

To: Andy Allen  
From: Bob Kriegel  
Date: September 27, October 1, 1996

Re: **Construction Permit Application for an Auxiliary Boiler, City of Tallahassee, Purdom Generating Station, Wakulla County;**  
**ARMS ID no. 1290001, Application no. 1290001 001 AC**

The City of Tallahassee submitted a construction permit application September 23, 1996 for an auxiliary boiler to be located at their Purdom Generating Station, Wakulla County. An application fee of \$250 was included with the application, appropriate for a subtype AC1F application - sources less than 5 tons/yr.

The application cover letter notes that the auxiliary boiler is a 16.74 MMBtu/hr natural gas fired boiler that will be used for steam only when the existing steam generating units (boilers 5,6, &7) are not operating. These boilers are much larger units (5,6 - 300 MMBtu/hr; 7 - 621 MMBtu/hr); are natural gas and no. 6 fuel oil fired but past operation has been predominantly with natural gas. Since, the operation of this proposed boiler will occur only when one of these boilers is not operating, and would otherwise require start of the larger boiler, the City argues there is not an increase in emissions.

The relevancy of this is that FAC Rule 62-212.400 (2)(d)4 (PSD, Modifications to Major Facilities) requires a preconstruction review if the modification results in a net emissions increase with an impact greater than one microgram/cubic meter on any Class I area. In this case the property boundary abuts a Class 1 area [St. Marks National Wilderness Area, Rule 62-204.360(4)(b)3]; and, for all practical purposes any emissions increase will trigger preconstruction review. This would entail among other things 12 months of ambient monitoring, a technology review, a BACT determination, an ambient impact analysis, a visibility analysis, various notices, etc.

Purdom also has boilers 1-4 @ 115 MMBtu (3,4 are also natural gas capable); but these are evidently standby units that have seen little operation since the early 1980's. They are not included in the City's Title V application. I spoke to Ben Cowart (904 891-5536) and Carl Bauer (904 891-8851) who advised they had not included units 1-4 in the Title V application, that they realized that the applicable permits were not extended (they expire 12/31/98), and these units will not be brought on line and will be demolished in the near future. Evidently there is correspondance between DARM and COT concerning the best process to surrender these permits.

The City also requests that the hours of operation be limited to 2000 hours/year; and, monitoring to VE once every five years.

*Must be done Annually  
62-297.310*

FAC Rule 62-296.406, Fossil Fuel Steam Generators with Less than 250 MMBtu/hr heat Input applies to new and existing sources, and establishes a multi tiered VE limit and requires BACT for PM and SO2. Policy memo DARM - PER/GEN-17 dated February 9,

1995 establishes BACT for fossil fuel steam generators less than 250 MMBtu/hr heat input as the amount of particulate matter and sulfur dioxide emissions from the new boiler - - - by the firing of natural gas - - -. The policy memo requires the districts to prepare and finalize the determination and includes a sample format. (copy attached)

40 CFR 60 Subpart Dc applies to steam generating units with a design heat input less than 100 MMBtu/hr but greater than 10 MMBtu/hr, and thus to this proposed unit. However, Dc contains no standards or compliance tests for natural gas fired boilers. Subpart Dc (60.48c) does include some reporting requirements, including notification of date of construction, design heat input capacity and fuels, anticipated annual capacity factor, fuel combusted.

Potential emissions from this boiler range from 0.1 TPY TOC to 2.4 TPY NOX. However, again, emissions will be offset by not operating the existing larger boilers (5,6,or 7).

Since the purpose of this boiler is to increase efficiency, and its proposed operation will be only when one of the larger boilers is not operating, actual emissions should be reduced. I suggest we proceed with issuance of proposed BACT and the construction permit.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION  
City of Tallahassee, Purdom Generating Station Auxiliary Boiler  
Wakulla County

The City of Tallahassee submitted a construction permit application September 23, 1996 for an auxiliary boiler to be located at their Purdom Generating Station, Wakulla County. The proposed boiler is a 16.74 MMBtu/hr natural gas fired boiler that will be used for steam only when the existing, larger steam generating units (boilers 5,6,or 7) are not operating.

This BACT determination is required for the source as set forth in FAC Rule 62-296.406 - Fossil Fuel Steam Generators with Less than 250 MMBtu/hr Heat Input.

BACT Determination Requested by Applicant:

Particulate matter and sulfur dioxide emissions shall be controlled by the firing of natural gas and operation of this proposed auxiliary boiler only when the existing steam generating units are not operating.

Date of Receipt of BACT Application: September 23, 1996

BACT Determination by DEP:

As requested by applicant.

BACT Determination Rationale:

Emissions will be minimal as a result of firing clean burning natural gas. Additionally, any emissions associated with this proposed auxiliary boiler will be offset by not operating the existing, larger steam generating units.

Details of the Analysis May be Obtained by Contacting:

Bob Kriegel  
Department of Environmental Protection  
160 Governmental Center  
Pensacola, FL 32503

Recommended by:

Approved by:

Bob Kriegel  
Environmental Specialist

Ed Middleswart, P.E.  
Air Program Administrator

PERMITTEE:

AIRS I.D. Number: 1290001  
Air Permit Number: 1290001 001 AC  
Emission Units: 010

Sam O. Purdom Generating Station

Date of Issue:  
Expiration Date: December 31, 1997  
County: Wakulla  
Project: Natural Gas Fired Auxiliary Boiler

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 62-296, 62-297 and 62-4. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construction of a 16.74 MMBtu/hr natural gas fired auxiliary steam generating boiler (Kewanee, model number H3S-400-G) at the City of Tallahassee's Sam O. Purdom Generating Station.

Construction shall be consistent with the construction permit application signed September 20, 1996.

Located on the east side of State Road 363 at 667 Port Leon Drive, St. Marks

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001

Air Permit Number: 1290001 001 AC

Emission Units: 010

Date of Issue:

Expiration Date: December 31, 1997

**SPECIFIC CONDITIONS:**

**General**

1. The attached General Conditions are part of this permit. [FAC Rule 62-4.160]

**Construction**

2. The Department shall be notified upon commencement of construction, and within 15 days of completion of construction. [FAC Rule 62-4.070]
3. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction. [FAC Rule 62-4.030]

**Operation**

4. The maximum allowable operating rate is 16.74 MMBtu/hr heat input per hour. This is the operating rate at which compliance with standards shall be demonstrated. [FAC Rule 62-4.070]
5. The maximum hours of operation are 2000 hours per year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation and fuel consumption annually. [FAC Rule 62-4.070 and construction permit application]
6. This emission unit shall only be operated as an auxiliary source of steam when the existing steam generating units (boilers 5,6, &7) are not operating. (Construction permit application, BACT dated XXX)
7. All applicable requirements of 40 CFR 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, shall be met. (FAC Rule 62-204.800)

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001

Air Permit Number: 1290001 001 AC

Emission Units: 010

Date of Issue:

Expiration Date: December 31, 1997

**SPECIFIC CONDITIONS:**

**Emissions**

8. The maximum allowable emission limit for each pollutant is as follows:

<b>Pollutant</b>	<b>FAC Rule</b>	<b>Allowable Emissions</b>
VE	62-296.406	20% opacity except for one six minute period per hour during which the opacity shall not exceed 27%.

9. Excess emissions resulting from startup, shutdown or malfunction shall be allowed providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. The Permittee shall immediately notify the Department's Tallahassee Branch Office of excess emissions resulting from malfunctions. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence. (Rules 62-210.700, 62-4.130)

**Testing**

*On an annual basis*  
10. Visible emissions tests are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. [FAC Rule 62-297.310(2)] A sixty minute visible emissions tests shall be conducted in accordance with DEP method 9 within 30 days after construction is completed. The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days after testing.

The test report shall comply with F.A.C. Rule 62-297.310(8), Test Reports.

The Department can require special compliance tests in accordance with F.A.C. Rule 62-297.310(7)(b).

Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing.

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001

Air Permit Number: 1290001 001 AC

Emission Units: 010

Date of Issue:

Expiration Date: December 31, 1997

**SPECIFIC CONDITIONS:**

Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impractical to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. [FAC Rule 62-297.310(2)]

**Administrative**

11. An annual operating report for air pollutant emitting facility, DEP Form 62-210.990(5), shall be submitted by March 1 of each year. A copy of the form and instructions may be obtained from the Department of Environmental Protection, Northwest District Air Resources Management Program, (904) 444-8364. [FAC Rule 62-210.370(3)]

12. The applicant shall retain a Professional Engineer, registered in the State of Florida, for the inspection of this project. Upon completion the engineer shall inspect for conformity to the permit application and associated documents. An application for an operation permit [Form DEP 62-210.900(1), Long Form] shall be submitted with the compliance test results and appropriate fee when applicable. These are to be submitted within 75 days of completion of construction. The permittee shall obtain an operating permit for this source before the expiration of this construction permit if the permittee desires to continue operation. [FAC Rule 17-210.300]

13. In accordance with F.A.C. Rule 62-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 62-213.900(1) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V Annual Emissions Fee, Cashiers Office, P.O. Box 3070, Tallahassee, Florida 32351-3070.



PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001

Air Permit Number: 1290001 001 AC

Emission Units: 010

Date of Issue:

Expiration Date: December 31, 1997

SPECIFIC CONDITIONS:

14. The emission unit covered by this permit is 1290001010

Please cite this number on all test reports and other correspondence specific to this permitted emission unit. [FAC Rule 62-297.310(8)]

15. The Permittee, for good cause, may request that this construction permit be extended. Such a request with the required \$50 extension fee shall be submitted 60 days prior to the expiration date of this permit. (FAC Rule 17-4.080(3))

16. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8364, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 413-9911. For routine business, telephone (904) 444-8364 during normal working hours. [FAC Rule 62-4.130]

Expiration Date:

December 31, 1997

Issued this \_\_\_\_ day of \_\_\_\_\_,  
1996.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

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ED MIDDLESWART  
Director of District Management

**Permit Processing Data**

*Name, Title, and Mailing Address of Party to Receive Permit:*

Robert E. McGarrah, Production Superintendent  
City of Tallahassee, Electric Utility  
2602 Jackson Bluff Road  
Tallahassee, FL 32304

*The Engineer to be Copied:*

*Additional Parties to be Copied:*

Jennette D. Curtis  
Environmental Administrator  
City of Tallahassee  
300 S. Adams Street  
Tallahassee, FL 32301

*Date Application was Received:* September 23, 1996

*Was additional information requested?* no

*Date Application became Complete:* September 23, 1996

THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an  
Application for Permit by:

DEP File No. 1290001 001 AC  
Wakulla County

Robert E. McGarrah, Production Superintendent  
City of Tallahassee, Electric Utility  
2602 Jackson Bluff Road  
Tallahassee, FL 32304

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INTENT TO ISSUE

The Department of Environmental Protection gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above for the reasons stated below.

The applicant, the City of Tallahassee, applied on September 23, 1996 to the Department of Environmental Protection for a permit to construct a natural gas fired auxiliary boiler on the east side of State Road 363 at 667 Port Leon Drive, St. Marks Wakulla County.

The Department has permitting jurisdiction under Section 403.087, Florida Statutes. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

The application was timely reviewed and determined to be deficient of certain information. The applicant subsequently corrected the deficiencies, and the application became complete September 23, 1996.



STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Protection gives notice of its intent to issue a Determination of Best Available Control Technology (BACT) and construction permit to the City of Tallahassee to construct a 16.74 MMBtu/hr heat input natural gas fired auxiliary boiler located at the Sam O. Purdom Generating Station on the east side of State Road 363 at 667 Port Leon Drive, St. Marks . The proposed BACT determination limits operation of the proposed natural gas boiler for a source of steam only when the existing, larger steam generating units are not operating. As a result the City will not bring one the larger existing units on line for the sole purpose of generating steam; and, there will be a trade off and no net increase in emissions.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 14 days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication 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, Florida Statutes, 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.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except for legal holidays, at the Northwest District, 160 Governmental Center, Pensacola, Florida.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NOTICE OF PERMIT

In the matter of an  
Application for Permit

DEP File No. 1290001 001 AC

By:  
Robert E. McGarrah, Production Superintendent  
City of Tallahassee, Electric Utility  
2602 Jackson Bluff Road  
Tallahassee, FL 32304

Wakulla County

Enclosed is Permit Number 1290001 001 AC, issued pursuant to Section 403.087, 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, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, 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 Pensacola, Florida.

State of Florida Department  
of Environmental Protection

\_\_\_\_\_  
BOBBY A. COOLEY  
Director of District Management

160 Governmental Center  
Pensacola, Florida 32501-5794  
(904) 444-8300

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 \_\_\_\_\_ to the listed persons.

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	Date
Copies Furnished to:		
1290001 001 AC		12

Jennette D. Curtis  
Environmental Administrator  
City of Tallahassee  
300 S. Adams Street  
Tallahassee, FL 32301



## **MEMORANDUM**

TO : Ed K. Middleswart, P.E.  
FROM : Andy Allen, Bob Kriegel  
DATE : October 1, 1996  
SUBJECT : **Evaluation Summary for BACT and Construction Permit for a Natural Gas Fired Auxiliary Boiler at the Sam O Purdom Generating Station, Wakulla County;**  
**AIRS ID no. 1290001, Application no. 1290001 001 AC**

We recommend issuing notice of intent to issue a BACT Determination and construction permit to the City of Tallahassee to construct a natural gas fired auxiliary at the Sam O. Purdom Generating Station in St. Marks, Wakulla County.

### **Process Description**

A 16.74 MMBtu/hr natural gas fired auxiliary steam generating boiler (Kewanee, model number H3S-400-G). The unit will be operated at the City of Tallahassee's Sam O. Purdom Generating Station only when the existing, larger steam generating units are not operating.

### **Pollution Control Equipment**

Use of natural gas as fuel.

### **Applicable Rules and Regulations and Environmental Impact**

A fee of \$250 was submitted. This fee is appropriate for a subtype AC1F source with emissions less than 5 TPY.

This source is a minor emissions unit at a major facility.

This source is regulated in accordance with FAC Rule 62-296.406, Fossil Fuel Steam Generators with Less than 250 MMBtu/hr heat Input which establishes a multi tiered VE limit and requires BACT for PM and SO<sub>2</sub>. Policy memo DARM - PER/GEN-17 dated February 9, 1995 establishes BACT for fossil fuel steam generators less than 250 MMBtu/hr heat input as the amount of particulate matter and sulfur dioxide emissions from the new boiler - - - by the firing of natural gas - - -. The policy memo requires the districts to prepare and finalize the BACT determination

The source is subject to certain reporting requirements contained in 40 CFR 60 Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,

Allowable and potential emissions are:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emissions</u>	<u>Maximum Emissions (tons per year)</u>
VE	62-296.406	20% opacity *1	
PM			0.2
SO2			0.0
NOX			2.3
CO			0.6
TOC			0.1

\* 1: except for one six minute period per hour during which the opacity shall not exceed 27%.

However, the BACT determination and permit allows this auxiliary generator to operate only when the existing larger units are not operating. As a result, there will be a trade off and no net increase in emissions.

**Site Characteristics:**

Existing generating station in St. Marks, Wakulla County.

**Compliance Monitoring Requirements and Rationale:**

Initial 60 minute VE within 30 days of completion of construction.

*Annually, Thereafter*

**Compliance History**

None, new unit.

Additional staff notes are attached.

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