



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

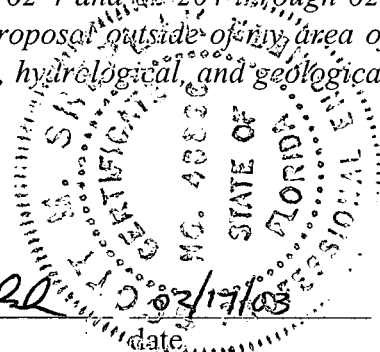
## P.E. Certification Statement

**Permittee:**  
City of Tallahassee  
Sam O. Purdom Generating Station

**Permit No.:** 1290001-007-AV  
**Facility ID No.:** 1290001

**Project type:** Alternate Title V Annual Emissions Fee Calculation Method

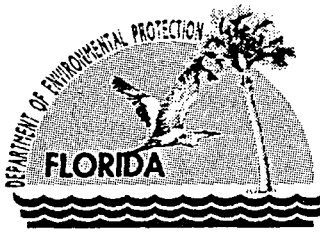
*I HEREBY CERTIFY that the engineering features described in the above referenced request and subject to the proposed order provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. 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).*

  
*Scott M. Sheplak*  
\_\_\_\_\_  
Scott M. Sheplak, P.E.  
Registration Number: 48866

Permitting Authority:  
Department of Environmental Protection  
Bureau of Air Regulation  
111 South Magnolia Drive, Suite 4  
Tallahassee, Florida 32301  
Telephone: 850/921-9532  
Fax: 850/922-6979

"More Protection, Less Process"

Printed on recycled paper.



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

February 17, 2003

CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Mr. Robert E. McGarrah  
Manager of Power Production  
Responsible Official  
Electric Utilities Department  
City of Tallahassee  
300 South Adams Street  
Tallahassee, Florida 32301-1731

Re: Order for Alternate Title V Annual Emissions Fee Calculation Procedure

Dear Mr. McGarrah:

Enclosed is the order for an alternate Title V annual emissions fee calculation procedure for the City of Tallahassee, Sam O. Purdom Generating Station.

If you should have any questions, please do not hesitate to contact Jonathan Holtom, P.E., at 850/921-9531 or me at 850/921-9532.

Sincerely,

A handwritten signature in cursive script that reads "Scott M. Sheplak".

Scott M. Sheplak, P.E.  
Administrator  
Title V Section

SMS/bjf

Enclosure

"More Protection, Less Process"

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**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:  
 Mr. Robert E. McGarrah  
 Manager of Power Production  
 Responsible Official  
 Electric Utilities Department  
 City of Tallahassee  
 300 South Adams Street  
 Tallahassee, Florida 32301-1731

2. Article Number  
 (Transfer from service label) 7000 2870 0000 7028 0764

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  Agent  
 Addressee  
*x Valerie Brown*

B. Received by (Printed Name) *Valerie Brown* C. Date of Delivery *FEB 19 2002*

D. Is delivery address different from item 1?  Yes  
 No  
 If YES, enter delivery address below:

3. Service Type  
 Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

**U.S. Postal Service  
 CERTIFIED MAIL RECEIPT  
 (Domestic Mail Only; No Insurance Coverage Provided)**

7000 2870 0000 7028 0764

**OFFICIAL USE**  
 Mr. Robert E. McGarrah

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$</b>

Postmark  
 Here

Sent To  
 Mr. Robert E. McGarrah  
 Street, Apt. No., or PO Box No.  
 300 South Adams Street  
 City, State, ZIP+4  
 Tallahassee, Florida 32301-1731

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:	)	Permit No.: 1290001-007-AV
	)	Facility ID No.: 1290001
City of Tallahassee	)	
Sam O. Purdom Generating Station	)	
	)	
Petitioner	)	

ORDER ON REQUEST  
FOR  
ALTERNATE TITLE V ANNUAL EMISSIONS FEE CALCULATION PROCEDURE

Pursuant to Rule 62-213.205(1)(e)(3), Florida Administrative Code (F.A.C.), the City of Tallahassee, Sam O. Purdom Generating Station, located in Wakulla County petitioned for approval to use an alternate Title V annual emissions fee calculation method for sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>).

Having considered Petitioner's request, the following Findings of Fact, Conclusions of Law, and Order are entered:

FINDINGS OF FACT

1. January 24, 2003, the Department received Petitioner's request for approval of its alternate Title V annual emissions fee calculation method for sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) pursuant to Rule 62-213.205(1)(e)(3), F.A.C.
2. A professional engineer registered in the State of Florida certified the request.
3. The City investigated the possibility of conducting field-testing on these units, but due to their size, age, and design, this was deemed not practicable.
4. The City used the highest emission factors available from the background database for the Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Stationary Point and Area Sources. The emission factors selected provide conservative estimates of emissions.
5. This facility consists of a fossil fuel-fired steam generator (Boiler No. 7), two simple cycle combustion turbines, one auxiliary boiler, and a combined cycle gas turbine (Combustion Turbine No. 8). The fuels used at this facility are natural gas, fuel oil and on-specification used oil. The auxiliary boiler is only used as a source of steam for plant operations when either Boiler No. 7 or Combustion Turbine No. 8 is not operating.  
The simple cycle combustion turbines, manufactured by Westinghouse (model number W171G), are designated as "Combustion Turbine Number 1" and "Combustion Turbine Number 2". Combustion Turbine Number 1 began commercial operation in 1963. Combustion Turbine Number 2 began

commercial operation in 1963. These very small units, used for peaking purposes, do not have continuous emissions monitoring systems (CEMS).

The auxiliary boiler is manufactured by Kewanee (model number H3S-400-G). The boiler began commercial operation in January of 1998 and does not have a CEMS.

6. The fee calculation method for Boiler No. 7 and Combustion Turbine No. 8 remains in accordance with the rule and an alternate fee calculation method was not requested for these units. These units have short-term emission limitations and CEMS.

7. The facility-wide emissions of SO<sub>2</sub> and NO<sub>x</sub> are capped at 80 and 467 tons per year, respectively.

#### CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider Petitioner's request pursuant to Section 403.0872(11)(a)5., Florida Statutes (F.S.), and Rule 62-213.205(1)(e)(3), F.A.C.

2. The Department concluded that Petitioner has provided reasonable justification for the alternate Title V annual emissions fee calculation method for sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) {See Attachments C, D, and E, which were provided with the request}.

#### ORDER

Having considered Petitioner's request, it is hereby ordered that:

1. The Department hereby approves the City of Tallahassee's request to calculate emissions of sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) from the Sam O. Purdom Generating Station under the current facility-wide emissions caps contained in Permit No. 1290001-007-AV, beginning with calendar year 2002 fees.

2. Emissions for Title V annual emissions fee shall be calculated as follows:

#### Combustion Turbine No. 1 and Combustion Turbine No. 2

A. SO<sub>2</sub> emissions from the combustion of No. 2 fuel oil in Combustion Turbine No. 1 and Combustion Turbine No. 2 shall be calculated from the product of the following:

- The quantity of fuel oil combusted during the calendar year determined from fuel flow meters, tank drop measurements, and/or fuel invoice data supplied by the fuel vendor.
- The highest fuel oil density as determined from fuel oil analysis provided by the fuel supplier each time fuel is delivered during the calendar year.
- The maximum allowable fuel oil sulfur content specified in the current Title V Air Operating Permit (e.g. 0.05% by weight).
- Ratio of the molecular weight of sulfur dioxide to the molecular weight of sulfur.
- Sulfur conversion factor of 1 (i.e. assume 100% conversion).
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{gals of oil}) \times (\text{density of oil}) \times (0.0005 \text{ lb of Sulfur/lb of oil}) \times (2 \text{ lb SO}_2/\text{lb S}) \times (1 \text{ ton}/2000 \text{ lb})] \\ = \underline{\text{Tons SO}_2 \text{ from oil.}}$$

B. SO<sub>2</sub> emissions from the combustion of natural gas in Combustion Turbine No. 1 and Combustion Turbine No. 2 shall be calculated from the product of the following:

- Total volume of natural gas combusted during the calendar year determined from fuel flow meters and/or fuel invoice data supplied by the vendor.
- Highest daily quality assured (by Florida Gas Transmission Company or appropriate sampling organization) sulfur content of the natural gas combusted as recorded by the fuel vendor (grains per hundred cubic feet) using a Florida Department of Environmental Protection (DEP) or U.S. Environmental Protection Agency (EPA) approved ASTM reference method, or equivalent, during the calendar year.
- Ratio of the number of grains per pound.
- Ratio of the molecular weight of sulfur dioxide to the molecular weight of sulfur.
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{cu ft gas}) \times (\text{gr}/100 \text{ cu ft}) \times (1 \text{ lb}/7000 \text{ gr}) \times (2 \text{ lb SO}_2/\text{lb S}) \times (1 \text{ ton}/2000 \text{ lb})] = \text{Tons SO}_2 \text{ from gas.}$$

C. NO<sub>x</sub> emissions from the combustion of No. 2 fuel oil in Combustion Turbine No. 1 and Combustion Turbine No. 2 shall be calculated from the product of the following:

- The quantity of fuel oil combusted during the calendar year determined from fuel flow meters, tank drop measurements, and/or fuel invoice data supplied by the fuel vendor.
- Highest daily gross calorific heating value of the fuel oil as recorded by the fuel vendor using a DEP or EPA approved ASTM reference method, or equivalent, for the calendar year.
- 1.08E+00 lb/mmBtu. {The highest NO<sub>x</sub> emission factor available from Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Stationary Point and Area Sources for combustion turbines.}
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{gals of oil}) \times (\text{Btu}/\text{gal of oil}) \times (1.08 \text{ lb NO}_x/\text{mmBtu}) \times (1 \text{ ton}/2000 \text{ lb})] = \text{Tons of NO}_x \text{ from oil.}$$

D. NO<sub>x</sub> emissions from the combustion of natural gas in Combustion Turbine No. 1 and Combustion Turbine No. 2 shall be calculated from the product of the following:

- Total volume of natural gas combusted during the calendar year determined from fuel flow meters and/or fuel invoice data supplied by the vendor.
- Highest daily quality assured (by Florida Gas Transmission Company or appropriate sampling organization) gross calorific heating value of the natural gas as recorded by the fuel vendor using a DEP or EPA-approved ASTM reference method, or equivalent, for the calendar year
- 9.68E-01 lb/mmBtu. {The highest NO<sub>x</sub> emission factor available from Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Stationary Point and Area Sources for combustion turbines.}
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{cu ft of gas}) \times (\text{Btu}/\text{cu ft of gas}) \times (0.968 \text{ lb NO}_x/\text{mmBtu}) \times (1 \text{ ton}/2000 \text{ lb})] = \text{Tons of NO}_x \text{ from gas.}$$

### Auxiliary Boiler

E. SO<sub>2</sub> emissions from the combustion of natural gas in the Auxiliary Boiler shall be calculated from the product of the following:

- Total volume of natural gas combusted during the calendar year determined from fuel flow meters and/or fuel invoice data supplied by the vendor.
- Highest daily quality assured (by Florida Gas Transmission Company or appropriate sampling organization) sulfur content of the natural gas combusted as recorded by the fuel vendor (grains per hundred cubic feet) using a DEP or EPA approved ASTM reference method, or equivalent, during the calendar year.
- Ratio of the number of grains per pound.
- Ratio of the molecular weight of sulfur dioxide to the molecular weight of sulfur.
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{cu ft gas}) \times (\text{gr}/100 \text{ cu ft}) \times (1 \text{ lb}/7000 \text{ gr}) \times (2 \text{ lb SO}_2/\text{lb S}) \times (1 \text{ ton}/2000 \text{ lb})] = \underline{\text{Tons SO}_2 \text{ from gas.}}$$

F. NO<sub>x</sub> emissions from the combustion of natural gas in the Auxiliary Boiler shall be calculated from the product of the following:

- Total volume of natural gas combusted during the calendar year determined from fuel flow meters and/or fuel invoice data supplied by the vendor.
- 1.945E+02 lb/mmescf {The highest NO<sub>x</sub> emission factor available from Compilation of Air Pollutant - Emission Factors, AP-42, Fifth Edition, Volume I, Stationary Point and Area Sources for small boilers.}
- Unit conversion and/or correction factors as necessary to convert to units of tons of pollutant emitted per calendar year.

$$[(\text{cu ft of gas}) \times (194.5 \text{ lb NO}_x/\text{mmescf}) \times (1 \text{ ton}/2000 \text{ lb})] = \underline{\text{Tons of NO}_x \text{ from gas.}}$$

3. In the event of greater than sixty (60) days of unreported data from Florida Gas Transmission Company during the calendar year, the highest daily sulfur content of natural gas shall default to the FERC tariff value of 10 gr/100 cu ft and the highest daily gross calorific heating value of natural gas shall default to 1100 Btu/standard cu ft.

4. This Order shall expire February 28, 2008.

### PETITION FOR ADMINISTRATIVE REVIEW

The Department's proposed agency action will become final upon expiration of the petition period described below unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed agency action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57 of the 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, Mail Station 35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within twenty-one days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3) of the Florida Statutes must be filed within twenty-one days of publication of the public notice or within twenty-one days of receipt of this notice, whichever occurs first. Under Section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within twenty-one days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that 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 such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.



NOTICE OF APPEAL RIGHTS

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station 35, 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 must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this 17 day of February, 2003 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



HOWARD L. RHODES, Director  
Division of Air Resource Management  
Mail Station 5500  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
850/488-0114

Clerk Stamp

**FILING AND ACKNOWLEDGMENT**

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

Barbara J. Friday 2/18/03  
(Clerk) (Date)