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Pensacola, Florida 32520

Tel 850.444.6111



Certified Mail

November 12, 2003

Mr. Scott M. Sheplak, P.E.  
Florida Department of Environmental Protection  
Division of Air Resources Management  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

**RE: Plant Crist Electric Generating Plant  
Corrected ISCST3 Model Input Values  
Air Permit No. 0330045-001-AV**

Dear Mr. Sheplak:

Your letter of September 25 indicates that preliminary modeling by FDEP showed modeled exceedances of the SO<sub>2</sub> ambient standard for Plant Crist. Based on our understanding of the stack information used for that modeling, we believe that the emission and stack parameters used were inaccurate and hereby supply you with updated information for the Plant Crist stacks. It is our understanding that FDEP used the stack data shown in Table 1 (attached) for its modeling and estimated the SO<sub>2</sub> emissions for each Unit as shown in Table 2 (attached). We have updated this information to correct the stack height for Units 2-5 at 130.53m and deleted Unit 1 which has been retired and should not be included in the model. We also found that the stack temperature and velocity used for the modeling do not correspond to operations at the permitted heat input values used for the emission calculations and the stack parameters were not properly represented in the modeling.

We have used the most recent stack test data to estimate these values for each unit currently in operation. Using the best-fit extrapolation techniques, the temperature and actual flow rates were estimated for the permitted heat input values. Using the unit-specific information, total actual flow rate and weighted-averaged temperature were estimated for each of the two stacks (the Units 2-5 stack and the Units 6&7 stack). Attachment 1 provides the data and graphs used to perform these estimates.

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After conversion of these data into the metrics used for ISCST3 model inputs, we show the stack data appropriate for this modeling exercise in Table 3.

Please find this information and supportive data attached for your review. Also enclosed is a statement of certification by the Responsible Official. If you have any questions, please call me at (850) 444-6527.

Sincerely,



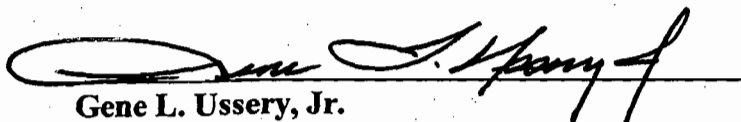
G. Dwain Waters, QEP  
Air Quality Programs Supervisor

Cc: Jim Vick, Gulf Power Company  
Bernard Jacob, Gulf Power Company  
Gene Ussery, Gulf Power Company  
Stan Vasa, Southern Company Services  
Cleave Holiday, FDEP – Tallahassee Office

## CERTIFICATION BY RESPONSIBLE OFFICIAL

**"I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Title V source for which this information is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this submission are true, accurate and complete."**

**Responsible Official Signature:**

A handwritten signature in black ink, appearing to read "Gene L. Ussery, Jr.", is written over a horizontal line.

**Gene L. Ussery, Jr.  
Vice-President of Power Generation**

11-14-03  
**Date:**

**Table-1**

Unit	TitleV E-Factor in (lb/mmBtu)	TitleV HeatInput in (mmBtu/hr)	Emissions in (g/s)
1	1.98	320	79.83
2	1.98	320	79.83
3	1.98	550	137.21
4	5.9	1096.7	815.29
5	5.9	1096.7	815.29
6	5.9	3704.8	2754.15
7	5.9	6406.4	4762.52

	Total Emissions
Unit 1-5	1927.45
Unit 6-7	7516.07

**Table-2**

Stack	Emissions in (g/s)	Height in (M)	Temp in (K)	Velocity in (m/s)	Diameter in (m)
GPC1_5	1927.45	137.16	433.0	16.0	5.49
GPC6_7	7516.66	137.16	433.0	29.6	7.07

**Table-3**

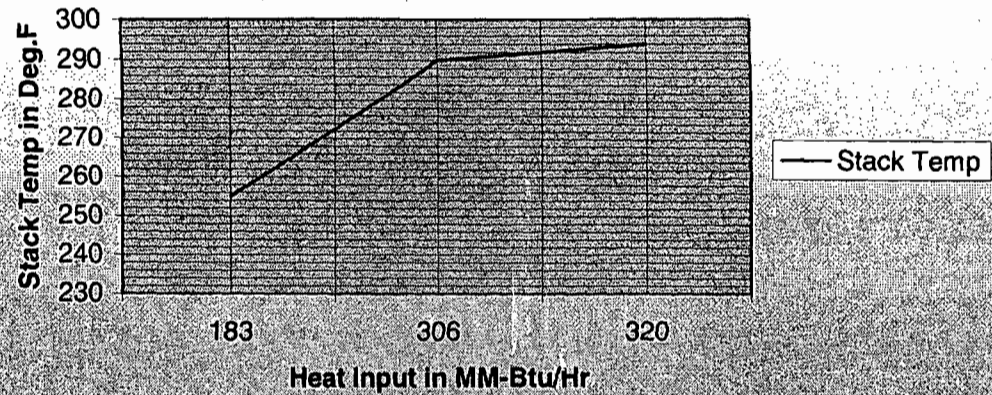
Stack	Emissions in (g/s)	Height in (M)	Temp in (K)	Velocity in (m/s)	Diameter in (m)
GPC1_5	1927.45	130.53	459.4	25.1	5.49
GPC6_7	7516.66	137.16	444.0	41.0	7.07

Unit Name	Heat Input in MM-Btu/Hr	Stack Temp in Deg. F	Gas Flow Rate in Cu-Ft/Min
Unit 1	320.00	293.98	71887.38
Unit 2	320.00	293.98	68573.98
Unit 3	550.00	322.65	267080.45
Unit 4	1096.70	336.17	358249.66
Unit 5	1096.70	463.65	490627.83
Unit 6	3704.80	345.00	1297376.11
Unit 7	6406.40	336.81	2112669.94

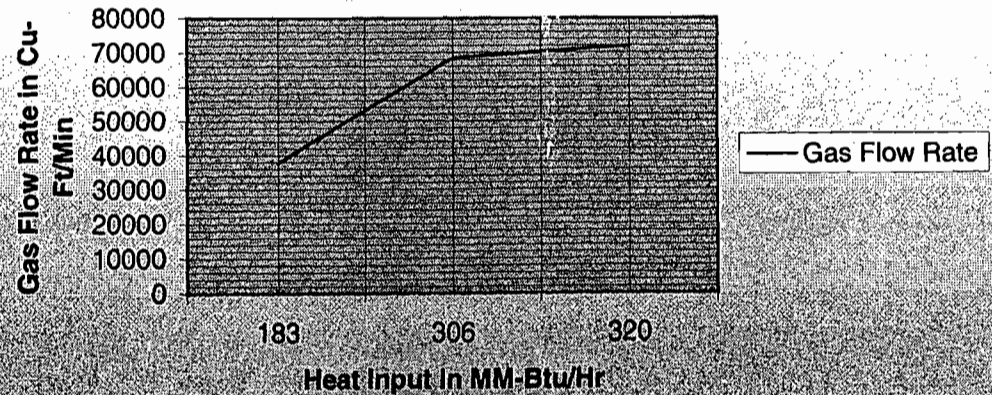
Stack	Heat Input in MM-Btu/Hr	Stack Temp in Deg. F	Gas Flow Rate in Cu-Ft/Min
Stack 1-5	3383.40	367.31	1256419.30
Stack 6-7	10111.20	339.81	3410046.06

Heat Input	Stack Temp	Gas Flow Rate
183	255	37800
306	290	68404
320	293.9837398	71887.38211

UNIT-1 (HeatInput Vs StackTemp )

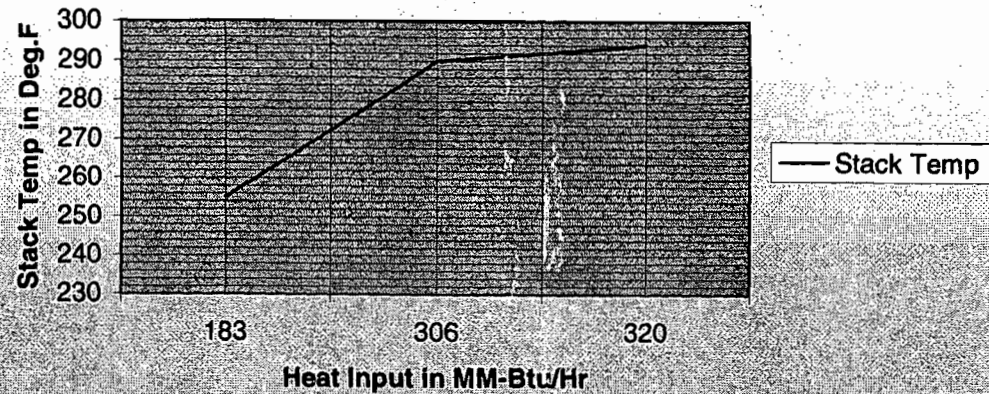


UNIT-1 (HeatInput Vs GasFlowRate)

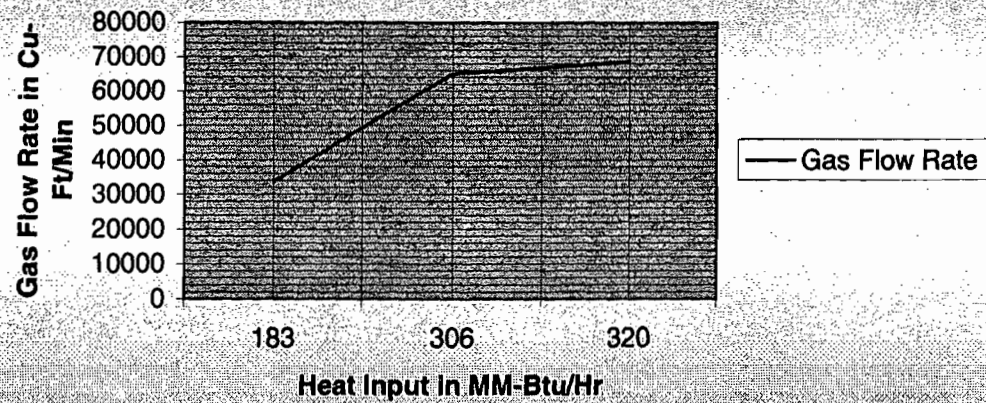


Heat Input	Stack Temp	Gas Flow Rate
183	255	33600
306	290	65000
320	293.9837398	68573.98374

UNIT-2 (HeatInput Vs StackTemp )

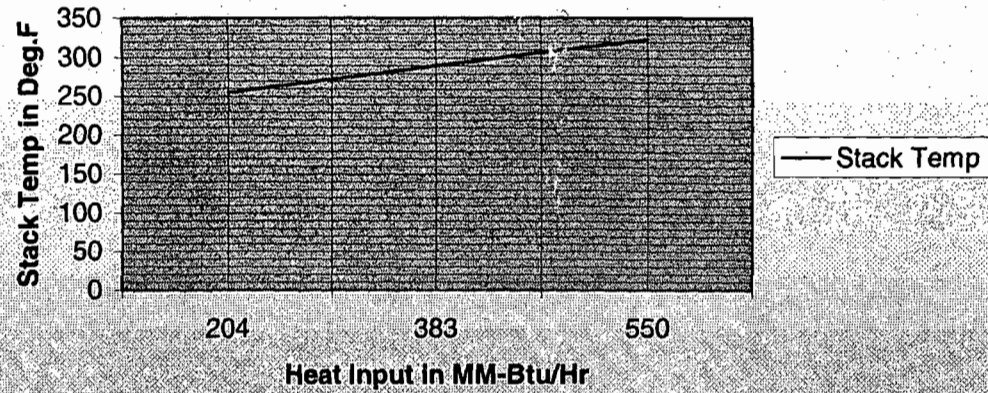


UNIT-2 (HeatInput Vs GasFlowRate)

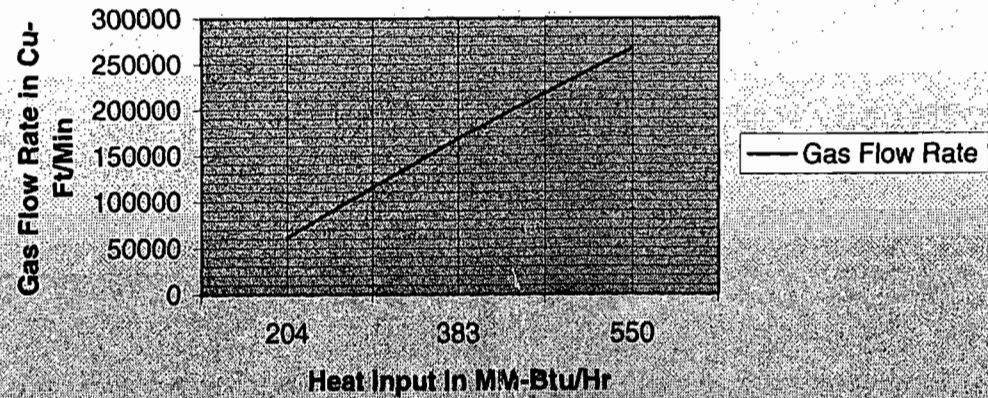


Heat Input	Stack Temp	Gas Flow Rate
204	255	61800
383	290	168000
550	322.6536313	267080.4469

UNIT-3 (HeatInput Vs StackTemp )



UNIT-3 (HeatInput Vs GasFlowRate)

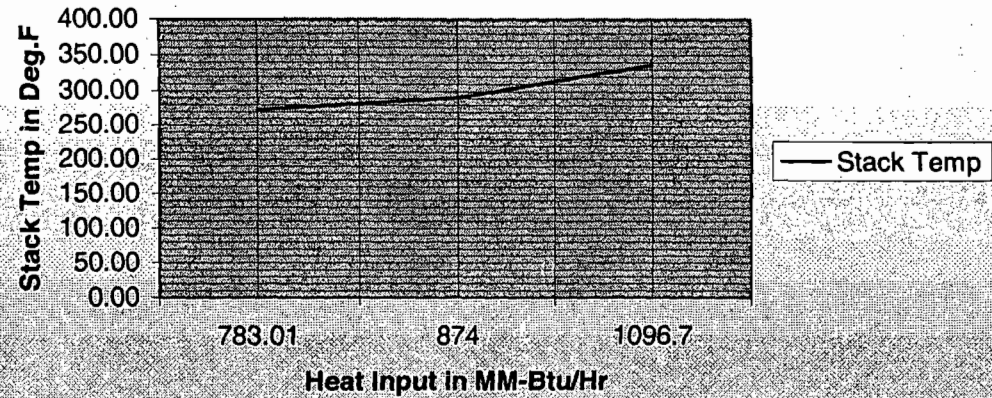




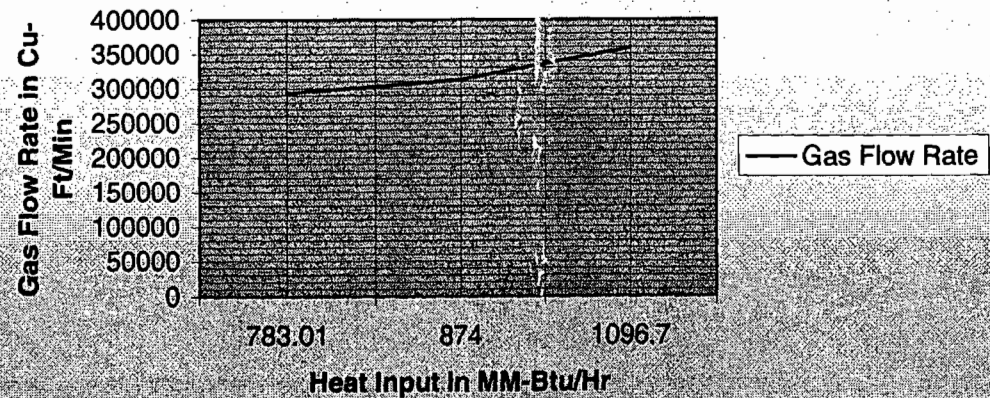
Heat Input	Stack Temp	Gas Flow Rate
783.01	272.73	293650
874	291.13	312388
1096.7	336.1677327	358249.6617

Run-1	Run-2	Run-3
286	292.1	295.3
272	272.8	273.4

UNIT-4 (HeatInput Vs StackTemp )



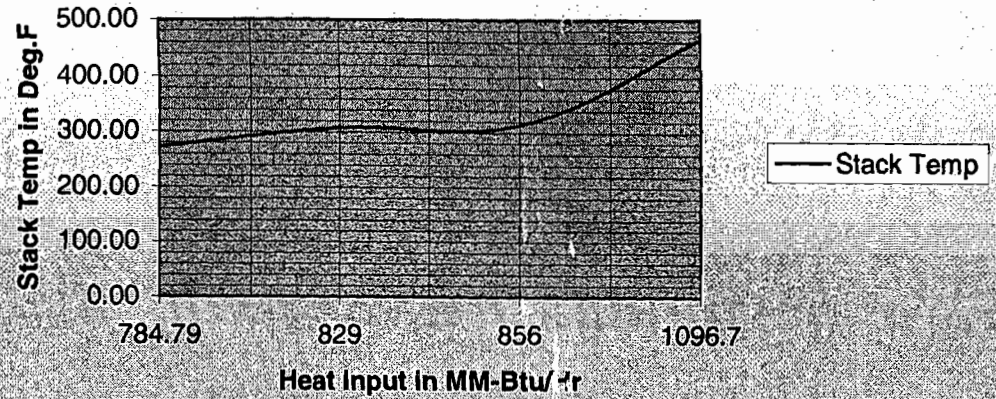
UNIT-4 (HeatInput Vs GasFlowRate)



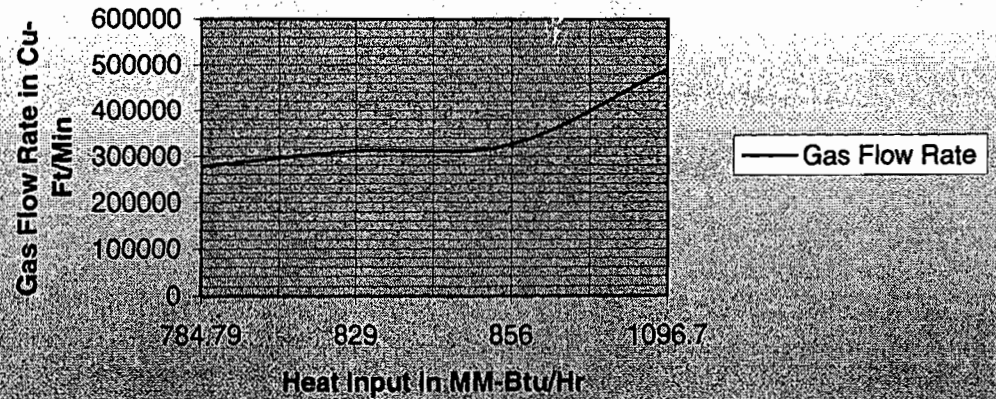
Heat Input	Stack Temp	Gas Flow Rate
784.79	272.40	277704
829	307.83	310933
856	314.00	325560
1096.7	463.65	490627.8292

Run-1	Run-2	Run-3
272	271.6	273.6
306.6	308.7	308.2
310.8	314.6	316.6

UNIT-5 (HeatInput Vs StackTemp )



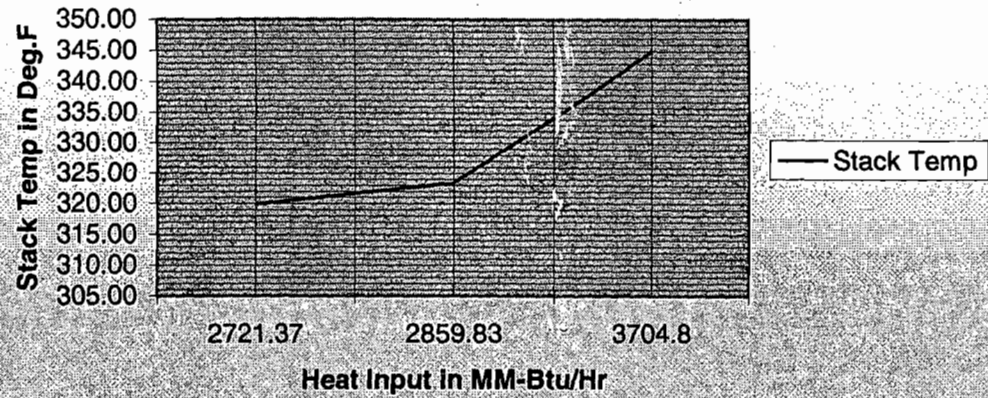
UNIT-5 (HeatInput Vs GasFlowRate)



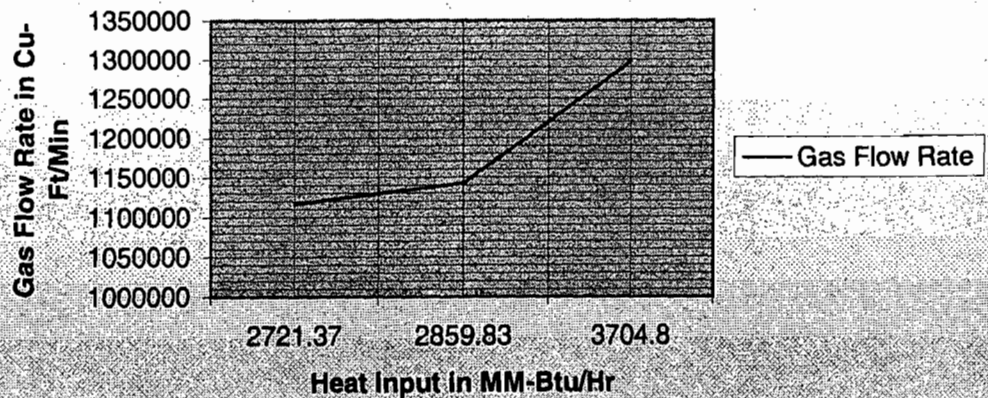
Heat Input	Stack Temp	Gas Flow Rate
2721.37	319.90	1116600
2859.83	323.43	1142052
3704.8	344.9959555	1297376.111

Run-1	Run-2	Run-3
320.5	320.7	318.5
318.3	324.7	327.3

UNIT-6 (HeatInput Vs StackTemp)



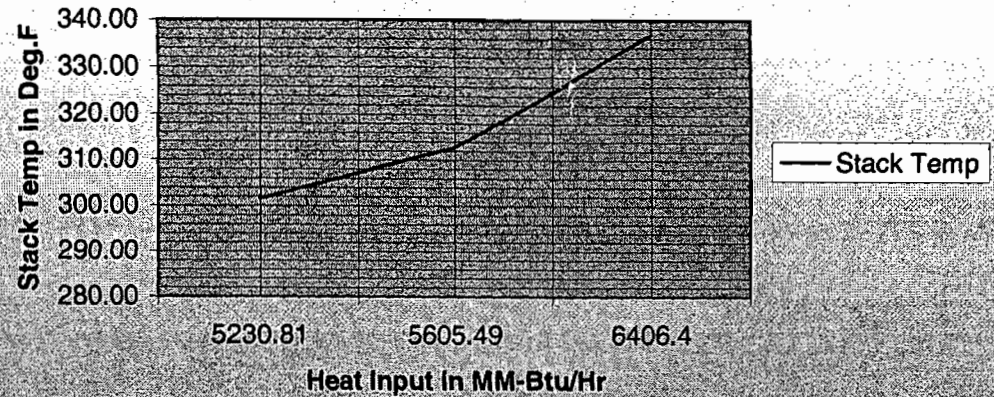
UNIT-6 (HeatInput Vs GasFlowRate)



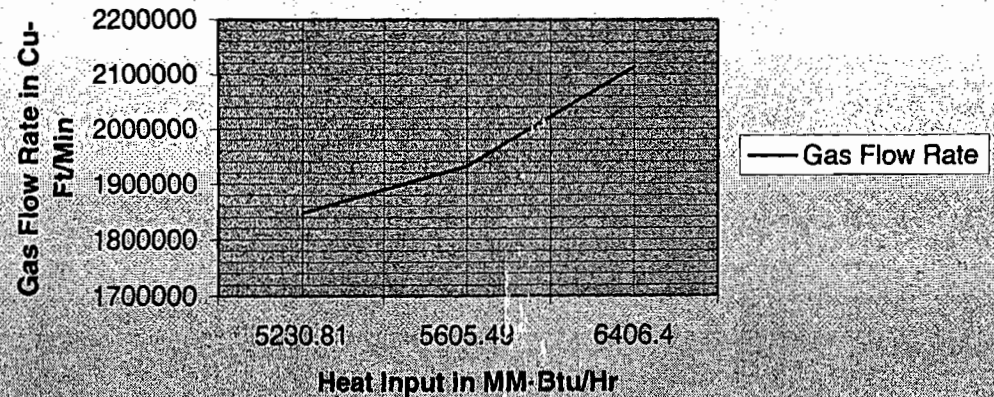
Heat Input	Stack Temp	Gas Flow Rate
5230.81	301.57	1847428
5605.49	312.80	1931965
6406.4	336.81	2112669.945

Run-1	Run-2	Run-3
301.7	301.1	301.9
293.6	332.4	312.4

UNIT-7 (HeatInput Vs StackTemp )



UNIT-7 (HeatInput Vs GasFlowRate)



**Vielhauer, Trina**

**From:** Linero, Alvaro  
**Sent:** Friday, October 25, 2002 10:32 AM  
**To:** 'Waters, Glenn D.'  
**Cc:** Vielhauer, Trina  
**Subject:** RE: Crist Construction Permits

Hi Dwain:

I agree with you and I don't think there is a lot of time on the groundbreaking issue. I believe my communication to you laid out a good path whereby the ESP project will be in support of a pollution control project. Let's get together ASAP and discuss what will be done and when. I will certainly need to describe in any authorization what it is that you propose to do. I have next to nothing right now.

I take back the 0.2 claim. I was reading the wrong side of the graph somehow. The numbers were closer to 0.3 (and not 0.5 that represents full load). The technical conclusion is not much different though.

I know it is important. We'll tie this down as soon as necessary. I'd like to review the matter with Trina (who is not here right now) and then take it to Howard when Trina and I need guidance. We have certainly not made a decision on this. Howard is out the first three days of next week. I believe Trina will be back on Thursday as well. She reads her e-mail and will read this one so she knows this is important.

Are you planning to come by here again? If so, bring schedules and project descriptions. It certainly worked a lot better that way when we reviewed the waterwall project. Shall I visit you in Pensacola?

In the meantime, let's start talking by phone as soon as you have the time. I'll be out until 12:30 this afternoon (your time). And as you know my time is your time.

Thanks. Al Linero.

- ③ How quick build up?
- ④ Seems to be a slow build up

① ~~is it~~ Is it outside malfunction rules?

② Catalyst Bed needs to be cleaned Best can Bypass SCR & still run unit.

③ 5-7 days to clean out popcorn ash

-----Original Message-----

**From:** Waters, Glenn D. [mailto:GDWATERS@southernco.com]  
**Sent:** Friday, October 25, 2002 8:52 AM  
**To:** Linero, Alvaro  
**Subject:** RE: Crist Construction Permits

It looks like you feel we have plenty of time for ground breaking issues at the beginning of the year for the ESP/SCR..I just don't want to be in a position that the plant wants to start construction and I have no permit..

On the Nox bypass issue, I highly question the data for Crist 7 at 0.20 lb/mbtu Nox. I have never seen any valid readings in that range for Crist 7. The only thing I can think of to be at that low level would be a startup or shutdown on natural gas which Unit 7 uses for startups. At minimum load on coal (which we plot weekly), I believe Crist 7 is normally around upper .39s range. We have weekly data for 5 years or so that we routinely send to the plant in load bins so they can weekly follow if they are meeting their internal Nox target for the emissions averaging plan.

We really believe we need some variance on startup/shutdown and malfunction on the operation of the SCR. I believe 10-14 days a year for proactive maintenance or emergency maintenance of the SCR is what we are

Want relief from when SCR out of service for maintenance.

\* It in agree - upfront notice. 1  
Biamual plan to maintain.

looking for. We're not trying to get out of using it at its maximum but experiences at Bowen and Hammond indicate that popcorn ash and luggage may be problem. I can see that one normal outage a year like we have can't keep this device operating at its peak efficiency. I believe this should NOT be a great issue during the off ozone season but during the ozone season we might need to monitor local ozone conditions and maybe even gain permission on a case by case basis during the ozone season. I envision that perhaps a best practice might be to do the annually just before ozone season to make sure we are in good shape for the summer. I see this as a positive thing to maintain the greatest efficiency of the control device especially if we are operating it year-a-round. I believe this is doable considering this is a voluntary agreement. Let's interpret the agreement language "on line" to mean normal operational conditions not to include startup/shutdown, maintenance and malfunction. Keep in mind in the agreement if Unit 7 is totally offline then the 0.20 average in not in effect. Think of this way, if we have to go off line then this generation will just be on a uncontrolled unit either at Crist, Scholz, Smith or Barry. We are looking only for a few days for maintenance on the SCR. I will be happy to help talk to Howard if you think this will help. This is very important to us. Please think some more on how to do this. Thanks, Dwain

-----Original Message-----

From: Linero, Alvaro [mailto:Alvaro.Linero@dep.state.fl.us]  
Sent: Thursday, October 24, 2002 12:37 PM  
To: Waters, Glenn D.  
Cc: Vielhauer, Trina; Koerner, Jeff  
Subject: RE: Crist Construction Permits

Hi Dwain:

There are a lot of issues in your e-mail that I reproduced below.

I think I have a good handle on permitting options for the Crist ESP/SCR projects. Just let me know when you have a plan and schedule. Then you and

I can sort out the details of applications or applicability determinations

that might be needed. Like I said, if the ESP move is to accommodate a pollution control project, then it can be easily permitted even before all

the details of the SCR project are known.

The main issue I recall that I needed assistance from my management on is the

one you mentioned regarding time when the SCR unit might be down for maintenance. You propose that Unit 7 still operate through a "bypass." You

were seeking guidance on whether those periods can be left out of the 30-day

calculation in determining adherence to the 0.2 lb NOx/mmBtu limit. I can't

answer that question today, but I will soon.

I "exploded" the data from Crist Unit 7 and graphed NOx versus load for a few

days of variable load. It looks to me like Unit 7 achieves about 0.5 to 0.6

lb/mmBtu at 500 MW. I saw at least one date (January 1, 2001) during which

the load dropped to 200 MW while emissions were right at 0.2 lb/mmBtu. It

looks to me like occasional SCR downtime can be managed by operating at a



reduced load until the SCR unit is available. It doesn't have to be 200 MW, because a number a little higher NOx rate can be accommodated by the 30-day averaging time.

You can probably crank up some of the alternative NOx control measures (like SNCR, etc. on other units) that will be in place, when such situations occur and perhaps still operate Unit 7 at a good rate. It looks manageable to me and I think you can still meet a 30 day limit of 0.2 lb/mmBtu without much production loss.

I will nevertheless get a reading on what is actually possible within the agreement that was executed. My observation is only "technical" until I consult with my boss. She will be back next Thursday.

I'm glad we were able to accomplish so much on the permitting matters at both Crist and Smith.

Thanks. Al Linero.

-----Original Message-----

From: Waters, Glenn D. [mailto:GDWATERS@southernco.com]  
Sent: Wednesday, October 23, 2002 10:31 AM  
To: Linero, Alvaro; Koerner, Jeff  
Subject: Crist Construction Permits

I just wanted to touch base with you again to see if FDEP had any additional suggestions on how to address the Crist 7 ESP/SCR Permit and the Crist 4,5,6 Alternative Nox Strategy Testing, etc., outlined from the FDEP-Gulf Agreement. As I recall from our October 3 meeting, you wanted to talk with Pat/Howard and think some more about the best way to address both. We discussed phased permits? Separate permits? Even separating the "breaking ground" stage on the ESP/SCR issue? Please recall that Gulf does not wish to open the Crist Title V Permit until its renewal in 2004. My VP will be in the office on Friday and I probably need him to sign some kind of RO request to at least start the Unit 7 ESP/SCR breaking ground issue. I gather this will still start after the first of the year.

Al, as for the other permits discussed on October 3, I believe we are on track with all the following:

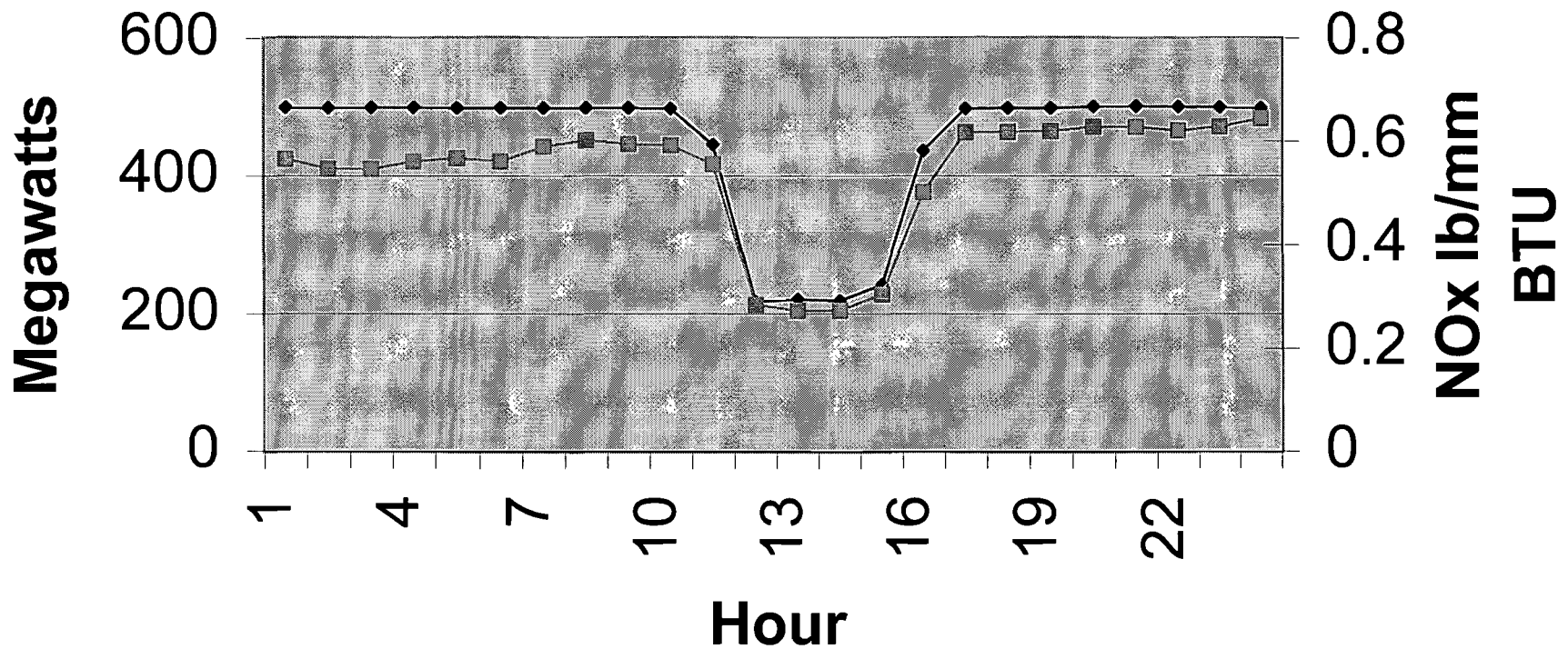
Smith 4 & 5 PSD extension - done (thanks for quick save).  
Smith 4 & 5 Title V Application submission - done at the Oct 3 meeting  
Smith Waterwall Construction Permit - issue, but Gulf still needs to send request to include in current Title V opening above on Unit 4 & 5.  
Smith 1 & 2 CAM extension request - Bruce Mitchell has given me feedback and we mailed our request yesterday. FDEP to issue letter OK  
Crist 4,5,6 CAM extension request - Bruce Mitchell has given feedback and we mailed our request yesterday. FDEP to issue letter OK  
Stanton A PSD revision for CEM issue - Gulf to submit formal request to Mike Halpin next week with supporting data.

AL and Jeff, Please let me know any thoughts. Your feedback is appreciated.  
Thanks, Dwain

G. Dwain Waters  
Air Quality Programs Supervisor  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520-0328  
Phone: (850) 444-6527  
Pager: (850) 469-4076  
gdwaters@southernco.com



# Gross Load and Emission Rate - Crist Unit 7 - Jan. 1, 2002



◆ Gross Load    ■ Emission Rate

## Vielhauer, Trina

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**From:** Koerner, Jeff  
**Sent:** Friday, November 15, 2002 2:14 PM  
**To:** Dwain Waters (E-mail)  
**Cc:** Linero, Alvaro; Vielhauer, Trina  
**Subject:** Gulf Power, Crist Plant - Upcoming Projects

Duane,

As Al has mentioned, I'm the point man on two projects that stem from the Gulf Power/DEP Agreement. We had a few glitches with the "biomass" project related to our need for additional information and your need to have the draft permit issued quickly. With the few details of the upcoming projects that I have, I tried to come up with an "advance" list of information that we would likely need for review. This is just an effort to help you provide us with as complete an application as possible. Please let me know if I've misstated any details or made any incorrect assumptions.

### 1. Installation of an SCR System for Unit 7

Southern Company has designed SCR systems for similar coal-fired units. The design process for Unit 7 is in the early stages. However, to accommodate the SCR, Gulf Power plans to relocate the ESP. Due to structural concerns, it may be necessary to install a new ESP. This would likely require preparation of the foundations within the next few months to meet the proposed schedule. We have previously indicated that we would consider a separate review for the foundations, which would be a project in support of a pollution reduction project (the SCR system). We should be able to act quickly on this, once we receive your request.

As discussed earlier, we would not necessarily require a full set of detailed construction plans for purposes of an air construction permit application. We do require enough detail to provide reasonable assurance that the design and equipment are capable of complying with the regulatory requirements. It may be possible to provide a conceptual design with sufficient detail that would provide this assurance. As a starting point, we would need at least the following information for review:

- A detailed process flow diagram of the entire system (boiler through stack) identifying equipment, fuels, raw materials, and exhaust flows as well as ranges of flow rates, temperatures, and pressure drops.
- For the proposed catalyst: composition (materials), structure (honeycomb, plate, etc.), estimated catalyst life, and an explanation of the selection of the proposed catalyst over other materials and structures based on specific operating conditions for this unit as well as permitted fuels and other fuels under consideration.
- For the proposed design: details of the ammonia distribution system, ammonia flow control system, approximate ammonia injection rates, target ammonia slip levels, proposed ammonia monitoring equipment and frequency, design control efficiency, control efficiency over the operational range, and estimated NOx emission rates.
- A thorough description of the operation and maintenance of the SCR system.
- Recommended procedures for startup and shutdown considering the SCR system and operating parameters that would affect implementing ammonia injection.
- Exhaust stack information including exhaust flow rates (acfm and dscfm), temperatures, internal stack diameter, and stack height.
- Modified CEMS monitoring locations.
- Estimated capital and operating costs of SCR system.
- Emissions estimates for NOx, PM, and PM10.
- Schedule of construction and operation.

(We would also need to review the proposed design information related to the new ESP. I could provide a list similar to the above if that would be helpful.)

Gulf Power is contemplating a bypass in the design for the SCR system for startup, shutdown, and catalyst maintenance. Gulf Power is also considering a request to exclude limited periods of NOx emissions during days when the bypass is used. As a starting point, we would need at least the following information to review such a request:

- A detailed process flow diagram.
- Description of the SCR bypass system (equipment, operation, and limited periods of use).
- Description of the catalyst maintenance procedure and schedule from the catalyst manufacturer.
- Description of soot-blowing equipment (number, type, location), procedure, and frequency.
- Discussion of why catalyst maintenance cannot be performed during regularly scheduled downtime for Unit 7.
- Examples of actual maintenance schedules for coal-fired units with SCR systems.
- A specific request for the periods to be excluded.
- Estimated emissions from Unit 7 during bypass operation.
- Description of other control techniques that could be used to minimize NOx emissions from Unit 7 during bypass operation (SNCR, hybrid SNCR/SCR system, gas reburn, etc.).
- Quantification of how SCR bypass operation will affect plant-wide emission levels from Units 4-7 to include

various scenarios such as: SCR on Unit 6, reburn on Units 4-6, SNCR on one or more of Units 4-6, etc.  
Comparison of predicted plant-wide emission levels with future plant-wide NOx standard of 0.2 lb/MMBtu.

- Estimate capital and operating costs of SCR bypass system.

My initial reaction to the SCR bypass is this: The Gulf Power/DEP agreement seems quite clear, "... install and begin and continue operating an SCR system at Crist Unit #7 whenever the Crist Unit #7 is online." We have Rule 62-210.700, F.A.C. that governs excess emissions due to startup, shutdown, or malfunction, but does not appear to provide a similar authority with regard to emissions during maintenance of control equipment. Also, a review of the emissions data for Units 4-7 seems to show that the plant-wide emissions standard could be met even if the SCR bypass operated for a few days during the 30-day period. This considers the fact that Unit 6 will eventually have an SCR system or Units 4-6 will have alternate NOx controls by the time the plant-wide NOx emission standard takes affect.

## 2. Alternative Fuel and NOx Control Technology Feasibility Studies

In accordance with the Gulf Power/DEP Agreement, Gulf Power agrees to conduct engineering studies on one or more of the remaining three coal-fired units at the Crist Plant. Such studies could include: SCR, SNCR, OFA, gas reburn, selective use of biomass fuel, etc. On November 13th, the Department issued a draft permit for the field-testing of wood chips, sawdust, sander dust, and switchgrass. What is the proposed schedule for the other studies? Have the alternate controls been limited to specific options?

Of course, each application must be made on the Department's approved forms and must be signed and sealed by a Professional Engineer licensed in Florida. That said, you may already have some of the supporting information that I've indicated above. I would be more than willing to begin reviewing any such supporting information in advance of the actual application. As I've mentioned before, my schedule looks like this for the remainder of the year:

November 27 - 29: Out of the office  
December 23 - January 3: Out of the office

These projects are important to the Department and we are committed to providing a prompt, but thorough review. If you have any questions, please call me at the number below. Have a good weekend.

Thanks!

Jeff Koerner  
New Source Review Section  
850/921-9536

P.S. Al just mentioned that you had some questions regarding test methods in the draft permit for the "biomass" project. Please give me a call at your convenience to discuss.

11/6/02

## Gulf Power Crisis

Popcan ash man ~~need to have~~ ~~SCS~~

Have made some design decisions &  
Have SCS folks come back over to discuss the  
design & technical

Emergency Bypass only when absolutely need  
to. w/out bypass can take 3-4 days to get  
someone in there to fix the SCR.

SCR on Plant Bowen, & Plant Hammond,  
Miller & Mc Guffis.

Send someone up to Bowen w/ Dwan &  
design engineers.

~~Plant Bowen~~ foundation for new ~~precipitator~~  
is next on permitting list.

Make  
question

Will be installing soot blowers, so why need  
bypass?

expl<sup>s</sup> Bypass lets you bring temperature down  
quicker & get someone in there quicker to do the  
work.

10/29/02 → ~~no~~ no one intervened.

PSC must do consummating order this week & then  
starts 30 day clock to challenge to Sup Ct.

## Vielhauer, Trina

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**From:** Koerner, Jeff  
**Sent:** Monday, November 25, 2002 1:48 PM  
**To:** Dwain Waters (E-mail)  
**Cc:** Linero, Alvaro; Vielhauer, Trina  
**Subject:** Crist Units 4 and 5, "Biomass" Project - Possible Changes for Discussion

Duane,

Attached is a preliminary revision of the draft permit for purposes of discussion. We are still in the process of accepting public comments on the draft permit so we can't agree to any changes. However, based on our phone conversation, it may be possible to make these changes depending on any other comments received. Note the following two items:

Condition No. 6: I have not yet received the field-testing protocol you mentioned this morning. therefore, I did not remove the language regarding the right to approve or disapprove the proposed schedule.

Condition No. 14: I looked at 4 years of PM test data in our database. The highest PM emissions were for Unit 4 (05/01/02) at 0.022 lb/MMBtu. The second highest PM emissions were for Unit 5 (03/10/99) at 0.015 lb/MMBtu. Therefore, I set the second test "trigger" at 0.025 lb/MMBtu.

Please review and we can discuss tomorrow.

Thanks!

Jeff Koerner  
New Source Review Section  
850/921-9536

Draft Permit,  
Revised.doc

# DRAFT PERMIT

## PERMITTEE:

Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520

*Authorized Representative:*

Mr. Gene L. Ussery, Jr.  
Vice President of Power Generation

Crist Electric Generating Plant Air Permit No. 0330045-004-AC Facility ID No. 0330045 SIC No. 4911 Permit Expires: October 1, 2003
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## PROJECT AND LOCATION

This permit authorizes a temporary period to conduct field-testing of carbonaceous fuels (wood chips, sawdust, sander dust, and switchgrass) to determine the feasibility of use in a NOx reduction program for Units 4 and 5 at the Crist Plant. This existing plant is located on Pate Road, off of 10 Mile Road on Governors Bayou in Escambia County, Florida. The map coordinates are: Zone 16, 478.50 km East and 3381.30 km North (Latitude: 30° 33' 58" North and Longitude: 87° 13' 44" West).

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to perform the work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit supplements all other air construction and operation permits for the affected emissions units and does not alter any requirements from such previously issued air permits.

## CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

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Howard L. Rhodes, Director  
Division of Air Resources Management

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(Date)

## SECTION 1. GENERAL INFORMATION (DRAFT)

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### FACILITY AND PROJECT DESCRIPTION

The existing plant consists of seven fossil fuel fired steam generators and two fly ash silos. Natural gas is the primary fuel for Units 1, 2 and 3. Pulverized coal is the primary fuel for Units 4, 5, 6 and 7. Fuel oil is used as supplemental fuel in all seven of the units. Only the following units are affected by this air construction permit.

ID	Emission Unit Description
004	Unit 4 is a utility boiler with a maximum heat input rate of 1096.7 MMBtu/hour.
005	Unit 5 is a utility boiler with a maximum heat input rate of 1096.7 MMBtu/hour.

### REGULATORY CLASSIFICATION

Title III: The existing facility is identified as a potential major source of hazardous air pollutants (HAP).

Title IV: The existing facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

### RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department. In addition, the field-testing of carbonaceous fuels ("biomass") is contemplated as a possible engineering feasibility study for NOx reduction in the "Agreement for the Purpose of Ensuring Compliance with Ozone Ambient Air Quality Standards" that was entered into on August 28, 2002 between the Florida Department of Environmental Protection and the Gulf Power Company.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate the emissions units regulated by this permit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794.
3. Appendices: The following Appendices are attached as part of this permit: Appendix CF (Citation Format); Appendix GC (General Conditions); and Appendix SC (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: The scope of this temporary project is to develop information in support of a permanent project. A future request for permanent authorization to fire carbonaceous fuels would then require a revision to the Title V air operation permit.



## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

### A. EU-004 and 005 – Existing Units 4 and 5

This section of the permit addresses the following emissions units.

#### Emissions Unit Nos. 004 and 005

*Description:* Each unit is a tangentially fired, dry-bottom boiler manufactured by Combustion Engineering.

*Capacity and Fuels:* Each unit is rated at a maximum heat input of 1,096.7 MMBtu per hour when firing pulverized coal, natural gas or distillate No. 2 fuel oil (used as back-up fuel).

*Controls:* Particulate matter emissions from each unit are controlled by hot side (Buell Model # Bal. 2x34n333-4-3p) and cold side (Buell Model # 1.1x48k33-1p) electrostatic precipitators.

*Monitors:* Each unit is continuously monitored for opacity, carbon dioxide, nitrogen oxides, and sulfur dioxide.

*Stack Parameters:* Units 4 and 5 share a common stack with units 1, 2 and 3 having the following characteristics: stack height is 450 feet; exit diameter is 18.0 feet; exit temperature is 290° F; actual volumetric flow rate is approximately 802,500 acfm.

#### AUTHORIZATION

1. Relation to Other Permits: The conditions of this permit are in addition to those of any other air construction or operation permits. [Rule 62-4.210, F.A.C.]
2. Field-Testing of Carbonaceous Fuels: Subject to the conditions of this permit, the permittee is temporarily authorized to conduct a ten-month field-testing program to determine the feasibility of co-firing carbonaceous fuels with coal in existing Units 4 and 5 as a NOx reduction technique. Carbonaceous fuels shall only include the following untreated materials: wood chips, sawdust, sander dust, and switchgrass. For each unit, these materials may be co-fired with coal at a maximum heat input rate of 97.7 MMBtu per hour. The maximum total heat input rate for each unit remains at 1096.7 MMBtu per hour. The permittee shall implement the field-testing program to determine and report operational and environmental impacts that will result from co-firing carbonaceous fuels. This information may be used to support a future request for permanent authorization of one or more of these fuels. Units 4 and 5 shall remain subject to the conditions of all existing permits related to air pollution and control equipment during the field-testing program. *{Permitting Note: Rule 62-210.200(55), F.A.C. defines "carbonaceous fuel" as, "Solid materials composed primarily of vegetative matter such as tree bark, wood waste, or bagasse." This permit further limits carbonaceous fuels to untreated wood chips, sawdust, sander dust, and switchgrass.}* [Applicant Request]
3. Expiration: Upon the expiration of this permit, the authority to fire carbonaceous fuels is withdrawn.

#### PERFORMANCE RESTRICTIONS

4. Temporarily Authorized Fuels: Subject to the conditions of this permit, each unit may also fire carbonaceous fuel consisting of the following untreated materials: wood chips, switchgrass, sawdust, and sander dust in addition to currently authorized fuels. These materials shall be substantially free of plastics, metals, paint or other chemicals. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
5. Permitted Capacity:
  - a. For each unit, the maximum hourly firing rates (tons per hour) for the carbonaceous fuels are: 10.9 tons of wood chips per hour, 6.7 tons of switchgrass per hour, 8.7 tons of sawdust per hour, and 8.7 tons of sander dust per hour. The above limits are not cumulative and only one carbonaceous fuel type may be fired at a time. *{Permitting Note: These restrictions are roughly equivalent to a heat input rate of 97.7*

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU-004 and 005 – Existing Units 4 and 5

MMBtu per hour.}

- b. During the project, no more than the following amounts of carbonaceous fuels shall be fired: 7816 tons of wood chips, 4836 tons of switchgrass, 6288 tons of sawdust, and 6288 tons of sander dust. *{Permitting Note: These restrictions are roughly equivalent to 30 days of firing for each fuel.}*

When firing any carbonaceous fuel, the permittee shall continuously monitor and record the amount of each fuel being fired. [Rule 62-210.200(PTE), F.A.C.]

- 6. Schedule: ~~Within 7 days of receiving the first~~ Before firing any carbonaceous fuel, the permittee shall submit a preliminary schedule detailing the proposed field-testing protocol to the Bureau of Air Regulation and the Compliance Authority. The Bureau of Air Regulation reserves the right to review and approve or disapprove the proposed schedule and protocol. Updates to the field-testing protocol and schedule shall be submitted as necessary. [Rule 62-4.070(3), F.A.C.]

EMISSIONS STANDARDS

- 7. Emissions Standards: This permit does not establish any new emissions standards for these units. Units 4 and 5 shall continue to comply with the requirements of all existing, valid Department permits. [Rule 62-4.070(3), F.A.C.]
- 8. Fugitive Dust Emissions: The permittee shall minimize unconfined particulate matter emissions from the storage and handling of carbonaceous fuels by using dust suppressing techniques such as covering, confining, or applying water to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

- 9. Baseline Coal Emissions Tests: ~~Prior to co-firing any carbonaceous fuels, initial testing for each boiler when firing only coal shall be performed to determine CO and VOC emissions and establish baseline levels. All CO and VOC tests required by this permit shall be conducted in accordance with the procedures normally used for PM compliance tests. CO<sub>2</sub>, NO<sub>x</sub>, opacity, and SO<sub>2</sub> emissions data collected by the existing continuous monitors shall be reported for each test run. Baseline NO<sub>x</sub>, opacity, and SO<sub>2</sub> emissions shall be determined from continuous monitor data. Representative tests for ash resistivity and particle size distribution shall be included.~~ Baseline PM emissions shall be determined from recent annual compliance tests. Baseline tests shall be performed at permitted capacity. {Permitting Note: Baseline VOC testing is only required if VOC testing is required for any carbonaceous fuel.} [Rule 62-4.070(3), F.A.C.]

- 10. Carbonaceous Fuel Emissions Tests: A series of tests shall be conducted to determine emissions of CO, PM and VOC when co-firing each carbonaceous fuel with coal. ~~At least one PM test for each carbonaceous fuel shall include the particle size distribution. Within 21 days of first firing a given carbonaceous fuel, the permittee shall conduct an initial CO test. If the initial CO test shows that CO emissions are no greater than baseline emissions from coal firing, then VOC tests are not required. If the initial CO test shows that CO emissions are greater than baseline emissions from coal firing, then at least one VOC test is required.~~ In addition to the preliminary CO tests, the permittee shall conduct two additional CO tests. The permittee shall conduct at least one test to determine particulate matter emissions from each carbonaceous fuel. Each CO, PM, and VOC test shall consist of at least three, 1-hour test runs. CO<sub>2</sub>, NO<sub>x</sub>, opacity, and SO<sub>2</sub> emissions data collected by the existing continuous monitors shall be reported for each test run. Tests shall be performed while co-firing the highest percentage of carbonaceous fuel that will be requested on a permanent basis. All CO, PM, and VOC tests required by this permit shall be conducted in accordance with the procedures normally used for PM compliance tests. ~~At least two such series of tests are required for each fuel. The first series of tests shall be conducted within 45 days of initial co-firing of that fuel. The second series of tests shall be at least seven days later and shall be conducted during the final week of co-~~

when?

Clarify when could be > 1; if only 1 when have to do it?

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

#### A. EU-004 and 005 – Existing Units 4 and 5

~~firing that fuel.~~—Any problems related to storage, handling, pulverizing, charging, boiler or ESP performance shall be reported. [Rule 62-4.070(3), F.A.C.]

11. ~~Continuous Monitoring:~~ When co-firing any carbonaceous fuels, the following parameters shall be monitored and recorded on an hourly basis: charging rate of each fuel (tons per hour), total heat input rate (MMBtu/hour), flue gas oxygen content, NOx emissions (lb/MMBtu), and opacity (percent). When co-firing any carbonaceous fuel, the permittee shall continuously monitor and record NOx emissions (lb/MMBtu) and opacity (percent). For each day any carbonaceous fuel is fired, the permittee shall report the following: total tons of each fuel charged; hours of fuel firing; average charging rate of each fuel (tons per hour); and average total heat input rate from each fuel (MMBtu/hour). [Rule 62-4.070(3), F.A.C.]
12. ~~ESP Parameters:~~ For At the beginning and end of each required PM test run, the critical ESP parameters (field voltages, rapping intensity, and rapping frequency) shall be monitored and recorded, at 15-minute intervals. After each required PM test run, a representative sample of the ESP ash shall be taken and analyzed for resistivity. Quantities of ash generated and adjustments made to the ESP shall also be reported. For the baseline tests when firing coal, these parameters shall be monitored and recorded at 15-minute intervals during the beginning and end of each required CO test run. [Rule 62-4.070(3), F.A.C.]
13. ~~Fuel Sampling:~~ During each required test, a representative fuel sample shall be taken and analyzed for the following fuel properties: heating value (Btu/lb), moisture (% by weight), nitrogen (% by weight), sulfur (% by weight), ash (% by weight), fluorides (ppm by weight), lead (ppm by weight), and mercury (ppm by weight). This includes coal samples for the baseline tests. Representative samples of each carbonaceous fuel shall also be taken and analyzed for these properties for each delivery upon initial receipt and once each month when stored on site. At least three samples of each carbonaceous fuel shall be analyzed for these properties. [Rule 62-4.070(3), F.A.C.]
14. ~~Ash Sampling and Particle Size Testing:~~ If initial tests for a carbonaceous fuel shows PM emissions of 0.025 lb/MMBtu or higher, the permittee shall conduct a second PM test to include particle size distribution. During the second PM test, a representative sample of ESP ash shall be taken and analyzed for ~~resistivity~~ resistivity. After each required stack test, a representative sample shall be taken from the ESP ash and analyzed for resistivity. [Rule 62-4.070(3), F.A.C.]
15. ~~Rate During Testing:~~ All tests shall be performed The permittee shall attempt to conduct all tests at permitted capacity, which is defined as 90% to 100% of the maximum operating rate allowed by permit (total heat input rate of coal and carbonaceous fuel). If the permittee is unable to operate at this level, then any subsequent request to fire this fuel shall be limited to 110% of the tested rate. If the co-firing of any carbonaceous fuel results in any emissions that are not in accordance with the existing permits, co-firing shall cease as soon as practicable. Co-firing that fuel shall not resume until appropriate actions are taken to correct the problem. The Compliance Authority shall be notified immediately upon such cessation and resumption of co-firing the carbonaceous fuel. [Rules 62-297.310(7)(a)9 and 62-4.070(3), F.A.C.]
16. ~~Test Notification:~~ The permittee shall provide a 5-day advance notice of any scheduled stack tests to afford the Compliance Authority the opportunity to witness the tests. If unavoidable circumstances occur that would delay the stack tests, the permittee shall keep the Compliance Authority informed of the delays and the new schedule. Within ten days of beginning the field-testing, the permittee shall provide a test schedule that summarizes the proposed program for co-firing carbonaceous fuels and identifies the preliminary dates for conducting stack testing. If unavoidable changes to the proposed schedule occur, the permittee shall provide the Compliance Authority with at least a 5-day advance notice of any rescheduled stack tests. [Rule 62-297.310(7)(a)9, F.A.C.]
17. ~~Test Methods:~~ Required tests shall be performed in accordance with the following reference methods.

do they have to request after test to continue using fuel?

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**A. EU-004 and 005 – Existing Units 4 and 5**

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Permitting Note: Tests performed as necessary to support other methods.}</i>
5, 5B, 5F or 17	Particulate Matter <i>{Permitting Note: Testing shall be performed in accordance with the procedures specified in the Title V air operation permit.}</i>
10	Carbon Monoxide
19	Determination of Mass Emission Rates for Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides <i>{Permitting Note: Used as necessary to support other methods.}</i>
18	Organic Compounds <i>{Permitting Note: As an optional supplement to Method 25A, may be performed to determine the fraction of methane and ethane emissions. Otherwise, all compounds measured by Method 25A are assumed to be "volatile organic compounds".}</i>
25A	Volatile Organic Compounds

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. Tests shall also be conducted in accordance with the requirements specified in Appendix SC of this permit. Other equivalent methods may be used only if written approval is obtained from the Bureau of Air Regulation prior to conducting the tests. CO<sub>2</sub>, NO<sub>x</sub>, opacity, and SO<sub>2</sub> emissions shall be determined by data collected with the existing continuous monitoring systems.

[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

**RECORDS AND REPORTS**

18. Stack Test Reports: The permittee shall prepare and submit reports for all required stack tests in accordance with the requirements specified in Rule 62-297.310(8), F.A.C. All stack test data collected during the field-testing program shall be submitted for review. For each test run, the report shall also indicate the information required by this permit. For each required stack test, the permittee shall submit a written report that summarizes the results with 45 days of completing such test. [Rule 62-297.310(8), F.A.C.]
19. Final Report: Within 90 days of the permit expiration date completing the field-testing project, the permittee shall submit a report summarizing the following: a description of the entire project; baseline emissions when firing coal; emissions when firing each carbonaceous fuel; ambient conditions during each test; properties of each carbonaceous fuel compared to coal; fuel feed rates; heat input rates; critical ESP parameters (field voltages, rapping intensity, and rapping frequency); and ash resistivity of each carbonaceous fuel compared to coal. The report shall note and discuss any adjustments to the boiler or ESP that were made to accommodate the co-firing of carbonaceous fuels. It shall also detail any operational concerns related to the following items: storage, handling, pulverizing, and charging carbonaceous fuels; co-firing carbonaceous fuels with coal; ash generation; boiler combustion efficiency; and opacity. Finally, the report shall quantify expected NO<sub>x</sub> reductions and discuss the feasibility of co-firing carbonaceous fuels as a NO<sub>x</sub> reduction technique. [Rule 62-4.070(3), F.A.C.]

Is this soon enough if they need to want to modify T-VP

THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

RECEIVED  
NOV 27 2002

BUREAU OF AIR REGULATION

In the Matter of an  
Application for Permit by:

OGC No. \_\_\_\_\_

Gulf Power Company  
One Energy Place  
Pensacola, FL 32520

Plant Crist, Units 4 and 5  
Escambia County  
Air Permit No. 0330045-004-AC

REQUEST FOR EXTENSION OF TIME

By and through undersigned counsel, Gulf Power Company (Gulf) hereby requests, pursuant to Florida Administrative Code Rule 62-110.106(4), an extension of time to and including January 6, 2003, in which to file a Petition for Administrative Proceedings in the above-styled matter. As good cause for granting this request, Gulf states the following:

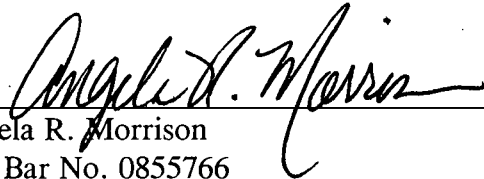
1. On or about November 12, 2002, Gulf received from the Department of Environmental Protection (Department) a draft air construction permit (Permit No. 0330045-004-AC) for the Crist Plant located in Escambia County, Florida, authorizing temporary field-testing of carbonaceous fuels ("biomass") in Units 4 and 5.
2. The draft permit contains several provisions that warrant clarification or correction.
3. Representatives of Gulf have corresponded and intend to continue to correspond with staff of the Department's Bureau of Air Regulation in an effort to resolve all issues.
4. This request is filed simply as a protective measure to avoid waiver of Gulf's right to challenge certain conditions contained in the draft air permit. Grant of this request will not prejudice either party, but will further their mutual interest and likely avoid the need to file a petition and proceed to a formal administrative hearing.

5. Counsel for Gulf has attempted without success to contact Douglas Beason with the Department's Office of General Counsel regarding this request.

WHEREFORE, Gulf respectfully requests that the time for filing of a Petition for Administrative Proceedings in regard to the Department's Draft Air Permit No. 0330045-004-AC be formally extended to and including January 6, 2003. If the Department denies this request, Gulf requests the opportunity to file a Petition for Administrative Proceedings within 10 days of such denial.

Respectfully submitted this 26<sup>th</sup> day of November, 2002.

HOPPING GREEN & SAMS, P.A.



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Angela R. Morrison  
Fla. Bar No. 0855766  
123 South Calhoun Street  
Post Office Box 6526  
Tallahassee, FL 32314  
(904) 222-7500

Attorney for GULF POWER COMPANY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to the following  
by U.S. Mail on this 26<sup>th</sup> day of November, 2002:

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

Douglas Beason, Esquire  
Office of General Counsel  
Department of Environmental Protection  
3900 Commonwealth Blvd.  
Tallahassee, FL 32399-2600

  
\_\_\_\_\_  
Attorney



# Hopping Green & Sams

Attorneys and Counselors

July 30, 2004

Patricia E. Comer  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399

Re: 1979 Rule Change and SIP Revision Involving Excess Emissions Rule and  
Visible Emissions Rule for Fossil Fuel Steam Generators

Dear Pat:

I am writing on behalf of the City of Tallahassee (City) concerning the above-referenced matter that came up during the April 9, 2004 meeting between Department staff and City representatives. As you know, the City notified the Department of its election of quarterly particulate emissions compliance testing for Hopkins Unit 2 by letter dated March 31, 2004. That quarterly testing commenced with the particulate emissions compliance test conducted at Hopkins Unit 2 on May 25, 2004. While the Department suggested an alternative approach to achieving relief from the visible emissions limit for Hopkins Unit 2, to date the air permitting staff have not been receptive to the City's proposal in this regard. Given these circumstances, I thought the enclosed historical information might be of interest to you and the Department.

As you will see from the enclosed, there is nothing in the historical documents that would suggest the 40 percent opacity limit for large fossil fuel steam generators specified in Rule 62-296.405(1)(a), F.A.C., was intended to be conditioned upon anything other than the election to conduct quarterly particulate emissions compliance testing. Moreover, the Department's practice in the case of numerous generating units has been fully consistent with the clear language of the rule.

I hope that the enclosed documents will be helpful to you and the Department. Please do not hesitate to call me if you have any questions.

Sincerely,



Peter C. Cunningham

Encls.



cc: Michael Cooke, FDEP  
Trina Vielhauer, FDEP  
Larry George, FDEP  
Jim Pennington, FDEP  
Jonathan Holtom, FDEP  
Robert E. McGarrah, COT  
Jennette Curtis, COT  
John Powell, COT

**Rule 62-296.406(1)(a), F.A.C.**  
**[Originally codified at Section 17-2.05(6), Table II, E., F.A.C.]**

**Chronology of Historical Documents**

The Environmental Regulation Commission adopted certain amendments to the State's air rules in August 1979, as recommended by the Secretary of the Department of Environmental Regulation. These rule changes included the provision, now codified in the second paragraph of Rule 62-296.405(1)(a), F.A.C., under which "units electing to test for particulate matter emissions compliance quarterly shall be allowed visible emissions of 40 percent opacity . . ."

In a memorandum to all Department District and Subdistrict Managers and District Air Engineers dated September 21, 1979, Assistant General Counsel Mary F. Clark addressed these rule changes, along with other matters (Attachment A). As to the emission limits for fossil fuel steam generators with more than 250 million Btu per hour heat input, Ms. Clark noted (at page 6 of the memo):

\* \* \*

The opacity limitations applicable to fossil fuel steam generators were amended by the Environmental Regulation Commission at its August meeting. The new rule provisions will become effective on September 25, 1979. As of that date, the following emission limitations for opacity should be enforced.

- (1) Existing Fossil Fuel Steam Generators – Steady State Opacity

40 percent opacity when particulate tests are conducted at least quarterly.

\* \* \*

In a letter to Wade Hopping dated September 18, 1979 (Attachment B), Assistant General Counsel Clark also addressed this new rule provision, as follows:

In addition, the amendment to Section 17-2.05(6), Table II, E., Florida Administrative Code, establishes a higher visible emissions standard for units which elect to test particulate emissions at least quarterly instead of annually. It would be helpful for the Department to know at which units quarterly testing will be conducted. In addition, the Department should be notified before a particulate test is conducted so that Department personnel will have an opportunity to observe such tests.

By letter dated October 19, 1979, the Department submitted a SIP revision package concerning the August 1979 rule changes to the U.S. Environmental Protection Agency's Region IV Office. I believe you had a copy of the package at our meeting on April 9, 2004. That package contained a "Comparative Appraisal of Regulations" that included a description of the rule changes. With regard to the visible emissions limit for existing fossil fuel steam generators, the description indicated that, in practice, the Department intended "to limit the subject units to an opacity corresponding to the 0.1#/MMBTU of heat input based on the opacity observed during steady state quarterly tests" and that the Department did "not intend to allow the opacity limit for a unit to exceed 20 percent if that level is not exceeded during the quarterly compliance test. . . ."

By letter dated November 1, 1979, to Assistant Secretary Victoria Tschinkel, Wade Hopping expressed several concerns regarding the "Comparative Appraisal of Regulations" on behalf of the Florida Electric Power Coordinating Group, Inc. (FCG) (Attachment C). As to the new steady state visible emissions limit for existing fossil fuel steam generating units, Mr. Hopping's letter states:

(a) The Department appears to take the position that units which elect to conduct quarterly particulate tests will not necessarily be allowed the new 40 percent steady state opacity limit. We emphasize that the new rule imposes no conditions on the allowance of the 40 percent limit for existing units other than the election to test for particulate emission compliance quarterly. We feel that the language of the rule is clear on this point. We recognize that units electing to conduct quarterly particulate emissions tests are subject to the present particulate limit of 0.1 pounds per million BTU heat input. Nonetheless, any attempt to impose a visible emissions limit lower than 40 percent on an existing unit that has elected to conduct quarterly particulate tests is unauthorized under, and in conflict with, the visible emissions rule adopted by the Environmental Regulation Commission.

(b) The Department has also indicated that: "The specific opacity limit for each unit will be incorporated into the permit condition for that unit." Our objection to this approach is again that the new rule does not speak of, nor in any way authorized, a "specific opacity limit for each unit." The new rule provides that the steady state opacity limit for every existing unit that elects to conduct quarterly particulate tests is 40 percent. Other existing units remain subject to the 20 percent opacity limit. Inclusion of an opacity limit in an existing unit's permit conditions is not a matter addressed by the new rule.

By letter dated November 7, 1979, Assistant Secretary Tschinkel responded to the comments from the FCG regarding the "Comparative Appraisal" included in the SIP Revision Package (Attachment D). In her letter, Ms. Tschinkel stated that:

We have reviewed your comments and agree that the "Comparative Appraisal of Regulations" submitted to EPA as part of the SIP revision is misleading. Consequently, we have amended that document to more accurately reflect the substance of the amendments to the visible emissions rule, Section 17-2.05(6), Table II, E., Florida Administrative Code. . . . The SIP revision package will be formally amended to reflect these changes.

The amended “Comparative Appraisal of Regulations” attached to Ms. Tschinkel’s letter did not contain any suggestion that the Department would impose conditions or unit-specific opacity limits under the new rule provision.

I have not located any subsequent correspondence from the Department to Region IV regarding this SIP revision until a letter dated September 24, 1980. (Attachment E) This letter contained Secretary Varn’s responses to Region IV’s comments on the SIP revision package, and included the “amended” version of the “Comparative Appraisal of Regulations,” along with a very similar document entitled “Revision to Florida Air Implementation Plan for Visible and Excess Emissions from Fossil Fuel Steam Generators”. Both of these attachments describe the 40 percent opacity limit as available simply by electing to conduct quarterly particulate emission testing, with no other qualifications or conditions.

On January 22, 1982, EPA published a Federal Register notice approving the two Florida SIP revisions. (Attachment F) That final rule notice states the following with regard to the 40 percent opacity rule provision:

1. The visible emission limitation for existing fossil fuel steam generators during steady state operation is increased from 20 percent to 40 percent opacity for units which elect to perform a quarterly particulate source test. The quarterly particulate source test must demonstrate compliance with the current particulate mass emission limit of 0.1 pounds per million BTU (=/MM BTU) input. If such quarterly testing shows the units to be in compliance, the owner or operator may petition the Secretary to reduce the required frequency of sampling. Verification of compliance with the appropriate opacity limit will be accomplished during periodic field inspections in accordance with the proposed state test methods in the September 8, 1981, Federal Register (46 FR 44783).

INTEROFFICE MEMORANDUM

For Routing To District Offices  
And/Or To Other Than The Addressee

To: _____	Loctn.: _____
To: _____	Loctn.: _____
To: _____	Loctn.: _____
From: _____	Date: _____

TO: All District and Subdistrict Managers and District Air Engineers

THROUGH: R. L. Caleen, Jr. *RLC*  
General Counsel

FROM: Mary F. Clark *MFC*  
Assistant General Counsel

DATE: September 21, 1979

SUBJECT: Enforcement of Emission Limiting Standards for Fossil Fuel Steam Generators

Over the past several months a number of events have occurred which affect the emission limitations in Sections 17-2.05(6) Table II E. and 17-2.05(14) as they apply to fossil fuel steam generators. As a result there is some confusion relating to what emission limitations should be enforced against power plants in the state. The purpose of this memorandum is to address what emission limitations should be enforced by the Department of Environmental Regulation. The memorandum does not address what standards should be enforced by the Environmental Protection Agency or by a local environmental program.

1. FLORIDA POWER AND LIGHT COMPANY

FPL has sought and received a declaration of an energy emergency for the State of Florida extending through October 15, 1979, and a suspension of all state and local air rules under Section 110(f) of the federal Clean Air Act Amendments of 1977. This relief is limited to 120 days for each unit, and for most FPL units the relief has either already expired or will soon expire. More recently, the Secretary of the Department granted FPL a variance under Section 403.201, Florida Statutes. This variance was signed on August 28, 1979 and copies have been furnished to all district offices. Under the terms of the variance, FPL is subject to the following emission limitations:

A. Particulate Matter

(1) Cape Canaveral Units 1 and 2

0.2 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent by weight.

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(2) Fort Myers Units 1 and 2

0.2 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent.

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(3) Manatee Units 1 and 2

0.3 lbs/mm BTU.

(4) Port Everglades Units 1, 2, 3 and 4

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent.

0.4 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(5) Riviera Units 3 and 4

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent.

0.4 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(6) Sanford Units 3 and 4

0.2 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent.

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(7) Sanford Unit 5

0.3 lbs/mm BTU.

(8) Turkey Point Units 1 and 2

0.3 lbs/mm BTU while burning fuel with  
an asphaltene content less than or  
equal to 9 percent.

0.4 lbs/mm BTU while burning fuel with  
an asphaltene content greater than  
9 percent.

(9) All Other FPL Units

As specified in Section 17-2.05(6),  
Table II, E.

B. Opacity

(1) All Units Listed in Paragraph A. (1) - (8).

Steady state opacity - 40 percent when  
particulate tests are conducted at least  
quarterly.

(2) All Other FPL Units

As specified in Section 17-2.05(6),  
Table II, E.



## Best Available Copy

All District and Subdistrict Managers and  
District Air Engineers  
September 21, 1979  
Page 4

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### C. Sulfur Dioxide

- (1) Manatee Units 1 and 2

2.75 lbs/mm BTU.

- (2) All other FPL Units

As specified in Section 17-2.05(6),  
Table II, E.

### D. Excess Emissions

- (1) All Units Listed in Paragraphs A. (1) - (8)  
Above.

- (a) Excess emissions during start up and shutdown allowed provided the duration is minimized and best operational practices are used.
- (b) Excess emissions during boiler cleaning and load changes, not to exceed 60 percent opacity and 0.6 lbs/mm BTU of particulate matter, allowed for no more than 3 hours in any 24-hour period provided the duration is minimized and best operational practices are used.
- (c) Opacity emissions exceeding 60 percent allowed for no more than 4 6-minute periods during the 3-hour period for units which now have or have committed to install continuous opacity monitors.

## 2. JACKSONVILLE ELECTRIC AUTHORITY

By Executive Order, the Governor has suspended emission limitations applicable to JEA, under the authority of 110(f) of the Clean Air Act. This suspension is effective through October 15, 1979, when the Presidential declaration of an energy emergency will expire. That declaration may be extended by the President, and all districts will be kept informed of future developments.

A. Particulate Matter

All Operating Units

0.1 lbs/mm BTU (no change).

B. Opacity

(1) Northside Units 1, 2 and 3

40 percent opacity.

(2) All Other Generating Units

20 percent opacity.

C. Sulfur Dioxide

(1) Kennedy Units 8, 9 and 10

1.65 lbs/mm BTU.

(2) Southside Units 1 through 5

1.65 lbs/mm BTU

(3) All Other Generating Units

As specified in Section 17-2.05(6),  
Table II, E.

3. ALL OTHER FOSSIL FUEL STEAM GENERATORS WITH MORE THAN 250  
MILLION BTU PER HOUR HEAT INPUT.

A. Particulate Matter

As specified in Section 17-2.05(6),  
Table II, E.

B. Opacity

Note: The opacity limitations applicable to fossil  
fuel steam generators were amended by the Environmental  
Regulation Commission at its August meeting. The new

rule provisions will become effective on September 25, 1979. As of that date, the following emission limitations for opacity should be enforced.

(1) Existing Fossil Fuel Steam Generators - Steady State Opacity

40 percent opacity when particulate tests are conducted at least quarterly.

(2) New Fossil Fuel Steam Generators

Steady state opacity - 20 percent opacity.

C. Sulfur Dioxide

As specified in Section 17-2.05(6), Table II, E.

D. Excess Emissions

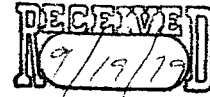
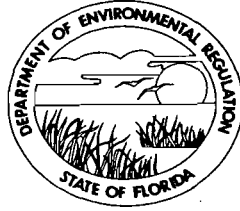
Note: The rule change effective on September 25, 1979, also amends Section 17-2.05(14) on excess emissions, as that provision applies to existing fossil fuel steam generators

- (1) Excess emissions during start up and shutdown allowed provided the duration is minimized and best operational practices are used.
- (2) Excess emissions during boiler cleaning and load changes, not to exceed 60 percent opacity and 0.3 lbs/mm BTU of particulate matter, allowed for no more than 3 hours in any 24-hour period provided the duration is minimized and best operational practices are used.
- (3) Opacity emissions exceeding 60 percent allowed for no more than 4 6-minute periods during the 3-hour period for units which now have or have committed to install continuous opacity monitors.

MFC/dg

cc: Jacob D. Varn  
Victoria Tschinkel  
Sandy Young  
Steve Fox  
DER Enforcement Administrator  
District/Subdistrict Enforcement Administrators  
Attorneys

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

## DEPARTMENT OF ENVIRONMENTAL REGULATION

September 18, 1979

Wade L. Hopping, Esquire  
Hopping, Boyd, Green & Sams, P.A.  
Post Office Box 6526  
Tallahassee, Florida 32301

Reference: Amendment to Section 17-2.05(14) Florida  
Administrative Code

Dear Wade:

The amendments to Section 17-2.05(14), and 17-2.05(6), Table II, E., Florida Administrative Code, governing excess emissions and visible emissions from fossil fuel steam generators were adopted by the Environmental Regulation Commission in August and filed with the Secretary of State's Office on September 6, 1979. Thus, the rule amendments should become effective September 25, 1979, twenty days after filing.

As you are well aware, the amended excess emissions rule would allow existing fossil fuel steam generators to exceed 60 percent opacity for no more than 4 six-minute periods during a 24 hour period under certain conditions. Specifically, the rule provides that:

visible emissions above 60 percent  
opacity shall be allowed for not  
more than 4, six (6)-minute periods  
. . . at units which have installed  
and are operating, or have committed  
to install or operate, continuous  
opacity monitors.

As I interpret this language, units which do not presently have continuous opacity monitors must commit to install such

Wade L. Hopping, Esquire  
September 18, 1979  
Page 2

equipment prior to obtaining the relief provided by this rule. A subsequent commitment would not be sufficient to protect a violator from enforcement actions under Chapter 403, Florida Statutes, and applicable regulations.

To assure that this problem does not arise, it is desirable that owners or operators of fossil fuel steam generators who plan to take advantage of this particular regulatory provision advise the Department in writing of their intentions at the earliest possible date. This document should state the company's commitment to install continuous opacity monitors at specified units and indicate the estimated time period in which this installation will be completed. When such a commitment has been received, we will be able to inform our district personnel, who bear primary responsibility for enforcing this rule, which generating units will be allowed visible emissions exceeding 60 percent opacity.

In addition, the amendment to Section 17-2.05(6), Table II, E., Florida Administrative Code, establishes a higher visible emissions standard for units which elect to test particulate emissions at least quarterly instead of annually. It would be helpful for the Department to know at which units quarterly testing will be conducted. In addition, the Department should be notified before a particulate test is conducted so that Department personnel will have an opportunity to observe such tests.

If you have any questions in this matter, please feel free to contact me.

Sincerely,



Mary F. Clark  
Assistant General Counsel

MFC/dg

cc: Jacob D. Varn  
Victoria Tschinkel  
Dr. J. P. Subramani  
Terry Cole, Esquire

HOPPING BOYD GREEN & SAMS, P. A.

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GARY P. SAMS

BRIAN H. BIBEAU  
WILLIAM D. PRESTON

OF COUNSEL.  
CARLOS ALVAREZ  
W. ROBERT FOKES

November 1, 1979

Ms. Victoria J. Tschinkel  
Assistant Secretary  
Department of Environmental Regulation  
Twin Towers Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Vicki:

We have recently received a copy of the materials transmitted from the Department to EPA Region IV regarding the visible emissions/excess emissions rule change. We appreciate the opportunity to review these materials, and recognize the considerable time and effort expended by the Department in compiling the SIP revision package. Our preliminary review, however, has revealed several matters of concern that we would like to bring to your attention.

1. In paragraph 1. of the introductory section entitled "Comparative Appraisal of Regulations," the Department sets forth a strategy for implementing the new steady state visible emissions limit for existing fossil fuel steam generating units.
  - (a) The Department appears to take the position that units which elect to conduct quarterly particulate tests will not necessarily be allowed the new 40 percent steady state opacity limit. We emphasize that the new rule imposes no conditions on the allowance of the 40 percent limit for existing units other than the election to test for particulate emission compliance quarterly. We feel that the language of the rule is clear on this point. We recognize that units electing to conduct quarterly particulate emissions tests are subject to the present particulate limit of 0.1 pounds per million BTU heat input. Nonetheless, any attempt to impose a visible emissions limit lower than 40 percent on an existing unit that has elected to conduct quarterly particulate tests is unauthorized under, and in conflict with, the visible emissions rule adopted by the Environmental Regulation Commission.

- (b) The Department has also indicated that: "The specific opacity limit for each unit will be incorporated into the permit condition for that unit." Our objection to this approach is again that the new rule does not speak of, nor in any way authorize, a "specific opacity limit for each unit." The new rule provides that the steady state opacity limit for every existing unit that elects to conduct quarterly particulate tests is 40 percent. Other existing units remain subject to the 20 percent opacity limit. Inclusion of an opacity limit in an existing unit's permit conditions is not a matter addressed by the new rule.
2. A significant omission is apparent in paragraph 2. of the "Comparative Appraisal of Regulations". The first sentence of this paragraph implies that the owner of any fossil fuel steam generating unit must petition the Secretary of the Department for an opacity limit higher than 20 percent on a case-by-case basis. Such a procedure is provided in the new rule only with respect to new fossil fuel steam generators. We trust the error in the first sentence of paragraph 2. was inadvertent, especially in light of the fact that the case-by-case procedure is specifically, and correctly, limited to new units in the Department's narrative appearing on page MTTT of the SIP revision package.

These are our initial comments on the SIP revision package, and we respectfully request that the Department respond to the points raised above. We feel that it is important that any problems be resolved, so that EPA approval of the SIP revision is not delayed. We will conduct a more thorough review of the package in the near future, and will forward any further comments to the Department.

We know that both you and the Department staff recognize the importance of obtaining EPA approval of the SIP revision as expeditiously as possible. Please let me know if you have any questions regarding this matter, or if I can be of assistance in speeding up EPA approval of the SIP revision.

Sincerely,



Wade L. Hopping

WLH:csp  
cc: S. Smallwood  
M. Clark

## COMPARATIVE APPRAISAL OF REGULATIONS

On August 22, 1979, the Florida Environmental Regulation Commission adopted a revision to Chapter 17-2, FAC for fossil fuel steam generators. This revision contained three important changes in the regulation. The basic thrust of these changes were a modification of the excess emission standards and visible emission limits.

1. The visible emission limit for existing fossil fuel steam generators during steady state operations was increased from 20 percent to 40 percent for those units electing to test quarterly. The quarterly test must show compliance with the particulate mass emission limit of 0.1 #/MMBTU of heat input. In practice, the Department intends to limit the subject units to an opacity corresponding to the 0.1 #/MMBTU of heat input based on the opacity observed during steady state quarterly tests. However, the steady state opacity will never be allowed to exceed 40 percent. The Department does not intend to allow the opacity to exceed 20 percent if that level is not exceeded during the quarterly compliance test at the corresponding 0.1 #/MMBTU level. The specific opacity limit for each unit will be incorporated into the permit conditions for that unit. Verification of compliance with the appropriate opacity standards will be made during periodic field inspections.
2. Owners of fuel steam generators may petition the Secretary of the Department of Environmental Regulation for an increase in the 20 percent emission limit on a case-by-case basis. This provision is contingent upon all mass emission limits being met. The Secretary has the authority to limit these units to the corresponding opacity observed during the compliance test if it is greater than 20 percent. The limiting opacity declared by the Secretary will be incorporated into the permit or site certification conditions for the specific unit. Compliance with the visible emission limit will be enforced during periodic field inspections and subsequent compliance tests.
3. Section 17-2.05(14), FAC was amended to allow excess emissions from fossil fuel steam generators during periods of boiler cleaning and sharp load changes.



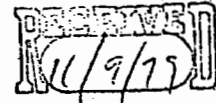
This modification of the rule permits fossil fuel steam generators to increase visible emissions to 60 percent for as long as 3 hours per day. In addition, the unit which have installed or committed to install continuous opacity monitors are allowed to exceed 60 percent opacity for up to 4 six minute periods during the allowed 3 hours per day. A particulate mass emission limitation cap of 0.3 #/MMBTU was allowed for periods of soot blowing and load changing. Compliance with the opacity limitations of Section 17-2.05(14), FAC will be monitored during random field inspections and quarterly compliance tests.

The Department will monitor compliance with the 0.3 #/MMBTU emission cap by requiring that one run of the test be conducted during soot blowing and load changing modes. The runs will then be weighted and arithmetically averaged ( $0.875 \times$  steady state avg. +  $0.125 \times$  soot blowing and load changing). The result will be compared with an average of 0.13 #/MMBTU ( $0.875 \times 0.1 \text{ #/MMBTU} + 0.125 \times 0.3 \text{ #/MMBTU}$ ). The average of the two steady state runs will be compared to the 0.1 #/MMBTU emission limitation for steady state conditions. The soot blowing run will be compared to the soot blowing standard of 0.3 #/MMBTU. An alternate approach, which will be accepted will be one complete test during steady state conditions and one complete test during soot blowing and load changing. The average of each test will be compared to the appropriate standard (0.1 #/MMBTU for steady state and 0.3 #/MMBTU for load changing and soot blowing).

Since Chapter 17-2, FAC contained no definition of load change, one was developed and added. A load change is defined as occurring when a fossil fuel steam generator, operating in the 10 to 100 percent capacity range, makes a load change equal to or greater than 10 percent of capacity at a rate of 0.5 percent per minute or more. An evaluation of several Florida units indicated that these load changes do not occur on a frequent basis.

This revision does not represent a change in particulate mass emission limits since Florida has never considered these conditions in its 0.1 #/MMBTU standard. However, soot blowing and load changing have always produced excess emission of up to 0.3 #/MMBTU of heat input.

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

November 7, 1979

Wade L. Hopping, Esquire  
Hopping, Boyd, Green & Sams, P.A.  
Suite 420, Lewis State Bank Building  
Post Office Box 6526  
Tallahassee, Florida 32301

Reference: Visible Emissions/Excess Emissions SIP Revision

Dear Wade:

Thank you for your letter of November 1, 1979, regarding your review of the Department's above referenced SIP revision package. We have reviewed your comments and agree that the "Comparative Appraisal of Regulations" submitted to EPA as part of the SIP revision is misleading. Consequently, we have amended that document to more accurately reflect the substance of the amendments to the visible emissions rule, Section 17-2.05(6), Table II, E., Florida Administrative Code. A copy of the "Comparative Appraisal of Regulation" as amended is attached for your review. The SIP revision package will be formally amended to reflect these changes.

If you have any questions in this matter, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Victoria J. Tschinkel".

Victoria J. Tschinkel  
Assistant Secretary

VJT/MFC/dg

Attachment

## COMPARATIVE APPRAISAL OF REGULATIONS

On August 22, 1979, the Florida Environmental Regulation Commission adopted a revision to Chapter 17-2, FAC for fossil fuel steam generators. This revision contained three important changes in the regulation. The basic thrust of these changes were a modification of the excess emission standards and visible emission limits.

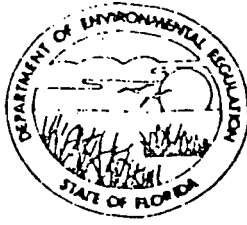
1. The visible emission limit for existing fossil fuel steam generators during steady state operations was increased from 20 percent to 40 percent for those units electing to test quarterly. The quarterly test must show compliance with the particulate mass emission limit of 0.1 #/MMBTU of heat input. If such quarterly testing shows that the units are regularly in compliance, the owner or operator may petition the Secretary of the Department to reduce the frequency of particulate testing required. Verification of compliance with the opacity standards will be made during periodic field inspections.
2. Owners of new fossil fuel steam generators may petition the Secretary of the Department of Environmental Regulation for an increase in the 20 percent emission limit on a case-by-case basis. This provision is contingent upon all mass emission limits being met. The Secretary has the authority to limit these units to the corresponding opacity observed during the compliance test if it is greater than 20 percent. The limiting opacity declared by the Secretary will be incorporated into the permit or site certification conditions for the specific unit. Compliance with the visible emission limit will be enforced during periodic field inspections and subsequent compliance tests. This provision is substantially the same as 40 CFR 60.11(e).
3. Section 17-2.05(14), FAC was amended to allow excess emissions from fossil fuel steam generators during periods of boiler cleaning and sharp load changes. This modification of the rule permits fossil fuel steam generators to increase visible emissions to 60 percent for as long as 3 hours per day. In addition, the units which have installed or committed to

install continuous opacity monitors are allowed to exceed 60 percent opacity for up to 4 six minute periods during the allowed 3 hours per day. A particulate mass emission limitation cap of 0.3 #/MMBTU was allowed for periods of soot blowing and load changing. Compliance with the opacity limitations of Section 17-2.05(14), FAC will be monitored during random field inspections and quarterly or annual compliance tests.

The Department will monitor compliance with the 0.3 #/MMBTU emission cap by requiring that one run of the test be conducted during soot blowing and load changing modes. The runs will then be weighted and arithmetically averaged ( $0.875 \times$  steady state avg. +  $0.125 \times$  0.3 #/MMBTU). The average of the two steady state runs will be compared to the 0.1 #/MMBTU emission limitation for steady state conditions. The soot blowing run will be compared to the soot blowing standard of 0.3 #/MMBTU. An alternate approach, which will be accepted will be one complete test during steady state conditions and one complete test during soot blowing and load changing. The average of each test will be compared to the appropriate standard (0.1 #/MMBTU for steady state and 0.3 #/MMBTU for load changing and soot blowing).

Since Chapter 17-2, FAC contained no definition of load change, one was developed and added. A load change is defined as occurring when a fossil fuel steam generator, operating in the 10 to 100 percent capacity range, makes a load change equal to or greater than 10 percent of capacity at a rate of 0.5 percent per minute or more. An evaluation of several Florida units indicated that these load changes do not occur on a frequent basis.

This revision does not represent a change in particulate mass emission limits since Florida has never considered these conditions in its 0.1 #/MMBTU standard. However, soot blowing and load changing have always produced excess emission of up to 0.3 #/MMBTU of heat input.



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

September 24, 1980

Ms. Rebecca Hanmer  
Regional Administrator  
U.S. Environmental Protection  
Agency, Region IV  
345 Courtland Street, NE  
Atlanta, Georgia 30365

Attention: Air Programs Branch

Dear Ms. Hanmer: *REBECCA*

The attached material contains revisions to the pages of the State Air Implementation Plan which describe compliance testing for the amendments to 17-2.05(14), F.A.C. and 17-2.05(6), Table II., E., F.A.C. These amendments were adopted by the Florida Environmental Regulation Commission on August 22, 1979 and submitted to the U.S. Environmental Protection Agency on October 19, 1979. In addition, I would like to address specific comments made by the Chief of Region IV's Air Enforcement Branch in a memorandum dated January 18, 1980. A copy is attached for your convenience.

First, the use of the term "best operational practices to minimize emissions" is questioned. This term appears in paragraphs 17-2.05(14)(a), F.A.C.; 17-2.05(14)(b), F.A.C.; and 17-2.05(14)(c), F.A.C. Paragraph 17-2.05(14)(a), F.A.C. was approved by EPA sometime ago and is consistent in the use of the term "best operational practices to minimize emissions" with 40 CFR 60.11(d). This term was chosen because it is not possible to delineate specific operational techniques either for each individual source or class of sources in 17-2, F.A.C. Techniques for reducing excess emissions vary with specific equipment designs, fuels, operating conditions, etc.

The specific separation of excess emission provisions for fossil fuel steam generators into paragraphs 17-2.05(14)(b), FAC and 17-2.05(14)(c), FAC makes it clear that the two hour limitation in paragraph 17-2.05(14)(a) does not apply to start-up, load change or shut-down for fossil fuel steam generators. However, the two hour provision in 17-2.05(14)(a), FAC does still apply to fossil fuel steam generators in the event of equipment malfunctions such as blown tubes, burner failures, etc.

The allowance of four six minute periods per 24 hours over 60% opacity in 17-2.05(14)(c), FAC is not a proposal. This provision was adopted on August 22, 1979 by the Florida Environmental Regulation Commission contingent upon the installation of continuous monitoring equipment. This provision is shown in its adopted form on Page 177B of section II in the original SIP revision package.

The question regarding upper limits on steady state opacity is a valid one. A typographical error is contained in 17-2.05(b), Table II., E., (1), (a) and (b), FAC. This error makes it appear that existing fossil fuel steam generators will be allowed to have a visible emission greater than or equal to 40% opacity; however, the emission limits adopted by the Florida Environmental Regulation Commission specified 40% as the limiting opacity for steady state conditions.

The particulate emission limitation applicable to soot blowing and load changes is found in 17-2.05(14)(c), FAC. The limitation is 0.3 #/MMBTU for which compliance is determined by the 3 test runs of the DER sampling method for power plant particulate. The DER sampling methods will be proposed for adoption in the first quarter of FFY 1981. Compliance sampling for steady state operation will also require 3 test runs.

Please check your copies of the State Air Implementation Plan Revision packages submitted on October 19, 1979. Those pages beginning with the letter of transmittal through MXXX may have been placed at the beginning of the document in duplicate. If this has occurred in your copies then those pages beginning with the letter of transmittal through MXXX may be removed without affecting the revision; because, another letter of transmittal appears behind page MXXX.



Rebecca Hanmer  
Page Three

It is hoped that this additional information will be sufficient to answer any questions you may have concerning this amendment which was adopted on August 22, 1979 and transmitted October 19, 1979. If you have further questions, please contact me or Walter Starnes.

Sincerely,



Jacob D. Varn  
Secretary

JDV/es

Attachment

cc: Steve Smallwood

## COMPARATIVE APPRAISAL OF REGULATIONS

On August 22, 1979, the Florida Environmental Regulation Commission adopted a revision to Chapter 17-2, FAC for fossil fuel steam generators. This revision contained three important changes in the regulation, which included a modification of the excess emission standards and visible emission limits.

1. The visible emission limit for existing fossil fuel steam generators during steady state operations was increased from 20 percent to 40 percent for those units electing to test quarterly. The quarterly test must show compliance with the particulate mass emission limit of 0.1 #/MMBTU of heat input. The steady state opacity is not allowed to exceed 40 percent. Verification of compliance with the appropriate opacity standards will be made during periodic field inspections.
2. Owners of new fossil fuel steam generators may petition the Secretary of the Department of Environmental Regulation for an increase in the 20 percent opacity emission limit on a case-by-case basis. This provision is contingent upon all mass emission limits being met. The Secretary has the authority to limit these units to the corresponding opacity observed during a compliance test if it is greater than 20 percent. The limiting opacity declared by the Secretary will be incorporated into the permit or site certification conditions for the specific unit. This is substantially identical to a provision in NSPS, 40 CFR 60 Subpart D, Standards of Performance for Electric Utility Steam Generating Units. Compliance with the visible emission limit will be enforced during periodic field inspections and subsequent compliance tests.
3. Section 17-2.05(14), FAC was amended to allow excess emissions from fossil fuel steam generators during periods of boiler cleaning and load changes. This modification of the rule permits fossil fuel steam generators to increase visible emission to 60 percent for a period aggregating as long as 3 hours per day. In addition, units which have installed or committed to install continuous opacity monitors are allowed to exceed 60 percent opacity for up to 4 six-minute periods

during the allowed 3 hours per day. A particulate mass emission limitation cap of 0.3 #/MMBTU is allowed for periods of soot blowing and load changing. Compliance with the opacity limitations of Section 17-2.05(14), FAC will be monitored during random field inspections and quarterly compliance tests.

The Department will monitor compliance with the 0.3 #/MMBTU emission cap by requiring that three runs of the test be conducted during soot blowing and load changing modes. The soot blowing and load changing runs will then be arithmetically averaged. The resulting average will be compared with the 0.3 #/MMBTU standard. The average of the three runs taken during steady state operation will be used for determining compliance with the 0.1 #/MMBTU emission limitation for steady state conditions.

Since Chapter 17-2, FAC, previously contained no definition of load change, one was developed and added. A load change is defined as occurring when a fossil fuel steam generator, operating in the 10 to 100 percent capacity range, makes a load change equal to or greater than 10 percent of capacity at a rate of 0.5 percent of capacity per minute or more.

REVISION TO FLORIDA AIR IMPLEMENTATION  
PLAN FOR VISIBLE AND EXCESS EMISSIONS  
FROM FOSSIL FUEL STEAM GENERATORS

On August 22, 1979, the Florida Environmental Regulation Commission adopted an amendment to Chapter 17-2, FAC which contained three important revisions to the regulation. The overall thrust of these revisions were the modifications of excess emission limitations and visible emission limits.

1. The visible emission limitation for existing fossil fuel steam generators during steady state operations was increased from 20 percent to 40 percent opacity for units which elect to perform a quarterly particulate source test. The quarterly particulate source test must demonstrate compliance with the current particulate mass emission limit of 0.1 #/MMBTU input. If such quarterly testing shows the units to be in compliance, the owner or operator may petition the Secretary to reduce the required frequency of sampling. Verification of compliance with the appropriate opacity limit will be accomplished during periodic field inspections.
2. Owners of new fossil fuel steam generators may petition the Secretary of the Department of Environmental Regulation for an increase in the 20 percent visible emission limit on a case-by-case basis. This provision is contingent upon all mass emission limits being complied with. The Secretary has the authority to limit these units to the corresponding opacity observed during compliance tests, if it is greater than 20 percent. The limiting opacity determined by the Secretary will be incorporated into permit or site certification conditions for the specific unit. Compliance with the visible emission limits will be enforced during periodic field inspections and subsequent compliance tests.

3. Section 17-2.05(14), FAC, has been amended to allow excess emission from fossil fuel steam generators during periods of boiler cleaning and load changing. This revision of the rule permits fossil fuel steam generators to have visible emissions as high as 60 percent for a period aggregating as long as 3 hours per day. In addition, the units which have installed or committed to install continuous opacity monitors are allowed to exceed 60 percent opacity for up to 4 six minute periods during the allowed 3 hours per day. A particulate mass emission limiting cap of 0.3 #/MMBTU applies to the affected sources during periods of soot blowing and load changing. Compliance with the opacity limiting standards of Section 17-2.05(14), FAC, will be monitored during random field inspections and quarterly compliance tests. The Department will monitor compliance with the 0.3 #/MMBTU emission cap by requiring that three runs of the test be conducted during soot blowing and load changing modes. The runs will be arithmetically averaged and the average compared to the 0.3 #/MMBTU standard. The average of the three runs taken during steady state operation will be used for determining compliance with the 0.1 #/MMBTU.

Since Chapter 17-2, FAC, previously contained no definition of load change, one was developed and added. This definition was necessary so that only significant load changes would exempt fossil fuel steam generators from the 0.1 #/MMBTU standard. Analysis of actual load data enabled the Department and the power industry to concur on a definition. A load change is defined as occurring when a fossil fuel steam generator, operating in the 10 to 100 percent capacity range makes a load change equal to or greater than 10 percent of capacity at a rate of 0.5 percent per minute or more.

commitments were submitted by the Air Resources Board on January 22, 1981.

2. Section 52-620 is amended by adding paragraph (c)(13) as follows:

§ 52.260 Identification of plan.

(c) \*\*\*  
(13) A variance to the Hawaii Public Health Regulations, Chapter 43, section 8 (b)(1) submitted on November 25, 1980 by the Governor.

[FR Doc. 82-1621 Filed 1-21-82; 8:45 am]

BILLING CODE 6560-38-M

*W.A.T. S. B. M.*

40 CFR Part 52

[A-4-FRL-2011-5]

Approval and Promulgation of Implementation Plans; Florida: Startup, Upset, and Malfunction Regulations

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

**SUMMARY:** On August 12, 1976, Florida submitted additions to Chapter 17-2 and 17-4 of its administrative code to EPA for approval as implementation plan revisions. The revisions require that the Department of Environmental Regulation be notified prior to the startup of a source that has been shut down for more than a year. The notification shall take place 60 days prior to startup unless an emergency requires an earlier startup. Changes have been made in the definitions of existing and new sources, startup, shutdown, malfunction, and excess emissions. Additional changes allow excess emissions during startup, shutdown, or malfunction under specified conditions. Excess emissions caused by poor maintenance, operation or preventable equipment failure are prohibited. Notification of excess emissions must be made to the Department of Environmental Regulation. On October 19, 1979, and September 24, 1980, Florida submitted revisions to FAC 17-2 and Table II, E which change the visible emission limiting standards for existing fossil fuel steam generators and provide a particulate emission cap for soot blowing and load changing. EPA is today approving all these revisions. This action will be effective March 23, 1982, unless notice is received within 30 days that someone wishes to submit adverse or critical comments.

**DATES:** This action is effective March 23, 1982.

**ADDRESSES:** Written comments should be addressed to Douglas Cook of the EPA Region IV Air Programs Branch (see address below). Copies of the materials submitted by Florida may be examined during normal business hours at the following locations:

Public Information Reference Unit,  
Library Systems Branch,  
Environmental Protection Agency, 401  
M Street SW., Washington, D.C. 20460  
Office of the Federal Register, 1100 L  
Street NW., Room 8401, Washington,  
D.C. 20005

Environmental Protection Agency,  
Region IV, Air Programs Branch, 345  
Courtland Street NE., Atlanta, Georgia  
30365

Florida Department of Environmental  
Regulation, Twin Towers Office  
Building, 2600 Blair Stone Road,  
Tallahassee, Florida 32301.

**FOR FURTHER INFORMATION CONTACT:**  
Douglas Cook, EPA Region IV, Air  
Programs Branch, at the above listed  
address and phone 404/861-2864 or FTS  
257-2864.

**SUPPLEMENTARY INFORMATION:** The  
State's August 6, 1976, submittal revises  
FAC 17-4 (Permits) and FAC 17-2  
(Definitions and General Restrictions).  
In effect, the upset and startup rule  
revision recognizes the occurrence of  
unavoidable malfunctions and provides  
a definite control rule to deal with them.  
The change in the definition of "new  
source" and "existing source" deletes  
the requirement that new source  
emission limitations be complied with  
by sources which have been shut down  
for one year or more. However, the  
reporting required by the regulation will  
provide the data to determine if  
additional controls are needed to protect  
ambient air quality.

On August 22, 1979, the Florida  
Environmental Regulation Commission  
adopted an amendment to Chapter 17-2,  
FAC, which contains three important  
revisions in the regulation. The general  
impact of these revisions is to modify  
excess emission limitations and visible  
emission limits. Specifically:

1. The visible emission limitation for  
existing fossil fuel steam generators  
during steady state operation is  
increased from 20 percent to 40 percent  
opacity for units which elect to perform  
a quarterly particulate source test. The  
quarterly particulate source test must  
demonstrate compliance with the  
current particulate mass emission limit  
of 0.1 pounds per million BTU (#/MM  
BTU) input. If such quarterly testing  
shows the units to be in compliance, the  
owner or operator may petition the  
Secretary to reduce the required  
frequency of sampling. Verification of

compliance with the appropriate opacity  
limit will be accomplished during  
periodic field inspections in accordance  
with the proposed state test methods in  
the September 8, 1981, *Federal Register*  
(46 FR 44783).

2. Owners of new fossil fuel steam  
generators may petition the Secretary of  
the Department of Environmental  
Regulation for an increase in the 20  
percent visible emission limit on a case-  
by-case basis. This can be granted only  
if all mass emission limits are being  
complied with. The Secretary has the  
authority to limit these units to the  
corresponding opacity observed during  
compliance tests, if it is greater than 20  
percent. The limiting opacity determined  
by the Secretary will be incorporated  
into permit or site certification  
conditions for the specific unit.  
Compliance with the visible emission  
limits will be enforced during periodic  
field inspections and subsequent  
compliance tests in accordance with the  
proposed state test methods in the  
September 8, 1981, *Federal Register* (46  
FR 44783).

3. Section 17-2.05(14), FAC, has been  
amended to allow excess emissions  
from fossil fuel steam generators during  
periods of boiler cleaning and load  
changing. This revision of the rule  
permits fossil fuel steam generators to  
have visible emissions as high as 60  
percent for a period aggregating as long  
as 3 hours per day. In addition, the units  
which have installed or committed to  
install continuous opacity monitors are  
allowed to exceed 60 percent opacity for  
up to 4 six-minute periods during the  
allowed 3 hours per day. A particulate  
mass emission limiting cap of 0.3 #/MM  
BTU applies to the affected sources  
during periods of soot blowing and load  
changing. Compliance with the opacity  
limiting standards of section 17-2.05(14),  
FAC, will be monitored during random  
field inspections and quarterly  
compliance tests in accordance with the  
proposed state test methods in the  
September 8, 1981, *Federal Register* (46  
FR 44783). The Department will monitor  
compliance with the 0.3 #/MM BTU  
emission cap by requiring that three  
runs of the test be conducted during soot  
blowing and load changing modes. The  
runs will be arithmetically averaged and  
the average compared to the 0.3 #/MM  
BTU standard. The average of the three  
runs taken during steady state operation  
will be used for determining compliance  
with the 0.1 #/MM BTU standard.

Since Chapter 17-2, FAC, previously  
contained no definition of "load  
change", one was developed and added.  
This definition was necessary so that  
only significant load changes would

exempt fossil fuel steam generators from the 0.1 #/MM BTU standard. Analysis of actual load data enabled the Department and the power industry to concur on a definition. A load change is defined as occurring when a fossil fuel steam generator, operating in the 10 to 100 percent capacity range makes a load change equal to or greater than 10 percent of capacity at a rate of 0.5 percent per minute or more.

**Action.** EPA is today approving the revisions submitted on August 12, 1976, October 19, 1979, and September 24, 1980, with regard to upset, startup, malfunction, reporting, visible emissions, and total suspended particulate cap for soot blowing and load changing. The public should be advised that this action will be effective 60 days from the date of this Federal Register notice. However, if notice is received within 30 days that someone wishes to submit adverse or critical comments, this action will be withdrawn, and two subsequent notices will be published before the effective date. One notice will withdraw the final action and another will begin a new rulemaking by announcing a proposal of the action and establishing a comment period.

Under Section 307(b)(1) of the Clean Air Act, judicial review of EPA's approval of this revision is available only by the filing of a petition for review in the United States Court of Appeals for the appropriate circuit on or before March 23, 1982. Under Section 307(b)(2) of the Clean Air Act, the requirements which are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

Pursuant to the provisions of 5 U.S.C. section 605(b) the Administrator has certified (46 FR 8709) that the proposed rule will not if promulgated have a significant economic impact on a substantial number of small entities. This action only approves state actions. It imposes no new requirements.

Under Executive Order 12291, EPA must judge whether a regulation is major and therefore subject to the requirement of a Regulatory Impact Analysis. This regulation is not major because it imposes no new burden on sources.

Incorporation by reference of the State Implementation Plan for the State of Florida was approved by the Director of the Federal Register on July 1, 1981.

(Section 110 of the Clean Air Act (42 U.S.C. 7410))

Dated: January 18, 1982.

Anne M. Gorsuch,  
Administrator.

#### PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

Part 52 of Chapter I, Title 40, Code of Federal Regulations is amended as follows:

In § 52.520, paragraph (c) is amended by adding subparagraph (40) as follows:

##### § 52.520 Identification of plan.

(c) The plan revisions listed below were submitted on the dates specified.

(40) Amendments to upset, startup and malfunction rule, submitted on August 12, 1976; revisions to section 17-2.05(14) FAC (excess emissions) and 17-2.05(6) Table II, E., FAC, fossil fuel steam generators-visible emissions, submitted on October 19, 1979; revision describing compliance testing for amendments in section 17-2.05 (14) and (6), submitted on September 24, 1980, by the Department of Environmental Regulation.

[FR Doc. 82-1661 Filed 1-21-82; 8:45 am]  
BILLING CODE 6560-38-M

#### 40 CFR Part 52

[A-7-FRL 2024-8]

#### Ambient Air Quality Monitoring: State of Kansas

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of Final Rulemaking.

**SUMMARY:** On October 16, 1981, the Kansas Department of Health and Environment submitted a revision to the State Implementation Plan (SIP) for Kansas to comply with the requirements of Title 40 of the Code of Federal Regulations (CFR) Part 58. The submission makes modifications to the existing Kansas air quality surveillance network as required by 40 CFR 58.20. The purpose of today's notice is to take final action to approve the submission as a revision to the Kansas SIP.

**EFFECTIVE DATE:** This action is effective March 23, 1982 unless notice is received within 30 days that someone wishes to submit adverse or critical comment.

**ADDRESSES:** Comments should be addressed to Mary C. Carter, Air and Radiation Branch, 324 East 11th Street, Kansas City, Missouri 64106. Copies of the state submission are available for inspection during normal business hours at the above address and at the

following locations: Environmental Protection Agency, Public Information Reference Unit, 401 M Street, S.W., Washington, D.C. 20460; and Kansas Department of Health and Environment, Bureau of Air Quality and Occupational Health, Forbes Field, Topeka, Kansas 66101.

**FOR FURTHER INFORMATION CONTACT:** Mary C. Carter at (816) 374-3791; FTS 758-3791.

**SUPPLEMENTARY INFORMATION:** Section 110(a)(2)(C) of the Clean Air Act (Act) requires SIPs to contain provisions for ambient air quality monitoring and data reporting. The Act also requires, in section 319, that EPA establish monitoring criteria to be followed uniformly across the nation and establish a national monitoring network. EPA promulgated regulations to implement section 319 in the May 10, 1979, Federal Register (44 FR 27558). The May 10 rulemaking established Part 58 of Title 40 of the Code of Federal Regulations, entitled "Ambient Air Quality Surveillance." For a discussion of the requirements for state implementation plan content the reader is referred to the May 10 rulemaking, page 27572.

On October 16, 1981, the Kansas Department of Health and Environment submitted a SIP revision for an air quality monitoring surveillance network to comply with 40 CFR 58.20. The submission makes modifications to the existing Kansas air quality surveillance network which was approved by the EPA Administrator on May 31, 1972.

EPA has determined that the SIP submission meets the requirements of 40 CFR 58.20 as described below. As required by 40 CFR 58.20(a), each station in the air quality monitoring surveillance network provided for in the SIP has been designated by the state as a State and Local Air Monitoring Station (SLAMS) and measures ambient air quality levels of criteria pollutants for which National Ambient Air Quality Standards have been established. To satisfy 40 CFR 58.20(b), the state has committed to meet the requirements of Appendices A, C, D, and E to Part 58 relating to quality assurance procedures, methodology, network design, and siting parameters. Further, the SIP provides that all stations in the state SLAMS network will be operated in accordance with the criteria established by Subpart B of 40 CFR Part 58. The state has committed to operate at least one monitoring station per pollutant for carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and ozone during any stage of an air

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Trina Kielhaue

3. \_\_\_\_\_

2. \_\_\_\_\_

4. \_\_\_\_\_  
5. \_\_\_\_\_

PLEASE PREPARE REPLY FOR:

SECRETARY'S SIGNATURE

DIV/DIST DIR SIGNATURE

MY SIGNATURE

YOUR SIGNATURE

DUE DATE \_\_\_\_\_

COMMENTS:

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:

Bruce Mitchell

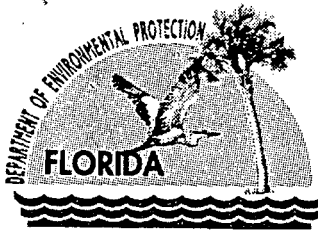
DATE:

4/9/04

PHONE:

413-9198





Jeb Bush  
Governor

# Department of Environmental Protection

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

Colleen M. Castille  
Secretary

Month Day, 2004

CERTIFIED MAIL – Return Receipt Requested

Mr. Gene L. Ussery, Jr.  
V.P. of Power Generation/Transmission  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520-0328

Dear Mr. Ussery:

RE: **Draft** Authorization to Conduct Pollutant Testing and Parameter Measurements for the Development of a Compliance Assurance Monitoring (CAM) Protocol for the Gulf Power Company's Crist Electrical Generating Plant's Unit #7's Electrostatic Precipitator (ESP)

The Department has reviewed the request that you provided on April 6, 2004. We have considered the Department's legal authority to allow Gulf Power Company to conduct the requested testing and measurements on its Crist Electrical Generating Plant's Unit #7's ESP (electrostatic precipitator) located in Pensacola, Escambia County. The purpose is to help the company address Compliance Assurance Monitoring (CAM), which will have to be addressed regarding the ESP upon renewal of their Title V Operation Permit. Paragraph 403.061(16), Florida Statutes (F.S.), authorizes the Department to encourage voluntary cooperation by persons in order to achieve the purposes of the state environmental control act. Paragraph 403.061(18), F.S., authorizes the Department to encourage and conduct studies, investigations, and research relating to the causes and control of pollution. Rule 62-210.700(5), Florida Administrative Code (F.A.C.), authorizes the Department to consider variation in industrial equipment and make allowances for excess emissions that provide reasonable and practical regulatory controls consistent with public interest. The control device's parameters to be assessed and established by the testing will be used to create Unit #7's CAM plan, which will define specific operating parameters, or indicators, that the owner or operator shall use to recognize when corrective actions must be taken to avoid non-compliance with the emission unit's permit limitations.

In accordance with the provisions of Paragraphs 403.061(16) and (18), F.S., and Rule 62-210.700(5), F.A.C., you are hereby authorized to conduct pollutant testing and parameter measurements for the development of a CAM protocol for the Gulf Power Company's Crist Electrical Generating Plant's Unit #7's ESP. This evaluation will require Gulf Power Company to vary the collection efficiency of the ESP to establish a performance curve between opacity, particulate matter emissions and ash resistivity, thus creating an operational condition near or in excess of the Florida particulate matter emissions and opacity standards. The data gathered will allow the calibration of an EPRI (Electrical Power Research Institute) computer model to evaluate the performance of the Crist Unit #7's ESP. The pollutants and or parameters to be measured or monitored will include sulfur dioxide, nitrogen oxides, particulate matter, visible emissions, carbon dioxide, ash content of the fuel, ultimate fuel analyses, unit operational parameters including load, fuel flow, excess air and flue gas temperature, and other unit specific parameters that are needed for the computer model.

*"More Protection, Less Process"*

*Printed on recycled paper.*

Mr. Gene L. Ussery, Jr.  
Gulf Power Company  
Crist Electric Generating Plant: Unit #7  
Page Two

The performance tests and parameter measurements or monitoring shall be subject to the following conditions:

1. Unless waived, the permittee shall notify the Department's Northwest District and Bureau of Air Regulation offices at least 15 days prior to commencement of the performance tests and parameter measurements or monitoring. A written report shall be submitted to these offices within 45 days upon completion of the last test run and parameter measurements and monitoring.
2. The authorized testing and measurement and monitoring schedule is from June 1 thru August 31, 2004. If additional time is needed, the permittee shall provide the Department with documentation of the progress accomplished to date and shall identify what is left to be done to complete the testing and measurements or monitoring.
3. The parameters to be measured or monitored are sulfur dioxide [CEM (continuous emission monitor)], nitrogen oxides (CEM), particulate matter, visible emissions, carbon dioxide (CEM), particulate size distribution, ash content of the fuel, ultimate fuel analyses, load, fuel flow, excess air, flue gas temperature, and other unit specific parameters that are needed for the EPRI computer model.
4. Emissions testing shall be conducted for the following pollutants and using the following test methods:
  - a. Particulate matter           EPA Test Method 17 (including EPA Test Methods 1 thru 4)
  - b. Visible emissions           EPA Test Method 9
5. The release of objectionable odors pursuant to Rule 62-296.320(2), F.A.C., is not authorized for this activity.
6. Performance testing shall immediately cease upon the occurrence of a valid environmental complaint by a citizen or other party, or a nuisance or danger to the public health or welfare. Performance testing shall not resume until appropriate measures to correct the problem have been implemented.
7. The performance tests and parameter measurements and monitoring shall be under the direct supervision and responsible charge of a professional engineer registered in Florida.
8. This Department action is just to authorize the performance testing and parameter measurements and monitoring for the Crist Unit #7's ESP for the purpose of developing a CAM protocol.
9. Complete documentation of the activity shall be kept on file for at least 5 (five) years.
10. The Department shall be notified in writing on the date of the last test run and parameter measurement and monitoring completion. If after work hours, notification shall occur on the next work day.

Mr. Gene L. Ussery, Jr.  
Gulf Power Company  
Crist Electric Generating Plant: Unit #7  
Page Three

11. Attachment Section.

- a. Mr. G. Dwain Waters's letter received April 5, 2004.  
[b]. [Final Determination.]

The Department has relied on the information referenced in the Attachment Section and conversations with representatives of Gulf Power Company in authorizing this activity.

Sincerely,

Michael G. Cooke, Director  
Division of Air Resource Management

TLV/rbm

Enclosures

cc: Trina Vielhauer, DEP - BAR  
Jim Pennington, DEP - BAR  
Sandra Veazey, DEP - NWD  
Andy Allen, DEP - NWD  
Joe Kahn, DEP - BAMMS  
G. Dwain Waters, Q.E.P., GPC  
Gregory N. Terry, P.E., GPC

One Energy Place  
Pensacola, Florida 32520

Tel 850.444.6111

RECEIVED

APR 05 2004

BUREAU OF AIR REGULATION



Certified Mail

March 31, 2004

Bruce Mitchell, P.E.  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

Dear Mr. Mitchell:

RE: CRIST ELECTRIC GENERATING PLANT  
AUTHORIZATION TO CONDUCT CAM PROTOCOL TESTING  
PERMIT No: 0330045-001-AV *0330045-009-AC*

Gulf Power hereby requests authorization to conduct Compliance Assurance Monitoring (CAM) testing at Plant Crist for Unit 7 during 2004. As you are aware, CAM is a requirement that must be addressed in the next round of Title V permit renewals for all facilities having pollution control equipment. In order to meet this goal, Gulf Power is planning a series of special particulate emission tests to calibrate an EPRI (Electric Power Research Institute) computer model to evaluate the performance of the new Crist Unit 7 ESP. Simply stated, this evaluation will require Gulf Power to vary the collection efficiency of the ESP to establish a performance curve between opacity, particulate emissions and ash resistivity, thus creating an operational condition near or in excess of the Florida particulate emissions standard.

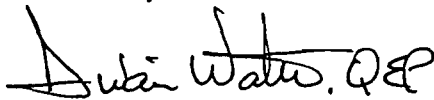
Therefore, Gulf Power requests a permit amendment to allow CAM protocol developmental testing on Crist Unit 7 from June 1 through August 31 as needed to complete all tests and measurements. Authorization of these tests is consistent with the Department's power and duty under Section 403.061(18), Florida Statutes, to "[e]ncourage and conduct studies, investigations, and research relating to pollution and its causes, effects, prevention, abatement, and control."

The specific equipment to be tested is the new Crist Unit 7 electrostatic precipitator. The pollutants and or parameters measured or monitored will include sulfur dioxide, nitrogen oxides, particulate matter, carbon dioxide, ash content of the fuel, ultimate fuel analyses, unit operational parameters including load, fuel flow, excess air, flue gas temperature and other unit specific parameters that are needed for the computer model. Test methods to be utilized include EPA Method 9, EPA Method 17, CEM monitoring data (SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>), and particulate size distribution.

Attached is an authorization statement by Gene L. Ussery, Jr., the Responsible Official outlining his approval of this permit amendment request. Also attached is a statement by a professional engineer regarding the certification of the test protocol and schedule. Please note that we recently talked with Andy Allen and the permitting staff at the Northwest Florida District office to outline this request, our test schedule and the basic CAM procedure. Ms. Sandra Veazey and her staff are being copied on this correspondence.

If you have any questions or need further information regarding the test procedures or CAM protocol development for Plant Crist please call me at (850) 444.6527.

Sincerely,



G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor

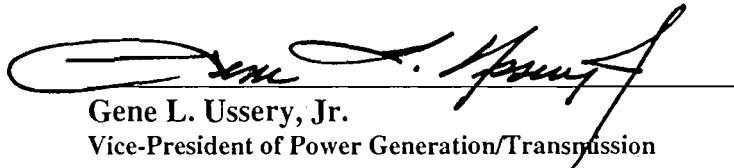
cc: w/att: Jim Vick, Gulf Power Company  
Joe Martin, Gulf Power Company  
Greg Terry, Gulf Power Company  
Terry Wright, Gulf Power Company  
Kevin Beaty, Gulf Power Company  
Danny Herrin, Southern Company Services  
Milan McGill, Southern Company Services  
John Dominey, Gulf Power Company

Ms. Sandra Veazey, FDEP Northwest District Office, Pensacola, Florida  
Mr. Andy Allen, FDEP Northwest District Office, Pensacola, Florida

**CERTIFICATION BY RESPONSIBLE OFFICIAL  
CRIST UNIT 7 COMPLIANCE ASSURANCE MONITORING  
TEST PERMIT AMENDMENT REQUEST**

“I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Crist Electric Generating Plant for which this permit amendment is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and information contained in this request are true, accurate and complete.”

Responsible Official Signature:

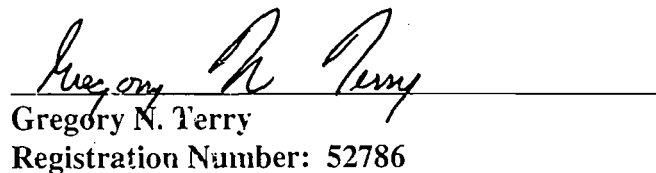
  
Gene L. Ussery, Jr.  
Vice-President of Power Generation/Transmission

3-31-04  
Date:

**CRIST UNIT 7 COMPLIANCE ASSURANCE MONITORING  
TEST PROTOCOL AND SCHEDULE  
CERTIFICATION BY PROFESSIONAL ENGINEER**

“I, the undersigned, am a registered professional engineer in the state of Florida and hereby certify to the best of my knowledge that all information submitted for this permit amendment to conduct special emissions testing for compliance assurance monitoring at the Crist Electric Generating Plant is true, accurate and complete.”

Professional Engineer Signature:

  
Gregory N. Terry  
Registration Number: 52786

3.30.04  
Date

**Pennington, Jim**

---

**From:** Pennington, Jim  
**Sent:** Friday, March 19, 2004 3:36 PM  
**To:** Vielhauer, Trina  
**Cc:** Holtom, Jonathan; Holladay, Cleve  
**Subject:** Call to Bryan Baldwin

Trina,

Jonathan, Cleve and I talked to Bryan Baldwin about the Gulf Power modeling this afternoon.

We conceded that the allowable concentration calculation will decrease at lower heat inputs and Cleve is going to remodel the worse cases using the more appropriate concentration values. Bryan agreed to provide additional information on: flow rates for the 50%, 75% and 100% scenarios, stack temperature losses, flow calculations and F factor corrections.

Jim

TRINA  
4/7/04  
NO FURTHER CONTACT AS OF 4/7/04.  
STANVASA'S (THEIR MODELER'S) MOTHER PASSED AWAY  
AND HE WENT TO INDIA FOR THE FUNERAL.  
Jim

**Vielhauer, Trina**

---

**From:** Cooke, Michael  
**Sent:** Thursday, January 20, 2005 4:36 PM  
**To:** Vielhauer, Trina  
**Subject:** FW: Gulf Power Demonstration Project Summary on Mercury Emissions Control

**Importance:** High



Gulf Power Crist HgProject  
RC System DesSchedule.xls (...)

Trina, what permitting issues do you see?

-----Original Message-----

**From:** Bedwell, Allan  
**Sent:** Thursday, January 20, 2005 3:31 PM  
**To:** Cooke, Michael; Fancher, Dick  
**Cc:** Wells, Deena; Long, Linda M.  
**Subject:** FW: Gulf Power Demonstration Project Summary on Mercury Emissions Control  
**Importance:** High

Michael and Dick

This document follows up an exciting call I got from Gulf today on their interest in doing a demonstration project on controlling mercury emissions. Let's discuss. They'd like to announce this demonstration/R&D project next Monday the 24th and quote DEP in their press release. Thanks, Allan

\_\_\_\_\_  
Allan F. Bedwell  
Deputy Secretary  
Regulatory Programs and Energy  
Florida Department of Environmental Protection

Office: 850.245.2036  
Fax: 850.245.2041  
E-mail: Allan.Bedwell@dep.state.fl.us  
Web: www.dep.state.fl.us

NOTICE: This document is a security system plan is exempted from inspection or copying of public records as stipulated in Florida Statute 119.071

Please Note: Florida has a very broad public records law. Most written communications to or from state officials regarding state business are public records available to the public and media upon request. Your e-mail is communications may therefore be subject to public disclosure.

-----Original Message-----

**From:** Waters, G. Dwain [mailto:GDWATERS@southernco.com]  
**Sent:** Thursday, January 20, 2005 2:31 PM  
**To:** Bedwell, Allan  
**Cc:** Jacob, P. Bernard; Vick, James O.; Monroe, Larry S.  
**Subject:** Gulf Power Project Summary

Jim Vick requested I send you a summary of a new mercury research project under consideration by Gulf Power at Plant Crist. Please let me know if you have any questions or any problems downloading the attachments. Thanks, Dwain

<<Gulf Power MerRC System Description05.doc>> <<Crist HgProject  
Schedule.xls>>

G. Dwain Waters, QEP  
Air Quality Programs Supervisor  
Gulf Power Company



One Energy Place  
Pensacola, Florida 32520-0328  
Phone: (850) 444-6527  
Cell: (850) 336-6527  
Pager: (850) 469-4076  
gdwaters@southernco.com

## Gulf Power Proposed Mercury Research Center (MerRC)

In March 2005, the U.S. EPA is scheduled to promulgate rules that will require utilities to significantly reduce their Hg emissions. Currently, there are no commercially available Hg control technologies with documented long term performance on coal flue gas. Because of the lack of experience, Hg chemistry in flue gas is not very well understood. However, research performed over the past couple of years has shown that pollution control technologies designed to control NO<sub>x</sub>, SO<sub>2</sub>, and PM can significantly affect overall Hg performance. In order to investigate these relationships, Gulf Power is planning a 5 MW equivalent slip-stream facility equipped with a complete system of flue gas cleanup technologies.

*June?*

### System Description

The proposed slip-stream facility will incorporate a Selective Catalytic Reduction (SCR) system, rotary air-preheater, Electrostatic Precipitator (ESP), baghouse (BH), and wet Flue Gas Desulphurization (wFGD). Each system will be designed with the appropriate level of functionality so that a large number of existing plants can be represented. Because of the complex interactions of Hg with various surfaces in flue gas, it is difficult to generate representative data for full scale installations at the pilot scale. However, the 5 MW scale is sufficiently large enough to provide the appropriate surface to volume ratios to gather representative data. Figure 1 shows a schematic for the proposed system.

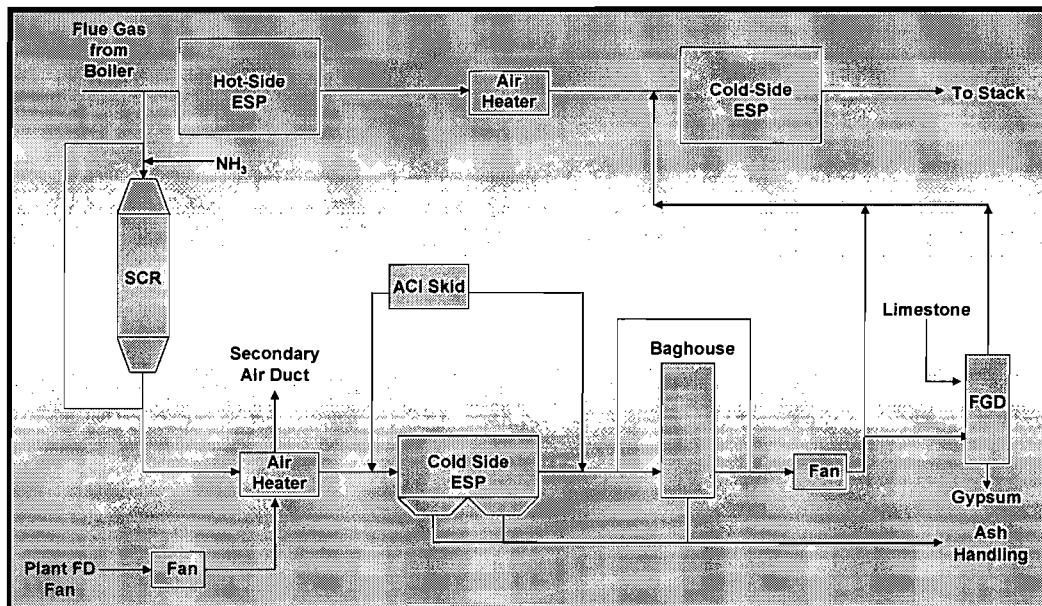


Figure 1: MerRC proposed schematic.

### Host Facility

Because of its history with research facilities of this magnitude, Plant Crist Unit 5 was chosen as the host plant for the slip-stream facility. Crist Unit 5 is a wall fired PC boiler

burning low-sulfur bituminous coals and is equipped with hot and cold side ESPs arranged in series. The process gas supplied to the MerRC will be drawn from the inlet of the hot-ESP. The typical flue gas characteristics for this gas stream are presented in Table 1.

**Table 1: Typical flue gas characteristics for MerRC inlet.**

	Value	Units
Temperature	600	°F
Pressure	-6	inches H <sub>2</sub> O
N <sub>2</sub>	80	%
CO <sub>2</sub>	15	%
O <sub>2</sub>	3	%
SO <sub>2</sub>	0.6-2.4	lb/mmBtu
NO <sub>x</sub>	0.5-0.7	lb/mmBtu
Particulate	7	lb/mmBtu
Hg	6	lb/tBtu
MerRC System Flow	25,000	wacfm

### Flue Gas Temperature Control

Because Hg chemistry has been shown to be temperature dependent, temperature control at the inlet of the research facility is crucial. This will be accomplished by using a combination of an economizer bypass line, providing ~ 900°F gas to the facility, or a flue gas heater. The heater will be sized to allow for a wide range of operating temperatures, up to and including 750°F. The heaters will be simple resistance type and will not introduce any additional compounds to the process gas. Typical heater characteristics are presented in Table 2.

**Table 2: Flue gas heater parameters.**

Heater Type	Electric Resistance heater	
Inlet Temp	600	°F
Max Outlet Temp	750	°F
Heat Input Requirement	3.5	mmBtu/hr
Power Requirement	600	kW

### Selective Catalytic Reduction (SCR) system

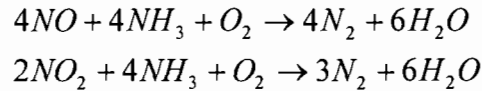
SCR for NO<sub>x</sub> control has been widely incorporated throughout the world and is well understood. However, there is little known on the details of Hg chemistry in the SCR. The SCR designed for MerRC will resemble a typical full scale system installed at any number of plants. The scale of MerRC will allow for the use of full scale catalyst modules, with the cross section designed to achieve representative space velocities for the system. Typical SCR design points are shown in Table 3. The SCR will be equipped with 3 catalyst layers, which will allow for greater than 80% control of NO<sub>x</sub> and a maximum pressure drop of 6 in. H<sub>2</sub>O.

**Table 3: Typical SCR system design points.**

SCR System Inlet NO <sub>x</sub>	0.7 lb/mmBtu
Expected SCR Performance	90%
Typical SCR Outlet	0.07 lb/mmBtu
Number of Catalyst Layers	3
Typical Maximum NH <sub>3</sub> slip	5 ppm <sub>vd</sub> @ 3% O <sub>2</sub>

The research facility will also incorporate a SCR reactor by-pass to allow for testing of alternate designs. Although research has shown that SCRs do not control Hg, data has shown it can significantly affect the chemistry of downstream devices, which could significantly change the performance of those systems. The ability to operate with and without SCR in service is a necessary requirement in order to investigate seasonal operation as well as alternate plant configurations.

In order to achieve NO<sub>x</sub> reductions within the SCR, ammonia must be fed as a reagent to react with NO and NO<sub>2</sub> per the following equations.



Typically 95% of NO<sub>x</sub> in the flue gas stream is NO, with the remainder NO<sub>2</sub>. At these ratios, an ammonia flow rate of ~25 lb/hr to the SCR can be expected in order to achieve the stated NO<sub>x</sub> reduction goals. At these rates, an ammonia slip of less than 5 ppm (0.065 lb/hr) is expected. However, during some research programs, this value could be exceeded for short periods of time.

### **Air Pre-heater (APH)**

In order to mimic the time-temperature profile of a full scale system, the MerRC will incorporate a rotary type APH for flue gas cooling. The APH will cool the flue gas from ~700°F to 300°F before sending it to the downstream air pollution control equipment. In order to reject the heat transferred from the flue gas, a cooling air fan will be installed. The cooling air fan will provide ambient air supplied from the plant forced draft fan to the APH and, after heating, will force the air back into the plant secondary air duct in order to minimize the efficiency impacts of the MerRC. Table 5 presents pertinent APH design information.

Table 5: APH typical design criteria.

APH Type	Rotary (Lungstrom)
Heat load	5.5 mmBtu/hr
Flue Gas inlet Temp	700 °F
Air inlet Temp	72 °F
Flue Gas outlet	300 °F
Air Outlet	550 °F

### **Electrostatic Precipitator (ESP)**

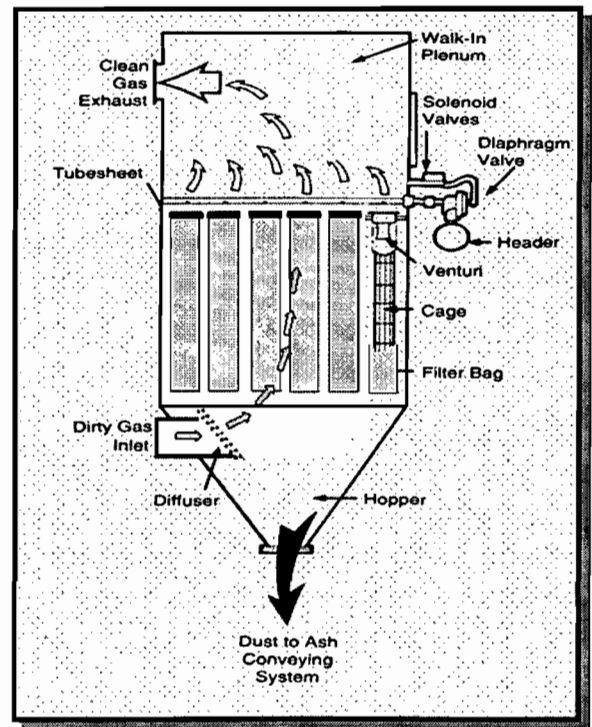
The utility industry has operated ESPs for several decades. However, in the future, more stringent particulate emission requirements will force operators to make incremental improvements in performance. Additionally, the co-benefit of Hg removal in these ESPs could play a significant role in achieving least cost compliance. The ESP installed in the MerRC will be designed as a single casing 4 field unit, able to achieve >99% removal efficiency of particulate matter. Typical design data are listed in Table 6.

**Table 6: Typical ESP design data.**

Number of fields	4
Field Length	5 ft
Field Height	12 ft
SCA (ft <sup>2</sup> /1000acfm)	225
Efficiency	>99%

### Baghouse

Currently, the most mature Hg control technology is TOXECON™. TOXECON™ is an EPRI patented technology that incorporates a high (air to cloth) ratio fabric filter downstream of an ESP, with activated carbon injection (ACI) between. The high ratio baghouse, or COHPAC baghouse, is designed to minimize conserve footprint while weighing increased pressure drop due to higher bag face velocities. There are only a handful of installations of this technology in the industry, and 2 of them are located at Alabama Power’s Plant Gaston near Birmingham, AL. Southern Company has significantly contributed to the development, and would be able to continue this development at the MerRC. The baghouse will be designed to allow for multiple bag configurations, bag types, and inlet loadings so that critical parameters for long term performance of these systems can be investigated. Figure 2 shows a schematic for a typical COHPAC baghouse.



### Activated Carbon Injection (ACI)

As stated above, the most mature Hg control technology is TOXECON (ACI into COHPAC baghouse). Significant work has been performed by Southern Company and others to investigate ACI into existing ESPs. Although results from these programs show promising Hg control results, there is concern that the additional solids loading to the ESP will degrade the particulate removal performance. In order to understand long term performance and BOP issues of both of these control concepts, the MerRC will

incorporate a carbon injection skid. The skid will be designed with enough variability to allow for both injection schemes. Typical injection rates for ACI into ESPs vary from 5-20 lbs Carbon/mmacf (5-20 lbs/hr) of flue gas, and for TOXECON from 0.5-2 lbs/mmacf (0.5-2 lbs/hr). As the art of ACI matures over time, the MerRC will also provide a testing ground for the latest innovation in sorbents. Assuming an annual capacity factor of 10% for ESP injection, you could expect ~7.5 tons of activated carbon, and ~0.5 tons of activated carbon for the TOXECON injection case.

### **Wet Flue-gas Desulphurization**

Over the next decade, Southern Company will be installing a large number of FGD systems throughout its fleet, including some of Gulf Power's units. In order to achieve the lowest cost Hg compliance, it will be paramount that these systems be optimized for Hg removal efficiency. Tests have shown that wet FGD systems can efficiently capture oxidized Hg. However, little about Hg chemistry in the FGD is understood. Research to uncover the critical factors affecting these chemical processes is needed.

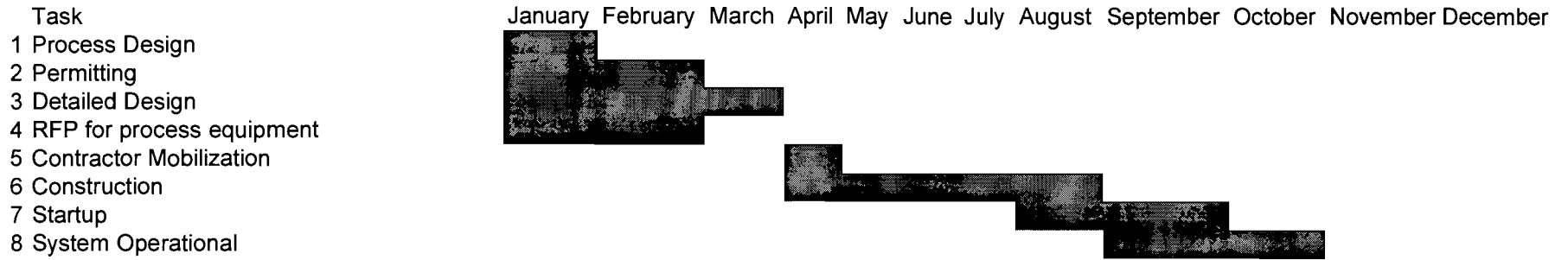
Southern Company currently owns a 1 MW scale pilot wet FGD system. This system will be incorporated into the MerRC to study the effects described above. The FGD will require a limestone feed for SO<sub>2</sub> control, and will produce a gypsum byproduct. Typical process flows are presented in Table 7. Applying an annual capacity factor of 20% to the FGD projects an annual gypsum production of ~45 tons.

**Table 7: Typical stream flows for FGD pilot.**

System Flow	3000 acfm @ 300°F
SO <sub>2</sub> Concentration	1100 ppm <sub>v</sub>
SO <sub>2</sub> Feed (lb/hr)	24
Limestone Feed (lb/hr)	37.5
Gypsum Draw off (lb/hr)	51

Crist Mercury Research Center

2005



One Energy Place  
Pensacola, Florida 32520

Tel 850.444.6111

RECEIVED

FEB 28 2005

BUREAU OF AIR REGULATION



Hand Delivery

February 24, 2005

Ms. Sandra Veazey  
Florida Department of Environmental Protection  
Northwest District  
160 Governmental Center  
Pensacola, Florida 32501-5794

Dear Ms. Veazey:

RE: 2004 ACID RAIN PROGRAM - PHASE II ANNUAL CERTIFICATION  
CRIST ELECTRIC GENERATING PLANT (Title V No: 0330045-001-AV)  
SCHOLZ ELECTRIC GENERATING PLANT (Title V No: 06330014-001-AV)  
LANSING SMITH ELECTRIC GENERATING PLANT (Title V No: 0050014-001-AV)  
ORIS CODES: 641, 642, 643

Attached, please find the Phase II Acid Rain Annual Certification Compliance Report for the Crist Electric Generating Plant (ORIS Code 641), Scholz Electric Generating Plant (ORIS Code 642) and Lansing Smith Electric Generating Plant (ORIS Code 643) for year 2004. As outlined in the Title V Air Permit for each plant, this document is being copied to the Division of Air Resources Management of the Florida Department of Environmental Protection, Tallahassee, Florida and to EPA Region IV. Please note that the above referenced reports were submitted electronically for 2004 as outlined in EPA's CAMD Business System. If you have questions regarding the electronic submission, please contact Kenon Smith at EPA Washington Headquarters at (202)-343-9164.

If you have any questions or need further information regarding the Phase II Annual Certification Compliance Report for the Gulf Power Company please call me at (850) 444.6527.

Sincerely,

A handwritten signature in black ink that reads "G. Dwain Waters, QEP". The signature is written in a cursive, somewhat stylized font.

G. Dwain Waters, QEP  
Air Quality Programs Supervisor



February 24, 2005  
Page 2  
Ms. Sandra Veazey  
2004 Acid Rain Annual Certification

cc: w/att: Bernard Jacob, Gulf Power Company  
Jim Vick, Gulf Power Company  
Joe Martin, Gulf Power Company  
Johnny Howze III, Gulf Power Company  
Michael Burroughs, Gulf Power Company  
Marie Largilliere, Gulf Power Company  
Terry Wright, Gulf Power Company  
John Dominey, Gulf Power Company  
Kenny Peacock, Gulf Power Company  
Brian Toth, Southern Company  
Ken Boyd, Southern Company  
Gary Perko, Hopping, Green, & Sams

Trina Vielhauer, FDEP, Air Resources Management, Tallahassee, Florida  
Doug Neeley, U.S.EPA Region IV, Air and EPCRA Enforcement Branch

# PHASE II ANNUAL COMPLIANCE CERTIFICATION REPORT

Gulf Power Company  
One Energy Place  
Pensacola, Fl 32520-0328

List of all affected units subject to requirements under the  
Acid Rain Program being certified for year 2004.

<u>Plant-Unit Name</u>	<u>State</u>	<u>ATS Account Number</u>
Crist Unit 1	Florida	000641000001
Crist Unit 2	Florida	000641000002
Crist Unit 3	Florida	000641000003
Crist Unit 4	Florida	000641000004
Crist Unit 5	Florida	000641000005
Crist Unit 6	Florida	000641000006
Crist Unit 7	Florida	000641000007
Scholz Unit 1	Florida	000642000001
Scholz Unit 2	Florida	000642000002
Lansing Smith Unit 1	Florida	000643000001
Lansing Smith Unit 2	Florida	000643000002
Lansing Smith Unit 4	Florida	000643000004
Lansing Smith Unit 5	Florida	000643000005

All certifications conducted electronically through EPA's CAMD Business System.

Certified Mail



April 22, 2004

Jonathan Holtom, P.E.  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

RECEIVED

MAY 03 2004

BUREAU OF AIR REGULATION

Dear Mr. Holtom:

RE: CRIST ELECTRIC GENERATING PLANT  
SO2 EMISSION RATE CHANGE REQUEST  
PERMIT No: 0330045-001-AV

*0330045-008-Ac*

Gulf Power hereby requests a permit amendment to reduce Plant Crist Title V permit limitations for sulfur dioxide from 5.9 to 2.4 lb/Mbtu as outlined in recent FDEP modeling in order to reduce the possibility of modeled ambient air SO<sub>2</sub> impacts. It is Gulf's understanding that the proposed reduction applies to each of the coal fired units at Plant Crist and that compliance is based on a 24 hour average with certification by stack continuous emission monitors. All existing permit language remains the same except for the numerical limit.

Attached is an authorization statement by Gene L. Ussery, Jr., the Responsible Official outlining his approval of this permit amendment request.

If you have any questions or need further information regarding this permit amendment request, please call me at (850) 444.6527.

Sincerely,

G. Dwain Waters, Q.E.P.

Air Quality Programs Supervisor


cc: w/att: Jim Vick, Gulf Power Company  
Joe Martin, Gulf Power Company  
Terry Wright, Gulf Power Company  
Kevin Beaty, Gulf Power Company  
Danny Herrin, Southern Company Services  
John Dominey, Gulf Power Company

Ms. Sandra Veazey, FDEP Northwest District Office, Pensacola, Florida  
Mr. Andy Allen, FDEP Northwest District Office, Pensacola, Florida

**CERTIFICATION BY RESPONSIBLE OFFICIAL  
CRIST SO<sub>2</sub> PERMIT AMENDMENT REQUEST  
April 22, 2004**

“I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Crist Electric Generating Plant for which this permit amendment is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and information contained in this request are true, accurate and complete.”

Responsible Official Signature: 33

  
Gene L. Ussery, Jr.  
Vice-President of Power Generation/Transmission

4-22-04

Date:

CERTIFIED MAIL

April 30, 2004

Mr. Michael G. Cooke  
Director  
Division of Air Resource Management  
2600 Blair Stone Road, MS # 5500  
Tallahassee, Florida 32399-2400

Dear Mr. Cooke:

Re: CRIST ELECTRIC GENERATING PLANT  
Permit Number: 0330045-001-AV  
FDEP/Gulf Ozone Reduction Agreement  
Crist Unit 4-6 Compliance Strategy

Background: In the fall of 2002, Gulf Power Company and the Florida Department of Environmental Protection reached an agreement to lower NOx emissions from Plant Crist in Pensacola Florida. As part of the Ozone Reduction Agreement, Gulf agreed to achieve a plant-wide NOx emission limit of 0.2 lb/mmBtu on a thirty day rolling average basis when Unit 7 is operating with its new Selective Catalytic Reduction (SCR) technology. Specifically, Gulf Power Company was to determine the most feasible technology to implement on Units 4 through 6 which would enable the plant to meet the plant-wide limits. If a SCR was the chosen technology for Unit 6, the agreement required that the SCR be operational by December 31, 2007. For any alternative technology, the agreement required that the technology be implemented and operational by May, 2006.

Strategy: Gulf Power Company commissioned a study with Reaction Engineering International during the spring of 2003. The focus of the study was to determine whether any alternative NOx reduction technologies are practicable and feasible for Units 4 through 6. The results of the study indicates that Selective Non-Catalytic Reduction (SNCR) technology combined with a Low NOx Burner and an Over Fire Air system on Unit 6 can, with the projected reductions from the Unit 7 SCR, meet the targeted plant-wide emission limit of 0.2 lb/Mbtu. Should additional margin be needed to comply with the limit, Gulf is prepared to install additional SNCR technology on Crist Units 4 and 5.

Implementation: An implementation plan has been developed to meet the May 1, 2006 deadline as outlined in the agreement for Units 4 through 6. This plan was developed with the current outage schedule for these units. The Low NOx Burner/ Over Fire Air system and SNCR will be installed on Unit 6 in the Fall of 2005. If needed, SNCR will be installed on Unit 4 and 5 in the Fall of 2005 and Spring of 2006, respectively.

Mr. Michael G. Cooke  
April 30, 2004  
Page 2

Attached are our current milestone schedules for the SNCR and Low NOx Burner/Over fire Air project for Crist Unit 6.

Please let me know if you have any questions or need more information on the Selective Non-Catalytic Reduction, Low NOx Burner or Over Fire Air System controls for nitrogen oxides.

Sincerely,

James O. Vick  
Director, Environmental Affairs

Cc: Joe Martin, Gulf Power Company  
Terry Wright, Gulf Power Company  
John Dominey, Gulf Power Company  
Dwain Waters, Gulf Power Company  
Robin B. Hurst, Southern Company  
Danny Herrin, Southern Company

Sandra Veazey, FDEP Northwest District

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Shirley Vidhauer 3. \_\_\_\_\_  
4. \_\_\_\_\_  
2. \_\_\_\_\_ 5. \_\_\_\_\_

PLEASE PREPARE REPLY FOR:

- SECRETARY'S SIGNATURE
- DIV/DIST DIR SIGNATURE
- MY SIGNATURE
- YOUR SIGNATURE
- DUE DATE \_\_\_\_\_

COMMENTS:

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: Bruce N. [Signature] DATE: 6/11/04 PHONE: \_\_\_\_\_

**NOTICE OF FINAL PERMIT**

In the Matter of an  
Application for Permit:

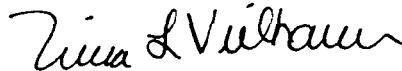
Mr. Gene L. Ussery, Jr.  
V.P. of Power Generation  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520

DEP File No.: 0330045-008-AC  
Escambia County

Enclosed is the Final Air Construction Permit, No. 0330045-008-AC. The subject of the permit (letter) is to establish a reduction of the allowable sulfur dioxide (SO<sub>2</sub>) emission limiting standard for Boilers Nos. 4, 5, 6 and 7, when burning solid fuel (pulverized coal), and to revise one (1) Specific Condition, specifically No. 5., that was established in air construction permit, No. AC17-234016, for Boiler No. 6. These emissions units are located at the Gulf Power Company's Crist Electric Generating Plant in Pensacola, Escambia County. This permit (letter) is issued pursuant to Chapter 403, Florida Statutes (F.S.). There were no comments received during the Public Notice period.

Any party to this order (permit) has the right to seek judicial review of the permit (letter) pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.



Trina L. Vielhauer  
Chief  
Bureau of Air Regulation

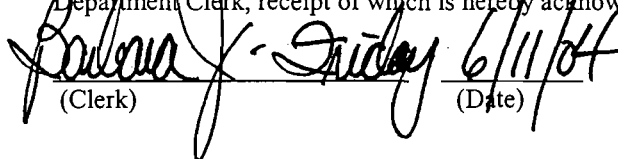
**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the Final Permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 6/11/04 to the person(s) listed or as otherwise noted:

- Mr. Gene L. Ussery, Jr.\*, V.P. of Power Generation, GPC
- Ms. Sandra Veazey, NWD
- Mr. Kevin White, NWD
- Mr. Andy Allen, NWD
- Mr. G. Dwain Waters, QEP, Air Quality Programs Supervisor, GPC

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

  
(Clerk) 6/11/04 (Date)





# Department of Environmental Protection

Jeb Bush  
Governor

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

Colleen M. Castille  
Secretary

June 10, 2004

CERTIFIED MAIL – Return Receipt Requested

Mr. Gene L. Ussery, Jr.  
V.P. of Power Generation/Transmission  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520-0328

Dear Mr. Ussery:

RE: Request for a Reduction of the Allowable Sulfur Dioxide Emission Limiting Standard for Boilers Nos. 4, 5, 6 and 7, When Burning Solid Fuel (Pulverized Coal)  
Gulf Power Company  
Crist Electric Generating Plant  
Project No.: 0330045-008-AC

The Department has reviewed the request that you provided on May 3, 2004, which asked for a reduction in the allowable sulfur dioxide (SO<sub>2</sub>) emission limiting standard for Boilers Nos. 4, 5, 6 and 7, when burning solid fuel (pulverized coal), at Gulf Power Company's Crist Electric Generating Plant. This permitting project establishes an allowable SO<sub>2</sub> emission limiting standard for Boilers Nos. 4, 5, 6 and 7, when burning solid fuel (pulverized coal), and revises one (1) Specific Condition, specifically No. 5, that was established in air construction permit, No. AC17-234016, for Boiler No. 6. Therefore, the following are added and changed:

A. Specific Conditions.

1. The Crist Electric Generating Plant's Boilers Nos. 4, 5, 6 and 7, shall not exceed 2.40 pounds per million Btu heat input, 24-hour average, while burning solid fuel (pulverized coal), with compliance determined by certified stack SO<sub>2</sub> continuous emission monitors.

[Applicant Request; Rules 62-4.070(3), 62-204.220(1) and 62-212.300(1)(b), F.A.C.; and, 0330045-008-AC]

2. All of the terms and conditions of the attached air construction permit, No. AC17-234016, remain the same except for Specific Condition No. 5., as follows:

a. Revision to Specific Condition No. 5., AC17-234016, for Boiler No. 6.

**FROM:**

The manner, nature, volume and frequency of permitted emissions, applicable emissions limiting standards, if any, and allowable emissions are listed as per FAC Rule 17-210.300(2)(a):

Airborne Contaminant Emitted	FAC Rule	Allowable Emissions T/yr
SO <sub>2</sub>	17-296.405(1)(c)2c	87035 <sup>2</sup>

<sup>2</sup> Based on steady-state operating parameters, application to construct and rule: SO<sub>2</sub> emissions shall not exceed 5.90 pounds per million Btu heat input.

"More Protection, Less Process"

Printed on recycled paper.

Mr. Gene L. Ussery, Jr.  
Gulf Power Company: Crist Electric Generating Plant  
Boilers Nos. 4, 5, 6 and 7  
Project No.: 0330045-008-AC  
Page 2 of 2

**TO:**

The manner, nature, volume and frequency of permitted emissions, applicable emissions limiting standards, if any, and allowable emissions are listed as per Rule 62-210.300(2)(a), F.A.C.:

<u>Airborne</u> <u>Contaminant</u> <u>Emitted</u>	<u>FAC Rule</u>	<u>Allowable</u> <u>Emissions</u> <u>T/yr</u>
SO <sub>2</sub>	62-296.405(1)(c)2.c.	38945 <sup>2</sup>

<sup>2</sup> Based on steady-state operating parameters, application to construct and rule:  
SO<sub>2</sub> emissions shall not exceed 2.40 pounds per million Btu heat input, 24-hour average, for the coal-fired emissions unit.

[Applicant Request; Rules 62-4.070(3), 62-204.220(1) and 62-212.300(1)(b), F.A.C.; and, 0330045-008-AC]

3. ATTACHMENT GENERAL CONDITIONS is a part of this permit (letter) and incorporated by reference.

B. Attachment Section.

- a. Air construction permit, No. AC17-234016, dated October 7, 1993.
- b. Mr. G. Dwain Waters's letter received May 3, 2004.
- c. ATTACHMENT GENERAL CONDITIONS.
- d. Public Notice affidavit received June 1, 2004.
- e. Final Determination.

The Department has relied on the information referenced in the Attachment Section and conversations with representatives of Gulf Power Company in making this permitting action.

Sincerely,



Michael G. Cooke, Director  
Division of Air Resource Management

MGC/rbm

Enclosures

cc: Trina Vielhauer, DEP - BAR  
Jonathan Holtom, DEP - BAR  
Sandra Veazey, DEP - NWD  
G. Dwain Waters, Q.E.P., GPC

Jim Pennington, DEP - BAR  
Cleve Holladay, DEP - BAR  
Andy Allen, DEP - NWD

F

Best Available Copy

# Florida Department of Environmental Protection



Lawton Chiles  
Governor

Northwest District  
160 Governmental Center  
Pensacola, Florida 32501-5794

Virginia B. Wetherell  
Secretary

**PERMITTEE:**

Gulf Power Company

I.D. Number: 10PEN17004506  
Permit/Certification Number: AC17-234016  
Date of Issue: October 7, 1993  
Expiration Date: December 1, 1994  
County: Escambia  
Latitude/Longitude: 30°33'57"N/87°13'29.5"W  
Project: Electrostatic Precipitator, Crist 6

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 17-296, 17-297 and 17-4. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construction of a replacement Electrostatic Precipitator (ESP), for Crist Unit No. 6. The new ESP will reduce PM emissions by 922 T/yr. The coal-fired power boiler (Crist No. 6) is used to supply steam for the generation of 320 MW of electricity.

Emissions of particulates will be controlled by the ESP, Wheelabrator model HaRDE. The ESP has a PM removal efficiency of 99.6% at full load flow conditions of 1,325,820 ACFM. Emissions of sulfur dioxide are controlled by the sulfur content of the coal. Continuous emissions monitoring systems for opacity, sulfur dioxide, nitrogen oxides and oxygen are installed. Collected fly ash and bottom ash generated by the combustion of fossil fuels are to be disposed of in an on-site permitted landfill.

Located: Gulf Power Crist Plant, Ten Mile Road, on Governor's Bayou, north of Pensacola.

Specific Condition No. 2 requires notification upon commencement of construction. Projects beyond one year require annual status reports.

Specific Condition No. 2 also requires notification and prior approval of any changes or revisions made during construction.

Specific Condition No. 18 requires submittal of certificate of completion of construction with appropriate fee within 75 days after completion of construction.

Specific Condition No. 18 also requires obtaining an operating permit before the expiration date (December 1, 1994) of this construction permit for continued operation.

PERMITTEE:  
Gulf Power Company

I.D. Number: 10PEN17004506  
Permit/Certification Number: AC17-234016  
Date of Issue: October 7, 1993  
Expiration Date: December 1, 1994

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.
2. The Department shall be notified upon commencement of construction. The Department shall be notified and prior approval shall be obtained of any substantial changes or revisions made during construction. Projects beyond one year require annual status reports.
3. The nameplate capacity is 320 MW net output of electricity based on the maximum fuel consumption of 3368 MBtu/hr input as measured by average fuel heating values. This is the operating rate at which compliance with standards shall be demonstrated. The maximum allowable heat input is that heat input necessary to maintain electrical load output at 110 percent of nameplate capacity or the level at which the most recent successful emissions compliance test was conducted. If the test was conducted at less than 90 percent of nameplate capacity of the unit, permittee may operate the unit at loads up to the nameplate capacity for purposes of preparation for testing for up to ten calendar days. The Department shall be advised in writing prior to each testing.
4. The Electrostatic Precipitator, and Crist Unit 6 may operate continuously, i.e., 8760 hrs/yr.
5. The manner, nature, volume and frequency of permitted emissions, applicable emissions limiting standards, if any, and allowable emissions are listed as per FAC Rule 17-210.300(2)(a):

<u>Airborne Contaminant Emitted</u>	<u>FAC Rule</u>	<u>Allowable Emissions T/yr</u>
PM	17-296.405(1)(b)	1475 <sup>1</sup>
SO <sub>2</sub>	17-296.405(1)(c)2c	87035 <sup>2</sup>
Objectionable Odors	17-296.320(2)	None allowed off plant property, <sup>3</sup>
VE	17-296.405(1)(a)	40% opacity <sup>3</sup>

- 1 Based on steady-state operating parameters, application to construct and rule:  
PM emissions shall not exceed 0.1 pounds per million Btu heat input.
- 2 Based on steady-state operating parameters, application to construct and rule:  
SO<sub>2</sub> emissions shall not exceed 5.90 pounds per million Btu heat input.
- 3 Department order dated May 12, 1988.

6. Excess emissions as stated in FAC Rule 17-210.700 shall be allowed. The steady-state hourly emission rate allowable for PM listed in Specific Condition #5 shall not apply during soot-blowing or load changes. However, PM emissions shall not exceed an average of 0.3 lb/MMBtu heat input (equivalent to 1011 lb/hr allowable emissions - steady state) during the 3 hour excess emissions period allowed by 17-210.700 ( ref. FAC rule 17-210.700(3) ).

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SPECIFIC CONDITIONS:

7. Excess emissions are defined as:

- A. Any six-minute average for opacity which exceeds the standard.
- B. Any 24-hour average for sulfur dioxide which exceeds the standard.

8. The Department shall be notified as soon as possible (by telephone) of excess emissions that are beyond the allowances of FAC Rule 17-210.700, such as:

A. Any soot blowing or load changes that cause excess visible emissions for a period longer than three hours, or that exceed 60 percent opacity (six minute average) more than four times in any one day.

B. Any malfunction that causes excess visible emissions for a period longer than two hours in any one day.

C. A 24-hour average of SO<sub>2</sub> emissions measured by the continuous monitor that exceeds the standard, or daily average SO<sub>2</sub> emissions measured by coal analysis (in the event the permittee chooses) that exceeds the standard.

Immediately upon notification of excess emissions that are beyond the allowances, the permittee shall take the necessary steps to determine the cause and arrange a meeting with the Department within 72 hours to discuss a settlement of the violation with corrective action to avoid recurrence.

9. A log shall be maintained showing the duration, magnitude and cause of excess visible emissions, and of excess SO<sub>2</sub> emissions.

10. A quarterly report of excess emissions shall be submitted within 30 days following the end of each calendar quarter. The report shall consist of each individual exceedance of opacity or SO<sub>2</sub> emissions (specific Conditions 7 and 8) with duration, magnitude and cause. Any exceedance that is beyond the allowances of FAC Rule 17-210.700 shall be highlighted with note indicating compliance with specific condition 8. A continuous emissions monitor quarterly summary report shall be submitted for each CEM.

11. A maintenance log of the continuous monitoring system shall be kept showing time out of service, and calibrations and adjustments.

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SPECIFIC CONDITIONS:

12. Emissions tests are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with the table below. Such tests shall be scheduled within 30 days after construction is completed. The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days after testing.

<u>Pollutant</u>	<u>Test Method</u>
PM	DEP method 1, 2, 3, and 17
VE	DEP method 9

The VE test shall be conducted during one of the PM test runs. Test reports shall comply with F.A.C. Rule 17-297.570, Test Reports. The Department can require special compliance tests in accordance with F.A.C. Rule 17-297.340(2). Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing.

13. Immediately upon notification of a particulate test report that fails to demonstrate compliance with the particulate emission limit of 0.1 pounds per million Btu heat input, the permittee shall take necessary steps to determine the cause of the test failure and arrange a meeting with the Department within 72 hours to discuss a settlement of the violation and a schedule for retesting when the cause of the test failure has been determined and corrected.

14. Boilers No. 6 and 7 use a common stack. Visible emission violations from this stack shall be attributed to both boilers unless opacity meter results show the specific boiler causing the violation.

15. Continuous SO<sub>2</sub> emission monitoring 24-hour averages are required to demonstrate compliance with the standard of the Department (specific condition 5). A valid 24-hour average shall consist of no less than 18 hours of valid data capture per calendar day. In the event that valid data capture is not available, the permittee shall initiate as-fired fuel sampling to demonstrate compliance with the SO<sub>2</sub> emission standard. The as-fired fuel sampling shall be initiated no later than 36 hours after the permittee has verified the problem or no later than 36 hours after the end of the affected calendar day. Fuel sampling shall continue until such time as the valid data capture is restored. In lieu of as-fired fuel sampling the permittee may elect to demonstrate SO<sub>2</sub> emission compliance by the temporary use of a spare SO<sub>2</sub> emission monitor. The spare SO<sub>2</sub> emission monitor must be installed and collecting data in the same time frame as required above for as-fired fuel sampling.

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SPECIFIC CONDITIONS:

16. The permittee shall develop and implement a QC program. As a minimum, the QC program must include written procedures which should describe in detail complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS.
2. Calibration Drift determination and adjustment of CEMS.
3. Preventive maintenance of CEMS (including spare parts inventory).
4. Data recording, calculations and reporting.
5. Accuracy audit procedures including sampling and analysis methods.
6. Program of corrective action for malfunctioning CEMS.

17. The applicant shall retain a Professional Engineer, registered in the State of Florida, for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to the permit application and associated documents. A Certificate of Completion [Form DEP 17-1.202(3) attached] shall be submitted with the compliance test results and appropriate fee as application for an operation permit. These are to be submitted within 75 days after completion of construction. The permittee shall obtain an operating permit for this source before the expiration of this construction permit if the permittee desires to continue operation.

18. All fugitive dust generated at this site shall be adequately controlled.

19. The permanent source identification number for this point source is 10PEN17004506. Please cite this number on all test reports and other correspondence specific to this permitted point source.

20. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 436-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, telephone (904) 436-8364 during normal working hours.

Expiration Date:

Issued this 7<sup>th</sup> day of October, 1993.

December 1, 1994

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

Certified Mail



April 22, 2004

Jonathan Holtom, P.E.  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

RECEIVED

MAY 03 2004

BUREAU OF AIR REGULATION

Dear Mr. Holtom:

RE: CRIST ELECTRIC GENERATING PLANT  
SO2 EMISSION RATE CHANGE REQUEST  
PERMIT No: 0330045-001-AV  
*0330045-008-AC*

Gulf Power hereby requests a permit amendment to reduce Plant Crist Title V permit limitations for sulfur dioxide from 5.9 to 2.4 lb/Mbtu as outlined in recent FDEP modeling in order to reduce the possibility of modeled ambient air SO<sub>2</sub> impacts. It is Gulf's understanding that the proposed reduction applies to each of the coal fired units at Plant Crist and that compliance is based on a 24 hour average with certification by stack continuous emission monitors. All existing permit language remains the same except for the numerical limit.

Attached is an authorization statement by Gene L. Ussery, Jr., the Responsible Official outlining his approval of this permit amendment request.

If you have any questions or need further information regarding this permit amendment request, please call me at (850) 444.6527.

Sincerely,

G. Dwain Waters, Q.E.P.

Air Quality Programs Supervisor

cc: w/att: Jim Vick, Gulf Power Company  
Joe Martin, Gulf Power Company  
Terry Wright, Gulf Power Company  
Kevin Beaty, Gulf Power Company  
Danny Herrin, Southern Company Services  
John Dominey, Gulf Power Company


Ms. Sandra Veazey, FDEP Northwest District Office, Pensacola, Florida  
Mr. Andy Allen, FDEP Northwest District Office, Pensacola, Florida



**CERTIFICATION BY RESPONSIBLE OFFICIAL  
CRIST SO<sub>2</sub> PERMIT AMENDMENT REQUEST  
April 22, 2004**

"I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Crist Electric Generating Plant for which this permit amendment is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and information contained in this request are true, accurate and complete."

Responsible Official Signature:

  
Gene L. Ussery, Jr.  
Vice-President of Power Generation/Transmission

4-22-04  
Date:

## ATTACHMENT GENERAL CONDITIONS

### Rule 62-4.160, F.A.C.

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.  
[Rule 62-4.160(1), F.A.C.]
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.  
[Rule 62-4.160(2), F.A.C.]
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.  
[Rule 62-4.160(3), F.A.C.]
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.  
[Rule 62-4.160(4), F.A.C.]
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.  
[Rule 62-4.160(5), F.A.C.]
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.  
[Rule 62-4.160(6), F.A.C.]
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
  - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

[Rule 62-4.160(7), F.A.C.]

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
  - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
- [Rule 62-4.160(8), F.A.C.]
- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- [Rule 62-4.160(9), F.A.C.]
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- [Rule 62-4.160(10), F.A.C.]
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- [Rule 62-4.160(11), F.A.C.]
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- [Rule 62-4.160(12), F.A.C.]
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology ( )
  - (b) Determination of Prevention of Significant Deterioration ( ) ; and
  - (c) Compliance with New Source Performance Standards ( ).
- [Rule 62-4.160(13), F.A.C.]
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - (c) Records of monitoring information shall include:
    1. The date, exact place, and time of sampling or measurements;
    2. The person responsible for performing the sampling or measurements;
    3. The dates analyses were performed;
    4. The person responsible for performing the analyses;
    5. The analytical techniques or methods used; and
    6. The results of such analyses.
- [Rule 62-4.160(14), F.A.C.]

- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.  
[Rule 62-4.160(15), F.A.C.]

One Energy Place  
Pensacola, Florida 32520

Tel 850.444.6111

RECEIVED

JUN 01 2004

BUREAU OF AIR REGULATION



Certified Mail

May 28, 2004

Mr. Bruce Mitchell, P.E.  
Florida Department of Environmental Protection  
Bureau of Air Regulation  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

Dear Mr. Mitchell: *Bruce*

RE: CRIST ELECTRIC GENERATION FACILITY  
DEP File No. 0330045-008-AC  
Air Construction Permit for SO2 Permit Limit Reduction - Public Notice Affidavit

Thanks for the quick response to Gulf Power's request for an air construction permit to reduce the SO2 emission limiting standard at Plant Crist. Enclosed is the proof of publication, i.e., newspaper affidavit regarding the Public Notice of Intent to Issue An Air Construction Permit originally sent to Gene L. Ussery (Gulf Power) on May 18, 2004. The notice was published on May 23, 2004 in the Pensacola News Journal.

Please let me know if you have any questions regarding this matter and if you receive any public comments regarding our request.

Sincerely,

*G. Dwain Waters, Q.E.P.*

G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor

Cc: Jim Vick, Gulf Power Company  
Terry Wright, Gulf Power Company  
John Dominey, Gulf Power Company  
Kevin Beaty, Gulf Power Company  
Sandra Veazey, FDEP, Northwest District

Published Daily-Pensacola, Escambia County, FL

**STATE OF FLORIDA**  
County of Escambia

Before the undersigned authority, personally appeared NIKKI WINDHAM who is personally known to me and who on oath says that he/she is a representative of The Pensacola News Journal, a daily newspaper published in Pensacola in Escambia County, Florida; that the attached copy of advertisement, being a legal in the matter of **NOTICE OF INTENT TO ISSUE** was published in said newspaper in the issues **MAY 23, 2004**. Affidavit further says that the said Pensacola News Journal is a newspaper published in Pensacola, in said Escambia County, Florida, and that the said newspaper has heretofore been continuously published in said Escambia County, Florida each day and has been entered as second class mail matter at the post office in Pensacola, in said Escambia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and Affidavit further says that he/she has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me this **28TH DAY OF MAY A.D., 2004**.



Notary Public

**RECEIVED**

JUN 01 2004

BERETH FERGUSON  
"Notary Public-State of FL"  
My Comm. Expires OCT. 10, 2005  
Comm. No. DD048662

BUREAU OF AIR REGULATION

**PUBLIC NOTICE OF INTENT TO ISSUE**

**STATE OF FLORIDA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Draft Air Construction Permit for  
Gulf Power Company  
Crist Electric Generation Station  
Escambia County, Florida

The Department of Environmental Protection (permitting authority) is hereby issuing a draft Air Construction Permit (letter) to Gulf Power Company, Pensacola, Escambia County. The applicant's name is Gulf Power Company, One E. Gulf Drive, Pensacola, Florida 32504.

The permittee, Gulf Power Company, applied on May 14, 2004, for a permit to construct and operate a new 24-turbine boiler (pulverized coal). The allowable SO2 emission limiting Btu heat input, when burning solid fuel (pulverized coal) heat input, when burning solid fuel (pulverized coal), 24-turbine stack SO2 continuous emission monitors.

The permitting authority will issue the Air Construction Permit, in accordance with the conditions of the Draft Air Construction Permit, in accordance with the following procedures results in a permit.

The permitting authority will accept written comments on the Draft Air Construction Permit for a period of 14 (fourteen) days. Comments should be provided to the Department of Environmental Protection, Mail Station #5505, Tallahassee, Florida 32399-2400, for public inspection. If written comments received on the Draft Air Construction Permit, the permitting authority shall issue a Revised Draft Air Construction Permit, another Public Notice.

A person whose substantial interests are affected by an administrative hearing in accordance with Section 120.57, Florida Statutes, must contain the information set forth below and in the Department of Environmental Protection, 3900 Tallahassee, Florida 32399-3000 (Telephone: 850/488-9733) other than those entitled to written notice under Section 120.569 and 120.57, F.S., or to intervene in this proceeding intervention will be only at the approval of the permitting authority with Rule 28-106.205, Florida Administrative Code.

A petition that disputes the material facts on which the permitting authority is based shall state the following information:

- The name and address of each agency affected by the action, if known;
- The name, address and telephone number of the petitioner's representative, if any, which is the course of the proceeding; and an explanation of the agency determination;
- A statement of how and when the petitioner received notice of the action;
- A statement of all disputed issues of material fact;
- A concise statement of the ultimate facts alleged by the petitioner to justify relief; and
- A demand for relief.

A petition that does not dispute the material facts shall state that no such facts are in dispute and other than those stated above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to provide notice of the permitting authority's final action, notice of intent. Persons whose substantial interests are affected by the permitting authority on the application have the right to participate in the process in accordance with the requirements set forth above.

Mediation is not available for this proceeding. A complete project file is available for public inspection from 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

**Permitting Authority:**  
Department of Environmental Protection  
Bureau of Air Regulation  
111 South Magnolia Drive, Suite 4  
Tallahassee, Florida 32301  
Telephone: 850/488-0114  
Fax: 850/922-6979

The complete project file includes the Draft Air Construction Permit submitted by the responsible official, exclusive of interested persons may contact James K. Pennington, for additional information.

Legal No. 66586 1T May 23, 2004

**Final Determination**

**Gulf Power Company**

**Project No.: 0330045-008-AC**

**I. Public Notice and Comments.**

The Public Notice of the permitting project was published in the Pensacola News Journal on May 23, 2004. There were no written comments received in the commenting period (14-days), which concluded at the close of business of June 6. Therefore, it is recommended that the Final air construction permit (letter) be signed and issued as drafted and Public Noticed.

**II. Conclusion.**

It is recommended to issue the Final air construction permit (letter) as drafted and Public Noticed.