

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

REC'D

OCT 31 1991

APPLICATION FOR RENEWAL OF  
PERMIT TO OPERATE AIR POLLUTION SOURCE(S)

ENV. PROT. COMM.  
OF H.C.

If major alterations have occurred, the applicant should complete the Standard Air Permit Application Form.

Source Type: Air Pollution Renewal of DER Permit No. A029-125315  
Company Name: Tampa Electric Company County: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e., Line Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired):

F.J. Gannon Station Unit One

Source Location: Street: Port Sutton City: Tampa  
UTM: East 360,000 North 3,087,500  
Latitude: 27° 54' 25" N. Longitude: 82° 25' 21" W.

1. Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05. Enclosed
2. Have there been any alterations to the plant since last permitted?  Yes  No  
If minor alterations have occurred, describe on a separate sheet and attach.
3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/22/91
4. Have previous permit conditions been adhered to?  Yes  No if no, explain on a separate sheet and attach.
5. Has there been any malfunction of the pollution control equipment during tenure of current permit?  Yes  No If yes, and not previously reported, give brief details and what action was taken on a separate sheet and attach. Previously addressed in Quarterly Reports.
6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department?  Yes  No
7. Has the annual operating report for the last calendar year been submitted?  Yes  No If no, please attach.

1. Please provide the following information, if applicable:

A. Raw Materials and Chemicals Used in Your Process: Not Applicable.

Description	Contaminant		Utilization lbs/hr
	Type	Wt	

B. Product Weight (lbs/hr): Not Applicable

C. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	Avg/hr*	Max/hr**	
Coal	69,691 *	100,000	1257

D. Normal Equipment Operating Time: hrs/day 24; days/wk 7; wks/yr 52;  
hrs/yr (power plants only) 8760; if seasonal, describe \_\_\_\_\_

\*Average Value, 1989 and 1990 emissions inventory

The undersigned owner or authorized representative\*\*\* of Tampa Electric Company is fully aware that the statements made in this application for a renewal of a permit to operate an air pollution source are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403, Florida Statutes, and all the rules and regulations of the Department. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted facility.

\*During actual time of operation.

\*\*Units: Natural Gas-MMCF/hr;  
Fuel Oils-barrels/hr; Coal-lbs/hr.

\*\*\*Attach letter of authorization if not previously submitted

Lynn F. Robinson  
Signature, Owner or Authorized Representative  
(Notarization is mandatory)  
Lynn F. Robinson, Manager, Environmental Planning  
Typed Name and Title  
P.O. Box 111  
Address  
Tampa FL 33601-0111  
City State Zip  
10/30/91 813 228-4841  
Date Telephone No.

ER Form 17-1.202(4)  
Effective November 30, 1982

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STATE OF FLORIDA  
COUNTY OF HILLSBOROUGH

Sworn to and subscribed before me this 30  
day of October, 1991.

Diana R. Neff  
Notary Public  
Commission Expires \_\_\_\_\_  
NOTARY PUBLIC STATE OF FLORIDA  
MY COMMISSION EXP. DEC. 4, 1993  
BONDED THRU GENERAL INS. UND.

Professional Engineer in Florida (as required by Subsection 17-4.05(3), F.A.C.)

This is to certify that the engineering features of this air pollution control project have been examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and the regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintainance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed David W. Ross

Date: 10-21-91 Telephone No. 228-4111

David W. Ross  
Name (Please type)

Tampa Electric Company  
Company Name (Please type)

P.O. Box 111, Tampa, FL 33601-0111  
Mailing Address (Please Type)

Florida Registration No. 42720



Affix seal here

This certification is only applicable for the permit renewal application of Tampa Electric Company's F.J. Gannon Station Unit I.

## F.J. Gannon Station - Unit #1

### Operation and Maintenance Plan for the Processing System and Particulate Control/Collection System

#### INTRODUCTION

F.J. Gannon Station is owned and operated by Tampa Electric Company. The station is located on the eastern shore of Hillsborough Bay at Port Sutton. The station consists of six coal fired, steam electric generating units.

Unit 1 was placed in service in 1957. The boiler was manufactured by the Babcock and Wilcox Corporation, and is of the "wet" bottom, cyclone firing type. Boiler exhaust gases pass through an electrostatic precipitator prior to discharge through a 306 foot stack.

#### PROCESS SYSTEM PERFORMANCE PARAMETERS

The Unit 1 boiler burns low sulfur coal. The design fuel consumption at maximum continuous rating is 50 tons/hr., operating pressure is 1575 psi and operating temperature is 1000<sup>o</sup>F.

The maximum design steam capacity of the boiler is 910,000 pounds per hour. Steam flow is recorded on a continuous basis.

#### PARTICULATE CONTROL EQUIPMENT DATA

Gannon Unit 1 is equipped with an electrostatic precipitator for the control of particulate emissions. The rigid frame precipitator was manufactured by Combustion Engineering, Inc. Fly ash collected by the precipitator is wither pneumatically transported to a storage silo for sale or reinjected into the boiler. Fly ash is reinjected into the boiler when the silo approaches its maximum storage capacity. Important design information and data applicable to the particulate control system are listed below.

##### Precipitator Data

Design Flow Rate	440,000 acfm
Primary Voltage	460 volts
Primary Current	258 amps
Secondary Voltage	56.6 kilovolts
Secondary Current	1500 ma
Design Efficiency	99.09%
Pressure Drop	1.59 inches of H <sub>2</sub> O (avg.)
Rapper Frequency	1/1.5 min-1/4.0 min (avg.)
Rapper Duration	Impact
Temperature	260 ± 55 <sup>o</sup> F (avg.)

Precipitator (ESP) performance parameters are recorded routinely on a daily basis. The information recorded includes primary voltage, primary current, secondary current and secondary voltage. Fly ash hopper high levels are alarmed in the control room.

#### MAINTENANCE AND INSPECTION SCHEDULES

All generating units of the Tampa Electric Company system are regularly scheduled for periodic maintenance. The schedule for planned maintenance outages is affected by system load and forced outage requirements. Typically, planned outages are scheduled during non-peak load periods such as the spring or fall.

The Unit 1 particulate control system receives regular preventive maintenance. The following preventive maintenance procedures are performed on a monthly basis.

- Inspection of insulator compartment heaters/blowers. Service as needed.
- Check rapper and transformer/rectifier controls.

The following preventive maintenance procedures are performed on a daily basis.

- Inspection of system controls. Make minor adjustments as needed.

Should these procedures indicate repairs are necessary, maintenance job requests are initiated. All records are maintained for a minimum of two years.



TO WHOM IT MAY CONCERN:

Please be advised that Lynn F. Robinson, Manager, Environmental Planning, is the authorized representative of Tampa Electric Company concerning matters with which this permit application deals.

Very Truly Yours,

William N. Cantrell  
Vice President  
Energy Resources Planning

sn/GG398