedite future review the air quality modeling the AES has referred to, which will be supplied to DER at some future time, such should be submitted to AQD at the same time.

2. Please submit the data AES has developed at its other plants that AES is using to project 0.17 lb NO_x/MMBtu as achievable.
3. The AES air emissions projected in this segment of the response, are they reflected in the air quality modeling?
4. AES should submit to AQD the AES generated, and other mercury related data reflecting the subject emissions, and reductions achieved by the baghouse alone.
5. If the "short fiber rejects are a fuel component, then compliance testing must be within 180 days of start up, per NSPS. There are no known provisions to allow AES to simply change their fuel/operations without going through a "Modification", if they wish to add a fuel component after the initial compliance test.

6. AES may be confusing "recording" with "reporting" in their response. AQD foresees the requirement that fuel components be "recorded" on a hourly basis in order to compute with emission limitations. Hence the wording in the site certification must be changed to reflect "hourly" recorded usage.
7. It is AQD's understanding that a unit is "Operational" after conducting its initial compliance test, whether successful or not. This distinction must be recognized and incorporated into the site certification.
8. No further comment seems appropriate on this issue.
9. This was an observation by AQD and did not necessitate a response by AES

Water Issues:

1. Incomplete. Water Quality Division (WQD) did not receive "Exhibit 1" as referenced. Even though this particular document possibly refers to some document on file, it should be a part of the package.
2. WQD comments still apply.
3. WQD comments still apply.
4. Incomplete. AES did not answer the question! It appears that AES "intends" to apply for an NPDES permit per the last sentence in their response.
5. Incomplete. No information was submitted by AES for WQD review.
6. Incomplete. No information was submitted by AES for WQD review.
7. Incomplete. Condition III.A.9., Chemical Metal Cleaning, should be modified to provide reporting requirements of proper disposal for chemical cleaning wastes hauled off-site for disposal. The terminology "chemical cleaning" or "chemical metal cleaning" must be completely clarified. Disposal of all cleaning wastes, whether initial or normal operation, cleaning wastes, including rinses, in all areas of power unit (boiler, air heater, etc.) must be discussed in detail.
8. AESCB should clarify their response to this comment. AESCB states water treatment wastes will not be stored on site and no modification to any of the conditions regarding reporting

or sampling of solid wastes is sought. AESCB should explain how approximately 3 tons/day of pretreatment clarifier sludge and approximately 1.5 tons/day of potential precipitation clarifier sludge will be collected without being stored on site. The petition for modification of certification, dated July 7, 1992, page 25, Condition IX, Solid Waste Storage and Disposal, is clearly proposed for modification. The requirements stated in WQD's original comment #8 should be incorporated into this condition.

9. Complete.

10. AESCB has responded to RESD's request that land acquisition dollars be disbursed to the Jacksonville Environmental Land Acquisition Trust Fund with "no comment". RESD's position on the issue of where land acquisition dollars should be spent remains unchanged. The money should be spent within Duval County and the Jacksonville Environmental Land Acquisition Trust Fund is the preferred vehicle to accomplish this.

11. This is new comment concerning the water balance diagrams attached to the AES response. AESCB should explain why no AESCB stormwater flows were included in the diagrams.

If RESD can be of further assistance please advise.

Alton W. Yates

AWY/ecr

cc: Mr. Robert S. Pace, P.E., AQD
Mr. John K. Flowe, P.E., WQD
File 1065-A
File WQD AES



Department of Environmental Protection

Bruce's Copy

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

8-10-94

August 2, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Generating Company
7500 Old Georgetown Road
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Coal Sampling and Analysis Requirements

Part,
Please copy and mail-out (provide me w a copy, also).
9 copies
Hubs,
Bin

The Department has reviewed Mr. Robert S. Pace's letter to Mr. Buck Oven dated July 6, 1994, which addressed a proposal by Cedar Bay Generating Company on coal sampling and analysis. Based on this letter and a review of the requirements pursuant to 40 CFR 60, Subpart Da, the following points are pertinent:

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Mr. Kent L. Fickett
Letter regarding coal sampling and analysis
August 2, 1994
Page 2

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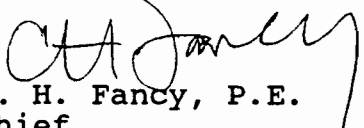
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If there are any questions, please call Mr. Bruce Mitchell or Mr. Mike Harley at (904)488-1344 or write to me at the above address.

Sincerely,


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

CHF/BM/rbm

Enclosures

cc: B. Oven, DEP
J. Brown, DEP
R. Donelan, Esq., DEP
B. Parker, USGC


R. Pace, RESD
M. Harley, DEP
J. Braswell, Esq., DEP

Florida Department of
Environmental Protection

Memorandum

TO: Bruce Mitchell

DATE: July 13, 1994

FROM: Buck Oven 

SUBJECT: Cedar Bay Generating Company (CBGC)
Coal Sampling and Analyses

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DEPARTMENT OF -
ENVIRONMENTAL PROTECTION

JUL 06 1994

SITING COORDINATION



REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT
Air Quality Division

July 5, 1994

Mr. Hamilton S. Oven, P.E., Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**RE: Cedar Bay Generating Company (CBGC)
Coal Sampling and Analyses**

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It is noted that CBGC did not report data showing the thirty (30) day rolling average percent sulfur reduction. AQD is accustomed to seeing this information as part of the quarterly EER from the St. Johns River Power Park which is also a NSPS Subpart Da source. This is because the CEMs data is used to demonstrate compliance in Da sources.

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AQD disagrees with that analysis. Section 60.43a CFR prohibits the discharge of any gases which contain SO₂ in excess of "(2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/v (0.60 lb/million BTu) heat input". CBGC does have an SO₂ emission limit less than the 1.20 lbs./million BTu heat input required by Subpart Da. Nevertheless, AQD interprets S. 60.43a to mean that the minimum 70% SO₂ reduction is an independent requirement that applies no matter how low the actual SO₂ emission limit is set. The very language of S. 60.43a(2) states "...when emissions are less than 260 ng/v (0.60 lbs./million BTu) heat input".



421 West Church Street - Suite 412
Jacksonville, Florida 32202-4111

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Mr. Hamilton S. Oven, P.E.

Page 2

July 5, 1994

In addition, AQD anticipated possible later debate about the applicability of the percent SO₂ requirement during the certification process and sought, unsuccessfully, to have this requirement explicitly stated in the conditions of certification. Enclosed is a copy of AQD's comments, dated September 21, 1992, addressing this issue. These comments were provided to CBGC and to FDEP. Also attached is the CBGC "Response to City of Jacksonville Regulatory and Environmental Services Department (RESO) Memorandum of September 21, 1992, regarding Air and Water Issues". In Section A.3., CBGC states "We will also determine the sulfur content of the coal on a daily basis. This in turn will be used with the data produced by the CEM system to calculate a percent reduction for that day. Each day, the 30-day rolling average will be recalculated by the CEM data management system".

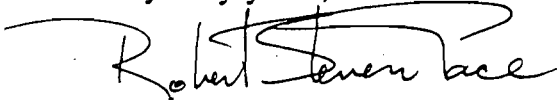
In conclusion, AQD believes that:

1. The NSPS requirement to demonstrate a minimum 70% SO₂ reduction applies, regardless of how low the SO₂ emission limit is set;
2. Cedar Bay was put on notice of this requirement during the Site Certification proceedings; and
3. Cedar Bay acknowledged in writing that they would calculate and report this information on a 30-day rolling average basis.

Please review this matter and advise AQD as to FDEP's position concerning the applicability of the SO₂ percent reduction requirement to CBGC. If you agree that the requirement applies to CBGC, please advise AQD of the preferred course of action to address the failure of CBGC to thus far report this information.

Your assistance in this matter will be appreciated. If you wish to discuss this issue, please contact me or Mr. Wayne Tutt at (904) 630-3484.

Very truly yours,



Robert S. Pace, P.E., Chief
Air Quality Division

RSP/WT/sa

Attachments

c: Mr. Chris Kirts, P.E., FDEP, NED
Mr. Kevin Grant, CBGC
Ms. Dana Brown, AQD
Mr. Wayne Walker, AQD
AQD File 1065

U. S. Operating Services Company
Cedar Bay Cogeneration Facility

June 7, 1994



Mr. Richard Robinson, P.E.
City of Jacksonville
RESD
Air Quality Division
Towncentre, Suite 412
421 W. Church St.
Jacksonville, FL 32202-4111

Dear Mr. Robinson:

As we discussed several weeks ago, the Cedar Bay facility has not yet implemented its plan to conduct coal analyses on a weekly basis. The plan is presented in the April 11 letter to Mr. Benjamin of the FDEP. We do however hope to implement this with the concurrence of the RESD in the near future. Currently, we are evaluating the applicable regulatory requirements of this alternative monitoring plan before implementation.

During the aforementioned discussion, I understood that you felt Cedar Bay was subject to 40 CFR Part 60 rules requiring SO2 reduction calculations and daily analyses of coal sulfur. These rules would require the facility to obtain approval from the EPA Regional Administrator to conduct alternative sampling, such as the sampling plan proposed in my letter to Mr. Benjamin. We believe that the proposed sampling and analyses method is governed by our permit, which is more strict than EPA rules (reference page 4, number 7 of the Conditions of Certification). Nevertheless, it may be prudent to seek the RA's approval of an alternative monitoring procedure, as you have suggested.

Weekly analyses of composite samples collected each day would provide more than \$20,000/year savings for Cedar Bay. The weekly analyses procedure would not significantly impact the 3-hour rolling average calculations of SO2 emissions, as calculated in lbs./MBtu. Additionally, the plan would have no impact on any permitted emission measurement made in pounds per unit time

Please contact me at your convenience if the RESD would like to discuss the coal monitoring protocol. Your time and consideration in this matter is appreciated.

Respectfully,

Kevin Grant. C.E.P., R.E.M.

cc: M. Benjamin, FDEP
F. Stallwood, Cedar Bay

June 7, 1994

Mr. Richard Robinson, P.E.
Air Quality Division
RESO
Towncentre, Suite 412

Dear Mr. Robinson:

As we discussed today, I am sending an informal summary of our coal data FYI.

Permit Requirements

Cedar Bay does not need to determine potential SO₂ emissions (from coal analyses) for percent SO₂ reduction calculations. Cedar Bay's permit applies more strict limits on SO₂ emissions than Subpart Da rules which require only a 70 % reduction in potential SO₂ emissions averaged over a 30 day period. Moreover, the rule purports that analyses of coal sulfur is necessary for emission calculations, where as, coal sulfur is not a factor in calculation of Cedar Bay permitted emissions.

Coal Data

As explained in the attached discussion paper, characterization of Cedar Bay coal to date demonstrates that weekly analyses of daily composite samples is representative of "as fired" coal. EPA rules do provide for coal sampling periods far beyond one day for lots of "as bunkered coal" on the presumption of the bunker being representative of as fired coal (although the facility doesn't bunker coal shipments, coal is taken from the same lot on most occasions).

As noted in the discussion paper, the characterization of 74 daily consecutive coal samples shows that the analyses of weekly composite samples, as compared to the daily analyses would have insignificant impact on the reporting of SO₂ emissions, contributing less than ± 0.01 lbs./MBtu error to daily emission calculations (the average error would be less than .005 lbs./MBtu/day). It should also be noted that the calculation of SO₂ emissions in pounds will not be effected by the number or frequency of coal samples collected or our weekly analyses plan.

Respectfully,



Kevin Grant, C.E.P., R.E.M.

NOV. 6

RESPONSE TO CITY OF JACKSONVILLE REGULATORY AND ENVIRONMENTAL SERVICES DEPARTMENT (RES D) MEMORANDUM OF SEPTEMBER 21, 1992 RE: AIR AND WATER ISSUES

A. Air Issues - Paragraph A of July 22, 1992 RES D Memorandum

1. Method For Testing Coal Sulfur Content In Unit Train Deliveries

Air Permit No. AC PSD-FL-137 specifies in Specific Condition C.6 and the Conditions of Certification specify in Condition II.6.6. that "Coal sulfur content shall be determined and recorded in accordance with 40 CFR 60.47a," which refers to Method 19. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the coal.

2. Method For Testing Sulfur Content of No. 2 Fuel Oil

Although the air permit does not specify a test method, it does require that samples be taken of each fuel oil shipment and that sulfur content and heating value be determined. The Cedar Bay Cogeneration Project will comply with state and federal requirements for assessing the sulfur content of the samples.

3. Specification of Averaging Periods and CEM Data Use For Compliance Demonstration

Sulfur Dioxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, we will determine SO2 on a short term basis (i.e. 3 hour average) by the CEMs and by the annual compliance test. The CEM system samples the flue gas every few minutes and will calculate the average SO2 emitted over the averaging time specified, in this case 3

(3. hr.)

hours. On a long term basis (30 day and 12 month rolling averages), we will use the CEMs and coal sampling data. We will also determine the sulfur content of the coal on a daily basis. This in turn will be used with the data produced by the CEM system to calculate a percent reduction for that day. Each day, the 30 day rolling average will be recalculated by the CEM data management system. In order to calculate a 12 month rolling average, the Cedar Bay Cogeneration Project will have to start with monthly block averages and then calculate the first true "rolling average" in the 13th month of operation.

We do not agree that any future misunderstanding could result from not repeating the requirements of the NSPS. We are aware of the requirements of the NSPS and will comply fully.

Nitrogen Oxide

The Cedar Bay Cogeneration Project will satisfy Specific Condition A.8. of the Air Permit and Condition II.A.8. of the Conditions of Certification requiring the use of CEMs for compliance. Specifically, CEMs will be used to monitor NO_x continuously and determine compliance with the allowable emissions rate on a 30-day rolling average.

In order to comply with the NSPS requirement to determine a 30 day rolling average, NO_x emissions data from the CEM will be combined into a 24 hour average. The 30 day rolling average will be determined from the daily NO_x emissions. The 24 hour average will be determined from 24 one hour averages produced by the CEM system. This is consistent with Specific Condition A.8.e. of the Air Permit and Condition II.A.8.e. of the Conditions of Certification that "gaseous CEM data shall be reduced to 1-hour averages..."

Carbon Monoxide

Although there is no NSPS requirement for CO, we will handle the data and compliance reporting as described above for NO_x.

B. Air Issues - Paragraph B of July 22, 1992 RESD Memorandum

1. (a) Support Documentation For Modified Emissions

The Cedar Bay Cogeneration Facility Air Quality Analysis (November 1992) being prepared by ENSR Consulting and Engineering for the Cedar Bay cogeneration facility will provide the requested information pertaining to the air quality impacts resulting from modification of the facility's emissions. A draft copy of Sections 1 through 3 of the referenced report is being provided with this submittal. Information pertaining to the mechanisms and control technologies by which these emission modifications will be achieved will be presented in the Air Emission Control Review currently being prepared by ENSR.

(b) Air Quality Modeling Submittal

The Cedar Bay Cogeneration Facility Air Quality Analysis will document the modeling conducted of the Cedar Bay operational impacts for combustion sources during normal full power operation. To facilitate the AOD's review of the air quality modeling, computer discs of the analyses conducted will be provided by ENSR. ENSR has been directed by the Cedar Bay Cogeneration Project to work closely with the AOD's scientists during their technical review of Cedar Bay's air impacts.

2. NO_x Emission Rate Backup

An Air Emissions Control Review Report being prepared by ENSR will present data on the NO_x emission rate for other cogeneration plants. The emission data base in the Air Emissions

DEPARTMENT OF REGULATORY &
ENVIRONMENTAL SERVICES
Office Of The Director



M E M O R A N D U M

DATE: September 21, 1992

TO: Mr. Greg Radlinski, Esq.
Chief Environmental Law Division
Office of General Counsel

FROM: Alton W. Yates, Director
Regulatory and Environmental Services Department (RES D)

RE: AES Response Dated August 27, 1992

In general RESD feels that the response of August 27, 1992 was not adequate. RESD has reformulated many of its previous questions in an effort to better communicate what *informatics* is being sought.

INFORMATION

The following RESD questions follow the same order as presented in RESD's memo of July 22, 1992.

Air Issues:

Paragraph A:

1. AES indicates that each train load of coal will be tested for sulfur content, but does not indicate by what method. The main point of the original AQD comment was to specify a test method. Does AES stipulate that EPA Reference Method 19, Section 5.2.1, 40 CFR 60, Appendix A, is appropriate, and should be specified in the conditions of certification?
2. Again, AES has not stipulated to a specific test method, nor agreed that the method should be specified in the conditions of certification.
3. AES states that it will be "capable" of demonstrating compliance with 12 month and 30 day rolling averages for SO₂, NO_x, and CO, and with the 3 hour average for SO₂. This is good to know, but AQD's main point in its comments was that these averaging periods be specified in the conditions of certification, along with a more explicit declaration that CEMs data will be used to demonstrate compliance with all of these emission limits. AES should stipulate to such clarifying language in the conditions of certification.



The 70% minimum reduction requirement for SO₂ has not been specified, except by reference to 40 CFR Part 60, Subpart Da. Compliance with maximum sulfur content of coal, and with maximum stack emission limits does not guarantee at least 70% SO₂ reduction. Section II C.6, conditions of certification, requires that "coal fired in the CFBS shall have a sulfur content not to exceed 3.3 percent by weight." There is no minimum sulfur content of coal, i.e., the sulfur content can be as low as possible. Subpart Da still requires a 70% reduction, regardless of how low the content of the coal. Also, there must be specified in the conditions of certification, a test method, as well as an averaging period. AES has not responded on this issue. 40 CFR 60, Subpart Da, requires a 30-day rolling average, and "as fired" fuel sampling and analysis pursuant to 40 CFR 60.47(a)(3). AES should stipulate to explicitly stating these requirements in the conditions of certification.

Paragraph B

1. AES has now stated that the means / calculations for reduction of their emissions has been supplied to the Department of Environmental Regulation (DER), and are available to AQD upon request. AQD herein formally requests the calculations, spreadsheets, computer disk, etc. that justify the proposed modifications reduction in emissions.

In view of AQD's past participation in the review proposed why wasn't the above data supplied to AQD, when it was provided to DER?

Further, to expedite future review the air quality modeling the AES has referred to, which will be supplied to DER at some future time, such should be submitted to AQD at the same time.

2. Please submit the data AES has developed at its other plants that AES is using to project 0.17 lb NO_x/MMBtu as achievable.
3. The AES air emissions projected in this segment of the response, are they reflected in the air quality modeling?
4. AES should submit to AQD the AES generated, and other mercury related data reflecting the subject emissions, and reductions achieved by the baghouse alone.
5. If the "short fiber rejects are a fuel component, then compliance testing must be within 180 days of start up, per NSPS. There are no known provisions to allow AES to simply change their fuel/operations without going through a "Modification", if they wish to add a fuel component after the initial compliance test.

6. AES may be confusing "recording" with "reporting" in their response. AQD foresees the requirement that fuel components be "recorded" on an hourly basis in order to compute with emission limitations. Hence the wording in the site certification must be changed to reflect "hourly" recorded usage.
7. It is AQD's understanding that a unit is "Operational" after conducting its initial compliance test, whether successful or not. This distinction must be recognized and incorporated into the site certification.
8. No further comment seems appropriate on this issue.
9. This was an observation by AQD and did not necessitate a response by AES

Water Issues:

1. Incomplete. Water Quality Division (WQD) did not receive "Exhibit 1" as referenced. Even though this particular document possibly refers to some document on file, it should be a part of the package.
2. WQD comments still apply.
3. WQD comments still apply.
4. Incomplete. AES did not answer the question! It appears that AES "intends" to apply for an NPDES permit per the last sentence in their response.
5. Incomplete. No information was submitted by AES for WQD review.
6. Incomplete. No information was submitted by AES for WQD review.
7. Incomplete. Condition III.A.9., Chemical Metal Cleaning, should be modified to provide reporting requirements of proper disposal for chemical cleaning wastes hauled off-site for disposal. The terminology "chemical cleaning" or "chemical metal cleaning" must be completely clarified. Disposal of all cleaning wastes, whether initial or normal operation, cleaning wastes, including rinses, in all areas of power unit (boiler, air heater, etc.) must be discussed in detail.
8. AESCB should clarify their response to this comment. AESCB states water treatment wastes will not be stored on site and no modification to any of the conditions regarding reporting

or sampling of solid wastes is sought. AESCB should explain how approximately 3 tons/day of pretreatment clarifier sludge and approximately 1.5 tons/day of potential precipitation clarifier sludge will be collected without being stored on site. The petition for modification of certification, dated July 7, 1992, page 25, Condition IX, Solid Waste Storage and Disposal, is clearly proposed for modification. The requirements stated in WQD's original comment #8 should be incorporated into this condition.

9. Complete.

10. AESCB has responded to RESD's request that land acquisition dollars be disbursed to the Jacksonville Environmental Land Acquisition Trust Fund with "no comment". RESD's position on the issue of where land acquisition dollars should be spent remains unchanged. The money should be spent within Duval County and the Jacksonville Environmental Land Acquisition Trust Fund is the preferred vehicle to accomplish this.

11. This is new comment concerning the water balance diagrams attached to the AES response. AESCB should explain why no AESCB stormwater flows were included in the diagrams.

If RESD can be of further assistance please advise.

Alton W. Yates

AWY/ecr

cc: Mr. Robert S. Pace, P.E., AQD
Mr. John K. Flowe, P.E., WQD
File 1065-A
File WQD AES

8-1-94
JB @ 11:00
for approval. RB

To Charlotte for CHF signature
@ 4:25
RB

August 2, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Generating Company
7500 Old Georgetown Road
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Coal Sampling and Analysis Requirements

The Department has reviewed Mr. Robert S. Pace's letter to Mr. Buck Oven dated July 6, 1994, which addressed a proposal by Cedar Bay Generating Company on coal sampling and analysis. Based on this letter and a review of the requirements pursuant to 40 CFR 60, Subpart Da, the following points are pertinent:

o Subsection 60.43a(a)(2) says that the owner of an affected facility shall not discharge gases which contain sulfur dioxide in excess of: "30 percent of the potential combustion concentration (70 percent reduction) when emissions are less than 260 ng/J (0.6 lb./million Btu) heat input." The fact that the requirements of the federal NSPS applies to the Cedar Bay facility is obvious from the keywords "when emissions are less than . . ."

o 40 CFR 60.45a [Commercial Demonstration Permits] provides evidence that the EPA intended for the reduction requirements to be applicable to circulating fluidized bed boilers. Subsection 60.45a(c) requires circulating fluidized bed units permitted as commercial demonstration units to achieve emissions of less than 1.2 lb./MMBtu and an 85% reduction in potential combustion concentrations. Under the commercial demonstration provisions, affected units must achieve at least 85% reduction regardless of the lb./MMBtu achieved.

o The provisions of 40 CFR 60.47a(b)(3) allow the owner to use an "as fired" fuel monitoring system to determine sulfur dioxide concentrations prior to control. 40 CFR 60.46a(e) states, "After the initial performance test . . . compliance with the sulfur dioxide emission limitations and percentage reduction requirements . . . is based on the average emission rate for 30 boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for sulfur dioxide . . . and a new percent reduction for sulfur dioxide are calculated

Mr. Kent L. Fickett
Letter regarding coal sampling and analysis
August 2, 1994
Page 2

to show compliance with the standards." Based on 40 CFR 60.46a, the sulfur content of the fuel is to be determined on a daily basis when an "as fired" fuel monitoring system is used. 40 CFR 60.46a(g) states, ". . . Compliance with the percentage reduction requirement for SO₂ is determined based on the average inlet and average outlet rates for the 30 successive boiler operating days."

o Pursuant to 40 CFR 60.49a(b)(3), each quarterly report is required to include the percent reduction of potential sulfur concentrations.

The company's failure to provide the required information is a reportable violation of the federal NSPS and would be a potential case for an enforcement action.

The proposal to alter the fuel sampling schedule requires both federal and state approval. It would probably require a variance at the state level pursuant to Chapter 403, F.S. The proposal to switch from the analysis of a daily fuel sample to the analysis of a weekly composite fuel sample may be inappropriate. Analysis of a weekly composite may artificially dampen or flatten variations indicative of noncompliance. Considering the variability of the sulfur content in solids, it may not be appropriate to grant the request.

If there are any questions, please call Mr. Bruce Mitchell or Mr. Mike Harley at (904)488-1344 or write to me at the above address.

Sincerely,

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

CHF/BM/rbm

Enclosures

cc: B. Oven, DEP
J. Brown, DEP
R. Donelan, Esq., DEP
B. Parker, USGC

R. Pace, RESD
M. Harley, DEP
J. Braswell, Esq., DEP

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

Date: 29-Jul-1994 09:55am ES
From: Bruce Mitchell) TAL
MITCHELL B
Dept: Air Resources Manageme
Tel No: 904/488-1344
SUNCOM:

TO: Hamilton Buck Oven TAL (OVEN_H)

Subject: Cedar Bay Generating Company

July 29, 1994

Buck,

We have reviewed the issue regarding CBGC's coal sampling and analysis requirements. The response accompanies this cover memo. I hope this response is sufficient. Please advise if not.

Bruce

Buck Oven's memo concerning the above referenced facility has been reviewed pursuant to your request. I agree with RESD that the requirement to report the 30-day rolling average percent reduction in 40 CFR 60.49a is clearly applicable to Cedar Bay Generating Company.

Subsection 60.43a(a)(2) says that the owner of an affected facility shall not discharge gases which contain sulfur dioxide in excess of: "30 percent of the potential combustion concentration (70 percent reduction) when emissions are less than 260 ng/J (0.6 lb./million Btu) heat input." The fact that the requirements of the federal NSPS applies to the Cedar Bay facility is obvious from the keywords "when emissions are less than . . ."

40 CFR 60.45a [Commercial Demonstration Permits] provides evidence that the EPA intended for the reduction requirements to be applicable to circulating fluidized bed boilers. Subsection 60.45a(c) requires circulating fluidized bed units permitted as commercial demonstration units to achieve emissions of less than 1.2 lb./MMBtu and an 85% reduction in potential combustion concentrations. Under the commercial demonstration provisions, affected units must achieve at least 85% reduction regardless of the lb./MMBtu achieved.

The provisions of 40 CFR 60.47a(b)(3) allow the owner to use an "as fired" fuel monitoring system to determine sulfur dioxide concentrations prior to control. 40 CFR 60.46a(e) states, "After the initial performance test . . . compliance with the sulfur dioxide emission limitations and percentage reduction requirements . . . is based on the average emission rate for 30 boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for sulfur dioxide . . . and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards." Based on 40 CFR 60.46a, the sulfur content of the fuel is to be determined on a daily basis when an "as fired" fuel monitoring system is used. 40 CFR 60.46a(g) states, ". . . Compliance with the percentage reduction requirement for SO₂ is determined based on the average inlet and average outlet rates for the 30 successive boiler operating days."

Pursuant to 40 CFR 60.49a(b)(3), each quarterly report is required to include the percent reduction of potential sulfur concentrations.

The company's failure to provide the required information is a reportable violation of the federal NSPS. I recommend that the matter be handled through an enforcement action.

The proposal to alter the fuel sampling schedule requires both federal and state approval. It would probably require a variance at the state level pursuant to Chapter 403, F.S. The proposal to switch from the analysis of a daily fuel sample to the analysis of a weekly composite fuel sample may be inappropriate. Analysis of a

weekly composite may artificially damp or flatten variations indicative of noncompliance. Considering the variability of the sulfur content in solids, it may not be appropriate to grant the request.

TO Bruce Mitchell

DATE 7/20 TIME 2:25

WHILE YOU WERE OUT

M Barnett Parker

of _____

PHONE 301-718-6937
AREA CODE NUMBER EXTENSION

TELEPHONED <input checked="" type="checkbox"/>	PLEASE CALL <input checked="" type="checkbox"/>	WILL CALL AGAIN <input checked="" type="checkbox"/>	
RETURNED YOUR CALL <input type="checkbox"/>		CALL IMMEDIATELY <input type="checkbox"/>	
CAME TO SEE YOU <input type="checkbox"/>		WANTS TO SEE YOU <input type="checkbox"/>	

MESSAGE 7-29-97
Spoken to B.P. on

this is a copy of the
message and to send

By MS

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION) 3. _____
 1. Wayne Tatt - RESD 4. _____
 2. _____ 5. _____

PLEASE PREPARE REPLY FOR:

- ____ SECRETARY'S SIGNATURE
- ____ DIV/DIST DIR SIGNATURE
- ____ MY SIGNATURE
- ____ YOUR SIGNATURE
- ____ DUE DATE _____

ACTION/DISPOSITION

- ____ DISCUSS WITH ME
- ____ COMMENTS/ADVISE
- ____ REVIEW AND RETURN
- ____ SET UP MEETING
- ____ FOR YOUR INFORMATION
- ____ HANDLE APPROPRIATELY
- ____ INITIAL AND FORWARD
- ____ SHARE WITH STAFF
- ____ FOR YOUR FILES

COMMENTS:

Per our discussion, here is the IM that I spoke of regarding CB&C's coal sampling and analysis issue. Please advise if there is anything ~~else~~ else that we need to do.

Flambo,

P.S. We'll send a letter to Barrett Barker along with the IM for the record.

BR

FROM: Ben Mitchell DATE: 7/29/94 PHONE: 30/227-1344

DEP 15-026 (12/93)

M E M O R A N D U M

te: 28-Jul-1994 09:31pm EST
 om: Mike Harley TAL
 HARLEY M
 pt: Air Resources Management
 l No: 904/488-1344
 NCOM:

- (MITCHELL_B)
- (COSTELLO M)
- (MENON R)
- (NICHOLS L)
- (PENNINGTON_J)

referenced facility has agreed with RESD that the average percent reduction to Cedar Bay Generating

the owner of an affected contain sulfur dioxide in combustion concentration (70 less than 260 ng/J (0.6 at the requirements of the ability is obvious from the

ation Permits] provides reduction requirements to be ed boilers. Subsection bed units permitted as emissions of less than 1.2 n potential combustion demonstration provisions, reduction regardless of the

allow the owner to use an determine sulfur dioxide concentrations prior to control. 40 CFR 60.46a(e) states, "After the initial performance test . . . compliance with the sulfur dioxide emission limitations and percentage reduction requirements . . . is based on the average emission rate for 30 boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for sulfur dioxide . . . and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards." Based on 40 CFR 60.46a, the

Bruce M.

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

Date: 28-Jul-1994 09:31pm EST
From: Mike Harley TAL
HARLEY M
Dept: Air Resources Management
Tel No: 904/488-1344
SUNCOM:

TO: Bruce Mitchell TAL (MITCHELL_B)
CC: Martin Costello TAL (COSTELLO M)
CC: Ramesh Menon TAL (MENON_R)
CC: Louis Nichols TAL (NICHOLS_L)
CC: Jim Pennington TAL (PENNINGTON_J)

Subject: Cedar Bay Generating Company

Buck Oven's memo concerning the above referenced facility has been reviewed pursuant to your request. I agree with RESD that the requirement to report the 30-day rolling average percent reduction in 40 CFR 60.49a is clearly applicable to Cedar Bay Generating Company.

Subsection 60.43a(a)(2) says that the owner of an affected facility shall not discharge gases which contain sulfur dioxide in excess of: "30 percent of the potential combustion concentration (70 percent reduction) when emissions are less than 260 ng/J (0.6 lb./million Btu) heat input." The fact that the requirements of the federal NSPS applies to the Cedar Bay facility is obvious from the keywords "when emissions are less than . . ."

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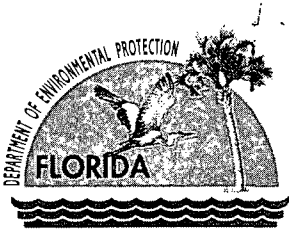
The provisions of 40 CFR 60.47a(b)(3) allow the owner to use an "as fired" fuel monitoring system to determine sulfur dioxide concentrations prior to control. 40 CFR 60.46a(e) states, "After the initial performance test . . . compliance with the sulfur dioxide emission limitations and percentage reduction requirements . . . is based on the average emission rate for 30 boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for sulfur dioxide . . . and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards." Based on 40 CFR 60.46a, the

sulfur content of the fuel is to be determined on a daily basis when an "as fired" fuel monitoring system is used. 40 CFR 60.46a(g) states, ". . . Compliance with the percentage reduction requirement for SO₂ is determined based on the average inlet and average outlet rates for the 30 successive boiler operating days."

Pursuant to 40 CFR 60.49a(b)(3), each quarterly report is required to include the percent reduction of potential sulfur concentrations.

The company's failure to provide the required information is a reportable violation of the federal NSPS. I recommend that the matter be handled through an enforcement action.

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Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

7-5-94
To Charlotte D
8:44
2-5-94
Signed & mailed.
B

July 5, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Cogeneration Company, L.P.
7500 Old Georgetown Road
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Letter Acknowledging Second Public Notice for PSD-FL-137A

The Department has received Mr. Barrett Parker's correspondence dated June 23, 1994, and the accompanied Public Notice that was published on March 24, 1994, in the Florida Times-Union paper. Based on a research of our files and Duval County's, there have been no requests/petitions filed for any administrative hearings with either Offices of General Counsel during the allotted timeframe spelled out in the Public Notice. Since there were no comments received on the Public Notice and there are no changes needed to be made to the permit that would prompt a resigning of it, then the Department acknowledges the renoticing and there is no further action planned regarding the existing revised/amended permit, No. PSD-FL-137A.

In addition, a typographical error on the cover page is acknowledged by this letter and was identified by Duval County's RESD after the revised/amended permit (PSD-FL-137A) was signed on November 23, 1993, but within the appeal timeframe spelled out on the cover letter conveying the signed permit to the permittee/company; and, this issue was immediately discussed with Mr. Barrett Parker by Mr. Bruce Mitchell. The change is as follows:

Cover Page: 1st sentence, 3rd paragraph:

From: The three CFB boilers, each rated at a maximum of 3,189 MMBtu/hr heat input, will fire fuel made up largely or exclusively of coal.

TO: The three CFB boilers, each rated at a maximum of 1,063 MMBtu/hr heat input, will fire fuel made up largely or exclusively of coal.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Mr. Kent L. Fickett
Letter Acknowledging Second Public Notice for PSD-FL-137A
July 5, 1994
Page 2

If there are any questions, please give Mr. Bruce Mitchell a call at (904)488-1344 or write to me at the above address.

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

CHF/rbm

Attachments

cc: C. Kirts, NED
S. Pace, RESD
R. Donelan, Esq., DEP
J. Braswell, Esq., DEP
B. Parker, USGC

**Cedar Bay Generating Company,
Limited Partnership**

RECEIVED

RETURN RECEIPT P 011 994 774

JUN 23 1994

June 20, 1994

Bureau of
Air Regulation

File No.: 6.3.1.2

Ms. Patty Adams
Mail Stop 5505
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

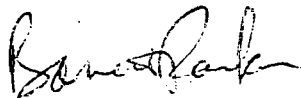
RE: Submission of Affidavit of Publication

Dear Ms. Adams:

The Cedar Bay Generating Company, Limited Partnership ("CBGC") is pleased to submit to your office the enclosed affidavit of publication which provided public notice for amending CBGC's Permit Number PSD-FL-137A. As mentioned in the affidavit, this notice was published in the **Florida Times-Union** on March 24, 1994. CBGC trusts that your office will rapidly generate and transmit the amended permit, since, to CBGC's knowledge, no comments concerning this notice were received by your office, the Northeast Division, or the City of Jacksonville's Air Quality Division.

Should you have questions concerning submission of this notice, please contact me at 301-718-6937.

Sincerely,



Barrett Parker
Environmental Specialist


BP/mm

Enclosure

cc: J.G. Kelly
J.F. Stallwood
K. Grant

B. Mitchell

J. Harper, EPA

J. Durnyak, NPS 

C. Kirtz, NE Dist
R. Robinson, RESD



7500 Old Georgetown Road • Bethesda, Maryland 20814-6161 • 301-718-6800 • Fax 301-718-6900

An affiliate of U.S. Generating Company

Printed on 100% recycled paper

FLORIDA PUBLISHING COMPANY
Publisher
JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared _____

John Leist

_____ who on oath says that he is

Classified Sales Representative

_____ of The Florida Times-Union,

a daily newspaper published at Jacksonville in Duval County, Florida; that the

attached copy of advertisement, being a Legal Notice

in the matter of Notice of Amendment of PSD Permit

in the _____ Court,

was published in THE FLORIDA TIMES-UNION in the issues of _____

24 March 1994

Affiant further says that the said The Florida Times-Union is a newspaper published at Jacksonville, in said Duval County, Florida, and that the said newspaper has heretofore been continuously published in said Duval County, Florida, The Florida Times-Union each day, has been entered as second class mail matter at the postoffice in Jacksonville, in said Duval County, Florida, for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he 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.

Sworn to and subscribed before me

this 24 day of

March A.D. 1994.

[Signature]
Notary Public,

State of Florida at Large.

My Commission Expires

[Signature]

Department of Environmental Protection
Notice of Amendment of PSD Permit
DEP No. PSD-FL-137A

The Department of Environmental Protection gives notice of its amendment of a prevention of significant deterioration (PSD) permit to Cedar Bay Generating Company, L.P., 7500 Old Georgetown Road, Bethesda, MD 20814. The Department previously issued a PSD permit for the operation of the Cedar Bay Cogeneration Project to be located in Jacksonville, Florida. The amended PSD permit will establish lower emission limits for the circulating fluidized bed boilers, require compliance for certain emissions to be demonstrated using continuous emissions monitors, authorize the use of short fiber rejects as a fuel, authorize the circulating fluidized bed boilers to operate at less than seventy percent capacity, reduce the sulfur content of fuel oil use and allow increased use of fuel oil during startup, decrease limestone dryer emissions, and reduce emission from the material handling and treatment areas. Overall, the emissions and ambient air quality impacts will be reduced by the changes to the PSD permit.

A person whose substantial interests are affected by the Department's permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 within 14 days of publication of this notice. The Petitioner shall mail a copy of the petition to the applicant, Mr. Mark V. Carney, Cedar Bay Generating Company, L.P., 7500 Old Georgetown Road, Bethesda, MD 20814, at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative hearing under Section 120.57, F.S.

The Petition shall contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department's permit file number, and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action; (d) A statement of the material facts disputed by petitioner; if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action; (f) A statement of which rules, statutes, petitioner contends require reversal or modification of the Department's action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be deferred from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application, have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and filed (received) within 14 days of the publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer pursuant to Rule 20-5.207, F.A.C.

The application for permit amendment and draft amended permit are available for public inspection during normal business hours, 8:00 AM to 5:00 PM, Monday through Friday, except legal holidays at

Department of Environmental Protection
Division of Air Resource
111 South Magnolia Avenue
Magnolia Park Courtyard, Suite 4
Tallahassee, FL 32301
Preston Lewis
(904) 488-1344

Department of Environmental Protection
Northeast Division, Air Section
7825 Baymeadows Way, Suite 200-B
Jacksonville, FL 32256-7577
Ernest E. Frey, Director

Department of Regulatory and Environmental Services
Air Quality Division
421 West Church Street, Suite 412
Jacksonville, FL 32202-4111
Steve Pace
(904) 630-3666

Any person may send written comments on the proposed action to Mr. Preston Lewis at 2600 Blair Stone Road, Tallahassee, FL 32399, (904) 488-1344. All comments received within 30 days of publication of this notice will be considered in the Department final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 5, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent L. Fickett
Cedar Bay Cogeneration Company, L.P.
7500 Old Georgetown Road
Bethesda, Maryland 20814

Dear Mr. Fickett:

RE: Letter Acknowledging Second Public Notice for PSD-FL-137A

The Department has received Mr. Barrett Parker's correspondence dated June 23, 1994, and the accompanied Public Notice that was published on March 24, 1994, in the Florida Times-Union paper. Based on a research of the Department's and Duval County's files, there have been no requests/petitions filed for any administrative hearings with either Offices of General Counsel during the allotted timeframe spelled out in the Public Notice. Since there were no comments received on the Public Notice and there are no changes needed to be made to the permit that would prompt a resigning of it, then the Department acknowledges the renoticing and there is no further action planned regarding the existing revised/amended permit, No. PSD-FL-137A.

In addition, a typographical error on the cover page is acknowledged by this letter and was identified by Duval County's RESD after the revised/amended permit (PSD-FL-137A) was signed on November 23, 1993, but within the appeal timeframe spelled out on the cover letter conveying the signed permit to the permittee/company; and, this issue was immediately discussed with Mr. Barrett Parker by Mr. Bruce Mitchell. The change is as follows:

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From: The three CFB boilers, each rated at a maximum of 3,189 MMBtu/hr heat input, will fire fuel made up largely or exclusively of coal.

TO: The three CFB boilers, each rated at a maximum of 1,063 MMBtu/hr heat input, will fire fuel made up largely or exclusively of coal.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Mr. Kent L. Fickett
Letter Acknowledging Second Public Notice for PSD-FL-137A
July 5, 1994
Page 2

If there are any questions, please give Mr. Bruce Mitchell a call at
(904)488-1344 or write to me at the above address.

Sincerely,



C. H. Faney, P.E.
Chief
Bureau of Air Regulation

CHF/rbm

Attachments

cc: C. Kirts, NED
S. Pace, RESD
R. Donelan, Esq., DEP
J. Braswell, Esq., DEP
B. Parker, USGC

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

Date: 28-Jun-1994 10:10am ES
From: Patty Adams TAL
ADAMS_P
Dept: Air Resources Manageme
Tel No: 904/488-1344
SUNCOM:

TO: Holly Burnaman TAL (BURNAMAN_H)

CC: Bruce Mitchell TAL (MITCHELL_B)

Subject: Cedar Bay

Holly,

The only permit number we have for this project is PSD-FL-137A. No PATS number was assigned because it was originally approved under Power Plant Siting. How are those tracked in LCT?

Patty

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

Date: 28-Jun-1994 09:56am ES
From: Holly Burnaman TAL
BURNAMAN_H
Dept: Office General Counsel
Tel No: 904/488-9730
SUNCOM:

TO: Patty Adams TAL (ADAMS_P)

CC: Bruce Mitchell TAL (MITCHELL_B)

Subject: RE: Cedar Bay Generating Company

Patty, we track our cases by permit numbers. If you forward the permit number to me, I would be glad to check our records.
Thanks

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

Date: 28-Jun-1994 09:00am ES
From: Patty Adams TAL
ADAMS_P
Dept: Air Resources Manageme
Tel No: 904/488-1344
SUNCOM:

TO: Holly Burnaman TAL (BURNAMAN_H)

CC: Bruce Mitchell TAL (MITCHELL_B)

Subject: Cedar Bay Generating Company

Holly,

Cedar Bay Generating Company published a notice of amendment to permit PSD-FL-137A in the Florida Times-Union on March 24, 1994. To our knowledge, no petitions were filed as a result of the notice. Can you verify that for us? You can let me or Bruce Mitchell know. Thanks.

Patty

**Cedar Bay Generating Company,
Limited Partnership**

RECEIVED

APR 18 1994

**Bureau of
Air Regulation**

April 15, 1994

VIA FACSIMILE

Mr. Hamilton S. Oven, P.E.
Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

File #: 66.37.1

RE: Extension of Alternative Ash Removal Procedure for the Cedar Bay Cogeneration Project - Site Certification Number PA 88-24A

Dear Mr. Oven:

The Cedar Bay Generating Company, L. P. ("CBGC") requests a 160 day extension to the alternative ash removal procedure's current expiration date of April 24, 1994. As you may recall, this procedure involves notifying the Jacksonville Regulatory and Environmental Services Division ("RESO") of ash loading commencement, loading ash into dust-protected open rail cars, sealing the ash with water and a crusting agent, and sending the rail cars to a permitted ash disposal facility in West Virginia. Visible emissions testing conducted during initial ash loading and witnessed by a representative of RESO confirmed that ash removal according to the procedure is consistent with the low emissions ash removal techniques mentioned in the Conditions of Certification.

CBGC believes that the malfunctioning components of the ash pelletizer have been identified and rectified, and CBGC is now focusing on identifying and resolving problem areas associated with the pelletized ash curing silos. As you know, CBGC is currently conducting tests to determine the effectiveness of heated air, insulation, and material movement on minimizing pellet agglomeration in the curing silos. Test analyses are expected to be completed by the end of June, with a test report and recommendations to follow soon thereafter.

Should the temporary modifications to the pelletizing silos prove effective, CBGC would like the right to continue using these modifications while a final proposal containing permanent modifications, if necessary, is prepared and submitted to your office for approval. CBGC believes that permanent modification construction, if approved, could be completed by October 1, 1994. Should the temporary modifications prove ineffective, CBGC believes that an extension until October 1, 1994, would provide sufficient time to develop and conduct additional tests on the pelletizer, or to develop, propose, and have accepted ash removal methods identified other than pelletization.



April 15, 1994

Page 2

In order to maintain plant operation should a temporary modification unexpectedly fail during report or proposal preparation, proposal review, or permanent modification construction, CBGC would like to continue using the established alternative ash removal procedure. Likewise, should temporary modifications or additional tests prove ineffective, CBGC would like to remove ash as necessary via the established alternative procedure while other ash removal methods are developed, proposed, and reviewed.

Should you or your staff have questions concerning CBGC's extension request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

cc: J.F. Stallwood, CBGC
C.M. Staley, USGC
J.G. Kelly, USGC
Ernie Frey, DEP/NED
Alton W. Yates, RESD
Clair Fancy, DEP/BAR



USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
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RECIPIENT'S COPY

From (Your Name) Please Print Corratt Parker		Your Phone Number (Very Important) (301) 718-6937	To (Recipient's Name) Please Print Mr. Clair Fancy		Recipient's Phone Number (Very Important) (704) 458-1344
Company US GENERATING CO		Department/Floor No. 9	Company Florida DEP - Bureau of Air Regulation		Department/Floor No.
Street Address 7500 OLD GEORGETOWN RD #1300			Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 2600 Blair Stone Road		
City BETHESDA	State MD	ZIP Required 20814	City Tallahassee	State FL	ZIP Required 32399-2400
YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.) 930014			IF HOLD AT FEDEX LOCATION, Print FEDEX Address Here Street Address City State ZIP Required		
PAYMENT 1 <input checked="" type="checkbox"/> Bill Sender 2 <input type="checkbox"/> Bill Recipient's FedEx Acct. No. 3 <input type="checkbox"/> Bill 3rd Party FedEx Acct. No. 4 <input type="checkbox"/> Bill Credit Card 5 <input type="checkbox"/> Cash/Check			Emp. No. Date Federal Express Use <input type="checkbox"/> Cash Received <input type="checkbox"/> Return Shipment <input type="checkbox"/> Third Party <input type="checkbox"/> Chg. To Del. <input type="checkbox"/> Chg. To Hold Street Address City State Zip Received By: X Date/Time Received FedEx Employee Number REVISION DATE 12/92 PART #137204 WCSL 1093 FORMAT #158 158 © 1992-93 FEDEX PRINTED IN U.S.A.		
4 SERVICES (Check only one box)		5 DELIVERY AND SPECIAL HANDLING (Check services required)		6 PACKAGES WEIGHT In Pounds Only YOUR DECLARED VALUE (See right)	
Priority Overnight (Delivery by next business morning) 11 <input type="checkbox"/> OTHER PACKAGING 16 <input checked="" type="checkbox"/> FEDEX LETTER* 12 <input type="checkbox"/> FEDEX PAK* 13 <input type="checkbox"/> FEDEX BOX 14 <input type="checkbox"/> FEDEX TUBE Standard Overnight (Delivery by next business afternoon. No Saturday delivery) 51 <input type="checkbox"/> OTHER PACKAGING 56 <input type="checkbox"/> FEDEX LETTER* 52 <input type="checkbox"/> FEDEX PAK* 53 <input type="checkbox"/> FEDEX BOX 54 <input type="checkbox"/> FEDEX TUBE Economy Two-Day (Delivery by second business day †) (Restricted for authorized users only) 30 <input type="checkbox"/> ECONOMY* 46 <input type="checkbox"/> GOVT LETTER 41 <input type="checkbox"/> GOVT PACKAGE † Delivery commitment may be later in some areas.		Weekday Service 1 <input type="checkbox"/> HOLD AT FEDEX LOCATION WEEKDAY (Fill in Section H) 2 <input checked="" type="checkbox"/> DELIVER WEEKDAY Saturday Service 31 <input type="checkbox"/> HOLD AT FEDEX LOCATION SATURDAY (Fill in Section H) 3 <input type="checkbox"/> DELIVER SATURDAY (Extra charge) (Not available to all locations) 9 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge) Special Handling 4 <input type="checkbox"/> DANGEROUS GOODS (Extra charge) 6 <input type="checkbox"/> DRY ICE (Dangerous Goods Shipper's Declaration not required) Dry wt. 9, UN1845, _____ X _____ kg. 904 III DESCRIPTION 12 <input type="checkbox"/> HOLIDAY DELIVERY (if offered) (Extra charge)		DIM SHIPMENT (Chargeable Weight) _____ lbs. L x W x H Received At <input type="checkbox"/> Regular Stop 3 <input type="checkbox"/> Drop Box 4 <input type="checkbox"/> B.S.C. 5 <input type="checkbox"/> Station <input type="checkbox"/> On-Call Stop	
70 OVERNIGHT FREIGHT** (Continued reservation required)		80 TWD-DAY FREIGHT** (Continued reservation required)		7 Release Signature:	

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

Date: 22-Apr-1994 02:20pm EST
From: Preston Lewis TAL
LEWIS_P
Dept: Air Resources Management
Tel No: 904/488-1344
SUNCOM:

TO: Hamilton Buck Oven TAL (OVEN_H)

CC: Bruce Mitchell TAL (MITCHELL_B)

Subject: Cedar Bay - Alt. Ash Removal Procedure Extension

I would prefer to have Bruce respond to this request for a 160 day extension to the alternative ash removal procedures current expiration date of April 24, 1994. However, he is not here today and is not expected back in the office until Monday. Since the expiration day is Sunday 4/22 I have looked at the request letter and their plan to bring the ash removal on line seems reasonable. **Therefore, I would grant the extension request.** If this can wait until Monday, I will confirm it with Bruce.

U.S. Generating Company**Fax Message**

DATE: 4/15/94

TO: Mr. Clair Fancy FACSIMILE NO.: _____

COMPANY: Florida DEP/EAR NO. OF PAGES: 3
(including this one)

CITY/STATE: Tallahassee, FL

FROM: Barrett Parker PHONE NO.: 301/718-6937

SPECIAL INSTRUCTIONS: please deliver

If transmittal is incomplete or illegible, please call at 301-718-.

Messages: Alternative Ash Removal Extension Request for the
Cedar Bay Generating Company.

CONFIDENTIALITY NOTICE

The information contained in this telefacsimile message is privileged and confidential, and intended only for the use of the individual(s) and/or entity(ies) named above. If you are not the intended recipient, you are hereby notified that any unauthorized disclosure, copying, distribution or taking of any action in reliance on the contents of the telecopy materials is strictly prohibited and review by any individual other than the intended recipient shall not constitute waiver of the attorney/client privilege. If you have received this transmission in error, please immediately notify us by telephone (collect) to arrange for the return of the materials. Thank you.

7500 Old Georgetown Road, 13th floor ... Bethesda, MD 20814-1616 301-718-6800 FAX-718-

**Cedar Bay Generating Company,
Limited Partnership**

April 15, 1994

VIA FACSIMILE

Mr. Hamilton S. Oven, P.E.
Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

File #: 66.37.1

RE: Extension of Alternative Ash Removal Procedure for the Cedar Bay Cogeneration
Project - Site Certification Number PA 88-24A

Dear Mr. Oven:

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April 15, 1994
Page 2

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Should you or your staff have questions concerning CBGC's extension request, please contact me at (301) 718-6937.

Sincerely,



Barrett Parker
Environmental Specialist

cc: J.F. Stallwood, CBGC
C.M. Staley, USGC
J.G. Kelly, USGC
Ernie Frey, DEP/NED
Alton W. Yates, RESD
Clair Fancy, DEP/BAR

Protection
Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Bruce Mitchell

2. MS 5505

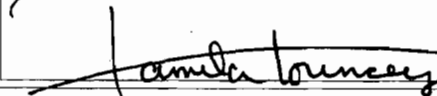
3.

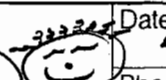
4.

Remarks:

FYI

From:


Pamela Lounsbury



Date

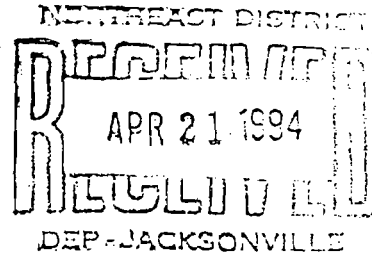
4-29-94

Phone

7-0472

REGULATORY & ENVIRONMENTAL
SERVICES DEPARTMENT
Air Quality Division

April 18, 1994



Mr. Ernie Frye, District Manager
Department of Environmental Protection
Northeast District
7825 Baymeadows Way
Jacksonville, FL-32256

RECEIVED

MAY 2 1994

Bureau of
Air Regulation

RE: Initial Compliance Emissions Test Report
Cedar Bay Generating Company (CBGC)
Circulating Fluidized Bed Boilers 1 - 3, Limestone Dryer B

Dear Mr. Frye:

Enclosed is the Air Quality Division (AQD) review of the CBGC initial compliance test report. The report contained results of compliance tests for carbon monoxide, nitrogen oxides, sulfur dioxide, percent sulfur removal, volatile organic compounds, particulate matter, PM10, sulfuric acid mist, fluorides, lead, mercury, beryllium, ammonia and visible emissions for each of the three circulating fluidized bed boilers. Also, emissions from Limestone Dryer B were tested for visible emissions and particulate matter.

The CBGC report indicates that the three boilers successfully demonstrated initial compliance with all parameters, except that the number 2 and number 3 boilers exceeded the permitted allowable emissions of 0.018 lbs/MMBtu heat input for particulate matter with an aerodynamic diameter of ten microns or less (PM10). These two sources were retested on February 3, 1994 and February 4, 1994, respectively, and demonstrated compliance at that time. Limestone Dryer B exceeded the permitted maximum allowable mass emission rate of 0.76 lbs per hour for particulate matter. This source was scheduled for retesting in April, 1994, and results of the retest are not yet available.

Pursuant to specific condition D. Contemporaneous Emissions Reductions, of Department Air Permit number PSD-FL-137A, five existing boilers at Seminole Kraft Corporation (SKC) shall be shut down within 30 days of written confirmation by the Department of the successful completion of the initial compliance tests on the CBGC boilers. Because the permit specifies that this written confirmation come from the Department, AQD requests that, following review of the AQD testing review, DEP notify SKC of the successful completion of initial compliance tests on the CBGC boilers, and of the 30 day time limit in which to shut down the affected sources and surrender their operating permits.



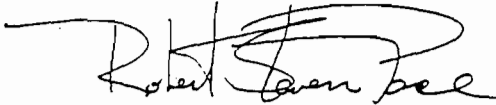
BEST AVAILABLE COPY

Mr. Ernie Frye
May 18, 1994
Page 2

The stack test failures mentioned above have been referred to the AQD enforcement activity for further action. Pursuant to the provisions of section XXVI Enforcement, of Conditions of Certification for the Cedar Bay Cogeneration Project No. PA88-24A, AQD will, by separate correspondence, request the FDEP Secretary's written permission to initiate lawful enforcement actions for these violations. You will be copied on this correspondence, and will be kept informed of any actions taken.

If you have any questions, or wish to discuss this matter, please telephone me at 630-3484.

Very truly yours,



Robert S. Pace, P.E.
Chief

RSP/WET/ecr

- c: Barrett Parker, CBGC
- Wayne Walker, AQD Testing
- Dana Brown, AQD Env. Enf. Officer
- AQD File 1065-B

copy to Buck Over 7-26-94
OK