

RECEIVED

February 24, 1999

MAR 02 1999

Mr. Clair Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

BAR conference room

Dear Mr. Fancy:

March 17 (10-12 noon, 1-3 p.m.)

Re: Status of Title V Permits

As you know, several of Florida Power Corporation's (FPC) Title V permits remain in the Initial Draft or Revised Draft stages and progress is being made very slowly. This is no one's fault in particular; it's difficult to establish any momentum when the involved parties are processing so many permits and some of the issues (e.g., periodic monitoring) are moving targets. As you and Mr. Scott Osbourn recently discussed, it may be helpful if all involved parties at FPC and the Department were to meet at one time to discuss any remaining unresolved issues.

FPC proposes, with your concurrence, to arrange for a one- or two-day meeting between FPC and the Department to resolve issues associated with the following Title V permits that remain in either the Initial Draft or Revised Draft stage: Anclote, Bartow, Crystal River, Suwannee, Tiger Bay, Bayboro and the University of Florida. It would be desirable to have you, Scott Sheplak and the permit engineers responsible for these facilities in attendance. Mr. Scott Osbourn and I will represent FPC.

It is FPC's desire to advance these Title V permits to the Final Permit stage as expeditiously as possible. FPC has recently requested additional extensions of time on the above-mentioned permits until April 1, 1999 and would like to resolve these permits prior to that date. We will contact you in the next day or two to coordinate a meeting date. If you should have any questions in the meantime, please contact either Scott Osbourn at (727) 826-4258 or me at (727) 826-4334.

Sincerely,

[Handwritten signature]

J. Michael Kennedy, Q.E.P.
Manager, Air Programs

cc: Scott Sheplak
Doug Beason, OGC
Jeffrey Brown, OGC
Robert Manning, HGS&S

processor

- Anclote Mike
Bartow Ed
Crystal Ed
Suwannee Bruce
Tiger Bay Jonathan
Bayboro Ed
UofF Bruce

{ See responses to FPC comments for Bartow or Crystal River for consistency }

cc: Scott, Bruce



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AUG 11 1997

**BUREAU OF
AIR REGULATION**

August 8, 1997

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Magnolia Park Courtyard
Tallahassee, FL 32301

RE: Florida Power Corporation - University of Florida Cogeneration Plant
Draft Title V Permit No. 0010001-001-AV

Dear Clair:

Florida Power Corporation (FPC) is in receipt of the draft Title V permit for the above referenced facility and appreciates the Department's efforts in issuing the draft permit. FPC has reviewed the draft permit and is submitting the comments relative to the itemized specific conditions. FPC has requested, and the Department has agreed, to an extension of time until August 12, 1997 to resolve these issues or file a Petition for Administrative Hearing. Accordingly, FPC looks forward to the Department's response at the earliest convenience. As a minor editorial comment, please check the spelling of "Gainesville" throughout the document. In many places it was misspelled. Detailed comments are listed below:

Page 3 of 30:

Facility Condition 5, Appendix U-1--Since the emergency generator is listed as an unregulated emissions unit, with no other limitations, the reference to a 32,000 gallons/year limitation should be deleted.

Facility Condition 6, Appendix E-1--The reference to "Lube Oil Vent" should be changed to "Lube Oil Vents", since both the gas turbine and electric generator have vents which were listed in the application. Regarding storage tanks, it would be more specific for future reference to list the type and size of tanks with the designation of "Fuel Oil Storage Tanks". This could be listed as: Fuel Oil Storage Tanks (2-193,200 gallon No. 2 fuel oil and emergency generator diesel tank) in Appendix E-1. The reference to "Vehicles" should be deleted since such sources are not regulated under Title V; the exception is for fugitive dust which is regulated under a separate condition. FPC is aware that the Department is undergoing rule changes to

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change the term "Exempt" to "Insignificant". FPC requests information on how this change may affect the Title V list.

Facility Condition 7--FPC understands that this condition has been promulgated as part of the State Implementation Plan (SIP) and is federally enforceable.

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Facility Condition 8--FPC suggests the words "and could" be added to the condition, i.e. "...particulate matter at this facility and could include..". Reasonable precautions may not include all of these actions in all areas of the facility. Moreover, other actions deemed reasonable should not be excluded. The suggested wording would provide flexibility in assuring that the intent of the rule is met.

Facility Condition 11--This condition should be deleted for several reasons. First, there are no existing permit conditions that would require such a condition (see AC 01-204652; PSD-FL-181). Second, the facility has demonstrated compliance with the federally enforceable emissions cap of 194.3 tons NOx per year over the last several years. If the emissions cap is exceeded, then the Department has mechanisms for enforcement. At this point in time, reference to the 39.7 tons/year is not an applicable requirement. Finally, if FPC, as the applicant, requires to increase the cap, then the Department's rules in 62-212.400 would apply regarding contemporaneous emissions increases and decreases over a five year period. If a modification is triggered, then the Department has the authority to establish BACT pursuant to its rules. If the Department desires to provide historical information for future review, it could be added to Appendix H-1.

Facility Condition 12--It would appear that this condition is unnecessary since these emissions units were not referenced in the Title V application and FPC would have no authority to operate these units. Moreover, this condition has already been complied with and is therefore obsolete and should be deleted.

Facility Condition 13--Similar to Facility Condition 11, the wording of this condition has no historical basis. The words "all", "and all relevant data" and "at any time" do not appear in any previous condition. This condition should be reworded to reflect the intent of Specific Condition 5 of AC 01-204652/PSD-FL-181. Suggested language would be:

13. The permittee shall maintain fuel use and other records to demonstrate compliance with Facility Condition 10 for a period of 5 years.

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Emission Unit (E.U.) 001, Condition A.1.--This condition also has no historical basis and is not necessary and should be deleted. The nameplate capacity is referenced in the emission unit description.

E.U. 001, Condition A3--The permit history for this emission unit and the application cites "natural gas and distillate oil (including on-specification used oil) with a maximum sulfur content

of 0.5 percent" as the appropriate fuels. The condition should better reflect the historical language. The phrase "at all times" seems unnecessary for the intent of this condition. Also, the rule citation does not seem appropriate. This should be checked.

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E.U. 001, Condition A.5--The term "allowables" should be changed to "emission limits" for clarity. This condition includes many items listed as "standards" which were not standards or emission limits in the original and subsequent changes to the construction permit and should only be centered over the lbs/hr and tons/yr columns. The column "Standard" should be changed to "Basis" as in the previous construction permits. The column titled "Fuel" should also reflect the actual construction conditions which reference "Oil" rather than "No. 2 fuel oil". The opacity limitations cited in the table are limits that should be listed as such. Also, the basis for the CO emission limits are "@ 15% O₂". The table should be changed as follows:

Pollutant	Fuel	Basis	Emission Limit (lb/hr)	Emission Limit (tons/year)
NO _x	Gas	25 ppmvd @ 15% O ₂	39.6	142.7
	Oil	42 ppmvd @ 15% O ₂	66.3	7.3
SO ₂	Oil	0.5% S by Weight		
VE	Gas/Oil		10%/20%	Opacity
CO	Gas	42 ppmvd @ 15% O ₂	38.8	158.8
	Oil	75 ppmvd @ 15% O ₂	70.5	7.7

E.U. 001, Condition A.6.--This condition also does not have any historical basis, since the construction permit did not include particulate emission limits. Also, Condition A.3. coupled with the opacity limits in Condition A.5. more than provide for the intent of this condition. Therefore, this condition should be deleted.

E.U. 001, Condition A.7.--This condition should reflect that it applies to non-NSPS emission limits, e.g., "For non-NSPS emission limits, excess emissions"

For the NSPS emission limits, the excess emissions provisions of 40 CFR Part 60, 60.8(c) should be included as a condition. The relevant portions of this condition states: "Operation during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test under 40 CFR 60.8, nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown and malfunction be considered a violation of the applicable emission limit."

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This suggestion would provide clarity to the various limits and is consistent with representation made by Department personnel at the public rulemaking workshops.

E.U. 001, Condition A.11--FPC recommends that this condition be replaced with an alternate which reflects a more stringent monitoring method and is consistent with the proposed construction permit amendment and future rulemaking, i.e., Compliance Assurance Monitoring. It should be noted that the reference to water-to-fuel monitoring does not specifically apply to this emission unit since water is not used as a control technique. This emission unit uses steam for NO_x control. There is no definition or other implication in these outdated NSPS that water and steam are equivalent. Further evidence of the outdated nature of this NSPS would be its application to dry low NO_x (DLN) combustors, where the units could not possibly meet the intent of the language in question. The proposed alternate method is more stringent than the current condition and is consistent with Department policy. The proposed condition is as follows:

A.11. The NO_x emission rate in lb/hr and tons/year from the cogeneration facility stack shall be calculated using the 40 CFR Part 75 continuous emission monitoring (CEM) system to determine lbs/mmBtu and fuel flow monitoring to determine heat input. Excess emissions pursuant to 40 CFR 60.334 shall be determined using the Part 75 CEM system.

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E.U. 001, Condition A.14.--Several of the ASTM methods listed are not listed as current methods for sulfur analysis. The current methods are ASTM D1072-90(94) and ASTM D4084-94 and should be added.

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E.U. 001, Condition A.18.--The performance tests required under 40 CFR 60.8 have already been conducted and compliance with the less stringent NSPS emission limits have been demonstrated. This condition is therefore unnecessary based on the Department's policy of eliminating less stringent requirements. FPC proposes alternate language for performing compliance testing. Also, in accordance with Section 403.0872(13)(b) Florida Statutes, FPC requests that compliance with the NO_x emissions limits be determined on a 30-day rolling average.

A.18. Compliance with the lb/hr NO_x emissions limits listed in Condition A.5. and B. 4. shall be determined as a 30-day rolling average using the Part 75 CEM system. The emission limit shall be based on either Condition A.5. if the turbine is operating alone or the numerical addition of the NO_x limits in Conditions A.5. and B.4. if both the turbine and duct burners are operating. Compliance with emission limits for sulfur content, CO and VE limits shall be determined annually using fuel analysis for sulfur content, EPA Method 10 for CO and EPA or DEP Method 9 for VE.

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E.U. 001, Condition A.19.--The current ASTM methods for sulfur analysis are: D 129-95, D 1266-91, D 1552-95 and D 4294-90(1995).

E.U. 001, Condition A.20.--This condition is unnecessary based on the approval of the Custom Fuel Monitoring Schedule in Condition A.14.

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E.U. 001, Condition A.22. The reference to "110 percent" in the fourth line should be changed to "105 percent", based on the Department's recent policy guidance on combustion turbines.

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E.U. 001, Condition A.24.--Section (b), (c) and (e) should be deleted since there is neither a PM limit nor requirement for particulate matter tests using EPA or DEP Method 5.

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E.U. 001, Condition A.27.--The word "submit" should be added to the third line of paragraph a. to clarify the meaning, i.e., "... period, submit only the summary..."

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E.U. 001, Condition A.30.--FPC proposes that this condition be replaced to reflect the alternate language of Condition A.11. In addition, Section b. needs to be changed to reflect the applicable sulfur content of 0.5 percent and that BACT was not established for sulfur dioxide. The recommended condition is as follows:

A.30. For the purpose of reports under 40 CFR 60.7(c) and monitoring emissions pursuant to Facility Condition 13, periods of excess emissions that shall be reported are defined as follows:

a. Nitrogen Oxides. Any period in which the averaged NOx emissions exceed the emission rates listed in Condition A.5. for the combustion turbine. When the duct burner (Emission Unit 002) is operating with the combustion turbine, the excess emission shall be any one-hour period in which the average NOx emissions exceed the sum of the emission rates listed in Condition A.5. and Condition B.4.

b. Sulfur Dioxide. Any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.5 percent by weight.

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E.U.002, Description--This emission unit is not an Acid Rain Unit as defined in 40 CFR Part 72 since none of the steam produced through the use of the duct burners is used to produce electricity. All the steam produced in the HRSG goes to supply the steam needs of the University of Florida. Under the definitions in 40 CFR 72.2, the duct burner is not an "Utility Unit" since no electric energy is produced from its use.

E.U. 002, Condition B.1.--The permitted capacity for the duct burners was expressed in the construction permit as 197.7 thousand (M)cf/hr, which is equivalent to 188 MMBtu/hr (LHV) as noted in the source description. The 187.3 MMBtu/hr should be changed to 188 MMBtu/hr to reflect this authorized heat input.

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E.U. 002, Condition B.4.--Similar to comments made for Condition A.5., the term "Allowable" should be changed to "Emission Limits" and "Standard" should be changed to "Basis". Opacity should be listed as an emission limit. In the introductory sentence and in the table the reference to fuel is redundant to Condition B.2 and should be deleted from the table. The proposed changes to the table are as follows:

Pollutant	Basis	Emission Limit (lb/hr)	Emission Limit (tons/year)
NOx	0.1 lb/mmBtu	18.7	24.6
VE		10% Opacity	
CO	015 lb/MMBtu	28.1	36.9

E.U. 002, Condition B.6.--There are no particulate or opacity limitations under 40 CFR 60.43b for natural gas firing [see 60.43b(a), (b), (c) and (d)]. Therefore, this condition should be deleted.

E.U. 002, Condition B. 7.--This condition is taken out of context of the precise NSPS applicable to duct burner systems and should be deleted. The actual NSPS condition states: "*For purposes of paragraph (i) of this section, the nitrogen oxides standard under this section applies at all times including periods of startup, shutdown, or malfunction.*" 60.44b(h). Section 60.44b(i) states: "Except as provided under paragraph (j) of this section, compliance under this section is determined on a 30-day rolling average basis." Under Section 60.48b(h), duct burner systems are not required to install a CEM system to measure NOx, thus only an initial performance test is required. Therefore, there is no way to determine a 30-day rolling average making 60.44b(h), 60.44b(i) and this condition non applicable requirements.

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E.U. 002, Condition B.10--This condition states the conditions under which the performance tests under 40 CFR 60.8 shall be conducted. These tests have been previously conducted and accepted by the Department as meeting the NSPS requirement under 60.8. Therefore, monitoring should be conducted as proposed in Condition A.11. FPC proposes that this condition be replaced with the following:

B.10. Monitoring for NOx emissions from the duct burner system shall be conducted as described in Condition A.11.

E.U. 002, Condition B.11.-- As noted above in the comments to Condition B.7., this condition is not applicable and should be deleted.

E.U. 002, Condition B.13.--This condition is not applicable since a CEM system for NOx is not required by Section 60.48b(h). This condition should be deleted.

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Emission Unit Description--The reference to "69.9 mmBtu/hr" should be "69.6 MMBtu/hr" to be consistent with the application.

E.U. 003/004, Condition C.1.--The reference to "Low Sulfur" in the context of the No. 2 fuel oil should be deleted from the table. The sulfur content of the fuel (i.e., 0.5 percent) could be included since this is the standard specification for No. 2 Fuel Oil (ASTM D 366-92, Table 1).

E.U. 003/004, Condition C.1.--The second sentence should be deleted, since Condition D.1. does not include any fuel usage limitation for these emission units.

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E.U. 003/004, Condition C.4.--The first sentence is not consistent with the construction permit for the cogeneration facility that describes the usage for these emission units. The words "purposes only" should be deleted.

E.U. 003/004, Condition C.5.--The applicable visible emissions limit for these emission units is provided for in Rule 62-296.406(1). This rule allows 20 percent opacity except for either one six-minute period per hour which opacity shall not exceed 40 percent for a two-minute period.

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E.U. 003/004, Condition C.12.--This condition should include the methods currently used to record fuel usage and calculate emissions for that portion of the NOx emissions cap that Boilers 4 and 5 would contribute. It is recommended that a paragraph (c) be added as follows:

(c) For the purposes of determining annual NOx emissions from Boilers 4 and 5, the fuel usage shall be recorded. The fuel usage would be used along with the applicable EPA AP-42 emission factors to calculate annual NOx emissions from these emission units.

E.U. 003/004, Condition C.13.--FPC requests that EPA Method 9 also be included as a test method of opacity for flexibility in performing compliance tests.

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E.U. 003/004, Condition C.15.--This condition reflects the previous case-by-case BACT established under Rule 62-296.406(3) which established a 1.5 percent sulfur limit for these emission units. Since FPC has accepted the use of No. 2 fuel oil for these units, thereby limiting sulfur to 0.5 percent or less, it appears that this condition and Condition C.16. are unnecessary. An alternate condition is proposed as follows:

C.15. Fuel Monitoring. The permittee shall demonstrate compliance with Condition C.3. by the vendor providing verification that No. 2 fuel oil or oil meeting ASTM requirements for No. 2 fuel oil is being supplied.

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Common Condition D.1.--The hourly natural gas usage for the combustion turbine was amended in the construction permit to 420.3 M ft³/hr from 367.9 M ft³/hr. Also, the conditions referenced in the footnote as double asterisk (**) are A.5. and B.4. rather than No. 1 and No. 2 as listed.

Common Condition D.2.--This condition, which is from the construction permit for the cogeneration facility, is obsolete. Compliance with the emission limits have already been demonstrated. If the emission limits are not met, it should be treated as any other non-compliance situation within the rules of the Department.

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Common Condition D.3.--This condition should be changed to reflect the proposed language for monitoring in Conditions A.11. and C.12. FPC proposes the following language:

D.3. To demonstrate compliance with the facility NOx emission cap of 194.3 tons/year, the NOx emissions determined through Condition A.11. and C.12. shall be added and provided to the Department in each annual operating report required by Rule 62-210.370(3).

Section IV. Acid Rain Part--Based on our discussion in the description of E.U. 002, the phrase "and duct burner with a common stack" in the table should be deleted. The duct burner is not an Acid Rain Unit.

Table 1-1, Air Pollutant Emission Allowables and Terms--This table needs to be modified consistent with the comments made to specific conditions (i.e., Conditions A.5. and B.4.). Also, this Table should clearly state that it is for information purposes only. The items which require change are listed below:

1. Change "Allowable" to "Emission Limit".
2. Change "Standard(s)" to "Basis"
3. Clearly distinguish "Basis" and "Emission Limits" in columns.
4. Change "35.0" under lb/hr for NOx and gas firing to "39.6".

The "regulations" listed in the table do not accurately reflect the authority for emission limits. BACT was only established for CO. The emissions limits for NOx, SO₂ and VE were proposed by FPC and listed in the construction permit as Established by Manufacturer (EBM). Moreover, since BACT has already been conducted and an emission limit established for CO, the Department's general authority should be the appropriate citation.

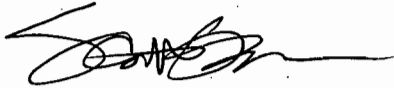
Table 2-1, Compliance Testing Requirements--This table should also state that it is for information purposes only. Changes to the table should reflect to our previous comments.

Appendix TV-1, Title V Conditions--FPC is not providing comments to these conditions as part of this application. Comments regarding this appendix are being submitted through the Florida Electric Power Coordinating Group and are applicable to this application as if submitted with this letter.

Mr. Fancy
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Your consideration of our comments is greatly appreciated.

Sincerely,



Scott H. Osbourn
Senior Environmental Engineer

cc: Chris Kirts, NE District
Charles Logan, DEP
Ken Kosky, Golder Associates
Robert Manning, HGS&S

8/11/97 Scott Sheplak
Bruce Mitchell

Appendix H-1, Permit History/ID Number Changes

Florida Power Corporation
University of Florida

Facility ID No.: 0010001

Permit History (for tracking purposes):

E.U.

<u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue</u> <u>Date</u>	<u>Expiration</u> <u>Date</u>	<u>Extended</u> <u>Date</u> ^{1,2}	<u>Revised</u> <u>Date(s)</u>
-001	Cogeneration Gas Turbine	AC01-204652/ PSD-FL-181	08/17/92	12/31/94	11/01/96	09
-002	Boiler #4	AO01-214830	08/28/92	12/31/94	08/14/96	
-003	Boiler #5	AO01-214831	08/28/92	12/31/94	08/14/96	

(if applicable) ID Number Changes (for tracking purposes):

From: **Facility ID No.:** 31GVL010014

To: **Facility ID No.:** 0010001

Notes:

1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

September 11, 1997

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Service Department
Florida Power Corp.
3201 34th Street South
St. Petersburg, Florida 33733

Re: FPC UF Cogen - AC01-204652/PSD-FL-181(A)
Final Permit Amendment

Dear Mr. Pardue:

The Department has evaluated your request for an increase in the heat input to the combustion turbine for operation at ambient temperatures near 45°F and a corresponding increase in the short term NO_x emission standard (lb/hr). Your request (page 8 of application) and subsequent information submitted on March 7, 1997 indicated that no increase in annual NO_x emissions would occur as a result of this amendment. The Department hereby amends the above referenced permit Specific Conditions 2 and 3 as follows and clarifies that continuous monitors are to be used to quantify the contribution from the combined cycle combustion turbine and duct burner in order to demonstrate compliance with the annual emissions caps for NO_x.

2. Emissions from this facility shall not exceed the limits listed below:

Pollutant	Source	Fuel	Basis of Limit	lbs/hr	tons/yr
NO _x	Turbine	Gas	EBM*: 25 ppmvd @ 15% O ₂	35.0 39.6	142.7
	Turbine	Oil	EBM*: 42 ppmvd @ 15% O ₂	66.3	7.3
	D. Burner	Gas	EBM*: 0.1 lb/MMBtu	18.7	24.6
	Facility	Gas/Oil			194.3
SO ₂	Turbine	Oil	BACT: 0.5% Sulfur Max.	---	---
	Boiler 4	Oil	BACT: 0.5% Sulfur Max.	---	---
	Boiler 5	Oil	BACT: 0.5% Sulfur Max.	---	---
VE	Turbine	Gas/Oil	Equivalent of mass EBM*	10%/20% opacity**	
	D. Burner	Gas	" " "	10% opacity	
	Boiler 4	Gas/Oil	" " "	10%/20% opacity**	
	Boiler 5	Gas/Oil	" " "	10%/20% opacity**	
CO	Turbine	Gas	BACT: 42 ppmvd	38.8	158.0
	Turbine	Oil	EBA***: 75 ppmvd	70.5	7.7
	D. Burner	Gas	BACT: 0.15 lb/MMBtu****	28.1	36.9

* EBM: Established by manufacturer

** Except for one 6-minute period per hour of not more than 27% opacity

*** EBA: Established by applicant

**** BACT limit proposed by applicant in Table A-2 of application

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3. Fuel consumption rates and hours of operation for the turbine and duct burner shall not exceed those listed below:

	<u>Natural Gas</u>			<u>No. 2 Fuel Oil</u>		
	<u>M ft³/hr*</u>	<u>MM ft³/yr</u>	<u>hrs/yr*</u>	<u>M gal/hr*</u>	<u>Mgal/yr</u>	<u>hrs/yr*</u>
Turbine	367.9 <u>420.3</u>	2997.2**	8146.8**	2.9	635.1	219.0**
Duct Burner	197.7	519.5	2628.0	0	0	0

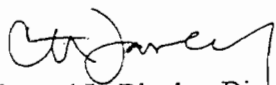
*Based on maximum firing rates. Units may run at lower rates for more hours within annual fuel limits.

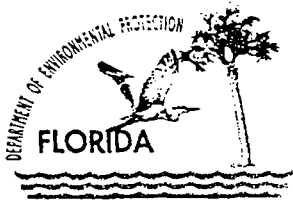
**An additional 1.9 hours/yr operation on natural gas will be allowed for each 1.0 hour/yr that fuel oil is not burned (up to 219 x 1.9 hrs/yr), in which case, the emissions limits in Specific Condition No. 2 shall be adjusted accordingly.

Boilers Nos. 4 and 5, firing natural gas or No. 2 fuel oil, may be operated as necessary for backup, as long as total NO_x emissions from the four ~~sources~~ emissions units within the permitted facility do not exceed 194.3 tons NO_x per year. The permittee shall maintain the required fuel use records ~~to demonstrate compliance with this condition~~ and include the total NO_x emission calculation in each annual operating report. For purposes of demonstrating compliance with the annual limits the NO_x emission rate (lbs/MMBtu) from the combustion turbine and duct burner shall be calculated using the NO_x analyzer data and equation F-6 from 40 CFR 75 Appendix F. Hourly heat input rates (MMBtu/hr) shall be used to convert lb/MMBtu of NO_x to lb/hour of NO_x and actual operating hours shall be used to obtain tons per year.

This permit amendment replaces the one issued on March 17, 1997. A copy of this permit amendment **shall be** filed with the referenced permit and shall become part of the permit. Any party to this order (**permit amendment**) has the right to seek judicial review of the permit 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** permit amendment is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

for 
Howard L. Rhodes, Director
Division of Air Resources
Management



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

March 17, 1997

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Service Department
Florida Power Corp.
3201 34th Street South
St. Petersburg, Florida 33733

Dear Mr. Pardue:

RE: FPC UF Cogen - AC01-204652/PSD-FL-181(A)
Request to Amend Permit

The Department has evaluated your request for an increase in the heat input to the combustion turbine for operation at ambient temperatures near 45°F and a corresponding increase in the short term NO_x emission standard (lb/hr). Your request (page 8 of application) and subsequent information submitted on March 7, 1997 indicated that no increase in annual NO_x emissions would occur as a result of this modification. The Department will monitor annual emission rates for a 5 year period to verify that emissions do not increase significantly as a result of this modification. The Department hereby amends the above referenced permit Specific Conditions 2 and 3 as follows:

2. Emissions from this facility shall not exceed the limits listed below:

Pollutant	Source	Fuel	Basis of Limit	lbs/hr	tons/yr
NO _x	Turbine	Gas	EBM*:25 ppmvd @ 15% O ₂	35.0	142.7
	Turbine	Oil	EBM*:42 ppmvd @ 15% O ₂	66.3	7.3
	D. Burner	Gas	EBM*:0.1 lb/MMBtu	18.7	24.6
	Facility	Gas/Oil			194.3
SO ₂	Turbine	Oil	BACT:0.5% Sulfur Max.	---	---
	Boiler 4	Oil	BACT:0.5% Sulfur Max.	---	---
	Boiler 5	Oil	BACT:0.5% Sulfur Max.	---	---
VE	Turbine	Gas/Oil	Equivalent of mass EBM*	10%/20% opacity**	
	D. Burner	Gas	" " "	10% opacity	
	Boiler 4	Gas/Oil	" " "	10%/20% opacity**	
	Boiler 5	Gas/Oil	" " "	10%/20% opacity**	
CO	Turbine	Gas	BACT: 42 ppmvd	38.8	158.0
	Turbine	Oil	EBA***:75 ppmvd	70.5	7.7
	D. Burner	Gas	BACT:0.15 lb/MMBtu****	28.1	36.9

*EBM: Established by manufacturer

**Except for one 6-minute period per hour of not more than 27% opacity

***EBA: Established by applicant

****BACT limit proposed by applicant in Table A-2 of application

Mr. W. Jeffrey Pardue
Page Two
March 17, 1997

3. Fuel consumption rates and hours of operation for the turbine and duct burner shall not exceed those listed below:

	<u>Natural Gas</u>			<u>No. 2 Fuel Oil</u>		
	<u>M ft³/hr*</u>	<u>MM ft³/yr</u>	<u>hrs/yr*</u>	<u>M gal/hr*</u>	<u>M gal/yr</u>	<u>hrs/yr*</u>
Turbine	367.9	420.3	2997.2**	2.9	635.1	219.0**
Duct Burner	197.7	519.5	2628.0	0	0	0

*Based on maximum firing rates. Units may run at lower rates for more hours within annual fuel limits.

**An additional 1.9 hours/yr operation on natural gas will be allowed for each 1.0 hour/yr that fuel oil is not burned (up to 219 x 1.9 hrs/yr), in which case, the emissions limits in Specific Condition No. 2 shall be adjusted accordingly.

Boilers Nos. 4 and 5, firing natural gas or No. 2 fuel oil, may be operated as necessary for backup, as long as total NO_x emissions from the four sources emissions units within the permitted facility do not exceed 194.3 tons NO_x per year. The permittee shall maintain the required fuel use records to demonstrate compliance with this condition and include the total NO_x emission calculation in each annual operating report. Beginning in 1997, the NO_x emission rate (lbs/MMBtu) from the combustion turbine and duct burner shall be calculated using the NO_x analyzer data and equation F-6 from 40 CFR 75 Appendix F. Hourly heat input rates (MMBtu/hr) shall be used to convert lb/MMBtu of NO_x to lb/hour of NO_x.

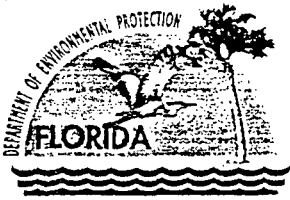
A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC01-204652/PSD-FL-181(A).

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/mc/t



File

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

September 13, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Scott H. Osbourn
Senior Environmental Engineer
Florida Power Corporation
3201 Thirty-fourth Street South
St. Petersburg, Florida 33733

Re: Extension of Permits No. AC 01-204652, University of Florida Cogeneration Facility
AC 49-203114, Intercession City Facility

Dear Mr. Osbourn:

On August 30 the Department received your application letters, dated August 25, requesting an extension of the expiration date of the above referenced permits. The attached proposed rule language will, if adopted, extend the air construction permit by law. It is anticipated that the rule will be adopted in early September. If the rule is adopted within 90 days of receipt of your application, the Department will not be required to respond further. However, we will inform you upon adoption of the proposed rule.

If the rule, for any reason, is not adopted within 90 days of receipt of your application we will act upon your request in a timely manner. Please note that your air construction permit is valid until the Department acts upon your request.

Should you have any questions please contact me at (904) 488-1344.

Sincerely,

A. A. Linero, P.E.
Administrator, New Source Review
Section

AAL/kw

cc: C. Collins, CD
E. Frey, NED
P. Reynolds, NED GBO
K. Kosky, KBN

NOTICE OF CHANGE IN PROPOSED RULE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DOCKET NO: 95-38R

CHAPTER TITLE:

CHAPTER NO.:

Operation Permits for Major Sources of Air

Pollution

62-213

RULE TITLE:

RULE NO.:

Permit Applications

62-213.420

The Department has made a change to the proposed rule which appeared in the Florida Administrative Weekly, Volume 21, Number 30, dated July 28, 1995, page 4958, so that the following section(s) will read as set forth below:

62-213.420 Permit Applications

(1)(a)1.a. Acid Rain Sources will submit applications for the entire source by June 15, 1996 ~~January 1, 1996~~. The Acid Rain Part of each such application, however, shall be submitted no later than January 1, 1996.

b.(ii) June 15, 1996 ~~February 1, 1996~~, otherwise.

c. All other sources subject to the permitting requirements of this chapter will submit applications by June 15, 1996 ~~February 1, 1996~~.

2. ~~Except as provided at Rule 62-213.420(1)(a)4., F.A.C., except for sources that are subject to the Florida Electrical Power Plant Siting Act (FEPPSA),~~ a source that commences operation after January 1, 1996, must file an application for an operation permit under this chapter ninety days before expiration of the source's construction permit, but no later than 180 days after commencing operation. Except as provided at Rule 62-213.420(1)(a)4., F.A.C., a source that has applied for an Electrical Power Plant Siting Certification prior to January 1, 1996, but has not but has not been issued the certification as of that date, or a source that has been issued an Electrical Power Plant Siting Certification prior to January 1, 1996, but has not commenced operation by that date, shall file an application for an operation permit under this chapter no later than 180 days after commencing operation. Sources subject to the FEPPSA that apply for Electrical Power Plant Siting Certification subsequent to January 1, 1996, may, at their option, shall apply for a permit under the provisions of this chapter at the same time the Florida Power Plant Siting Certification application is submitted.

4. The expiration dates of all air construction permits for Title V sources that expire between September 1, 1995, and November 1, 1996 ~~September 1, 1996~~, are hereby extended to the later of November 1, 1996, or 240 days after commencing operation ~~September 1, 1996~~. Facilities with such air construction permits which have not commenced operation on January 1, 1996, shall apply

for a permit under the provisions of this chapter on the later of
September 1, 1996, or 180 days after commencing operation.

Specific Authority: 403.061, 403.087, F.S.

Law Implemented: 403.061, 403.0872, F.S.

History: New 11-28-93; Amended 4-62-94; Formerly 17-213.420;
Amended 11-23-94, 4-2-95,_____.

NAME OF PERSON ORIGINATING PROPOSED RULE: Howard L. Rhodes,
Director, Division of Air Resources Management

NAME OF SUPERVISOR OR PERSON WHO APPROVED THE PROPOSED RULE:
Virginia B. Wetherell, Secretary

DATE PROPOSED RULE APPROVED: July 17, 1995



file

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

May 22, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Service Department
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Pardue:

RE: University of Florida Cogeneration Facility Alachua County
AC01-204652 and PSD-Fl-181
Request for Amendment of Construction Permit

The Department is in receipt of your March 31 letter requesting to incorporate the EPA approved custom fuel monitoring schedule and to amend Specific Conditions No. 2, No. 3, and No. 8 of the above mentioned permit. This permit was issued under a stipulated settlement (OGC case No. 91-1113). The Department has evaluated your request and determines the following:

CUSTOM FUEL MONITORING SCHEDULE:

FPC'S REQUEST:

To incorporate the EPA approved custom fuel monitoring schedule for sulfur in natural gas.

DEPARTMENT'S RESPONSE:

The Department will amend the permit to incorporate the fuel monitoring schedule. The attached EPA custom fuel monitoring schedule shall be part of this permit.

SPECIFIC CONDITION NO.2

FPC'S REQUEST:

To delete reference to boiler No. 2 with no increases in the current cap for typ of NO_x for boilers No. 4 and 5.

Mr. W. Jeffrey Pardue
May 22, 1995
Page Two

DEPARTMENT'S RESPONSE:

Based on discussion with Company personnel, we understand FPC will withdraw this request and will use a rental boiler and the emergency order if needed. The Department's Office of General Counsel will review the draft order.

SPECIFIC CONDITION No.3

FPC'S REQUEST:

An Alternate to the NSPS testing requirements for the Subpart Db duct burner was proposed which involved combining the NO_x emission limits from the turbine and the duct burner. You provided a draft letter from the Department to EPA which proposed to demonstrate compliance with the duct burner NSPS NO_x emission standards (0.2 lb/MMBtu) without conducting a Method 20 upstream of the duct burner.

DEPARTMENT'S RESPONSE:

- o Subpart Db establishes NO_x emission limits for the gas fired duct burner (0.2 lb/MMBtu pursuant to 40 CFR 60.44b) and Method 20 is specified upstream and down stream of the duct burner to demonstrate compliance (40 CFR 60.46b).
- o 40 CFR 60.8(e)(1) requires the owner or operator of an affected facility to provide or cause to be provided, performance testing facilities including sampling ports adequate for test methods applicable to such facility.
- o The requested alternate testing procedure must be reviewed pursuant to Rule 62-297.620, F.A.C., Exceptions and Approval of Alternate Procedures and Requirements (attached). FPC should provide the information required in Rule 62-297.620, F.A.C.
- o The Department intends to deny the request to combine the emission limits from the turbine and duct burner unless and until an approved alternate sampling procedure is obtained from the Department's Emissions Monitoring Section. These are separate NSPS emissions units (Subpart GG and Subpart Db) and current NSPS regulations require that compliance be demonstrated for each emissions unit. The draft letter to EPA will not be sent. We understand that a second (revised) draft letter to EPA will be sent by FPC to the Department for review.

Mr. W. Jeffrey Pardue
May 22, 1995
Page Three

o The Department intends to amend AC01-203652/PSD-FL-181 to require NO_x and CO testing prior to obtaining the operating permit. Compliance testing on the duct burner will not be required annually since this emissions unit emits less than 100 tpy of NO_x or CO and there are significant difficulties with conducting the required Method 20 upstream of the duct burner. This will allow additional time for FPC to resolve the duct burner compliance test issues.

SPECIFIC CONDITION No. 8

FPC'S REQUEST:

To increase heat input rate from the turbine by 10% and corresponding increases in lb/hr of NO_x with no increases in tpy. FPC indicated that tpy NO_x limits would be demonstrated using the water-to-fuel monitor until 1996 when a NO_x CEMS would be used in place of the water/fuel monitor. The NO_x CEMS will be installed to meet the requirements of 40 CFR Part 75.

DEPARTMENT'S RESPONSE:

o The revised BACT determination for PSD-FL-181 established BACT for CO only. NO_x was not triggered for PSD review. There were 134.9 tpy of NO_x offsets listed from shutting down units 1, 2, and 3. The net increase in emissions totaled 39.7 tpy, just 0.3 tpy below the significance level for PSD review. From that BACT determination:

"The application indicates that emissions of other pollutants will not be subject to a BACT determination. The applicant narrowly escaped PSD review for NO_x by lowering firing rates, and since increased firing rates may be requested at some time in the future, the Department will require that retrofit costs associated with the applicant's decision not to make initial provisions for future installation of advanced catalytic control shall not be considered in any cost analysis required for any future requested increase in capacity".

o BACT for similar combustion turbines when PSD-FL-181 was under review was 15 ppmvd @ 15% oxygen for gas firing to be obtained by 1997 or 1998. These emission levels were thought to be achievable using dry low NO_x combustor technology or SCR. This BACT, 15 ppmvd @ 15% oxygen, has been demonstrated currently using dry low NO_x burners. The NO_x standard in PSD-FL-181 was set at 25 ppmvd @ 15% oxygen for natural gas.

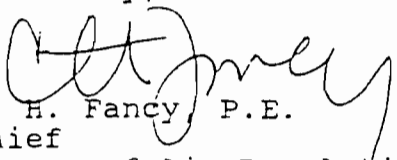
o The requested increase in lb/hr of NO_x emissions constitutes a modification. If approved, the Department would reissue the construction permit and public notice this action.

Mr. W. Jeffrey Pardue
May 22, 1995
Page Four

o The following information is requested to help the Department resolve this request. Please describe how FPC determined that increased heat rates, and corresponding increased NO_x emission rates, are achievable based on the initial performance test. Provide manufactures curves and example calculations. Please describe how tpy of NO_x are monitored for each emissions unit. State if any F factors will be used when the NO_x CEMS system is used for NO_x tpy monitoring. Supply example calculations and state all assumptions for these calculations. Describe fuel and process monitoring associated with the NO_x monitoring.

Submit any written inquiries or additional information to me at the above address. If you have any questions or need clarification on any of these items, please call Martin Costello at (904)488-1344.

Sincerely,


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

CHF/mc/h

attachments: Mr. Pardue's letter of March 31, 1995
EPA's custom fuel monitoring schedule guidance
Rule 62-297.620, F.A.C.

cc: Robert Leetch, NED
John Reynolds
Mike Harley
Morton Benjamin
Martin Costello



Department of Environmental Protection

BEST AVAILABLE COPY

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Virginia B. Wetherell
Secretary

CERTIFIED - RETURN RECEIPT

August 5, 1994

Mr. Johnny Miller
Supt., Heat Plant II
University of Florida
Building 473
Gainesville, Florida 32611

Dear Mr. Miller:

Alachua County - AP
University of Florida - Heat Plant II

Emissions Unit	Permit No.	ID No.
#1 Boiler	AO01-214826	31GVL01001402
#2 Boiler	AO01-214828	31GVL01001403
#3 Boiler	AO01-214829	31GVL01001404
#4 Boiler	AO01-214830	31GVL01001411
#5 Boiler	AO01-214831	31GVL01001415

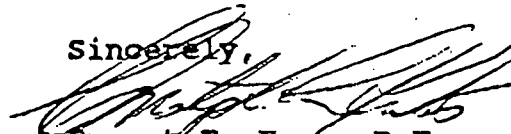
Each permit above is extended to 09-02-95 to coordinate each emissions unit with the submittal of the Title V source (facility) permit application which shall be submitted by 07-02-95 per FAC Rule 17-213.420(1)(a)1.b.

Since each extension is in lieu of processing an operation permit application for a short-term operation permit, the testing required by each permit shall continue to be performed at the interval in each permit.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by filing a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date this Notice is filed with the Clerk of the Department.

If there are any questions, please contact Johnny Cole at (904) 448-4310, Ext. 236.

Sincerely,


Ernest E. Frey, P.E.
102 Director of District Management

EEF:JLC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

NORTHEAST DISTRICT
PERMIT
AUG 19 1992
REGULATIVE
DER-JACKSONVIL

In the matter of an
Application for Permit by:

DER File No. AC 01-204652
PSD-FL-181
Alachua County

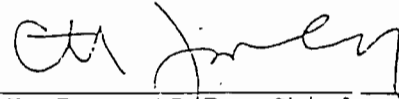
Mr. R. W. Neiser
Florida Power Corporation
3201-34th Street South
St. Petersburg, Florida 33733

Enclosed is Permit Number AC 01-204652 to construct a 43 MW cogeneration facility at the University of Florida's Central Heat Plant facility in Gainesville, Alachua County, Florida, issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 17, 1992 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.

Charlotta G. Hayes
(Clerk)

8/17/92
(Date)

Copies furnished to:

A. Kutyna, NED
J. Harper, EPA
C. Shaver, NPS
K. Kosky, P.E.

Final Determination

Florida Power Corporation/University
of Florida Cogeneration Project
Alachua County, Florida

Permit No. AC 01-204652
PSD-FL-181

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

August 7, 1992

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 43 megawatt cogeneration facility at the University of Florida Central Heat Plant in Gainesville, Alachua County, Florida, was distributed on June 30, 1992. The Notice of Intent to Issue was published in the Gainesville Sun on July 3, 1992. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Jacksonville offices.

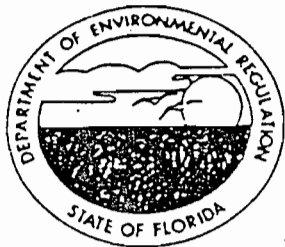
Comments were submitted by the applicant on July 29, 1992, requesting modification of Specific Conditions Nos. 3, 4, and 7. The Department made the following changes in response to those comments:

Specific Condition No. 3 - Specific limits for Boilers 4 and 5 were replaced with a total NO_x cap to provide operational flexibility in the event of gas curtailments.

Specific Condition No. 4 - The required operating rate during the compliance test was modified to reflect the maximum capacity achievable at a given ambient temperature.

Specific Condition No. 7 - Language was added to clarify that a revised BACT analysis is dependent on the facility meeting the emission limits.

The final action of the Department will be to issue construction permit AC 01-204652 (PSD-FL-181) as modified.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-240

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Florida Power Corporation
3201 - 34th Street South
St. Petersburg, FL 33733

Permit Number: AC 01-204652

PSD-FL-181

Expiration Date: December 31, 1994

County: Alachua

Latitude/Longitude: 29°38'23"N
82°20'55"W

Project: UF Cogeneration Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a 43 Megawatt cogeneration facility consisting of replacement of existing boiler Nos. 1, 2, and 3 with a GE LM-6000 combustion turbine in series with a duct burner at a designed flow of 325,200 ACFM, and operating existing boiler Nos. 4 and 5 as auxiliary units.

Particulate emissions shall be controlled by using clean fuels and good combustion practices. CO emissions shall be initially controlled by proper combustion techniques. NO_x emissions shall be initially controlled by steam injection. Future control requirements for CO and NO_x will be established by a revised BACT determination if deemed necessary by the Department.

The facility is located at the existing Central Heat Plant on the campus of the University of Florida in Gainesville, Alachua County, Florida. The UTM coordinates are 369.4 km East and 3,279.3 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. FPC letter dated 11-13-91.
2. FPC letter dated 11-25-91.
3. KBN letter dated 12-2-91.
4. DER incompleteness letter dated 12-31-91.
5. FPC letter dated 1-2-92.
6. EPA letter dated 1-8-92.
7. DER letter to EPA dated 1-16-92.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

Attachments Cont'd

8. KBN letter dated 1-30-92.
9. FPC letter to EPA dated 2-6-92.
10. DER letter to EPA dated 2-12-92.
11. DER letter to EPA dated 2-14-92.
12. FPC response to incompleteness dated 3-5-92.
13. FWS letter to DER dated 4-2-92.
14. EPA letter to DER dated 4-8-92.
15. KBN letter to DER dated 4-8-92.
16. EPA letter to DER dated 6-16-92.
17. FPC letter to DER dated 6-19-92.
18. FPC letter to DER dated 7-29-92.

GENERAL CONDITIONS:

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.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

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 of 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.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.

BEST AVAILABLE COPY

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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.

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.

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 any 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.

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

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

- 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.

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.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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 for 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:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the dates analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

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.

SPECIFIC CONDITIONS:

1. Unless otherwise indicated, the construction and operation of the subject cogeneration facility shall be in accordance with the capacities and specifications stated in the application.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

2. Emissions from this facility shall not exceed the limits listed below:

Pollutant	Source	Fuel	Basis of Limit	lbs/hr	tons/yr
NOx	Turbine	Gas	EBM*:25 ppmvd @ 15% O2	35.0	142.7
	Turbine	Oil	EBM*:42 ppmvd @ 15% O2	66.3	7.3
	D.Burner	Gas	EBM*:0.1 lb/MMBTU	18.7	24.6
SO2	Turbine	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 4	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 5	Oil	BACT:0.5% Sulfur Max.	-	-
VE	Turbine	Gas/Oil	Equivalent of mass EBM*	10%/20% opacity**	
	D.Burner	Gas	" " "	10% opacity	
	Boiler 4	Gas/Oil	" " "	10%/20% opacity**	
	Boiler 5	Gas/Oil	" " "	10%/20% opacity**	
CO	Turbine	Gas	BACT:42 ppmvd	38.8	158.0
	Turbine	Oil	EBA***:75 ppmvd	70.5	7.7
	D.Burner	Gas	BACT:0.15 lb/MMBTU****	28.1	36.9

*EBM: Established by manufacturer

**Except for one 6-minute period per hour of not more than 27% opacity

***EBA: Established by applicant

****BACT limit proposed by applicant in Table A-2 of application

3. Fuel consumption rates and hours of operation for the turbine and duct burner shall not exceed those listed below:

	Natural Gas			No. 2 Fuel Oil		
	M ft3/hr*	MM ft3/yr	hrs/yr*	M gal/hr*	M gal/yr	hrs/yr*
Turbine	367.9	2997.2**	8146.8**	2.9	635.1	219.0**
Duct Burner	197.7	519.5	2628.0	0	0	0

*Based on maximum firing rates. Units may run at lower rates for more hours within annual fuel limits.

**An additional 1.9 hours/yr operation on natural gas will be allowed for each 1.0 hour/yr that fuel oil is not burned (up to 219 x 1.9 hours/yr), in which case, the emission limits in Specific Condition No. 2 shall be adjusted accordingly.

296 415

BEST AVAILABLE COPY

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

Boilers Nos. 4 and 5, firing natural gas or No. 2 fuel oil, may be operated as necessary for backup, as long as total NO_x emissions from the four sources within the permitted facility do not exceed 194.3 tons NO_x per year. The permittee shall maintain the required fuel use records to demonstrate compliance with this condition and include the total NO_x emission calculation in each annual operating report.

4. Before this construction permit expires, the cogeneration facility and Central Heat Plant (Boilers 4 and 5) stacks shall be sampled or tested as applicable according to the emission limits in Specific Condition No. 2. Annual compliance tests shall be conducted each year thereafter. Compliance tests shall be run at 96% to 100% of the maximum capacity achievable for the average ambient temperature during the compliance tests. The turbine manufacturer's capacity vs. temperature (ambient) curve shall be included with the compliance test results. Tests shall be conducted using the following reference methods:

NO_x: EPA Method 20
SO₂: Fuel supplier's sulfur analysis
VE: EPA Method 9
CO: EPA Method 10

5. The DER Northeast District office shall be notified at least 30 days prior to the compliance tests. Compliance test results shall be submitted to the DER Northeast District office and the Bureau of Air Regulation office within 45 days after completion of the tests. Sampling facilities, methods, and reporting shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A.

6. A continuous operations monitoring system shall be installed, operated, and maintained in accordance with 40 CFR 60.334. The natural gas, fuel oil and steam injection flows to the cogeneration turbine along with the power output of the generator shall be metered and continuously recorded. The data shall be logged daily and maintained so that it can be provided to DER upon request.

7. The permittee shall have the option of including, in the initial construction, adequate modules and other provisions necessary for future installation of state-of-the-art catalytic abatement or equivalent CO and NO_x control systems. Within 90 days of receipt of the initial compliance test results, the Department shall, if CO emission limits are not met, review the need for making a revised determination of Best Available Control Technology for CO.

BEST AVAILABLE COPY

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

If test results from the turbine and duct burner show that it is unlikely that NO_x limits can be met, a revised BACT determination for NO_x shall also be considered. The Department may revise the BACT determination to require installation of such technology if so indicated by the revised BACT cost/benefit analysis. If the permittee has elected not to provide for future addition of such technology in the initial construction and later applies for a permit modification to increase capacity, the retrofit costs associated with not making provisions for such technology (initially) shall not be considered by the Department in the retrofit cost analysis required for the future expansion.


8. Boilers Nos. 1, 2 and 3 shall permanently cease operation upon receipt of the operation permit for the cogeneration facility.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

10. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of August, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


Carol M. Browner, Secretary

Revised
 Best Available Control Technology (BACT) Determination
 University of Florida Cogeneration Project
 Alachua County

The applicant proposes to install a 43 MW cogeneration facility to replace existing boiler capacity at the University of Florida - Gainesville campus in Alachua County. The facility will consist of a General Electric LM-6000 Gas Turbine Generator exhausting through a duct-fired heat recovery steam generator which will produce steam for the University campus. The turbine and duct burner will be fired by natural gas with No. 2 fuel oil being used only as a backup fuel for the turbine.

A BACT determination is required for all regulated air pollutants emitted in amounts equal to or greater than the significant emission rates listed in Table 500-2 of Florida Administrative Code (F.A.C.) Rule 17-2.500.

The following table presents the estimated actual emissions in tons per year proposed by the applicant for NO_x, SO₂, PM/PM₁₀, VOC, and H₂SO₄. The Department accepts the applicant's proposed emissions for those pollutants, but will require a more stringent CO limit for the turbine during natural gas firing than proposed by the applicant (42 ppmvd vs. 75 ppmvd).

	<u>Gas Turbine</u>		<u>Duct Burner</u>	<u>Total</u>	<u>Offsets</u>	<u>Increase</u>	<u>PSD</u>
	<u>NG</u>	<u>Oil</u>	<u>NG</u>				
NO _x	142.7	7.3	24.6	174.6	134.9	39.7	40.0
SO ₂	4.3	21.6	0.7	26.6	36.1	-9.5	40.0
PM/PM ₁₀	10.2	1.1	2.5	13.8	3.4	10.4	25/15
CO	158.0	7.7	36.9	202.6	20.4	182.2	100.0
VOC	6.5	0.4	10.6	17.5	1.1	16.4	40.0
H ₂ SO ₄	0.3	2.0	0.1	2.4	0.8	1.6	7.0

Emissions are based on firing natural gas in the turbine for 8,147 hours/yr at 348 MMBTU/hr and natural gas in the duct burner for 2,628 hours/yr at 187 MMBTU/hr. Oil firing in the turbine is based on 219 hours/yr at 382.6 MMBTU/hr.

Turbine performance under natural gas firing is based on NO_x emissions of 25 ppmvd (corrected to 15 percent O₂). Performance on oil firing is based on NO_x emissions of 42 ppmvd (corrected to 15 percent O₂). SO₂ emissions are based on 0.5 percent sulfur.

Date of Receipt of a Complete Application

March 6, 1992

BACT Determination Requested by Applicant

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits: 75 ppmvd CO (natural gas or No. 2 oil - 0.5% Sulfur max.)
(No request made for Boilers 4 and 5)BACT Determined by the Department

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits: Turbine - Natural gas firing: 42 ppmvd CO
Turbine - No. 2 oil firing: 75 ppmvd CO
Maximum % Sulfur - No. 2 oil: 0.5 % S
Duct Burner - Natural gas: 0.15 lb CO/MMBTU
Boilers 4 & 5: (Gas/Oil) 10%/20% OpacityBACT Determination Procedure

In accordance with F.A.C. Chapter 17-2, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available control methods, systems and techniques. In addition, the regulations require that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other State.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

A review of EPA's BACT/LAER Clearinghouse indicates that catalytic oxidation is the most stringent control technique. An oxidation catalyst control system allows unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts at about 300°F and reaches near completion (above 90%) at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than for thermal oxidation thus reducing the thermal energy required. The oxidation catalyst is typically located directly after the turbine or as an integral part of the steam generator. Catalyst size depends on the exhaust flow, temperature, and desired efficiency.

Catalytic oxidation for CO control has been employed in nonattainment areas and is considered to be LAER technology capable of reducing CO emissions to the 10 ppm range. Due to economics, applications of catalytic oxidation technology have thus far been limited to small cogeneration facilities burning natural gas. Oxidation catalysts have not been used on base-loaded fuel oil-fired turbines in simple cycle or combined cycle facilities since extended use of sulfur-containing fuel would result in increased corrosion. Also, trace metals in the fuel could poison catalysts during prolonged fuel oil firing.

Using the applicant's proposed CO emission level of 75 ppmvd, the total annualized cost of CO catalytic oxidation for this project is \$508,156 with a cost effectiveness of about \$1,970/ton of CO removed. The cost effectiveness is based on 87% efficiency (75 ppmvd to 10 ppmvd) and includes a heat rate penalty of 0.2% based on an energy loss of \$50/MW associated with pressure drop across the catalyst. A review of previous BACT determinations indicates that \$1,970/ton would not be prohibitive. However, the decision to require catalytic oxidation should be based on a cost/benefit analysis once compliance testing has been done. Therefore, the Department will propose initial BACT emission limits for CO consistent with recent BACT determinations for similar sources. These limits are to be revised, if necessary, upon evaluation of the compliance test data. The turbine limit proposed by the applicant for fuel oil operation (75 ppmvd) is more stringent than a recent BACT determination for similar sources (78 ppmvd).

Other Air Pollutants Not Subject to BACT Determination

The application indicates that emissions of other pollutants will not be subject to a BACT determination. The applicant narrowly escaped PSD review for NO_x by lowering firing rates, and since increased firing rates may be requested at some future date, the Department will require that retrofit costs associated with the applicant's decision not to make initial provisions for future installation of advanced catalytic control shall not be considered in any cost analysis required for any future requested increase in capacity.

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

August 14 1992
Date

Approved by:

Carol M. Browner
Carol M. Browner, Secretary
Dept. of Environmental Regulation

August 17 1992
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

NORTHEAST DISTRICT
REGULATIVE
AUG 19 1992
REGULATIVE
DER-JACKSONVILLE

In the matter of an
Application for Permit by:

DER File No. AC 01-204652
PSD-FL-181
Alachua County

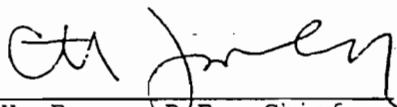
Mr. R. W. Neiser
Florida Power Corporation
3201-34th Street South
St. Petersburg, Florida 33733

Enclosed is Permit Number AC 01-204652 to construct a 43 MW cogeneration facility at the University of Florida's Central Heat Plant facility in Gainesville, Alachua County, Florida, issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

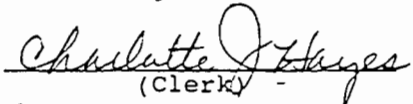

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 17, 1992 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.


(Clerk) - 8/17/92
(Date)

Copies furnished to: ✓

A. Kutyna, NED
J. Harper, EPA
C. Shaver, NPS
K. Kosky, P.E.

Final Determination

Florida Power Corporation/University
of Florida Cogeneration Project
Alachua County, Florida

Permit No. AC 01-204652
PSD-FL-181

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

August 7, 1992

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 43 megawatt cogeneration facility at the University of Florida Central Heat Plant in Gainesville, Alachua County, Florida, was distributed on June 30, 1992. The Notice of Intent to Issue was published in the Gainesville Sun on July 3, 1992. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Jacksonville offices.

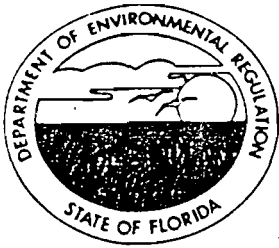
Comments were submitted by the applicant on July 29, 1992, requesting modification of Specific Conditions Nos. 3, 4, and 7. The Department made the following changes in response to those comments:

Specific Condition No. 3 - Specific limits for Boilers 4 and 5 were replaced with a total NO_x cap to provide operational flexibility in the event of gas curtailments.

Specific Condition No. 4 - The required operating rate during the compliance test was modified to reflect the maximum capacity achievable at a given ambient temperature.

Specific Condition No. 7 - Language was added to clarify that a revised BACT analysis is dependent on the facility meeting the emission limits.

The final action of the Department will be to issue construction permit AC 01-204652 (PSD-FL-181) as modified.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Florida Power Corporation
3201 - 34th Street South
St. Petersburg, FL 33733

Permit Number: AC 01-204652

PSD-FL-181

Expiration Date: December 31, 1994

County: Alachua

Latitude/Longitude: 29°38'23"N

82°20'55"W

Project: UF Cogeneration Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a 43 Megawatt cogeneration facility consisting of replacement of existing boiler Nos. 1, 2, and 3 with a GE LM-6000 combustion turbine in series with a duct burner at a designed flow of 325,200 ACFM, and operating existing boiler Nos. 4 and 5 as auxiliary units.

Particulate emissions shall be controlled by using clean fuels and good combustion practices. CO emissions shall be initially controlled by proper combustion techniques. NO_x emissions shall be initially controlled by steam injection. Future control requirements for CO and NO_x will be established by a revised BACT determination if deemed necessary by the Department.

The facility is located at the existing Central Heat Plant on the campus of the University of Florida in Gainesville, Alachua County, Florida. The UTM coordinates are 369.4 km East and 3,279.3 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. FPC letter dated 11-13-91.
2. FPC letter dated 11-25-91.
3. KBN letter dated 12-2-91.
4. DER incompleteness letter dated 12-31-91.
5. FPC letter dated 1-2-92.
6. EPA letter dated 1-8-92.
7. DER letter to EPA dated 1-16-92.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

Attachments Cont'd

8. KBN letter dated 1-30-92.
9. FPC letter to EPA dated 2-6-92.
10. DER letter to EPA dated 2-12-92.
11. DER letter to EPA dated 2-14-92.
12. FPC response to incompleteness dated 3-5-92.
13. FWS letter to DER dated 4-2-92.
14. EPA letter to DER dated 4-8-92.
15. KBN letter to DER dated 4-8-92.
16. EPA letter to DER dated 6-16-92.
17. FPC letter to DER dated 6-19-92.
18. FPC letter to DER dated 7-29-92.

GENERAL CONDITIONS:

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
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 of 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.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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.

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.

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 any 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.

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

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

- 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.

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.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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 for 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:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the dates analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

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.

SPECIFIC CONDITIONS:

1. Unless otherwise indicated, the construction and operation of the subject cogeneration facility shall be in accordance with the capacities and specifications stated in the application.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

2. Emissions from this facility shall not exceed the limits listed below:

Pollutant	Source	Fuel	Basis of Limit	lbs/hr	tons/yr
NOx	Turbine	Gas	EBM*:25 ppmvd @ 15% O2	35.0	142.7
	Turbine	Oil	EBM*:42 ppmvd @ 15% O2	66.3	7.3
	D.Burner	Gas	EBM*:0.1 lb/MMBTU	18.7	24.6
					174.6
SO2	Turbine	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 4	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 5	Oil	BACT:0.5% Sulfur Max.	-	-
VE	Turbine	Gas/Oil	Equivalent of mass EBM*	10%/20% opacity**	
	D.Burner	Gas	" " "	10% opacity	
	Boiler 4	Gas/Oil	" " "	10%/20% opacity**	
	Boiler 5	Gas/Oil	" " "	10%/20% opacity**	
CO	Turbine	Gas	BACT:42 ppmvd	38.8	158.0
	Turbine	Oil	EBA***:75 ppmvd	70.5	7.7
	D.Burner	Gas	BACT:0.15 lb/MMBTU****	28.1	36.9

*EBM: Established by manufacturer

**Except for one 6-minute period per hour of not more than 27% opacity

***EBA: Established by applicant

****BACT limit proposed by applicant in Table A-2 of application

3. Fuel consumption rates and hours of operation for the turbine and duct burner shall not exceed those listed below:

	Natural Gas			No. 2 Fuel Oil		
	M ft3/hr*	MM ft3/yr	hrs/yr*	M gal/hr*	M gal/yr	hrs/yr**
Turbine	367.9	2997.2**	8146.8**	2.9	635.1	219.0**
Duct Burner	197.7	519.5	2628.0	0	0	0

*Based on maximum firing rates. Units may run at lower rates for more hours within annual fuel limits.

**An additional 1.9 hours/yr operation on natural gas will be allowed for each 1.0 hour/yr that fuel oil is not burned (up to 219 x 1.9 hours/yr), in which case, the emission limits in Specific Condition No. 2 shall be adjusted accordingly.

296 405

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

Boilers Nos. 4 and 5, firing natural gas or No. 2 fuel oil, may be operated as necessary for backup, as long as total NO_x emissions from the four sources within the permitted facility do not exceed 194.3 tons NO_x per year. The permittee shall maintain the required fuel use records to demonstrate compliance with this condition and include the total NO_x emission calculation in each annual operating report.

4. Before this construction permit expires, the cogeneration facility and Central Heat Plant (Boilers 4 and 5) stacks shall be sampled or tested as applicable according to the emission limits in Specific Condition No. 2. Annual compliance tests shall be conducted each year thereafter. Compliance tests shall be run at 96% to 100% of the maximum capacity achievable for the average ambient temperature during the compliance tests. The turbine manufacturer's capacity vs. temperature (ambient) curve shall be included with the compliance test results. Tests shall be conducted using the following reference methods:

NO_x: EPA Method 20
SO₂: Fuel supplier's sulfur analysis
VE: EPA Method 9
CO: EPA Method 10

5. The DER Northeast District office shall be notified at least 30 days prior to the compliance tests. Compliance test results shall be submitted to the DER Northeast District office and the Bureau of Air Regulation office within 45 days after completion of the tests. Sampling facilities, methods, and reporting shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A.

6. A continuous operations monitoring system shall be installed, operated, and maintained in accordance with 40 CFR 60.334. The natural gas, fuel oil and steam injection flows to the cogeneration turbine along with the power output of the generator shall be metered and continuously recorded. The data shall be logged daily and maintained so that it can be provided to DER upon request.

7. The permittee shall have the option of including, in the initial construction, adequate modules and other provisions necessary for future installation of state-of-the-art catalytic abatement or equivalent CO and NO_x control systems. Within 90 days of receipt of the initial compliance test results, the Department shall, if CO emission limits are not met, review the need for making a revised determination of Best Available Control Technology for CO.

PERMITTEE:
Florida Power Corporation

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

If test results from the turbine and duct burner show that it is unlikely that NO_x limits can be met, a revised BACT determination for NO_x shall also be considered. The Department may revise the BACT determination to require installation of such technology if so indicated by the revised BACT cost/benefit analysis. If the permittee has elected not to provide for future addition of such technology in the initial construction and later applies for a permit modification to increase capacity, the retrofit costs associated with not making provisions for such technology (initially) shall not be considered by the Department in the retrofit cost analysis required for the future expansion.

8. Boilers Nos. 1, 2 and 3 shall permanently cease operation upon receipt of the operation permit for the cogeneration facility.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

10. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of August, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



Carol M. Browner, Secretary

Revised
 Best Available Control Technology (BACT) Determination
 University of Florida Cogeneration Project
 Alachua County

The applicant proposes to install a 43 MW cogeneration facility to replace existing boiler capacity at the University of Florida - Gainesville campus in Alachua County. The facility will consist of a General Electric LM-6000 Gas Turbine Generator exhausting through a duct-fired heat recovery steam generator which will produce steam for the University campus. The turbine and duct burner will be fired by natural gas with No. 2 fuel oil being used only as a backup fuel for the turbine.

A BACT determination is required for all regulated air pollutants emitted in amounts equal to or greater than the significant emission rates listed in Table 500-2 of Florida Administrative Code (F.A.C.) Rule 17-2.500.

The following table presents the estimated actual emissions in tons per year proposed by the applicant for NO_x, SO₂, PM/PM₁₀, VOC, and H₂SO₄. The Department accepts the applicant's proposed emissions for those pollutants, but will require a more stringent CO limit for the turbine during natural gas firing than proposed by the applicant (42 ppmvd vs. 75 ppmvd).

	<u>Gas Turbine</u>		<u>Duct Burner</u>	<u>Total</u>	<u>Offsets</u>	<u>Increase</u>	<u>PSD</u>
	<u>NG</u>	<u>Oil</u>	<u>NG</u>				
NO _x	142.7	7.3	24.6	174.6	134.9	39.7	40.0
SO ₂	4.3	21.6	0.7	26.6	36.1	-9.5	40.0
PM/PM ₁₀	10.2	1.1	2.5	13.8	3.4	10.4	25/15
CO	158.0	7.7	36.9	202.6	20.4	182.2	100.0
VOC	6.5	0.4	10.6	17.5	1.1	16.4	40.0
H ₂ SO ₄	0.3	2.0	0.1	2.4	0.8	1.6	7.0

Emissions are based on firing natural gas in the turbine for 8,147 hours/yr at 348 MMBTU/hr and natural gas in the duct burner for 2,628 hours/yr at 187 MMBTU/hr. Oil firing in the turbine is based on 219 hours/yr at 382.6 MMBTU/hr.

Turbine performance under natural gas firing is based on NO_x emissions of 25 ppmvd (corrected to 15 percent O₂). Performance on oil firing is based on NO_x emissions of 42 ppmvd (corrected to 15 percent O₂). SO₂ emissions are based on 0.5 percent sulfur.

Date of Receipt of a Complete Application

March 6, 1992

BACT Determination Requested by Applicant

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits: 75 ppmvd CO (natural gas or No. 2 oil - 0.5% Sulfur max.)
(No request made for Boilers 4 and 5).

BACT Determined by the Department

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits: Turbine - Natural gas firing: 42 ppmvd CO
Turbine - No. 2 oil firing: 75 ppmvd CO
Maximum % Sulfur - No. 2 oil: 0.5 % S
Duct Burner - Natural gas: 0.15 lb CO/MMBTU
Boilers 4 & 5: (Gas/Oil) 10%/20% Opacity

BACT Determination Procedure

In accordance with F.A.C. Chapter 17-2, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available control methods, systems and techniques. In addition, the regulations require that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other State.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

A review of EPA's BACT/LAER Clearinghouse indicates that catalytic oxidation is the most stringent control technique. An oxidation catalyst control system allows unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts at about 300°F and reaches near completion (above 90%) at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than for thermal oxidation thus reducing the thermal energy required. The oxidation catalyst is typically located directly after the turbine or as an integral part of the steam generator. Catalyst size depends on the exhaust flow, temperature, and desired efficiency.

Catalytic oxidation for CO control has been employed in nonattainment areas and is considered to be LAER technology capable of reducing CO emissions to the 10 ppm range. Due to economics, applications of catalytic oxidation technology have thus far been limited to small cogeneration facilities burning natural gas. Oxidation catalysts have not been used on base-loaded fuel oil-fired turbines in simple cycle or combined cycle facilities since extended use of sulfur-containing fuel would result in increased corrosion. Also, trace metals in the fuel could poison catalysts during prolonged fuel oil firing.

Using the applicant's proposed CO emission level of 75 ppmvd, the total annualized cost of CO catalytic oxidation for this project is \$508,156 with a cost effectiveness of about \$1,970/ton of CO removed. The cost effectiveness is based on 87% efficiency (75 ppmvd to 10 ppmvd) and includes a heat rate penalty of 0.2% based on an energy loss of \$50/MW associated with pressure drop across the catalyst. A review of previous BACT determinations indicates that \$1,970/ton would not be prohibitive. However, the decision to require catalytic oxidation should be based on a cost/benefit analysis once compliance testing has been done. Therefore, the Department will propose initial BACT emission limits for CO consistent with recent BACT determinations for similar sources. These limits are to be revised, if necessary, upon evaluation of the compliance test data. The turbine limit proposed by the applicant for fuel oil operation (75 ppmvd) is more stringent than a recent BACT determination for similar sources (78 ppmvd).


Other Air Pollutants Not Subject to BACT Determination

The application indicates that emissions of other pollutants will not be subject to a BACT determination. The applicant narrowly escaped PSD review for NO_x by lowering firing rates, and since increased firing rates may be requested at some future date, the Department will require that retrofit costs associated with the applicant's decision not to make initial provisions for future installation of advanced catalytic control shall not be considered in any cost analysis required for any future requested increase in capacity.

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

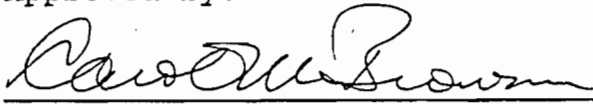


C. H. Fancy, P.E., Chief
Bureau of Air Regulation

August 14 1992

Date

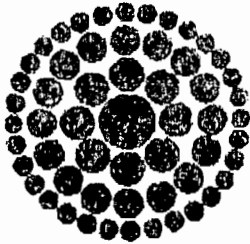
Approved by:



Carol M. Browner, Secretary
Dept. of Environmental Regulation

August 17 1992

Date



**Florida
Power**
CORPORATION

ENVIRONMENTAL SERVICES DEPARTMENT
FAX TRANSMITTAL SHEET

FAX #: (813) 866-4926

DATE: 2/8/95

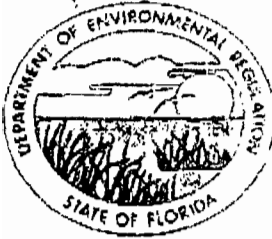
TO: John Horton
(904) 922-6979 FAX

FROM: [Signature] Telephone #: _____

6 pages to follow

Please notify (813) 866- 5158 for any problems concerning the receipt of this FAX

Comments



Florida Department of Environmental Regulation

Northeast District • Suite 8200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

NOTICE OF PERMIT ISSUANCE

Carol M. Browner, Secretary

CERTIFIED - RETURN RECEIPT

Mr. Johnny Miller, Superintendent
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

Dear Mr. Miller:

Alachua County - AP
University of Florida
No. 2 Steam Boiler

Enclosed is Permit Number A001-214828 to operate the subject air pollution source, pursuant to Section 403.087, Florida Statutes (FS).

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

Administration 448-4300
Air 448-4310
Waste Management 448-4320



Water Facilities 448-4330
Water Management 448-4340
FAA 448-4366

University of Florida
Page two
A001-214828

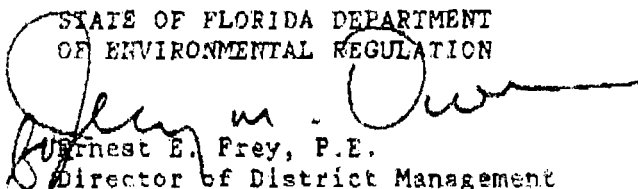
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

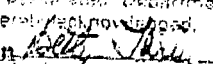
When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Ernest E. Frey, P.E.
Director of District Management

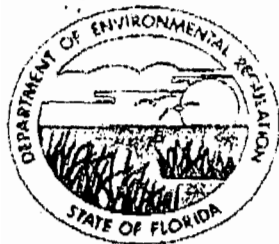
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Copies furnished to: John B. Koogler, Ph.D., P.E.
Gainesville Branch Office
Alachua County Office Environmental Protection

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

Date 8/28/82

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 8/28/82 to the listed persons.



Florida Department of Environmental Regulation

Northeast District • Suite 3200, 7625 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

University of Florida
Physical Plant Division
Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001403
Permit/Cert Number: A001-214828
Date of Issue: 08-28-92
Expiration Date: December 31, 1994
County: Alachua
Latitude/Longitude: 29°38'24"N; 82°20'52"W
Project: No. 2 Steam Boiler
UTM: E-(17)369.5; N-3279.4

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized 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:

For the operation of No. 2 Steam Boiler.

Located west of Center Drive, north of Mowery Road, University of Florida, Gainesville, Alachua County, Florida.

In accordance with:

Operation Permit Application dated 08-23-77
Renewal application dated 06-21-82
Renewal application dated 07-17-87
BACT Determination received 09-24-87
Renewal application received 06-15-92

PERMITTEE:	I.D. Number:	31GVL01001403
University of Florida	Permit/Certification Number:	A001-214828
Physical Plant Division, Bldg. 473	Date of Issue:	
Gainesville, Florida 32611	Expiration Date:	December 31, 1994

SPECIFIC CONDITIONS:

- The maximum input rate (operating rate) is shown below and shall not be exceeded without prior approval.

<u>Rate</u>	<u>Material</u>
533 GPH	No. 6 fuel oil ¹
84,320 CFH	Natural gas

¹See SC #4, note 4 for quality requirements

- Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
- The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed that rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (subsequent) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
- The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
PM ¹	17-2.600(6)(b)	9.592 ⁴	38.383
SO ₂ ⁴	17-2.600(6)(c)	132.725 ⁵	530.873
VE ⁶	17-2.600(6)(a)	20% opacity, except 40% for 2 min/hr	

Fuel oil only

¹PM - Particulate matter

²Basis: 533 gals/hr; 1.5% S* in FO; AP-42 emission factor. = $[9.19(5) + 3.22] \frac{16}{10^3 \text{ gal}}$

³From previous permit.

⁴SO₂ - sulfur dioxide

⁵Basis: 533 gals/hr; 1.5% S* in FO; 8.3 lbs/gal.

⁶VE - visible emissions

= 17.005 $\frac{16}{10^3 \text{ gal}}$
@ 533 GPH = 9.06 #/hr

*Basis: BACT Determination dated 09-21-87 which limits the fuel oil fired to "new" No. 6 fuel oil (FO) with a sulfur content not to exceed 1.5% by weight. "New" means oil refined from crude oil and has not been used.

Hours of operation are limited to 24 H/D, 7 D/W; 52 W/Y and shall be recorded.

PERMITTEE:
 University of Florida
 Physical Plant Division, Bldg. 473
 Gainesville, Florida 32611

I.D. Number: 31GVL01001403
Permit/Certification Number: A001-214828
Date of Issue:
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

- Test the emission for the following pollutant(s) at the interval(s) indicated, notify the Department 14 days prior to testing, and submit the test report documentation to the Department within 45 days after completion of the testing:

<u>Pollutant</u>	<u>Interval</u>	<u>Test Method</u>
VE ¹	12 months from 01-20-92	DER 9
SO ₂	12 months from 01-20-92	-----2

¹Basis: Rule 17-2.700(2)(a)3., FAC - test not required when liquid fuel is burned for a total of no more than 400 hours.

²Per FAC Rule 17-2.700(6)(c)1.b.

Tests and test reports shall comply with the requirements of Florida Administrative Code Rule 17-2.700(6) and (7), respectively.

- In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
- Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1 including the previous year's total usage of No. 6 fuel oil and documenting the sulfur % content, by weight.
- Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.
- The ID Name and ID No. for this source is to be used on all correspondence.
- This boiler shall be permanently shutdown when the cogeneration facility operation permit is received.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
 OF ENVIRONMENTAL REGULATION

FILING AND ACKNOWLEDGEMENT
 FILED on this date pursuant to §120.52
 Statutes, with the designated Department
 receipt of which is hereby acknowledged

[Handwritten Signature]
 Ernest E. Frey, P.E.
 Director of District Management

CERTIFICATION

PROJECT NAME: University of Florida
No. 2 Steam Boiler

APPLICATION NO: A001-214828

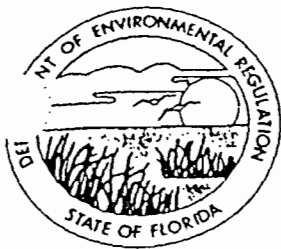
I HEREBY CERTIFY that the engineering features described in application No. A001-214828 provide reasonable assurance of compliance with the applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Title 17. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, and geological features).

Andrew G. Kutyna, P.E.
Name, P.E.

Andrew G. Kutyna
Signature and Seal

2/27/92
Date

Jan '92
Transfer request from Fl. Power
Returned to them as pre-mature
1 & 3 should not have been transferred



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

NOTICE OF PERMIT ISSUANCE

Carol M. Browner, Secretary

CERTIFIED - RETURN RECEIPT

Mr. Johnny Miller, Superintendent
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

Dear Mr. Miller:

Alachua County - AP
University of Florida
No. 4 Steam Boiler

Enclosed is Permit Number A001-214830 to operate the subject air pollution source, pursuant to Section 403.087, Florida Statutes (FS).

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

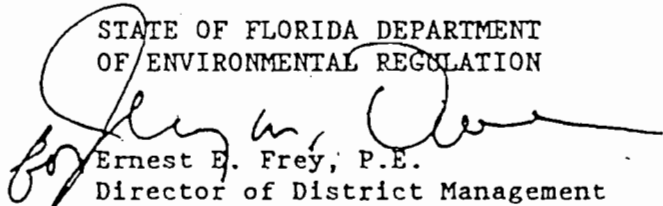
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Jacksonville, Florida.

FILING AND ACKNOWLEDGEMENT
FILED on this date, pursuant to S120.52, Florida
Statutes, with the designated Department Clerk
receipt of which is hereby acknowledged.
Betty Larson Clerk 8/28/92 Date

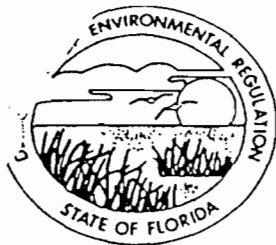
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Ernest E. Frey, P.E.
Director of District Management

EEF:bt

Copies furnished to: John B. Koogler, Ph.D., P.E.
Gainesville Branch Office
Alachua County Office Environmental Protection

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 8/28/92 to the listed persons.



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

University of Florida
Physical Plant Division
Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001411
Permit/Cert Number: A001-214830
Date of Issue: 08-28-92
Expiration Date: December 31, 1994
County: Alachua
Latitude/Longitude: 29°38'24"N; 82°20'52"W
Project: No. 4 Steam Boiler
UTM: E-(17)369.5; N-3279.4

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized 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:

For the operation of No. 4 Steam Boiler.

Located west of Center Drive, north of Mowery Road, University of Florida, Gainesville, Alachua County, Florida.

In accordance with:

Operation Permit Application dated 08-23-77
Renewal application dated 06-21-82
Renewal application dated 07-08-87
BACT Determination received 09-24-87
Renewal application received 06-15-92

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001411
Permit/Cert: A001-214830
Date of Issue:
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants, or representatives.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
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. Nor 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 does not constitute a waiver of 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.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement 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.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, 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.
6. The permittee shall at all times 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.
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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

PERMITTEE:
 University of Florida
 Physical Plant Division, Bldg. 473
 Gainesville, Florida 32611

I.D. Number: 31GVL01001411
 Permit/Cert: A001-214830
 Date of Issue:
 Expiration Date: December 31, 1994

GENERAL CONDITIONS

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring 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.

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 notify and provide the department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. the period of non-compliance, including exact 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 revocation of this permit.

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 arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
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.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

BEST AVAILABLE COPY

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001411
Permit/Cert: A001-214830
Date of Issue:
Expiration Date: December 31, 1994

GENERAL CONDITIONS

13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT)
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards
- (Section 401, PL 92-500)
- Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

15. When requested by the department, the permittee shall, within a reasonable period of 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 submitted or corrected promptly.

PERMITTEE:

University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31GVL01001411

A001-214830

December 31, 1994

SPECIFIC CONDITIONS:

1. The maximum input rate (operating rate) is shown below and shall not be exceeded without prior approval.

<u>Rate</u>	<u>Material</u>
444 GPH	No. 6 fuel oil ¹
68,000 CFH	Natural gas

¹See SC #4, note 4 for quality requirements

2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed that rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
PM ¹	17-2.600(6)(b)	7.99 ²	31.97 ³
SO ₂ ⁴	17-2.600(6)(c)	110.56 ⁵	442.23 ³
VE ⁶	17-2.600(6)(a)	20% opacity, except 40% for 2 min/hr	

¹PM - Particulate matter

²Basis: 444 gals/hr; 1.5% S* in FO; AP-42 emission factor.

³From previous permit.

⁴SO₂ - sulfur dioxide

⁵Basis: 444 gals/hr; 1.5% S* in FO; 8.3 lbs/gal.

⁶VE - visible emissions

*Basis: BACT Determination dated 09-21-87 which limits the fuel oil fired to "new" No. 6 fuel oil (FO) with a sulfur content not to exceed 1.5% by weight. "New" means oil refined from crude oil and has not been used.

Hours of operation are limited to 24 H/D, 7 D/W; 52 W/Y and shall be recorded.

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31GVL01001411
A001-214830
December 31, 1994

SPECIFIC CONDITIONS:

5. Test the emission for the following pollutant(s) at the interval(s) indicated, notify the Department 14 days prior to testing, and submit the test report documentation to the Department within 45 days after completion of the testing:

<u>Pollutant</u>	<u>Interval</u>	<u>Test Method</u>
VE ¹	12 months from 01-20-92	DER 9
SO ₂	12 months from 01-20-92	____2

¹Basis: Rule 17-2.700(2)(a)3., FAC - test not required when liquid fuel is burned for a total of no more than 400 hours.

²Per FAC Rule 17-2.700(6)(c)1.b.

Tests and test reports shall comply with the requirements of Florida Administrative Code Rule 17-2.700(6) and (7), respectively.

6. In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
7. Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1 including the previous year's total usage of No. 6 fuel oil and documenting the sulfur % content, by weight.
8. Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.
9. The ID Name and ID No. for this source is to be used on all correspondence.
10. This permit will be superseded by the cogeneration facility operation permit.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

RECEIVED AND ACKNOWLEDGEMENT
This permit is hereby acknowledged to \$120000 Florida
Station for the designated Department Clerk.
receipt of this permit is hereby acknowledged.
Patty Johnson Clerk
Date

Ernest E. Frey, P.E.
Director of District Management

CERTIFICATION

PROJECT NAME: University of Florida
No. 4 Steam Boiler

APPLICATION NO: A001-214830

I HEREBY CERTIFY that the engineering features described in application No. A001-214830 provide reasonable assurance of compliance with the applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Title 17. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, and geological features).

Andrew G. Kutyna, P.E.
Name, P.E.

Andrew G. Kutyna
Signature and Seal

8/27/42
Date



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

NOTICE OF PERMIT ISSUANCE

Carol M. Browner, Secretary

CERTIFIED - RETURN RECEIPT

Mr. Johnny Miller, Superintendent
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

Dear Mr. Miller:

Alachua County - AP
University of Florida
No. 5 Steam Boiler

Enclosed is Permit Number A001-214831 to operate the subject air pollution source, pursuant to Section 403.087, Florida Statutes (FS).

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Ernest E. Frey
Ernest E. Frey, P.E.
Director of District Management

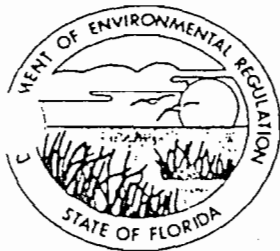
FILING AND ACKNOWLEDGEMENT
FILED on this date, pursuant to S120.52, Florida
with the designated Department Clerk,
of which is hereby acknowledged.
Betty Davis Clerk
Date *8/28/92*

EEF:bt

Copies furnished to: John B. Koogler, Ph.D., P.E.
Gainesville Branch Office
Alachua County Office Environmental Protection

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on *8/28/92* to the listed persons.



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

University of Florida
Physical Plant Division
Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001415
Permit/Cert Number: A001-214831
Date of Issue: 08-28-92
Expiration Date: December 31, 1994
County: Alachua
Latitude/Longitude: 29°38'24"N; 82°20'52"W
Project: No. 5 Steam Boiler
UTM: E-(17)369.5; N-3279.4

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized 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:

For the operation of No. 5 Steam Boiler.

Located west of Center Drive, north of Mowery Road, University of Florida, Gainesville, Alachua County, Florida.

In accordance with:

Operation Permit Application dated 08-23-77
Renewal application dated 06-21-82
Renewal application dated 07-08-87
BACT Determination received 09-24-87
Renewal application received 06-15-92

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001415
Permit/Cert: A001-214831
Date of Issue:
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants, or representatives.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
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. Nor 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 does not constitute a waiver of 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.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement 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.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, 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.
6. The permittee shall at all times 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.
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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001415
Permit/Cert: A001-214831
Date of Issue:
Expiration Date: December 31, 1994

GENERAL CONDITIONS

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring 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.

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 notify and provide the department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. the period of non-compliance, including exact 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 revocation of this permit.

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 arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
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.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001415
Permit/Cert: A001-214831
Date of Issue:
Expiration Date: December 31, 1994

GENERAL CONDITIONS

13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT)
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards
- (Section 401, PL 92-500)
- Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

15. When requested by the department, the permittee shall, within a reasonable period of 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 submitted or corrected promptly.

PERMITTEE:
 University of Florida
 Physical Plant Division, Bldg. 473
 Gainesville, Florida 32611

I.D. Number: 31GVL01001415
 Permit/Certification Number: A001-214831
 Date of Issue:
 Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

1. The maximum input rate (operating rate) is shown below and shall not be exceeded without prior approval.

<u>Rate</u>	<u>Material</u>
1,067 GPH	No. 6 fuel oil ¹
164,000 CFH	Natural gas

¹See SC #4, note 4 for quality requirements

2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed that rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
PM ¹	17-2.600(6)(b)	19.20 ²	76.80 ³
SO ₂ ⁴	17-2.600(6)(c)	265.58 ⁵	1062.33 ³
VE ⁶	17-2.600(6)(a)	20% opacity, except 40% for 2 min/hr	

- ¹PM - Particulate matter
- ²Basis: 1067 gals/hr; 1.5% S* in FO; AP-42 emission factor.
- ³From previous permit.
- ⁴SO₂ - sulfur dioxide
- ⁵Basis: 1067 gals/hr; 1.5% S* in FO; 8.3 lbs/gal.
- ⁶VE - visible emissions

*Basis: BACT Determination dated 09-21-87 which limits the fuel oil fired to "new" No. 6 fuel oil (FO) with a sulfur content not to exceed 1.5% by weight. "New" means oil refined from crude oil and has not been used.

Hours of operation are limited to 24 H/D, 7 D/W; 52 W/Y and shall be recorded.

PERMITTEE:
University of Florida
Physical Plant Division, Bldg. 473
Gainesville, Florida 32611

I.D. Number: 31GVL01001415
Permit/Certification Number: A001-214831
Date of Issue:
Expiration Date: December 31, 1994

SPECIFIC CONDITIONS:

5. Test the emission for the following pollutant(s) at the interval(s) indicated, notify the Department 14 days prior to testing, and submit the test report documentation to the Department within 45 days after completion of the testing:

<u>Pollutant</u>	<u>Interval</u>	<u>Test Method</u>
VE ¹	12 months from 01-20-92	DER 9
SO ₂	12 months from 01-20-92	---- ²

¹Basis: Rule 17-2.700(2)(a)3., FAC - test not required when liquid fuel is burned for a total of no more than 400 hours.

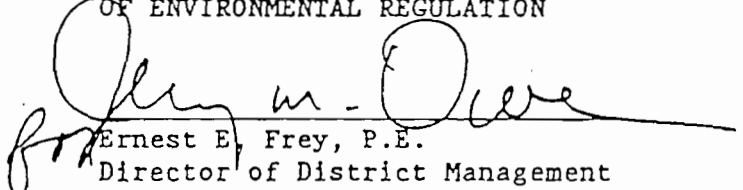
²Per FAC Rule 17-2.700(6)(c)1.b.

Tests and test reports shall comply with the requirements of Florida Administrative Code Rule 17-2.700(6) and (7), respectively.

6. In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
7. Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1 including the previous year's total usage of No. 6 fuel oil and documenting the sulfur % content, by weight.
8. Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.
9. The ID Name and ID No. for this source is to be used on all correspondence.
10. This permit will be superseded by the cogeneration facility operation permit.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


Ernest E. Frey, P.E.
Director of District Management

RECEIVED AND ACKNOWLEDGEMENT
DATE: 8/18/92
BY: Betty J. Jara
DATE: 8/18/92
BY: [Signature]

CERTIFICATION

PROJECT NAME: University of Florida-
No. 5 Steam Boiler

APPLICATION NO: A001-214831

I HEREBY CERTIFY that the engineering features described in application No. A001-214831 provide reasonable assurance of compliance with the applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Title 17. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, and geological features).

Andrew G. Kutyna, P.E.
Name, P.E.

Andrew G. Kutyna
Signature and Seal

8/27/92
Date