



# Florida Department of Environmental Regulation

Southwest District

4520 Oak Fair Boulevard

Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-623-5561

Carol M. Browner, Secretary

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF PERMIT ISSUANCE

### CERTIFIED MAIL

Mr. Lynn F. Robinson  
Environmental Planning  
Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

DER File No.: A029-202997  
County: Hillsborough

Enclosed is Permit Number A029-202997 to operate a 610 MMBTU/hr. steam generator designated as Unit #5, issued pursuant to Section 403.087, Florida Statutes.

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 32399-2400, within fourteen (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 required 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 allotted 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.

Tampa Electric Company  
Tampa, FL 33601-0111

Page Three

Executed in Tampa, Florida

Sincerely,

  
J. Harry Kerns, P.E.  
District Air Engineer

JHK/SKW/bm

Attachment:

cc: Environmental Protection Commission  
of Hillsborough County  
Mark J. Hornick, P.E., Tampa Electric Company

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all  
copies were mailed by certified mail before the close of business on  
DEC 19 1991 to the listed persons.

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

  
Clerk

DEC 19 1991  
Date

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: A029-202997 HK  
(6) A029-203002

MR MARK J HORNICK  
TAMPA ELECTRIC CO  
PO BOX 111  
TAMPA FL 33601 0111

4. Article Number  
P 149 931 638

Type of Service:  
☐ Registered ☐ Insured  
☒ Certified ☐ COD  
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee  
X [Signature]

6. Signature — Agent  
X [Signature]

7. Date of Delivery  
DEC 23 1991

8. Addressee's Address (ONLY if requested and fee paid)  
DEC 26 1991  
SOUTHWEST DISTRICT  
TAMPA

PS Form 3811, Apr. 1989 U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 149 931 638

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

MR MARK J HORNICK  
TAMPA ELECTRIC CO  
PO BOX 111  
TAMPA FL 33601 0111

PS Form 3800, June 1985

Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
<u>TECO A029-202997</u> <u>11 - 202998</u> <u>11 - 202999</u> <u>11 - 203000</u> <u>A029-203001</u> <u>11 - 203002</u>	

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do so will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: **A029-202997 HK**  
**(6) A029-203002**

MR LYNN F ROBINSON  
 MANAGER ENV PLANNING  
 TAMPA ELECTRIC CO  
 PO BOX 111  
 TAMPA FL 33601 0111

4. Article Number  
**P 149 931 637**

Type of Service:  
☐ Registered ☐ Insured  
☒ Certified ☐ COD  
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and **DATE DELIVERED**.

5. Signature - Addressee  
**X**

6. Signature - Agent  
**X**

7. Date of Delivery  
**DEC 25 1991**

8. Addressee's Address (ONLY if requested and fee paid)

**PS Form 3811, Apr. 1989** **★U.S.G.P.O. 1989-238-815** **DOMESTIC RETURN RECEIPT**

P 149 931 637

**RECEIPT FOR CERTIFIED MAIL**  
 NO ASSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

MR LYNN F ROBINSON  
 MANAGER ENV PLANNING  
 TAMPA ELECTRIC CO  
 PO BOX 111  
 TAMPA FL 33601 0111

Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
<b>TECO A029-202997</b>	
Postmark or Date	1 - 202998
"	" - 202999
"	" - 203000
"	" - 203001
"	" - 203002

**PS Form 3800, June 1985**



# Florida Department of Environmental Regulation

Southwest District

4520 Oak Fair Boulevard

Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-623-5561

Carol M. Browner, Secretary

## PERMITTEE:

Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

## PERMIT/CERTIFICATION

Permit No: A029-202997  
County: Hillsborough  
Expiration Date: 12/01/96  
Project: Hooker's Point  
Station Unit #5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 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 drawing(s), plans and other documents, attached hereto or on file with the department and made a part of hereof and specifically described as follows:

For the operation of a 610 MMBTU/hr. steam generator designated as Unit #5. This front firing type boiler was manufactured by Babcock and Wilcox Corporation and is fired on No. 6 fuel oil. The unit has no add-on pollution control equipment. Air pollutant emissions are controlled by efficient combustion of the fuel. Unit Nos. 1, 2, and 5 share the same stack exhaust (#5 stack), located on the west side of the building between stacks #2 and #4.

Location: At the foot of Hemlock Street, Tampa

UTM: 17-358.0 E 3091.0 N NEDS NO: 0038 Point ID: 05

Replaces Permit No.: A029-125690

PERMITTEE:  
Tampa Electric Company

PERMIT/CERTIFICATION NO.: AO29-202997  
PROJECT: Hooker's Point Station  
Unit #5

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.
2. Except as provided in Specific Condition No. 5, the maximum allowable particulate matter emission rate from this source shall not exceed 0.1 pounds per MMBtu heat input over a two (2) hour average. [Rule 17-2.650(2)(c)2.b.(i), F.A.C.]
3. Except as provided in Specific Condition No. 5, visible emissions shall not exceed 20% opacity except for one two-minute period per hour during which opacity shall not exceed 40%. [Rules 17-2.650(2)(c)2.b.(ii) and 17-2.600(5)(a)1., F.A.C.]
4. The maximum allowable sulfur dioxide emission rate from this source shall not exceed 1.1 pounds per MMBtu heat input. [Rule 17-2.600(5)(a)3.a.(v), F.A.C.]
5. Excess Emissions:
  - A. Excess emissions from existing fossil fuel steam generators resulting from startup or shutdown are permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized. [Rule 17-2.250(2), F.A.C.]
  - B. Excess emissions resulting from boiler cleaning (sootblowing) and load change are permitted provided that the duration of such excess emissions shall not exceed 3 hours in any 24-hour period and visible emissions shall not exceed 60% opacity, and providing (a) best operational practices to minimize emissions are adhered to and (b) the duration of the excess emissions are minimized. Particulate matter emissions shall not exceed an average of 0.3 pounds per MMBtu heat input during the 3-hour period of excess emissions allowed by part B. of this specific condition. [Rule 17-2.250(3), F.A.C.]
  - C. Excess emissions resulting from malfunctions\* are permitted provided (a) best operational practices to minimize emissions are adhered to and (b) the duration of excess emissions are minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department of Environmental Regulation for longer duration. [Rule 17-2.250(1), F.A.C.]
  - D. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction is prohibited. [Rule 17-2.250(4), F.A.C.]



PERMITTEE:  
Tampa Electric Company

PERMIT/CERTIFICATION NO.: AO29-202997  
PROJECT: Hooker's Point Station  
Unit #5

SPECIFIC CONDITIONS: (continued)

\* In case of excess emissions resulting from malfunctions, Tampa Electric Company shall notify the Environmental Protection Commission of Hillsborough County in accordance with Rule 17-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested. [Rule 17-2.250(6), F.A.C.]

6. Test the emissions for the following pollutant(s) at intervals of 12 months from May 10, 1991 ( $\pm$  90 days) and submit 2 copies of test data to the Air Section of the Environmental Protection Commission of Hillsborough County office and the Florida Department of Environmental Regulation within forty-five days of such testing. Testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C.:

(X) Particulates\*\*  
(X) Opacity\*\*

(X) Sulfur Dioxide\*

\* Compliance with the sulfur dioxide emission limits may be demonstrated by calculating SO<sub>2</sub> emissions based on the sulfur content of the fuel in lieu of stack sampling as provided in Rule 17-2.700, F.A.C. An analysis of the fuel oil shall be submitted with the stack test report. The analysis shall be in accordance with ASTM D4239-85 to determine sulfur content and contain as a minimum the Btu content (Btu/gal.), the density (lbs./gal.) and the sulfur content (% by weight).

\*\* Compliance with the particulate matter and opacity limits shall be demonstrated under both sootblowing and non-sootblowing operating conditions. A test under sootblowing conditions which demonstrates compliance with a non-sootblowing emission limitation will be accepted as proof of compliance with that non-sootblowing emission limitation.

7. Approved compliance testing of emissions must be conducted within  $\pm$  10% of the maximum permitted heat input rate (610 MMBtu/hr.), when practicable. Testing may be conducted at less than 90% of the maximum permitted heat input rate; however, if so, the maximum permitted heat input rate is automatically amended to be equal to the test heat input rate. If the maximum permitted heat input rate for this source is exceeded by more than 10%, compliance testing shall be performed within 60 days of initiation of the higher rate and the results of the tests shall be submitted to the Department of Environmental Regulation and the Environmental Protection Commission of Hillsborough County. The Environmental Protection Commission of Hillsborough County may, for good cause shown, grant an extension of the 60-day time limit on a case by case basis. Acceptance of said test will automatically amend the maximum permitted heat input rate to be equal to the test heat input rate. The actual heat input rate shall be specified in each test



PERMITTEE:  
Tampa Electric Company

PERMIT/CERTIFICATION NO.: AO29-202997  
PROJECT: Hooker's Point Station  
Unit #5

SPECIFIC CONDITIONS: (continued)

report. Failure to submit the actual heat input rate, or operation at conditions during testing which do not reflect normal operating conditions may invalidate the test and fail to provide reasonable assurance of compliance. [Rule 17-4.070(3), F.A.C.]

8. Compliance with the emission limitations of Specific Condition Nos. 2, 3, 4 and 5B (sootblowing) shall be determined using EPA Methods contained in 40 CFR 60, Appendix A and adopted by reference in Rule 17-2.700, F.A.C. in accordance with Table 700-1 and DER Method 9 contained in Rule 17-2.700, F.A.C. The Method 9 observation period shall be at least 60 minutes and concurrent with one stack test run for sootblowing and non-sootblowing conditions. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

9. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), Florida Statutes:

- (A) Annual amount of materials and/or fuels utilized.
- (B) Annual emissions (note calculation basis).
- (C) Any changes in the information contained in the permit application.

Duplicate copies of all reports shall be submitted to the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation.

10. Operation and Maintenance Plan. [Rule 17-2.650(2)(g), F.A.C.]

A. Process System Performance Parameters:

- 1) Source Designator: Hooker's Point Unit #5
- 2) Design Fuel Consumption Rate: 86.2 barrels per hour
- 3) Steam Flow: 440,000 pounds per hour
- 4) Operating Temperature: 900° F.
- 5) Operating Pressure: 975 psi

B. The following observations, checks, and operations apply to this source while in operation and shall be conducted on the schedule specified:

Continuously Monitored and Recorded

Steam Flow  
Steam Temperature  
Steam Pressure  
Excess Air

PERMITTEE:  
Tampa Electric Company

PERMIT/CERTIFICATION NO.: AO29-202997  
PROJECT: Hooker's Point Station  
Unit #5

SPECIFIC CONDITIONS: (continued)

Daily

Check visible emissions  
Sample fuel oil for monthly composite analysis  
Maintain optimum flame pattern for efficient fuel combustion

Monthly

Monitor and back calculate fuel input rate

During Major Outages

Inspect boiler, controls, auxiliaries, and ductwork and repair as necessary.

Prior to Startup


Inspect burners and clean as necessary.  
Inspect burner tips and replace as necessary.

- C. Records of inspection, maintenance, and performance parameters shall be retained for a minimum of two years and shall be made available to the Department or the Environmental Protection Commission of Hillsborough County upon request. [Rule 17-2.650(2)(g)5., F.A.C.]

11. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source. [Rules 17-2.700(2)(a)9. and 17-2.820(5), F.A.C.]

12. An application for renewal of permit to operate this source, completed in quadruplicate, shall be submitted to the Environmental Protection Commission of Hillsborough County at least 60 days prior to its expiration date. [Rule 17-4.090, F.A.C.]

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
Richard Garrity, Ph.D.  
Director of District Management

ATTACHMENT - 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 403.141, 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), F.S., 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 this 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, 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 and used by the permittee to achieve compliance with the conditions of this permit, are 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 reasonable times, 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 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 noncompliance; and
- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

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 403.111 and 403.73, F.S. 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 Rule 17-4.120 and 17-730.300, Florida Administrative Code, 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:

- ( ) 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:

- (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:
  - 1. the date, exact place, and time of sampling or measurements;
  - 2. the person responsible for performing the sampling or measurements;
  - 3. the dates analyses were performed;
  - 4. the person responsible for performing the analyses;
  - 5. the analytical techniques or methods used;
  - 6. 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 the 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.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2800 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



REC'D

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

SEP 23 1991

APPLICATION FOR RENEWAL OF ENV. PROT. COMM.  
PERMIT TO OPERATE AIR POLLUTION SOURCE(S) <sup>OF H.C.</sup>

A029-262997

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

Source Type: Air Pollution Renewal of DER Permit No. A029-125690

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):

Hookers Point Station Boiler 5

Source Location: Street: Foot of Hemlock City: Tampa

UTM: East 358,000 North 3,091,000

Latitude: 2 7° 5 6' 2 0"N. Longitude: 8 2° 2 6' 3 4"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 3/15/91
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.
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 Chemical Used in Your Process: Not Applicable

Description	Contaminant		Utilization	
	Type	Wt	Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	Avg/hr*	Max/hr**	
Fuel Oil	45.2*	86.2	610

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, 1984 and 1985 emissions

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  
9/20/91 228-4836  
Date Telephone No.

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

Page 2 of 2

STATE OF FLORIDA  
COUNTY OF HILLSBOROUGH

Sworn to and subscribed before me this 20  
day of September, 1991.

NOTARY  
PUBLIC

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 ~~Designed~~/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 maintenance and operation of the pollution control facilities\*and, if applicable, pollution sources.

Signed Mark J. Hornick

Date: 9/13/91 Telephone No. 228-4111

Mark J. Hornick

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. 38663

\* This unit's air emissions are controlled by fuel quality and efficient combustion of fuel.

## HOOKERS POINT STATION - BOILERS 1 THROUGH 6

### OPERATION AND MAINTENANCE PLAN

#### Introduction

Hookers Point Station is owned and operated by Tampa Electric Company. The plant is located on the shore of Hillsborough Bay off Sparkman Channel. The plant consists of six boilers and five turbine generator units. Boilers 1 through 5 are connected to a header system which supplies steam to four turbine generators. Boiler 6 supplies steam to turbine generator number 5.

The Hookers Point boilers burn No. 6 fuel oil. The boiler manufacturers, types and in-service dates are listed below:

<u>Boiler</u>	<u>Service Date</u>	<u>Manufacturer</u>	<u>Type</u>
1	1948	Babcock and Wilcox	Front Firing
2	1948	Babcock and Wilcox	Front Firing
3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
6	1955	Combustion Engineering	Tangential Firing

The boilers exhaust gases through stacks at an elevation of 280 feet.

#### Process System Performance Parameters

Boilers 1 through 6 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. In addition, daily samples are taken for a monthly composite analysis. The design fuel consumption, steam flow rates, operating temperatures and operating pressures are listed below.

<u>Boiler</u>	<u>Fuel Consumption (bbls/hr)</u>	<u>Steam Flow (lbs/hr)</u>	<u>Operating Temperature (°F)</u>	<u>Operating Pressure (psi)</u>
1	43.0	220,000	900	960
2	43.0	220,000	900	960
3	59.4	303,000	900	960
4	59.4	303,000	900	960
5	86.2	440,000	900	975
6	126.0	625,000	950	1450

Actual fuel input to the boilers is back calculated from monthly fuel tank drawdown and boiler efficiencies. Steam flow, temperature and pressure are continuously monitored and recorded on control room charts. Fuel oil temperature and pressure are maintained at optimum levels. Excess air is continuously monitored, recorded and maintained at levels to produce efficient fuel combustion.

### Maintenance Inspection

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.

During major outages, the boilers, controls, auxiliaries and duct work are inspected and repaired as necessary. Ongoing procedures include burner inspections and cleanings, burner tip replacements and maintenance of optimum flame patterns to achieve efficient fuel combustion. All repair information is stored for future reference.

### Plant Status

Hookers Point Station was brought back into service in late 1990. The plant was previously on long-term reserve standby status since April 1986. All required start-up stack testing has been done.



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,

A handwritten signature in cursive script, appearing to read 'W N Cantrell'.

William N. Cantrell  
Vice President  
Energy Resources Planning

sn/GG398

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

813-985-7402  
SunCom - 570-8000

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

January 14, 1987

Mr. A. Spencer Autry, Manager  
Environmental Planning  
Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

Dear Mr. Autry:

RE: Hillsborough County - AP  
Permit Nos. A029-125685, 86, 87, 89,  
(90) and 91.

Enclosed are amended permits No. A029-125685, 86, 87, 89, 90  
and 91 to operate the facilities at Hooker's Point Unit Nos. 1,  
2, 3, 4, 5, and 6 respectively.

These amendments have been made in accordance with the requests  
of your staff during the meeting January 8, 1987, at the  
District Office, with Hillsborough County Environmental  
Protection Commission in attendance.

If you have any questions please call Mr. Tom John at (813)  
985-7402.

Sincerely,

W. C. Thomas, P.E.  
District Air Engineer

cc: HCEPC  
file

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

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BOB GRAHAM  
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VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

PERMITTEE:

Mr. A. Spencer Autry, Manager  
Environmental Planning  
Tampa Electric Company  
P.O. Box 111  
Tampa, FL 33601-0111

PERMIT/CERTIFICATION

Permit No.: AO29-125690  
County: Hillsborough  
Issuance Date: 12-29-86  
Amended Date: 1-14-87  
Expiration Date: 12-22-91  
Project: Hooker's Point  
Station Unit # 5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named 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:

For the operation of a 610 MMBTU/hr steam generator designated as Unit #5. This front firing type boiler was manufactured by Babcock and Wilcox Corporation and is fired on No. 6 fuel oil. The unit has no pollution control equipment. Air pollutant emissions are controlled by efficient combustion of the fuel. Unit Nos. 1, 2, and 5 share the same stack exhaust.

Location: At the foot of Hemlock Street, Tampa.

UTM: 17-358.0E 3091.0N NEDS NO: 0038 Point ID: 05

Replaces Permit No.: AO29-47722

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 the enforcement action for any violation of the "Permit Conditions" by the permittee, its agent, 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 403.712(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 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 any order from the department.



PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 maybe required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purposes of:

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.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 Section 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 non-compliance 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.

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.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

14. (con't)

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 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.

SPECIFIC CONDITIONS:

1. The maximum allowable particulate emission rate from this source shall be 0.1 pounds per MMBTU heat input over a two hour average [Section 17-2.650(2)(c)2.b.(i), F.A.C.], except for any 3 hours during a 24 hour period in which the boiler is being cleaned by soot blowing or experiencing a load change. Under these operating conditions, the maximum allowable particulate emission rate shall be 0.3 pounds per MMBTU heat input, providing best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized [Section 17-2.250(3), F.A.C.].

2. The maximum opacity from this source shall be 20 percent [Section 17-2.650(2)(c)2.b.(ii), F.A.C.] except for any 2 minutes during a 60 minute period in which the opacity shall not exceed 40 percent [Section 17-2.600(5), F.A.C.]; any 3

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

hours during a 24 hour period of excess emissions in which the boiler is being cleaned by soot blowing or experiencing a load change the opacity shall not exceed 60%; and excess emissions otherwise allowed under Sections 17-2.250(1) through (3), F.A.C.

3. The maximum allowable SO<sub>2</sub> emission rate from this unit shall be 1.1 pounds of SO<sub>2</sub> per MMBTU heat input [Subsection 17-2.600(5)(b)3.a.(v), F.A.C.].

4. Within 60 days after achieving 90% of the maximum rated capacity but not more than 180 days from startup, and annually thereafter, or within a ninety (90) day period prior to the next annual due date, this unit shall be tested for particulate matter [under both sootblowing and non-sootblowing operating conditions], sulfur dioxide, and visible emissions. The Method 9 test interval on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. One copy of test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission and one copy to the Southwest District Department of Environmental Regulation within 45 days of testing.

5. Compliance with the SO<sub>2</sub> emission standard may be demonstrated by calculating SO<sub>2</sub> emissions based on the sulfur content of the fuel in lieu of stack sampling as provided in Section 17-2.700, F.A.C. An analysis of the fuel oil shall be submitted with the stack test report.

6. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

- (A) Annual amount of materials and/or fuels utilized.
- (B) Annual emissions (note calculation basis).
- (C) Any changes in the information contained in the permit application.

A copy of this report shall be submitted to the Southwest District Department of Environmental Regulation, and a copy to the Air Section, Hillsborough County Environmental Protection Commission.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

7. Operation and Maintenance Plan [Section 17-2.650(2),  
F.A.C.].

A. Process System Performance Parameters:

- (1) Source Designator: Hooker's Point Unit No. 5
- (2) Design Fuel Consumption Rate: 86.2 barrels per hour
- (3) Steam Flow: 440,000 pounds per hour
- (4) Operating Temperature: 900 degrees F
- (5) Operating Pressure: 975 psi

B. The following observations, checks, and operations apply to this source while in operation and shall be conducted on the schedule specified:

Continuously Monitored and Recorded

Steam Flow  
Steam Temperature  
Steam Pressure  
Excess Air

Daily

Check visible emissions  
Sample fuel oil for monthly composite analysis  
Maintain optimum flame pattern for efficient fuel combustion

Monthly

Monitor and back calculate fuel input rate

During Major Outages

Inspect boiler, controls, auxiliaries, and ductwork and repair as necessary.

Prior to Start-up

Inspect burners and clean as necessary.  
Inspect burner tips and replace as necessary.

C. Records of inspection, maintenance, and performance parameters shall be retained for a minimum of two years and shall be made available to the Department or Hillsborough County Environmental Protection Commission upon request [Subsection 17-2.650(2)(g)5., F.A.C.].

PERMITTEE  
Tampa Electric Company


Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

8. An original application to renew this operating permit and three (3) copies, with original seals and signatures, shall be submitted to the Hillsborough County Environmental Protection Commission, at least 60 days prior to the expiration date of this permit.

Issued: December 29, 1986

Amended this 14 day of Jan  
1987.

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
Richard D. Garrity, Ph.D.  
District Manager

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



**SOUTHWEST DISTRICT**

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

813-985-7402  
SunCom - 570-8000

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

December 22, 1986

**NOTICE OF PERMIT**

Mr. A. Spencer Autry, Manager  
Environmental Planning  
Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

Dear Mr. Autry:

Re: Hillsborough County - AP  
Hooker's Point Station Unit #5

Enclosed is Permit Number AO29-125690 to operate a 610 MMBTU/hr steam generator designated as Unit #5, issued pursuant to Section 403.087, Florida Statutes.

Persons whose substantial interests are affected by this permit have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, FAC, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee Florida 32301, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph 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, FAC. 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.



Mr. A. Spencer Autry  
December 22, 1986

Page Two

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 32301; 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 Tampa, Florida.

Sincerely,



Tom John, P.E.  
Permitting Engineer

TJ/dtw

Attachment: as stated

cc: HCEPC

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 12/29/86 to the listed persons.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant  
to §120.52(10), Florida  
Statutes, with the designated  
Department Clerk, receipt of  
which is hereby acknowledged.

  
Clerk

12/29/86  
Date

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

813-985-7402  
SunCom - 570-8000

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

PERMITTEE:

Mr. A. Spencer Autry, Manager  
Environmental Planning  
Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

PERMIT/CERTIFICATION

Permit No.: AO29-125690  
County: Hillsborough  
Expiration Date: 12-22-91  
Project: Hooker's Point  
Station Unit #5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named 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:

For the operation of a 610 MMBTU/hr steam generator designated as Unit #5. This front firing type boiler was manufactured by Babcock and Wilcox Corporation and is fired on No. 6 fuel oil. The unit has no pollution control equipment. Air pollutant emissions are controlled by efficient combustion of the fuel. Unit Nos. 1, 2, and 5 share the same stack exhaust.

Location: At the foot of Hemlock Street, Tampa.

UTM: 17-358.OE 3091.ON NEDS NO: 0038 Point ID: 05

Replaces Permit No.: AO29-47722

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 the enforcement action for any violation of the "Permit Conditions" by the permittee, its agent, 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 403.712(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 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 any order from the department.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 maybe required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purposes of;

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.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

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 Section 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 non-compliance 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.

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.

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

14. (con't)

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 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.

SPECIFIC CONDITIONS:

1. The maximum allowable particulate emission rate from this source shall be 0.1 pounds per MMBTU heat input over a two hour average [Section 17-2.650(2)(c)2.b.(i), F.A.C.], except for any 3 hours during a 24 hour period in which the boiler is being cleaned by soot blowing or experiencing a load change. Under these operating conditions, the maximum allowable particulate emission rate shall be 0.3 pounds per MMBTU heat input, providing best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized [Section 17-2.250(3), F.A.C.].

2. The maximum opacity from this source shall be 20 percent [Section 17-2.650(2)(c)2.b.(ii), F.A.C.] except for any 2 minutes during a 60 minute period in which the opacity shall not exceed 40 percent [Section 17-2.600(5), F.A.C.]; any 3

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

hours during a 24 hour period of excess emissions in which the boiler is being cleaned by soot blowing or experiencing a load change the opacity shall not exceed 60%; and excess emissions otherwise allowed under Sections 17-2.250(1) through (3), F.A.C.

3. The maximum allowable SO<sub>2</sub> emission rate from this unit shall be 1.1 pounds of SO<sub>2</sub> per MMBTU heat input [Subsection 17-2.600(5)(b)3.a.(v), F.A.C.].

4. Within 60 days after achieving 90% of the rated capacity but not more than 180 days from startup, and annually thereafter, or within a ninety (90) day period prior to the next annual due date, this unit shall be tested for particulate matter [under both sootblowing and non-sootblowing operating conditions], sulfur dioxide, and visible emissions. The Method 9 test interval on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. One copy of test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission and one copy to the Southwest District Department of Environmental Regulation within 45 days of testing.

5. Compliance with the SO<sub>2</sub> emission standard may be demonstrated by calculating SO<sub>2</sub> emissions based on the sulfur content of the fuel in lieu of stack sampling as provided in Section 17-2.700, F.A.C. An analysis of the fuel oil shall be submitted with the stack test report.

6. A report shall be submitted to both the Florida Department of Environmental Regulation and Hillsborough County Environmental Protection Commission within 30 days following each calendar quarter detailing any excess opacity readings recorded during the three month period. For the purpose of this report, excess emissions shall be defined as all six minute averages of opacity greater than 20% except as specified in Specific Condition No. 2.

7. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

- (A) Annual amount of materials and/or fuels utilized.
- (B) Annual emissions (note calculation basis).
- (C) Any changes in the information contained in the permit application.



PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

A copy of this report shall be submitted to the Southwest District Department of Environmental Regulation, and a copy to the Air Section, Hillsborough County Environmental Protection Commission.

8. Operation and Maintenance Plan [Section 17-2.650(2), F.A.C.].

A. Process System Performance Parameters:

- (1) Source Designator: Hooker's Point Unit No. 1
- (2) Design Fuel Consumption Rate: 43 barrels per hour
- (3) Steam Flow: 220,000 pounds per hour
- (4) Operating Temperature: 900 degrees F
- (5) Operating Pressure: 960 psi

B. The following observations, checks, and operations apply to this source while in operation and shall be conducted on the schedule specified:

Continuously Monitored and Recorded

Steam Flow  
Steam Temperature  
Steam Pressure  
Excess Air

Daily

Check visible emissions  
Sample fuel oil monthly composite analysis  
Maintain optimum flame pattern for efficient fuel combustion

Monthly

Monitor and back calculate fuel input rate

During Major Outages

Inspect boiler, controls, auxiliaries, and ductwork and repair as necessary.

Prior to Start-up

Inspect burners and clean as necessary.  
Inspect burner tips and replace as necessary.

C. Records of inspection, maintenance, and performance parameters shall be retained for a minimum of two years and shall be made available to the Department or Hillsborough County Environmental Protection Commission upon request [Subsection 17-2.650(2)(g)5., F.A.C.].

PERMITTEE  
Tampa Electric Company

Permit No.: AO29-125690  
Project: Hooker's Point  
Station Unit No.5

9. An original application to renew this operating permit shall be submitted to the Southwest District Department of Environmental Regulation, and a copy, with original seals and signatures, shall be submitted to the Hillsborough County Environmental Protection Commission, at least 60 days prior to the expiration date of this permit.

Issued this 29 day of Dec.  
1986.

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION



*For* \_\_\_\_\_  
Richard D. Garrity, Ph.D.  
District Manager

P 433 083 923

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

★ U.S.G.P.O. 1985-460-794

PS Form 3800, June 1985

Sent to	Spence Autry, TECO
Street and No	P.O. Box 111
P.O. State and ZIP Code	Tampa 33601-0111
Postage	\$ 2.40
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	.70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 3.85
Postmark or Date	December 29, 1986

2-65447

CHECK NO.

65447

TAMPA  
ELECTRIC  
A TECO ENERGY COMPANYPOST OFFICE BOX 111  
TAMPA, FLORIDA 3360163-27  
831

PAY:

DATE

TWO THOUSAND SEVENTY AND NO/100 \*\*\*\*\*  
DOLLARS \*\*\*\*\*

09 24 86 \$ \*\*\*\*\*2,070.00

TO HILLSBOROUGH COUNTY BOARD OF  
THE COUNTY COMMISSIONERS  
ORDER  
OF

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF \$2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

THE ACCOMPANYING CHECK IS IN FULL PAYMENT OF ITEMS BELOW - DETACH BEFORE CASHING

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65447	092486	H1076	HILLSBOROUGH COUNTY B	2,070.00	

TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111

2-65563  
CHECK NO.

65563



POST OFFICE BOX 111  
TAMPA, FLORIDA 33601

63-27  
631

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DATE

THREE THOUSAND AND NO/100 DOLLARS \*\*\*\* 09 24 86 \$ \*\*\*\*\*3,000.00

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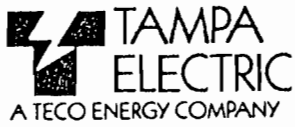
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TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111



September 25, 1986

RE: Hookers Point Station Boiler No. 5  
Air Operations Permit Application

TO WHOM IT MAY CONCERN:

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

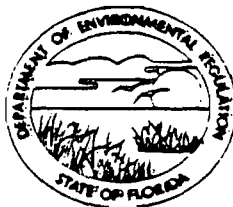
Very truly yours,

Heywood A. Turner  
Senior Vice President  
Production

HAT/tb

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



A029-125690  
PAID OCT 2 1986

BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

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

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

Source Type: Air Pollution Renewal of DER Permit No. A029-47722

Company Name: Tampa Electric Company County: Hillsborough

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

Hookers Point Station Boiler 5

Source Location: Street: Hemlock Avenue City: Tampa

UTM: East 358,000 North 3,091,000

Latitude: 2 7° 56' 2 0"N. Longitude: 8 2° 2 6' 3 4"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.
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 1/30/86.
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.
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 Chemical Used in Your Process: Not Applicable.

Description	Contaminant		Utilization	
	Type	%Wt	Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	Avg/hr*	BBLS/HR Max/hr**	
Fuel Oil	45.2*	86.2	610

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

\*Average value, 1984 and 1985 emissions inventories.

\*\*See Attachment A.

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 Chap-  
ter 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.

[Signature]  
Signature, Owner or Authorized Representative  
(Notarization is mandatory)

A. Spencer Autry, Manager, Environmental Planning

Typed Name and Title

P.O. Box 111

Address

Tampa, Florida 33601

City

9/25/86

Date

State Zip

(813) 228-4111

Telephone No.

9/25/86

NOTARY

PUBLIC

NOTARY PUBLIC STATE OF FLORIDA  
MY COMMISSION EXP. NOV 14, 1989  
DANIEL THOMAS GENERAL INS. UND.



## ATTACHMENT A

### HOOKERS POINT STATION - BOILERS 1 THROUGH 6

#### OPERATION AND MAINTENANCE PLAN

##### Introduction

Hookers Point Station is owned and operated by Tampa Electric Company. The plant is located on the shore of Hillsborough Bay off Sparkman Channel. The plant consists of six boilers and five turbine generator units. Boilers 1 through 5 are connected to a header system which supplies steam to four turbine generators. Boiler 6 supplies steam to turbine generator number 5.

The Hookers Point boilers burn No. 6 fuel oil. The boiler manufacturers, types and in-service dates are listed below:

<u>Boiler</u>	<u>Service Date</u>	<u>Manufacturer</u>	<u>Type</u>
1	1948	Babcock and Wilcox	Front Firing
2	1948	Babcock and Wilcox	Front Firing
3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
6	1955	Combustion Engineering	Tangential Firing

The boilers exhaust gases through stacks at an elevation of 280 feet.

##### Process System Performance Parameters

Boilers 1 through 6 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. In addition, daily samples are taken for a monthly composite analysis. The design fuel consumption, steam flow rates, operating temperatures and operating pressures are listed below.

<u>Boiler</u>	<u>Fuel Consumption</u>	<u>Steam Flow</u>	<u>Operating Temperature</u>	<u>Operating Pressure</u>
1	43.0 BBLs/HR	220,000 LBS/HR	900°F	960 psi
2	43.0	220,000	900°	960
3	59.4	303,000	900°	960
4	59.4	303,000	900°	960
5	86.2	440,000	900°	975
6	126.0	625,000	950°	1450

Actual fuel input to the boilers is back calculated from monthly fuel tank drawdown and boiler efficiencies. Steam flow, temperature and pressure are continuously monitored and recorded on control room charts. Fuel oil temperature and pressure are maintained at optimum levels. Excess air is continuously monitored, recorded and maintained at levels to produce efficient fuel combustion.

#### Maintenance Inspection

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.

During major outages, the boilers, controls, auxiliaries and duct work are inspected and repaired as necessary. Ongoing procedures include burner inspections and cleanings, burner tip replacements and maintenance of optimum flame patterns to achieve efficient fuel combustion. All repair information is stored for future reference.

#### Plant Status

Hookers Point Station was placed on Long Term Reserve Standby status in April 1986. Under expected load growth conditions and present assumptions, these units are expected to be returned to service sometime after 1989. However, these units could be brought into service earlier if load growth is higher than expected or other circumstances dictate.

2-65447

CHECK NO.

65447

POST OFFICE BOX 111  
TAMPA, FLORIDA 3360163-27  
631

PAY:

DATE

TWO THOUSAND SEVENTY AND NO/100 \*\*\*\*\*  
DOLLARS \*\*\*\*\*

09 24 86

\$ \*\*\*\*\*2,070.00

TO HILLSBOROUGH COUNTY BOARD OF  
THE COUNTY COMMISSIONERS  
ORDER  
OF  
ONLY ONE SIGNATURE REQUIRED ON CHECKS OF \$2500.00 OR LESS

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2-65563  
CHECK NO.

65563



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TAMPA, FLORIDA 33601

63-27  
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PAY:

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TO  
THE  
ORDER  
OF  
  
FLORIDA DEPT OF ENVIRONMENTAL  
REGULATION

*W. H. [Signature]*  
W. H. [Signature]  
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TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111



September 25, 1986

RE: Hookers Point Station Boiler No. 5  
Air Operations Permit Application

TO WHOM IT MAY CONCERN:

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

Very truly yours,

Heywood A. Turner  
Senior Vice President  
Production

HAT/tb

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

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

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

Source Type: Air Pollution Renewal of DER Permit No. A029-47722  
Company Name: Tampa Electric Company County: Hillsborough

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

Hookers Point Station Boiler 5

Source Location: Street: Hemlock Avenue City: Tampa

UTM: East 358,000 North 3,091,000

Latitude: 2 7° 56' 2 0"N. Longitude: 8 2° 2 6' 3 4"W.

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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 1/30/86.
4. Have previous permit conditions been adhered to? ☒ Yes ☐ No If no, explain on a separate sheet and attach.
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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 Chemical Used in Your Process: Not Applicable.

Description	Type	Contaminant %wt	Utilization Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	BBLS/HR Max/hr**	Maximum Heat Input (MMBTU/hr)
Fuel Oil	45.2*	86.2	610

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

\*Average value, 1984 and 1985 emissions inventories.

\*\*See Attachment A.

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

[Signature]  
Signature, Owner or Authorized Representative  
(Notarization is mandatory)

A. Spencer Autry, Manager, Environmental Planning

Typed Name and Title

P.O. Box 111

Address

Tampa, Florida 33601

City

9/25/86

Date

State Zip

(813) 228-4111

Telephone No.

ER Form 17-1 (202)(4)  
Effective November 30, 1982

Page 2 of 2

NOTARY

NOTARY PUBLIC STATE OF FLORIDA  
MY COMMISSION EXP. NOV 14, 1989  
BONDED THRU GENERAL INS. UND.

## ATTACHMENT A

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2-65447

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PAY:

DATE

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TO  
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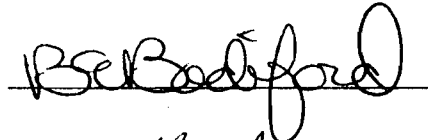

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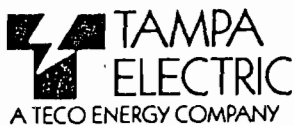
  
  
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TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111



September 25, 1986

RE: Hookers Point Station Boiler No. 5  
Air Operations Permit Application

TO WHOM IT MAY CONCERN:

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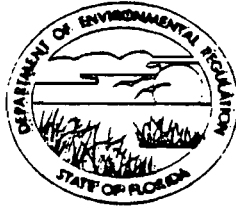
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Senior Vice President  
Production

HAT/tb

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

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

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

Source Type: Air Pollution Renewal of DER Permit No. A029-47722

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):

Hookers Point Station Boiler 5

Source Location: Street: Hemlock Avenue City: Tampa

UTM: East 358,000 North 3,091,000

Latitude: 2 7° 56' 2 0"N. Longitude: 8 2° 2 6' 3 4"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.
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 1/30/86.
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.
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 Chemical Used in Your Process: Not Applicable.

Description	Contaminant		Utilization	
	Type	%wt	Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	Avg/hr*	Max/hr**	
Fuel Oil	45.2*	86.2	610

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

\*Average value, 1984 and 1985 emissions inventories.

\*\*See Attachment A.

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

[Signature]  
Signature, Owner or Authorized Representative  
(Notarization is mandatory)

A. Spencer Autry, Manager, Environmental Planning

Typed Name and Title

P.O. Box 111

Address

Tampa, Florida 33601

City

State Zip

9/25/86

(813) 228-4111

Date

Telephone No.

CR Form 17-1.2026  
Effective November 30, 1982

Page 2 of 2

NOTARY PUBLIC  
STATE OF FLORIDA  
MY COMMISSION EXPIRES NOV 14, 1989  
BONDED THRU GENERAL INS. UND.

## ATTACHMENT A

### HOOKERS POINT STATION - BOILERS 1 THROUGH 6

#### OPERATION AND MAINTENANCE PLAN

##### Introduction

Hookers Point Station is owned and operated by Tampa Electric Company. The plant is located on the shore of Hillsborough Bay off Sparkman Channel. The plant consists of six boilers and five turbine generator units. Boilers 1 through 5 are connected to a header system which supplies steam to four turbine generators. Boiler 6 supplies steam to turbine generator number 5.

The Hookers Point boilers burn No. 6 fuel oil. The boiler manufacturers, types and in-service dates are listed below:

<u>Boiler</u>	<u>Service Date</u>	<u>Manufacturer</u>	<u>Type</u>
1	1948	Babcock and Wilcox	Front Firing
2	1948	Babcock and Wilcox	Front Firing
3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
6	1955	Combustion Engineering	Tangential Firing

The boilers exhaust gases through stacks at an elevation of 280 feet.

##### Process System Performance Parameters

Boilers 1 through 6 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. In addition, daily samples are taken for a monthly composite analysis. The design fuel consumption, steam flow rates, operating temperatures and operating pressures are listed below.

<u>Boiler</u>	<u>Fuel Consumption</u>	<u>Steam Flow</u>	<u>Operating Temperature</u>	<u>Operating Pressure</u>
1	43.0 BBLs/HR	220,000 LBS/HR	900°F	960 psi
2	43.0	220,000	900°	960
3	59.4	303,000	900°	960
4	59.4	303,000	900°	960
5	86.2	440,000	900°	975
6	126.0	625,000	950°	1450

Actual fuel input to the boilers is back calculated from monthly fuel tank drawdown and boiler efficiencies. Steam flow, temperature and pressure are continuously monitored and recorded on control room charts. Fuel oil temperature and pressure are maintained at optimum levels. Excess air is continuously monitored, recorded and maintained at levels to produce efficient fuel combustion.

#### Maintenance Inspection

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.

During major outages, the boilers, controls, auxiliaries and duct work are inspected and repaired as necessary. Ongoing procedures include burner inspections and cleanings, burner tip replacements and maintenance of optimum flame patterns to achieve efficient fuel combustion. All repair information is stored for future reference.

#### Plant Status

Hookers Point Station was placed on Long Term Reserve Standby status in April 1986. Under expected load growth conditions and present assumptions, these units are expected to be returned to service sometime after 1989. However, these units could be brought into service earlier if load growth is higher than expected or other circumstances dictate.



2-65447

CHECK NO.

65447

POST OFFICE BOX 111  
TAMPA, FLORIDA 3360163-27  
631

PAY:

DATE

TWO THOUSAND SEVENTY AND NO/100 \*\*\*\*\*  
DOLLARS \*\*\*\*\*

09 24 86 \$ \*\*\*\*\*2,070.00

TO HILLSBOROUGH COUNTY BOARD OF  
THE COUNTY COMMISSIONERS  
OF
  
 ONLY ONE SIGNATURE REQUIRED ON CHECKS OF \$2000.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

THE ACCOMPANYING CHECK IS IN FULL PAYMENT OF ITEMS BELOW - DETACH BEFORE CASHING

INVOICE NO.	DATE	VOUCHER	GROSS AMOUNT	DISCOUNT	NET AMOUNT
092286A	092286	222228	PERMIT 345.00		345.00
092286B	092286	222229	PERMIT 345.00		345.00
092286C	092286	222230	PERMIT 345.00		345.00
092286D	092286	222231	PERMIT 345.00		345.00
092286E	092286	222232	PERMIT 345.00		345.00
092286F	092286	222233	PERMIT 345.00		345.00
CHECK NO.	DATE	VENDOR NO.	VENDOR NAME	TOTAL AMOUNT	
65447	092486	H11076	HILLSBOROUGH COUNTY B	2,070.00	

TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111

2-65563  
CHECK NO.

65563



POST OFFICE BOX 111  
TAMPA, FLORIDA 33601

83-27  
631

PAY:

DATE

THREE THOUSAND AND NO/100 DOLLARS \*\*\*\* 09 24 86 \$ \*\*\*\*\*3,000.00

TO  
THE  
ORDER  
OF  
FLORIDA DEPT OF ENVIRONMENTAL  
REGULATION

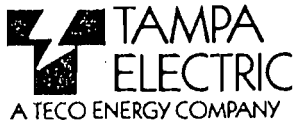
*Barbara*  
*W. H. [Signature]*  
ONLY ONE SIGNATURE REQUIRED ON CHECKS OF \$2000.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

THE ACCOMPANYING CHECK IS IN FULL PAYMENT OF ITEMS BELOW - DETACH BEFORE CASHING

INVOICE NO.	DATE	VOUCHER	GROSS AMOUNT	DISCOUNT	NET AMOUNT
092286A	092286	222234	PERMIT 500.00		500.00
092286B	092286	222235	PERMIT 500.00		500.00
092286C	092286	222236	PERMIT 500.00		500.00
092286D	092286	222237	PERMIT 500.00		500.00
092286E	092286	222238	PERMIT 500.00		500.00
092286F	092286	222239	PERMIT 500.00		500.00
CHECK NO.	DATE	VENDOR NO.	VENDOR NAME	TOTAL AMOUNT	
65563	092486	FLO004	FLORIDA DEPT OF ENVIR	3,000.00	

TAMPA ELECTRIC COMPANY • P.O. BOX 111 TAMPA, FL. 33601 • (813) 228-4111



September 25, 1986

RE: Hookers Point Station Boiler No. 5  
Air Operations Permit Application

TO WHOM IT MAY CONCERN:

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

Very truly yours,

Heywood A. Turner  
Senior Vice President  
Production

HAT/tb

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

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

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

Source Type: Air Pollution Renewal of DER Permit No. A029-47722

Company Name: Tampa Electric Company County: Hillsborough

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

Hookers Point Station Boiler 5

Source Location: Street: Hemlock Avenue City: Tampa

UTM: East 358,000 North 3,091,000

Latitude: 2 7° 56' 20"N. Longitude: 82° 26' 34"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.
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 1/30/86.
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.
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 Chemical Used in Your Process: Not Applicable.

Description	Contaminant		Utilization	
	Type	%Wt	Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	Avg/hr*	Max/hr**	
Fuel Oil	45.2*	86.2	610

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

\*Average value, 1984 and 1985 emissions inventories.

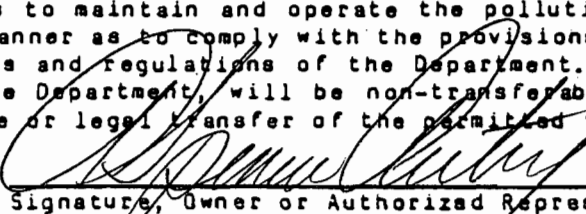
\*\*See Attachment A.

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

  
Signature, Owner or Authorized Representative  
(Notarization is mandatory)

A. Spencer Autry, Manager, Environmental Planning

Typed Name and Title

P.O. Box 111

Address

Tampa, Florida 33601

City

State Zip

9/25/86

(813) 228-4111

Date

Telephone No.

ER Form 17-1.202(4) 000  
Effective November 30, 1982.

Page 2 of 2

NOTARY

9/25/86

NOTARY PUBLIC, STATE OF FLORIDA

MY COMMISSION EXP. NOV 14, 1989

BONDED THRU GENERAL INS. UNO

## ATTACHMENT A

### HOOKERS POINT STATION - BOILERS 1 THROUGH 6

#### OPERATION AND MAINTENANCE PLAN

##### Introduction

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3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
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6	126.0	625,000	950°	1450

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State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: The Files

*Copied for*  
THRU: Dan Williams

FROM: Bob Garrett

DATE: January 25, 1982

SUBJECT: RACT Applications from TECO, Hookers Point, (6) Permits,  
Hillsborough County, A/P

Tampa Electric Company has applied for renewal of the following permits to establish RACT compliance.

Unit	Old Permit	New Permit
1. Boiler No. 1	A029-22018	A029-47726
2. Boiler No. 2	A029-22019	A029-47725
3. Boiler No. 3	A029-25432	A029-47724
4. Boiler No. 4	A029-7103	A029-47723
5. Boiler No. 5	A029-12942	A029-47722
6. Boiler No. 6	A029-7104	A029-47721

FAC 17-2.650 establishes criteria for heavy polluters in Para. (2)(c)2 as 0.1 lbs. TSP/million BTU heat input for fossil fuel steam generators greater than 30 MMBTU/hr. and visible emissions not to exceed 20% opacity. In addition detail information is required by rule pertaining to operation, control devices, and maintenance procedures as part of the permit.

A last minute extension was obtained from TECO to allow both the company and the Department time for more refined information. General questions were answered but no specific numbers for operating parameters were given.

I recommend we issue these permits, accordingly, with an expiration date of January 25, 1987.



## DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#000000047722 COE# DER PROCESSOR:GARRETT DER OFFICE:TPA  
FILE NAME:TAMPA ELECTRIC CO. DATE FIRST REC: 09/15/81 APPLICATION TYPE:AO  
APPL NAME:TAMPA ELECTRIC CO. APPL PHONE:(813)228-4111 PROJECT COUNTY:29  
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601  
AGNT NAME:WILLIAM N. CANTRELL AGNT PHONE:(813)228-4111  
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601

ADDITIONAL INFO REQ: / / / / / REC: / / / / /  
APPL COMPLETE DATE: 09/15/81 COMMENTS NEC:N DATE REQ: / / DATE REC: / /  
LETTER OF INTENT NEC:Y DATE WHEN INTENT ISSUED: / / WAIVER DATE:01/31/82

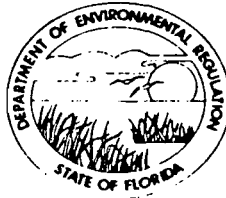
HEARING REQUEST DATES: / / / / /  
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / /  
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N

\*\*\* RECORD HAS BEEN SUCCESSFULLY UPDATED \*\*\* 01/29/82 11:05:13  
FEE PD DATE#1:09/17/81 \$0020 RECEIPT#00054851 REFUND DATE: / / REFUND \$  
FEE PD DATE#2: / / \$ RECEIPT# REFUND DATE: / / REFUND \$  
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:IS DATE:01/27/82  
REMARKS:TECO  
HOOKERS POINT STATION BOILER 5

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610



BOB GRAHAM  
GOVERNOR

XXXXXXXXXX

SECRETARY

Vicki Tschinkel  
WILLIAM K. HENNESSEY  
DISTRICT MANAGER

Hillsborough County AP

Mr. Jerry L. Williams  
Manager Environmental Planning  
Tampa Electric Company  
P.O. Box 111  
Tampa, Fla. 33601

Dear Mr. Williams:

Enclosed is Permit Number AO29-47722, dated Jan. 27, 1982,  
to operate the subject air pollution source  
issued pursuant to Section 403, Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, Florida Administrative Code, (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

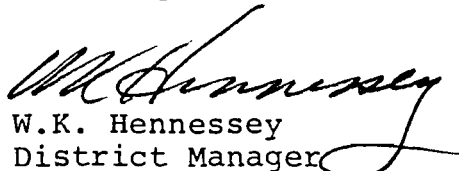
If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

cc: HCEPC  
William N. Cantrell

Enclosure

  
W.K. Hennessey  
District Manager

RULES OF THE ADMINISTRATION COMMISSION  
MODEL RULES OF PROCEDURE  
CHAPTER 28-5  
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

PART II  
FORMAL PROCEEDINGS

28-5.201 Initiation of Formal Proceedings.

- (1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination;
  - (c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision;
  - (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, as well as the rules and statutes which entitle the petitioner to relief;
  - (f) A demand for relief to which the petitioner deems himself entitled; and
  - (g) Other information which the petitioner contends is material.

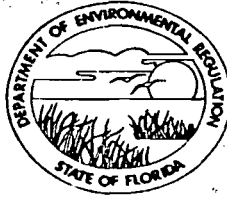
\*\*\*\*\*

A petition may be denied if the petitioner does not state adequately a material factual allegation, such as a substantial interest in the agency determination, or if the petition is untimely. (Section 28-5.201(3)(a), FAC).

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610



BOB GRAHAM  
GOVERNOR

~~XXXXXXXXXX~~  
Vicki Tschinkel  
SECRETARY  
WILLIAM K. HENNESSEY  
DISTRICT MANAGER

APPLICANT:

Tampa Electric Company  
P.O. Box 111  
Tampa, Fla. 33601

PERMIT/CERTIFICATION  
NO. AO29-47722

COUNTY: Hillsborough  
PROJECT: FFSG No. 5  
Hookers Point

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the operation of a 610 MMBTU/hr heat input steam generator No. 5,  
oil fired.

Located at foot of Hemlock Street, Tampa, Hillsborough County.

UTM: 17-358.0E and 3091.0N

Replaces Permit NO: AO29-12942 NEDS NO: 0038 Point ID: 05

Expires: January 25, 1987

PERMIT NO.: AO29-47722  
APPLICANT: Tampa Electric Company

**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 Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court 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 indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. 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.

4. As provided in subsection 403.087(6), 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.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. 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 Section 403.111, F.S.

7. In the case of an operation permit, 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.

8. 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, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.

13. This permit also constitutes:

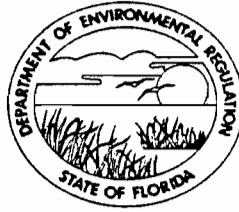
- ☐ Determination of Best Available Control Technology (BACT)
- ☐ Determination of Prevention of Significant Deterioration (PSD)
- ☐ Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

March 11, 1982

Mr. Jerry L. Williams  
Manager, Environmental Planning  
Tampa Electric Company  
P.O. Box 111  
Tampa, Fla. 33601

RE: Permit Nos. A029-47721 through A029-47731  
and A029-47735

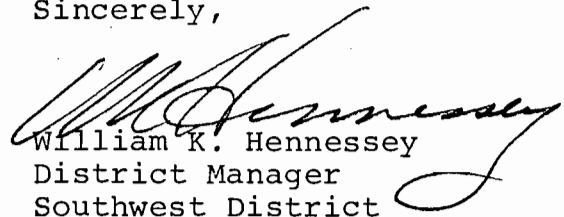
Dear Mr. Williams:

Enclosed are revised provisos for each of the above referenced permits. Per conversation and negotiations between John Ramil of TECO and Dan Williams of DER the problems with the original permits issued January 11, 1982 have been resolved.

Your petition rights for administrative hearing remain the same as described in the original permit.

The revised provisos replace the original provisos and become a part of each permit.

Sincerely,

  
William K. Hennessey  
District Manager  
Southwest District

WKH/rkt

cc: HCEPC

SPECIFIC CONDITIONS

1. Test the emissions for the following pollutant(s) at intervals of 12 months from date of permit and submit a copy of test data to the District Engineer of and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing.  
[Chapter 17-2.700(2), F.A.C.]

(X)Particulates	(X)Sulfur Oxides*
( )Fluorides	( )Nitrogen Oxides
(X)Plume Density	( )Hydrocarbons
	( )Total Reduced Sulfur

\*Fuel analysis is acceptable

2. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data [Chapter 403.161(1)(c), Florida Statutes].
3. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.
  - (A) Annual amount of materials and/or fuels utilized.
  - (B) Annual emissions (note calculation basis).
  - (C) Any changes in the information contained in the permit application.
4. Particulate emission limits for this unit is 0.1 lb TSP/MMBTU heat input per F.A.C. 17-2.650(2)(c)2.
5. Visible emissions are limited to a density of number 1 on the Ringelmann Chart (20 percent opacity) except that a shade as dark as No. 2 of the Ringelmann Chart (40% opacity) shall be permissible for no more than 2 minutes in any hour. [F.A.C. 17-2.600(5)(b)1].
6. Sulfur dioxide emissions are limited to 1.1 lbs. of SO<sub>2</sub> per million BTU heat input for this unit.

Applicant: Tampa Electric Company  
Page 4 of 4 of Permit No. A029-47722

7. Operation and Maintenance Plan for Particulate Control, F.A.C.  
17-2.650

A. Process Parameters

- |                         |                           |
|-------------------------|---------------------------|
| 1. MMBTU Input:         | 610                       |
| 2. Fuel:                | Low Sulfur No. 6 Fuel Oil |
| 3. BBL/hr burned:       | 86.2                      |
| 4. Ash Content:         | as sampled                |
| 5. Steam Temp.:         | 900 F                     |
| 6. Steam Press:         | 975 psig                  |
| 7. Steam Flow:          | 440 MPPH                  |
| 8. Air to Fuel Ratio:   | Continuously Monitored    |
| 9. Stack Height:        | 280 Ft.                   |
| 10. Boiler Make:        | Babcock & Wilcox          |
| 11. Firing Arrangement: | Front firing              |

B. Inspection and Maintenance Schedules

1. Planned outages: non peak load periods (Spring or Fall)
2. Continuously Monitored
  - a. Steam Flow
  - b. Steam Temp.
  - c. Steam Pressure
  - d. Excess Air (recorded)
  - e. Fuel oil press and temp.
3. Back calculated
  - a. Fuel oil flow
  - b. Daily samples for fuel oil analysis

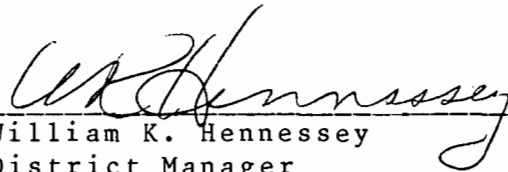
C. Records

Records of inspection, maintenance, and performance parameter data shall be retained for a minimum of two years and shall be made available to the Department upon request. [F.A.C. 17-2.650(2)(g)5].

Revised Provisos

Issued this 11<sup>th</sup> day of March,  
1982

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
William K. Hennessey  
District Manager

EXPIRATION DATE: January 25, 1987



SPECIFIC CONDITIONS

1. Test the emissions for the following pollutant(s) at intervals of 12 months from date of permit and submit a copy of test data to the District Engineer of and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing.  
[Chapter 17-2.700(2), F.A.C.]

(X)Particulates	(X)Sulfur Oxides*
( )Fluorides	( )Nitrogen Oxides
(X)Plume Density	( )Hydrocarbons
	( )Total Reduced Sulfur

\*Fuel analysis is acceptable

2. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data [Chapter 403.161(1)(c), Florida Statutes].
3. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.
  - (A) Annual amount of materials and/or fuels utilized.
  - (B) Annual emissions (note calculation basis).
  - (C) Any changes in the information contained in the permit application.
4. Particulate emission limits for this unit is 0.1 lb TSP/MMBTU/hr heat input per F.A.C. 17-4.650(2)(c)2.
5. Visible emissions are limited to a density of number 1 on the Ringelmann Chart (20 percent opacity) except that a shade as dark as No. 2 of the Ringelmann Chart (40% opacity) shall be permissible for no more than 2 minutes of any one hour. [F.A.C. 17-2.600(5)(a)1].
6. Sulfur dioxide emissions are limited to 1.1 lbs. of SO<sub>2</sub> per million BTU heat input for this unit.

Applicant: Tampa Electric Company  
Page 4 of 4 of Permit No. A029-47722

7. Operation and Maintenance Plan for Particulate Control, F.A.C.  
17-2.650

A. Process Parameters

- |                         |                           |
|-------------------------|---------------------------|
| 1. MMBTU Input:         | 610                       |
| 2. Fuel:                | Low Sulfur No. 6 Fuel Oil |
| 3. BBL/hr burned:       | 86.2                      |
| 4. Ash Content:         | as sampled                |
| 5. Steam Temp.:         | 900 F                     |
| 6. Steam Press:         | 975 psig                  |
| 7. Steam Flow:          | 440 MPPH                  |
| 8. Air to Fuel Ratio:   | Continuously Monitored    |
| 9. Stack Height:        | 280 Ft.                   |
| 10. Boiler Make:        | Babcock & Wilcox          |
| 11. Firing Arrangement: | Front firing              |

B. Inspection and Maintenance Schedules

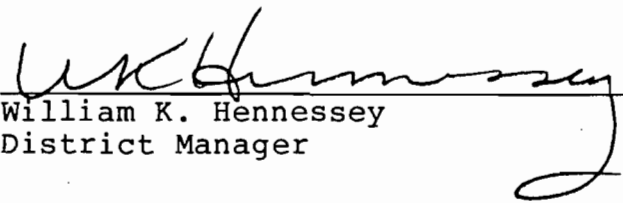
1. Planned outages: non peak load periods (Spring or Fall)
2. Continuously Monitored
  - a. Steam Flow
  - b. Steam Temp.
  - c. Steam Pressure
  - d. Excess Air (recorded)
  - e. Fuel oil press and temp.
3. Back calculated
  - a. Fuel oil flow
  - b. Daily samples for fuel oil analysis

C. Records

Records of inspection, maintenance, and performance parameter data shall be retained for a minimum of two years and shall be made available to the Department upon request. [F.A.C. 17-2.650(2)(g)5].

Issued this 27<sup>th</sup> day of January,  
1982

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

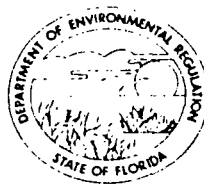
  
William K. Hennessey  
District Manager

EXPIRATION DATE: January 25, 1987

D.E.R.

SEP 17 1981

SOUTHWEST DISTRICT  
TAMPA



PAID SEP 7 1981

RECEIVED  
SEP 15 1981  
H.C.E.P.C.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
APPLICATION TO OPERATE/CONSTRUCT  
AIR POLLUTION SOURCES

SOURCE TYPE: AIR POLLUTION [ ] New<sup>1</sup> [X] Existing<sup>1</sup>  
APPLICATION TYPE: [ ] Construction [X] Operation [ ] Modification  
COMPANY NAME: Tampa Electric Company COUNTY: Hillsborough  
Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Hookers Point Station Boiler 5  
SOURCE LOCATION: Street Hemlock Avenue City Tampa  
UTM: East 358,000 m North 3,091,000 m  
Latitude 27 ° 56 ' 20 " N Longitude 82 ° 26 ' 34 " W  
APPLICANT NAME AND TITLE: Tampa Electric Company  
APPLICANT ADDRESS: P.O. Box 111, Tampa, Florida 33601

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Tampa Electric Company

I certify that the statements made in this application for an Operating permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

\*Attach letter of authorization

Signed: Jerry L. Williams Environmental  
Jerry L. Williams, Manager Planning  
Name and Title (Please Type)  
Date: 9-15-81 Telephone No. 813/228-4111

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/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 judgment, 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 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 maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: William N. Cantrell  
William N. Cantrell  
Name (Please Type)  
Tampa Electric Company  
Company Name (Please Type)  
P. O. Box 111, Tampa, Florida 33601  
Mailing Address (Please Type)

(Affix Seal)

Florida Registration No. 23494 Date: 9-15-81 Telephone No. 813/228-4111

<sup>1</sup>See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

## SECTION II: GENERAL PROJECT INFORMATION

- A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.
- The source is an oil fired boiler which generates steam to drive  
a turbine and produce electricity.
- 
- B. Schedule of project covered in this application (Construction Permit Application Only) Not Applicable
- Start of Construction \_\_\_\_\_ Completion of Construction \_\_\_\_\_
- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)
- |                                      |  |
|--------------------------------------|--|
| <u>Oil Conversion (Boilers 1-6)</u>  | <u>\$3,069,000 (High Sulfur to Low Sulfur)</u> |
| <u>Stack Extension (Boilers 1-6)</u> | <u>\$2,325,000</u>                             |
- 
- D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.
- A029-12942      Oct. 23, 1978 to July 15, 1983
- 
- E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code?         Yes      X   No
- F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr \* ; if seasonal, describe: Not Applicable
- 
- G. If this is a new source or major modification, answer the following questions. (Yes or No)      Not Applicable
1. Is this source in a non-attainment area for a particular pollutant?
    - a. If yes, has "offset" been applied? \_\_\_\_\_
    - b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_
    - c. If yes, list non-attainment pollutants.  
\_\_\_\_\_
  2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. \_\_\_\_\_
  3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. \_\_\_\_\_
  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? \_\_\_\_\_
  5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? \_\_\_\_\_

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

# SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable: Not Applicable

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): See Section III-E

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

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup> Rate per Ch. 17-2, F.A.C.	Allowable <sup>3</sup> Emission lbs/hr	Potential Emission <sup>4</sup>		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr *			lbs/hr	T/yr	
Sulfur Dioxide	671	802.9	1.1 lbs/MMBTU	671	671	2939	Fig 1
Particulates	61.0	23.2	0.1 lbs/MMBTU	61.0	61.0	267	

\* From 1980 Emission Inventory

D. Control Devices: (See Section V, Item 4) Not Applicable

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 0.1 pounds per million BTU heat input)

<sup>3</sup>Calculated from operating rate and applicable standard

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5</sup>If Applicable

E. Fuels From 1980 Emission Inventory

Type (Be Specific)	Consumption* Gal/Hr		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Fuel Oil	1871	3620	610

\*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 0.97 Percent Ash: N.A.  
 Density: N.A. lbs/gal Typical Percent Nitrogen: N.A.  
 Heat Capacity: N.A. BTU/lb 149,810 BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N.A. Maximum N.A.

G. Indicate liquid or solid wastes generated and method of disposal.

None

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 280 ft. Stack Diameter: 11.25 ft.  
 Gas Flow Rate: 356,400\* ACFM Gas Exit Temperature: 265 °F.  
 Water Vapor Content: \_\_\_\_\_ % Velocity: 59.8 FPS

\*Boilers 1,2, 5

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

Approximate Number of Hours of Operation per day \_\_\_\_\_ days/week \_\_\_\_\_

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

	Volume (ft) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ☐ Cyclone ☐ Wet Scrubber ☐ Afterburner ☐ Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_

---



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Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

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## SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. SEE FIGURE 1
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map). SEE FIGURE 2
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. SEE FIGURE 3

9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

### SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

#### NOT APPLICABLE

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?  
☐ Yes ☐ No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) ☐ Yes ☐ No

Contaminant	Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

1. Control Device/System:

2. Operating Principles:

3. Efficiency: \*

4. Capital Costs:

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

\*Explain method of determining D 3 above.



10. Stack Parameters

- |               |      |                 |     |
|---------------|------|-----------------|-----|
| a. Height:    | ft.  | b. Diameter:    | ft. |
| c. Flow Rate: | ACFM | d. Temperature: | °F  |
| e. Velocity:  | FPS  |                 |     |

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency\*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy\*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency\*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy\*\*:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

\*Explain method of determining efficiency.

\*\*Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency\*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

\*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

- a. Control Device
- b. Operating Principles:
- c. Efficiency\*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency\*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

\*Explain method of determining efficiency above.

(7) Emissions\*:

Contaminant

Rate or Concentration


(8) Process Rate\*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

\*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions\*:

Contaminant

Rate or Concentration

_____	_____
_____	_____
_____	_____

(8) Process Rate\*:

10. Reason for selection and description of systems:

\*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

NOT APPLICABLE

1. \_\_\_\_\_ no sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir \_\_\_\_\_

Other data recorded \_\_\_\_\_

## 2. Instrumentation, Field and Laboratory

- ## B. Meteorological Data Used for Air Quality Modeling

2. Surface data obtained from (location) \_\_\_\_\_

3. Upper air (mixing height) data obtained from (location) \_\_\_\_\_

4. Stability wind rose (STAR) data obtained from (location) \_\_\_\_\_

1. \_\_\_\_\_ Modified? If yes, attach description.
2. \_\_\_\_\_ Modified? If yes, attach description.
3. \_\_\_\_\_ Modified? If yes, attach description.
4. \_\_\_\_\_ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

#### D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sup>2</sup>	_____ grams/sec

#### E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

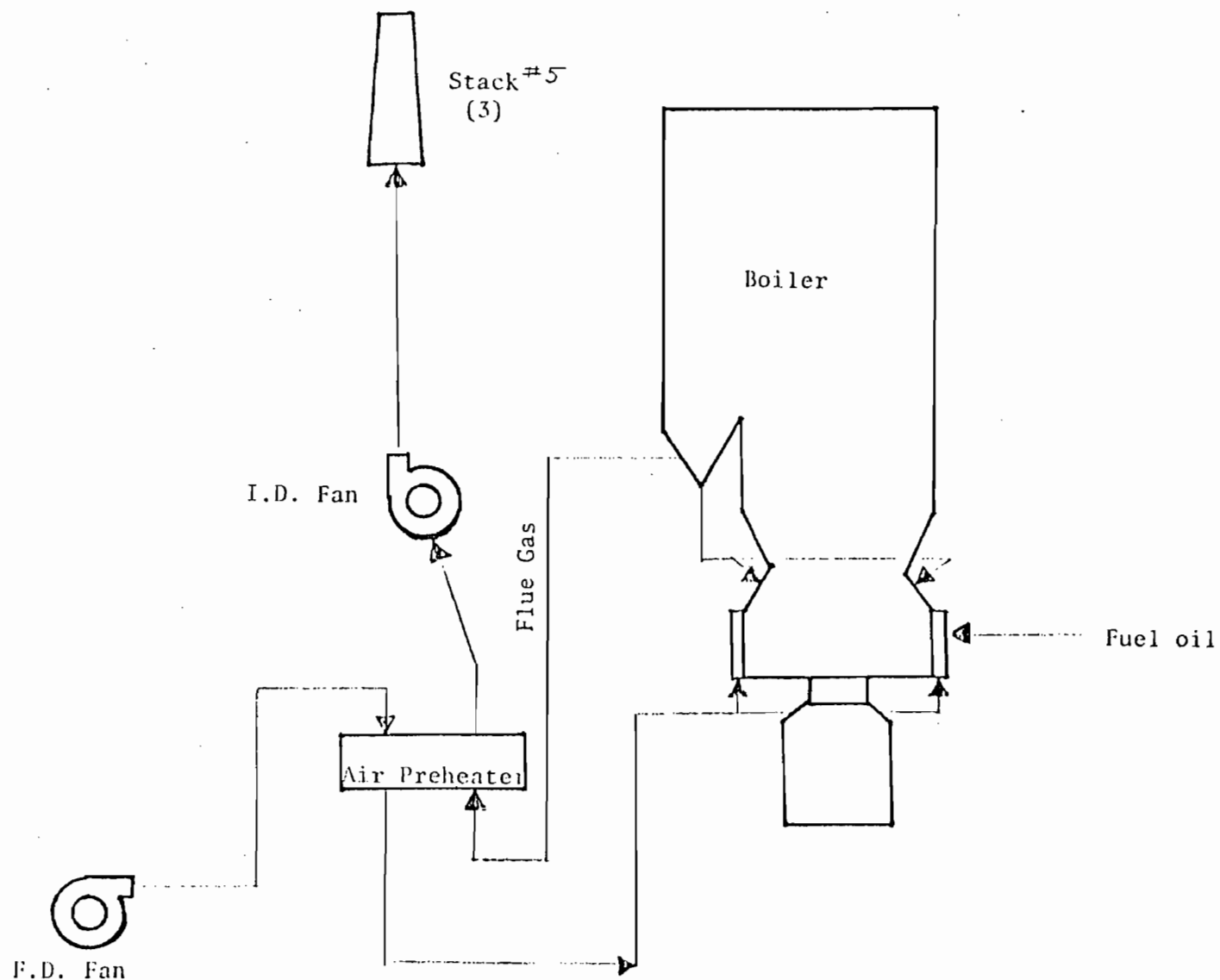
F. Attach all other information supportive to the PSD review.

\*Specify bubbler (B) or continuous (C).

- G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

FIGURE 1



FLOW DIAGRAM  
Hookers Point 5  
3-D1

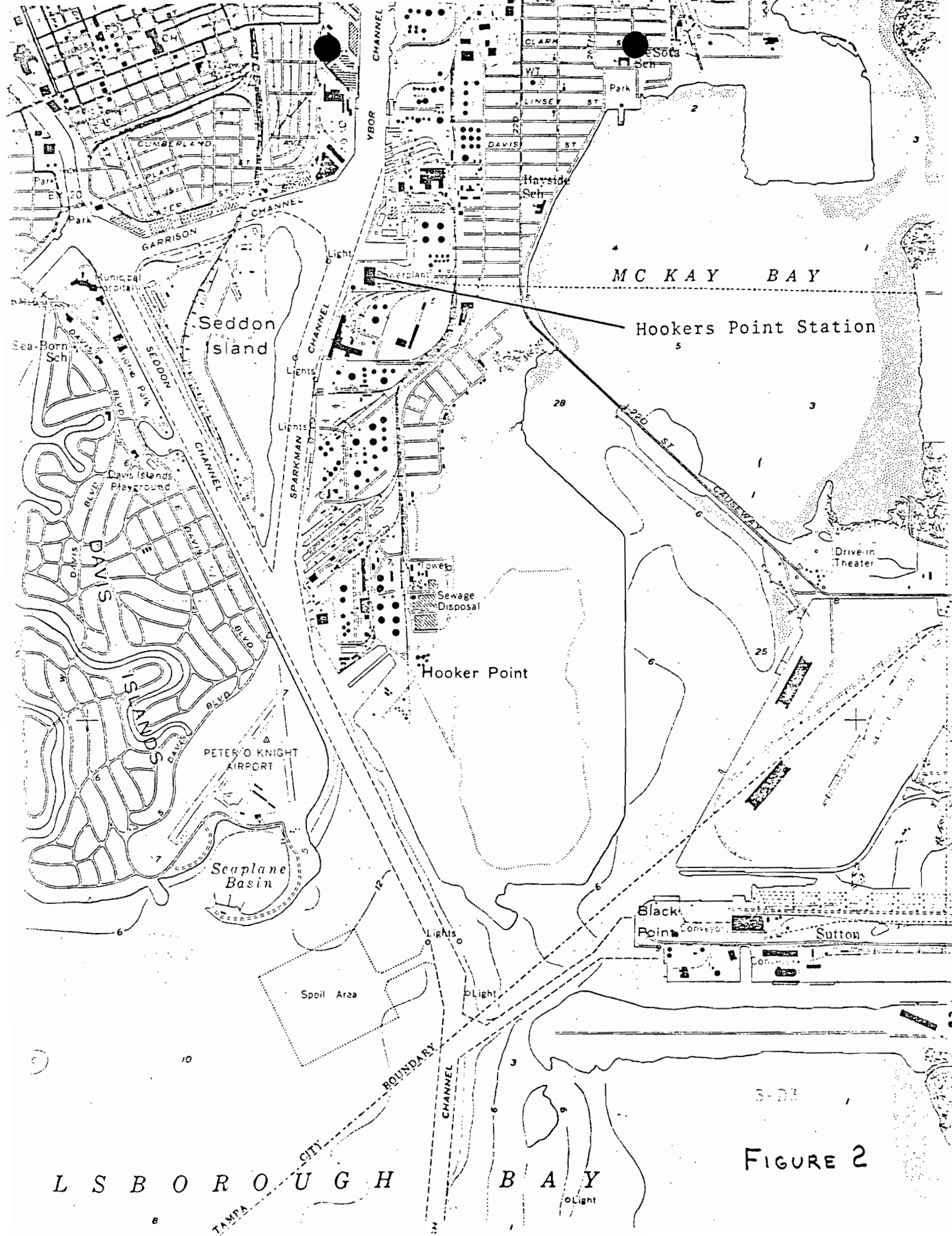
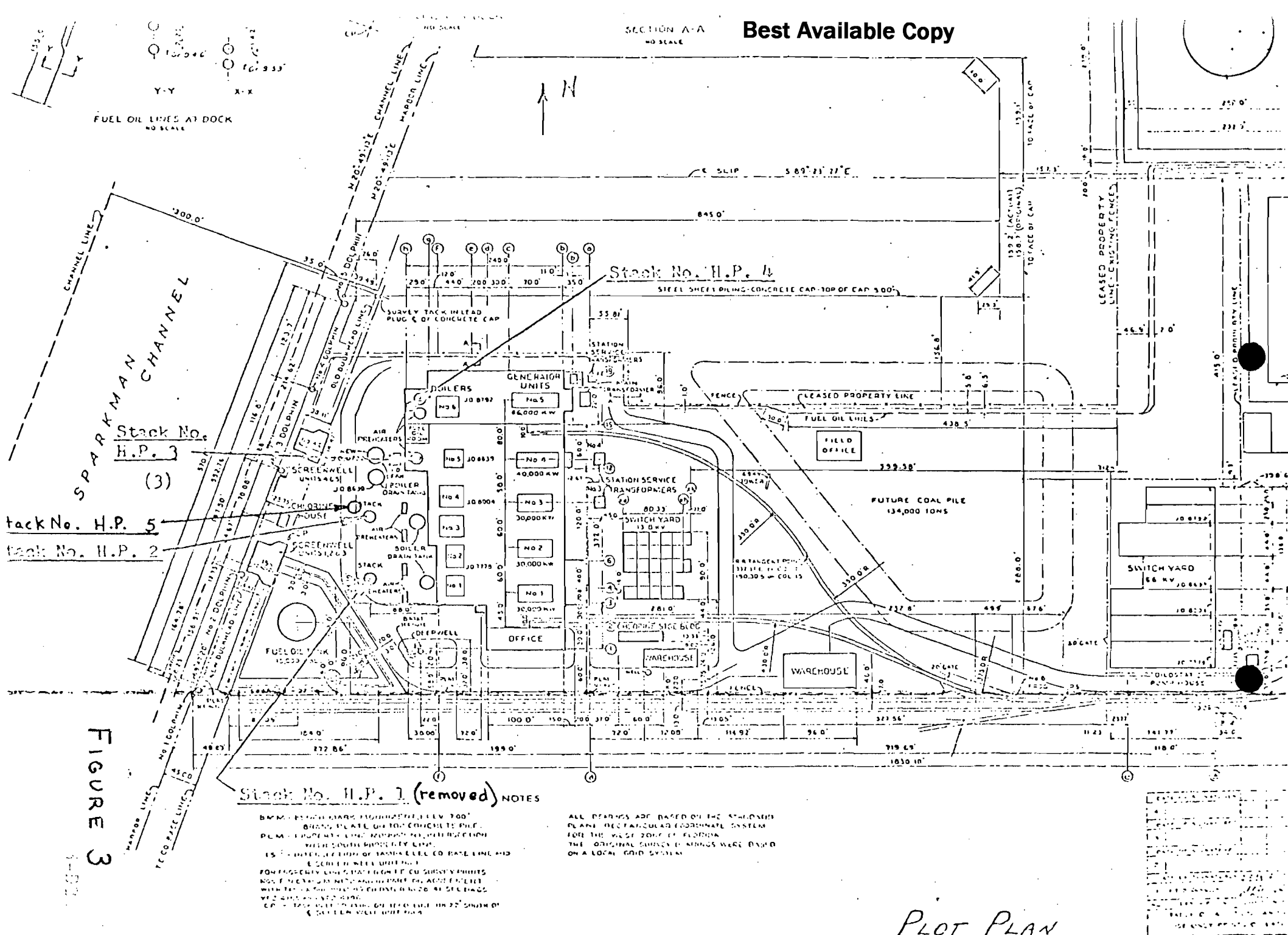


FIGURE 2



## ATTACHMENT

HOOKERS POINT 5

### CALCULATIONS

- Maximum/Allowable Emissions

$$\text{SO}_2 \quad \frac{1.1 \text{ lbs. SO}_2}{\text{MMBTU}} \times \frac{610 \text{ MMBTU}}{\text{HOUR}} = \frac{671 \text{ lbs. SO}_2}{\text{HOUR}}$$

$$\text{Particulate} \quad \frac{0.1 \text{ lbs.}}{\text{MMBTU}} \times \frac{610 \text{ MMBTU}}{\text{HOUR}} = \frac{61.0 \text{ lbs. Part.}}{\text{HOUR}}$$

- Potential Emissions

$$\text{SO}_2 \quad \frac{671 \text{ lbs. SO}_2}{\text{HOUR}} \times \frac{8760 \text{ Hour}}{\text{YEAR}} \times \frac{1 \text{ Ton}}{2000 \text{ lbs.}} = \frac{2939 \text{ Tons SO}_2}{\text{YEAR}}$$

$$\text{Particulate} \quad \frac{61.0 \text{ lbs.}}{\text{HOUR}} \times \frac{8760 \text{ Hour}}{\text{YEAR}} \times \frac{1 \text{ Ton}}{2000 \text{ lbs.}} = \frac{267 \text{ Tons}}{\text{YEAR}}$$

- Test Methods for Compliance

SO<sub>2</sub> - Fuel Analysis

Particulate - EPA Reference Method 17





POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

September 8, 1981

TO WHOM IT MAY CONCERN:

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

Very truly yours,

Alex Kaiser  
Vice President  
Energy Supply

# HOOKERS POINT STATION - BOILERS 1 THROUGH 6

## Operation and Maintenance Plan

### Introduction

Hookers Point Station is owned and operated by Tampa Electric Company. The plant is located on the shore of Hillsborough Bay off Sparkman Channel. The plant consists of six boilers and five turbine generator units. Boilers 1 through 5 are connected to a header system which supplies steam to four turbine generators. Boiler 6 supplies steam to turbine generator number 5.

The Hookers Point boilers burn No. 6 fuel oil. The boiler manufacturers, types, and in service dates are listed below:

<u>BOILER</u>	<u>SERVICE DATE</u>	<u>MANUFACTURER</u>	<u>TYPE</u>
1	1948	Babcock and Wilcox	Front Firing
2	1948	Babcock and Wilcox	Front Firing
3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
6	1955	Combustion Engineering	Front Firing

The boilers exhaust gases through stacks at an elevation of 280 feet.

### Process System Performance Parameters

Boiler 1 through 6 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. In addition, daily samples are taken for a monthly composite analysis. The design fuel consumption and steam flow rates are listed below.

<u>BOILER</u>	<u>DESIGN FUEL CONSUMPTION</u>	<u>DESIGN STEAM FLOW</u>
1	86 BBLS./HR	200,000 lbs./HR
2	86 BBLS./HR	200,000 lbs./HR
3	118.8 BBLS./HR	275,000 lbs./HR
4	118.8 BBLS./HR	275,000 lbs./HR
5	86.2 BBLS./HR	440,000 lbs./HR
6	126 BBLS./HR	625,000 lbs./HR

Actual fuel input to the boilers is monitored continuously and calculated on a weekly basis. Steam flow is monitored and recorded each shift. Fuel oil temperature and pressure are maintained at optimum levels. Temperature is recorded continuously while pressure is recorded each hour. Excess air is monitored and maintained at levels to produce efficient fuel combustion.

## Maintenance and Inspection

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.

During major outages, the boilers, controls, auxiliaries and duct work are inspected and repaired as necessary. On-going procedures include burner inspections and cleanings, burner tip replacements and maintenance of optimum flame patterns to achieve efficient fuel combustion.

## DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#0000000012947 CODE# DER PROCESSOR: BROWN DER OFFICE: TPA  
FILE NAME: WILLIAM J. JOHNSON/ DATE FIRST REC: 08/28/78 APPLICATION TYPE: A0  
APPL NAME: TECO - HOOKERS POINT 15 APPL PHONE: (813) 879-4444 PROJECT COUNTY: 29  
ADDR: P.O. BOX 444 CITY: TAMPA ST: FL ZIP: 33604  
AGNT NAME: WILLIAM J. JOHNSON AGNT PHONE: (813) 879-4444  
ADDR: P.O. BOX 444 CITY: TAMPA ST: FL ZIP: 33604

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /  
APPL COMPLETE DATE: 08/28/78 COMMENTS REC: N DATE REC: / / DATE REC: / /  
LETTER OF INTENT REC: Y DATE WHEN INTENT ISSUED: / / WAIVER DATE: / /

HEARING REQUEST DATES: / / / / / /  
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /  
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED: N

RECORD HAS BEEN SUCCESSFULLY UPDATED

FEF PD DATE#1: / / \$ RECEIPT# REFUND DATE: / / REFUND \$  
FEF PD DATE#2: / / \$ RECEIPT# REFUND DATE: / / REFUND \$  
APPL: ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED: IS DATE: 10/23/78  
REMARKS: HOOKERS POINT STATION BOILER 15



STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT  
7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610  
October 23, 1978

REUBIN O'D. ASKEW  
GOVERNOR

Tampa Electric Company  
Hillsborough County -- AP

JOSEPH W. LANDERS, JR.  
SECRETARY  
P. David Puchaty  
District Manager

Dr. William J. Johnson, Senior Consulting Engineer  
Acting Manager, Environmental Planning  
Tampa Electric Company  
P.O. Box 111  
Tampa, Florida 33601

Dear Dr. Johnson:

Pursuant to Section 403.061(16), Florida Statutes, your application has been approved by the Department and therefore, we are issuing to you the enclosed permit no. A029-12942 which will expire on July 15, 1983.

This permit is not effective unless you accept it, including any and all of the conditions contained therein. If you do not choose to accept it, you must file an appropriate petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes.

A petition for a hearing must comply with the requirements of Florida Administrative Code, Section 28-5.15 and be filed (postmarked) with the Secretary of the Department of Environmental Regulation at 2562 Executive Center Circle, East, Montgomery Building, Tallahassee, Florida 32301, with a copy to this office within fourteen (14) days from receipt of this letter. Petitions which are not filed in accordance with the above provisions may be subject to dismissal.

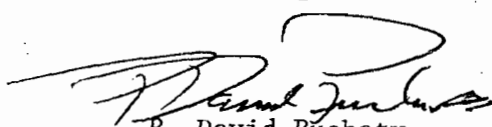
Any time limits imposed in the permit are a condition to this permit and are enforceable under Section 403.061, Florida Statutes. You are hereby placed on notice that the Department will review this permit to check for compliance and will initiate enforcement action for violations of the conditions and requirements of this permit.

Your continued cooperation in this matter is appreciated. Please refer to your assigned permit number in all future communications.

Sincerely,

cc: Central Records  
HCEPC  
William J. Johnson, P.E.

Enclosures

  
P. David Puchaty  
District Manager

RULES OF THE ADMINISTRATION COMMISSION  
MODEL RULES OF PROCEDURE  
CHAPTER 28-5  
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners;
  - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
  - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
  - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
  - (f) A demand for the relief to which the petitioner deems himself entitled; and
  - (g) Such other information which the petitioner contends is material.

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Note: At a formal hearing all parties shall have an opportunity to present evidence and argument on all issues involved, to conduct cross-examination and submit rebuttal evidence, to submit proposed findings of fact and orders, to file exceptions to any order or hearing officer's recommended order, and to be represented by counsel.

# STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

HILLSBOROUGH COUNTY

## OPERATION PERMIT

FOR Tampa Electric Company

P. O. Box 1110

Tampa, Florida 33601

PERMIT NO. A029-12942 DATE OF ISSUE October 23, 1978

PURSUANT TO THE PROVISIONS OF SECTIONS 403.061 (16) AND 403.707 OF CHAPTER 403, FLORIDA STATUTES AND CHAPTERS 17-4 AND 17-7, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO

Dr. William J. Johnson, Senior Consulting Engineer, Acting Manager, Environmental Planning

FOR THE OPERATION OF THE FOLLOWING:

Hooker's Point Station No. 5 Steam Generator Using Low Sulfur No. 6 Fuel Oil Subject to Attached Conditions of Approval Nos. 1, 2, 3, 4, 5, & 6.

47 MW

LOCATED AT Foot of Hemlock Street, Tampa

UTM: 17N 358.0E 3091.0N

IN ACCORDANCE WITH THE APPLICATION DATED August 25, 1978

ANY CONDITIONS OR PROVISOS WHICH ARE ATTACHED HERETO ARE INCORPORATED INTO AND MADE A PART OF THIS PERMIT AS THOUGH FULLY SET FORTH HEREIN. FAILURE TO COMPLY WITH SAID CONDITIONS OR PROVISOS SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL SUBJECT THE APPLICANT TO SUCH CIVIL AND CRIMINAL PENALTIES AS PROVIDED BY LAW.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUE UNTIL July 15, 1983

OR UNLESS REVOKED OR SURRENDERED, AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

DISTRICT ENGINEER

JOSEPH W. LANDERS, JR.  
SECRETARY

Roger P. Stewart, Director  
Hillsborough Co. Env. Protection Commission

DISTRICT MANAGER



State of Florida  
Department of Environmental Regulation

OPERATION PERMIT CONDITIONS  
FOR AIR POLLUTION SOURCES

Permit No.: A029-12942

Date: October 23, 1978

An (X) indicates applicable conditions

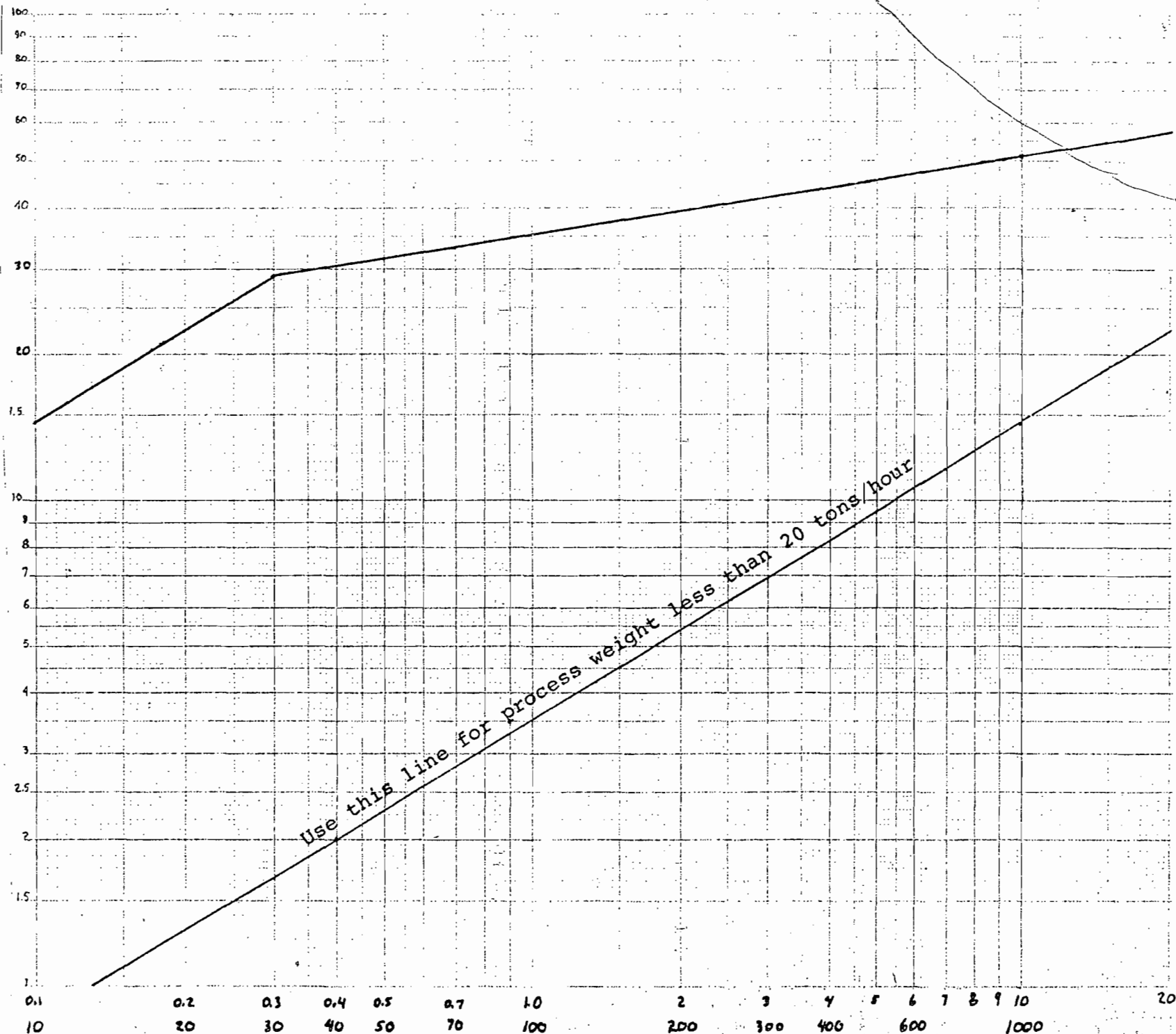
- (X) 1. The permit holder must comply with Florida Statute, Chapter 403 and the applicable Chapters of the Department of Environmental Regulation in addition to the conditions of this permit (Chapter 403.161(1)(b), Florida Statutes).
- (X) 2. Test the emissions for the following pollutant(s) at intervals of 12 months from the date March 29, 1978 and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing (Chapter 17-2.07(1), Florida Administrative Code (F.A.C.)).
- |                   |                          |
|-------------------|--------------------------|
| (X) Particulates  | (X) Sulfur Oxides*       |
| ( ) Fluorides     | ( ) Nitrogen Oxides      |
| (X) Plume Density | ( ) Hydrocarbons         |
|                   | ( ) Total Reduced Sulfur |
- \*Fuel analysis is accepted in lieu of SO<sub>2</sub> stack sampling.
- (X) 3. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Chapter 403.161(1)(c), Florida Statutes).
- (X) 4. Submit for this source quarterly reports showing the type and monthly quantities of fuels used in the operation of this source. Also state the sulfur content of each fuel (Chapter 17-4.14, F.A.C.).
- (X) 5. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.
- (A) Annual amount of materials and/or fuels utilized.
  - (B) Annual emissions (note calculation basis).
  - (C) Any changes in the information contained in the permit application.



- (x) 6. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the District Office of the D.E.R. as per Chapter 17-4.13, F.A.C. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement actions by the Department.
- ( ) 7. According to the Process Weight Table within Chapter 17-2.04(2), F.A.C., the maximum allowable emission rate of particulate matter for a process rate of \_\_\_\_\_ tons/hour is \_\_\_\_\_ pounds/hour. At lesser process rates, the allowable emission rates can be determined from the graph.
- ( ) 8. This permit is associated with a Development of Regional Impact (D.R.I.). It does not waive any other permits that may be required from this or any other state, federal, or local agency.

\*Fuel analysis is accepted in lieu of SO<sub>2</sub> stack sampling

POUNDS OF PARTICULATES



PROCESS WEIGHT TONS/HOUR

PROCESS WEIGHT TABLE

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

To: _____	Locn.: _____
To: _____	Locn.: _____
To: _____	Locn.: _____
From: _____	Date: _____

TO: P. David Puchaty

THRU: Dan A. Williams *SW*

FROM: William H. Brown, II *WB*

DATE: October 18, 1978

SUBJECT: TECO - Hookers Point #5

*A029-12942*

TECO Hooker's Point #5 is a 47 MW steam generator fired with #6 fuel oil containing ~~0.76~~ sulfur.

*0.76%*

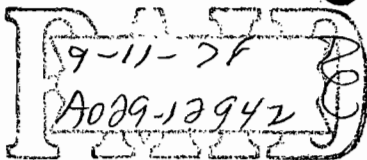
The emissions are as follows:

	Emitted	Allowed
TSP	0.05 lb/MMBTU	0.1 lb/MMBTU
SO <sub>2</sub>	0.77 lb/MMBTU	1.1 lb/MMBTU

HCEPC has reviewed this application and R. Stewart has signed the permit.

The above operation being in compliance with Florida regulations I request this application and permit be approved.

WHB/ftb



**D.E.R.**  
AUG 11 1978

**RECEIVED**  
AUG 28 1978  
**H.C.E.P.C.**

**SOUTHWEST DISTRICT**  
**STATE OF FLORIDA TAMPA**  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**  
**APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES**

Source Type Air Pollution [XX] Incinerator [ ]  
Type application: [XX] Operation [ ] Construction  
Source Status: [ ] New [XX] Existing [ ] Modification  
Source Name: Hookers Point Station Boiler 5 County Hillsborough  
Source Location: Street Foot of Hemlock Street City Tampa  
UTM: East 358,000m North 3,091,000m  
Appl. Name and Title: Tampa Electric Company  
Appl. Address: P. O. Box 111, Tampa, Florida 33601

**STATEMENTS BY APPLICANT AND ENGINEER**

**A. APPLICANT**

The undersigned owner or authorized representative of \* Tampa Electric Company is fully aware that the statements made in this application for a operating permit are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution control 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 or revisions thereof. 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 establishment.

William J. Johnson  
Signature of the Owner or Authorized Representative

Date: August 25, 1978 Telephone No.: 813/879-4111

\*Attach a letter of authorization. If applicant is a corporation, a Certificate of Good Standing must be submitted with application. This may be obtained, for a \$5.00 charge, from the Secretary of State, Bureau of Corporate Records, Tallahassee, Florida 32304.

**B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA**

This is to certify that the engineering features of this pollution control project have been designed/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 judgment, 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 regulations of the Department. It is also agreed that the undersigned will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signature William J. Johnson  
Name William J. Johnson

Mailing Address P. O. Box 111  
Tampa, Fla. 33601

Company Name Tampa Electric Company

Telephone No.: 813/879-4111

Florida Registration Number 12-142  
(Affix Seal)

Date August 25, 1978

### DETAILED DESCRIPTION OF SOURCE

- A. Describe the nature and extent of the project. Refer to existing pollution control facilities, expected improvement in performance of the facilities and state whether the project will result in full compliance. Attach additional sheet if necessary.

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- B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Start of Construction N/A  
Completion of Construction \_\_\_\_\_

- C. Costs of Construction (Show a breakdown of costs for individual components/units of the project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit.

Oil conversion (all six boilers)	\$3,069,000
Stack extension (all stacks)	2,171,000

- D. For this source indicate any previous DER permit: issuance dates, and expiration dates; and orders and notices.

None

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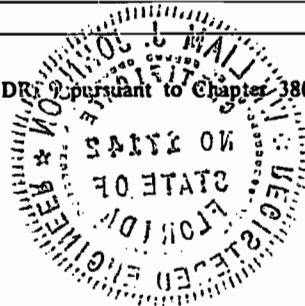
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- E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? .....Yes XX No



**AIR POLLUTION SOURCES & CONTROL DEVICES**  
(other than incinerators)

**A. Identification of Air Contaminants**

- 1) ☒ Particulates
  - a) ☐ Dust
  - b) ☒ Fly Ash
  - c) ☐ Smoke
  - d) ☐ Other (Identify)
- 2) ☒ Sulfur Compounds
  - a) ☒ SO<sub>x</sub> as SO<sub>2</sub>
  - b) ☐ Reduced Sulfur as H<sub>2</sub>S
  - c) ☐ Other (Identify)
- 3) ☒ Nitrogen Compounds
  - a) ☒ NO<sub>x</sub> as NO<sub>2</sub>
  - b) ☐ NH<sub>3</sub>
  - c) ☐ Other (Identify)
- 4) ☐ Fluorides
- 5) ☐ Acid Mist
- 6) ☐ Odor
- 7) ☐ Hydrocarbons
- 8) ☐ Volatile Organic Compounds
- 9) ☐ Other (Specify) \_\_\_\_\_

**B. Raw Materials and Chemicals Used (Be Specific)**

Description	Utilization Rate lbs./hr.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
N/A				

**C. Process Rate:**

- 1) Total Process input Rate\* N/A Units.
- 2) Product Weight\* electricity (megawatts) Units.
- 3) Normal Operating Time 24 hrs/day, 7 days/week, if seasonal describe: N/A  
 hrs./day \_\_\_\_\_ days/wk. \_\_\_\_\_ wks/yr. \_\_\_\_\_

**D. Airborne Contaminants Discharged:**

Name of Contaminant	Actual** Discharge		Discharge Criteria Rate*	Allowable Discharge Lbs./hr. (1)	Relate to Flow Diagram
	lbs./hr. (1)	T/yr. (1)			
SO <sub>2</sub>	475	1798	1.1 lbs/MMBTU	679	(3)
Particulates	31	117	0.1 lbs/MMBTU	62	(3)
NOTE: (1) Calculated from test data and fuel analysis of March 29, 1978					

\*Refer to Chapter 17-2.04(2), Florida Administrative Code.  
(Discharge Criteria: Rate= #/ton P<sub>2</sub>O<sub>5</sub>, #/M BTU/hr., etc.)

\*\*Estimate only if this is an application to construct.

D. Airborne Contaminants Discharged. (Cont'd.)

Name of Contaminant	Hourly Emission <del>xxxxx</del> lbs/MMBTU	Daily Emission (lb./day)	Yearly Emission (T/yr.)	Basis for Emission Estimate (Test Data, Material Balance)
Sulfur dioxide	0.77	See previous	page	Test data from March 29, 1978 stack test
Particulate	0.05	See previous	page	Test data from March 29, 1978 stack test

E. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency*	Conditions of Operations	Basis for Efficiency Operational Data, Test, Design, Data)
None				

\*See required supplement.

(Include any test data and/or design data for efficiency substantiation)

F. Fuels

Type (Be Specific, includes %S, etc.)	Daily Consumption * (1) gal/hr		Maximum Heat Input MBTU/hr.
	Avg./hr.	Max./hr.	
No. 6 oil 1.0%	3620	1658	610
NOTE: (1) From the 1977 HCEPC Emission Inventory			

\* Units: Natural Gas -MCF/hr.; Fuel Oils, Coal-lbs./hr.

Fuel Analysis:

Percent Sulfur 0.76 Percent Ash N/A

Density N/A lb./gal.

Heat Capacity 18,678 BTU/lb. BTU/gal.

Other Fuel Contaminants

- G. Describe briefly, without revealing trade secrets, the processes/operations generating the airborne emissions identified in this application.

Oil is burned to generate steam which drives a turbine to generate electricity.

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- H. Indicate liquid or solid wastes generated and method of disposal.

N/A

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- I. Emission Stack Geometry and Flow Characteristics, (Provide Date for each Stack).

Stack Height 280 ft, Stack Diameter 11.25 ft.  
356,400 max.  
Gas Flow Rate 190,104 avg. ACFM, Gas Exit Temperature 265 °F  
(boilers 1,2,5)

- J. Required Supplements:

1. Total process input rate and product weight – show deviation. Maximum heat input to boiler is 610 MMBTU/Hr. Operating range is from approximately 35% to 100% load.
2. Efficiency Estimation. N/A
3. An 8½" x 11" flow diagram, which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate whether raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.  
See Figure 3-D1
4. An 8½" x 11" plot plan showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.  
See Figure 3-D2
5. An 8½" x 11" plot plan showing the exact location of the establishment, and points of airborne emissions in relation to the surrounding area, residences and other permanent structures and roadways.  
See Figure 3-D3
6. If applicable, provide a brief description of the control device or treatment system serving the discharge point for airborne contaminants identified in this application. Include details of the manufacturer, model, size, type and capacity for control/treatment device and the features of the discharge point (height above ground, diameter, period(s) of discharge and discharge temperature).  
N/A
7. Plans for storm water control during and after construction.  
N/A



# INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Patho- logical)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs./Hr. incinerated							

Description of Waste: \_\_\_\_\_

Total Weight Incinerated lbs./hr. \_\_\_\_\_ Design Capacity lbs./hr. \_\_\_\_\_

Approximate Number of Hours of Operation per Day \_\_\_\_\_, days/week \_\_\_\_\_

Manufacturer \_\_\_\_\_ Model No.: \_\_\_\_\_

Date Constructed: \_\_\_\_\_

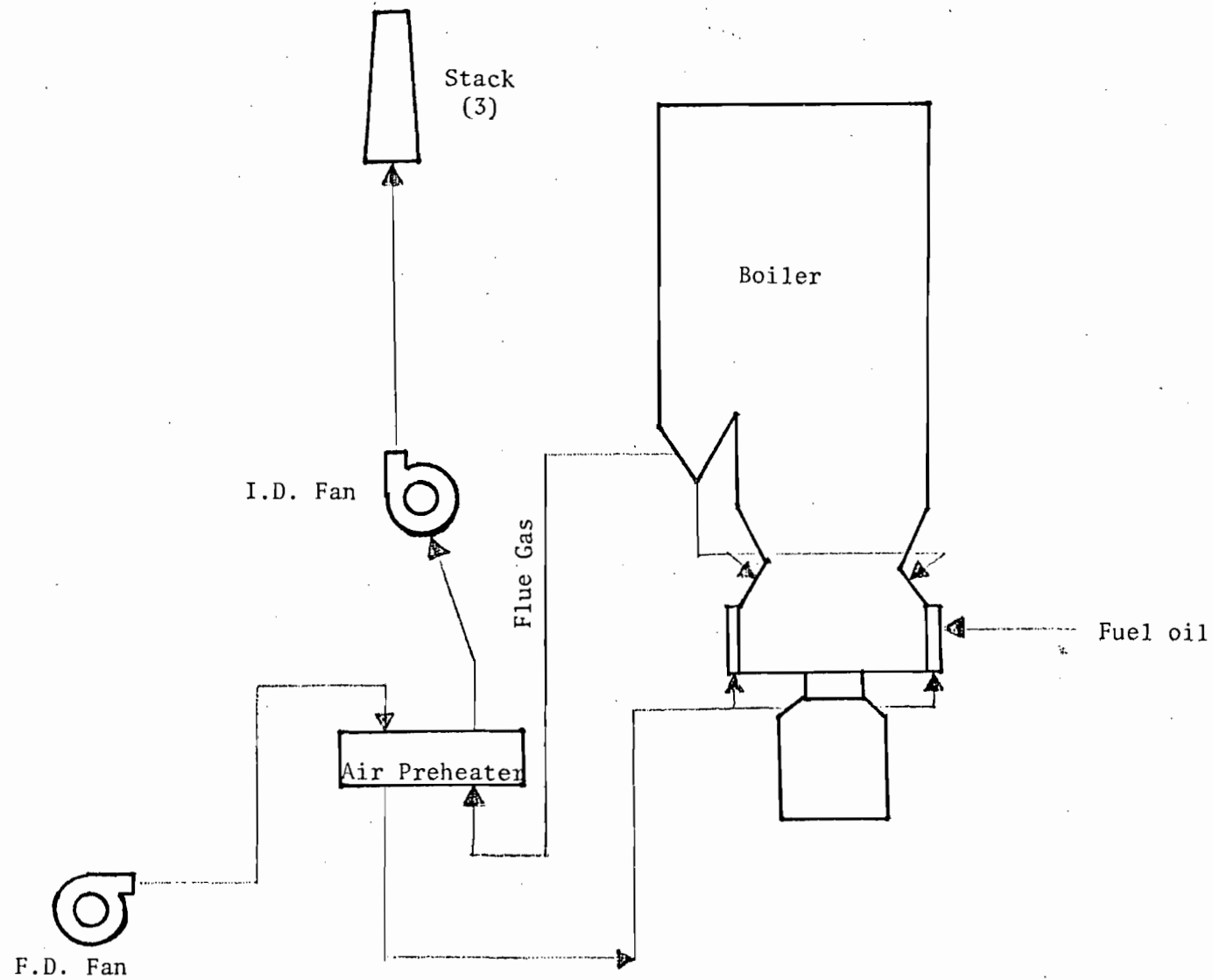
	Volume (ft. <sup>3</sup> ) <sup>a</sup>	Heat Release (BTU/hr.)	Fuel		Temp. (° F)
			Type	BTU/hr.	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp.: \_\_\_\_\_ °F

Type of Pollution Control Device    ☐ Cyclone        ☐ Wet scrubber        ☐ Afterburner  
    ☐ Other (Specify): \_\_\_\_\_

Brief Description of Operating Characteristics of Control Device: \_\_\_\_\_

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.) \_\_\_\_\_

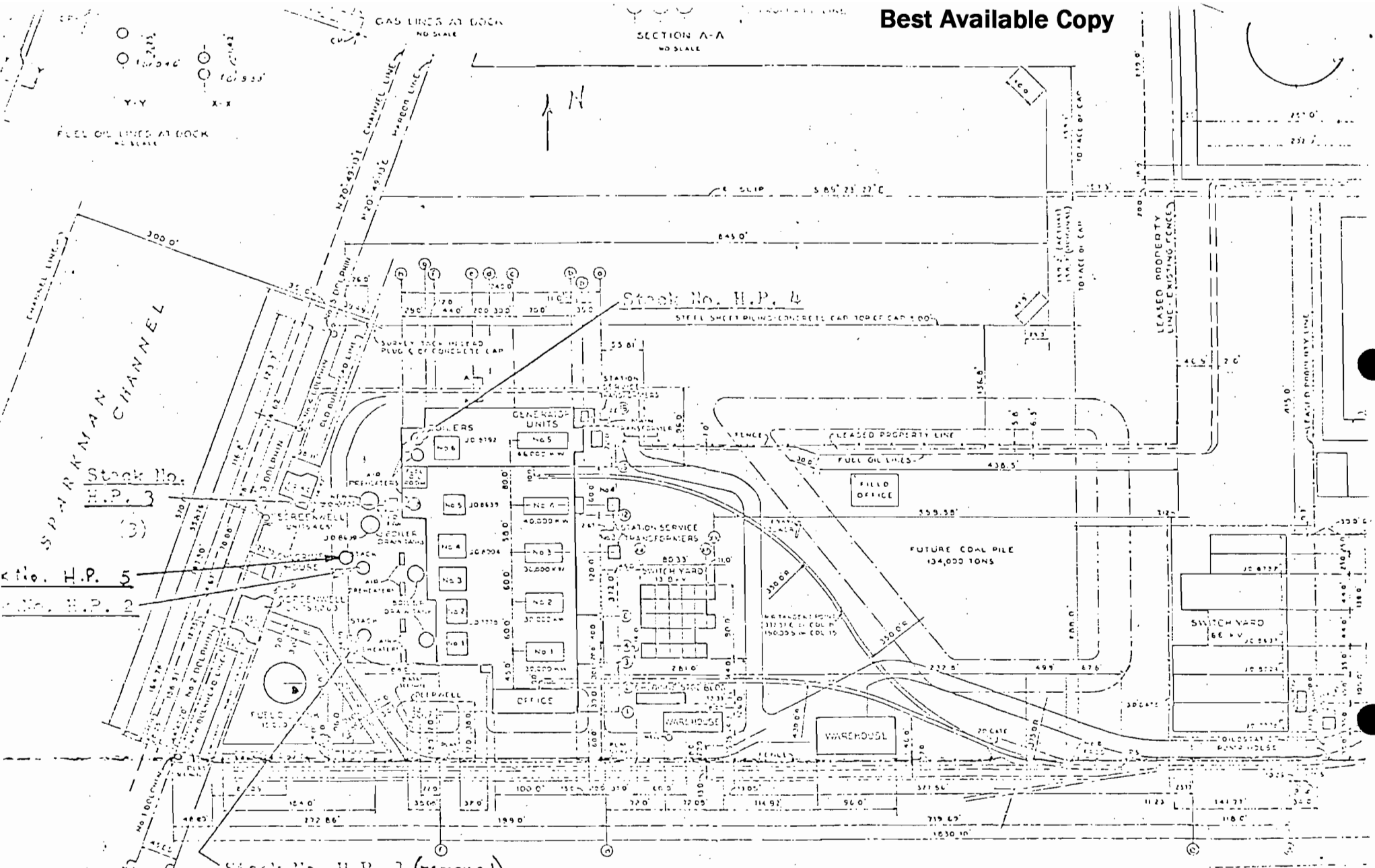


FLOW DIAGRAM  
Hookers Point 5  
3-D1

SECTION A-A  
NO SCALE

GAS LINES AT DOCK  
NO SCALE

FUEL OIL LINES AT DOCK  
NO SCALE



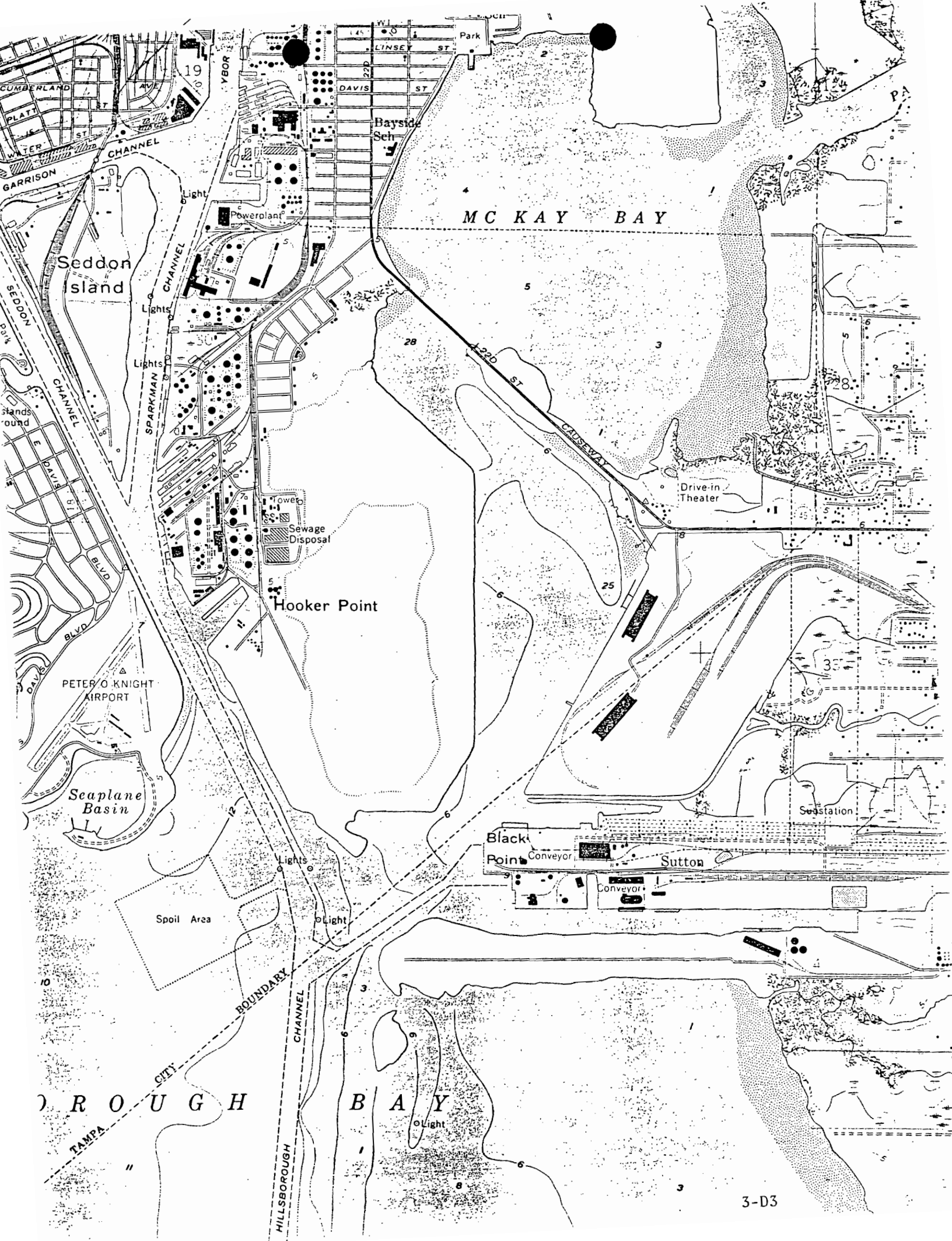
Stock No. H.P. 1 (removed) NOTES

BEING PLANNED FOR REMOVAL BY 700' BRIDGE PLATE ON TOP CONCRETE PILE. PLANNED FOR REMOVAL AND RECONSTRUCTION WITH SOUTH BRIDGE PILE. IS THE INTERSECTION OF SPARKMAN CHANNEL AND (SEE PLAN WITH UNIT 1) FOR REMOVAL AND RECONSTRUCTION. ALSO FOR REMOVAL AND RECONSTRUCTION. WITH THE REMOVAL AND RECONSTRUCTION. SEE PLAN WITH UNIT 1. SEE PLAN WITH UNIT 1.

ALL DIMENSIONS ARE BASED ON THE SPARKMAN PLANNED RECTANGULAR COORDINATE SYSTEM FOR THE WEST COAST OF FLORIDA. THE ORIGINAL SURVEY POINTS WERE FOUND ON A LOCAL GRID SYSTEM.

PLOT PLAN

CITY OF NEW YORK		COUNTY OF NEW YORK	
IN SENATE		JANUARY 1, 1912	
REPORT		OF THE	
COMMISSIONERS OF THE LAND OFFICE		IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE	
JANUARY 1, 1912		PUBLISHED BY THE COMMISSIONERS OF THE LAND OFFICE	
NEW YORK		1912	
PRINTED BY THE COMMISSIONERS OF THE LAND OFFICE		1912	
100 NASSAU ST.		NEW YORK	



HOOKERS POINT 5  
PERMIT CALCULATIONS

ACTUAL DISCHARGE

$$\text{SO}_2 \quad 0.77 \text{ lbs/MMBTU} \times 617 \text{ MMBTU/hr} = 475 \text{ lbs/hr}$$

$$475 \text{ lbs/hr} \times \frac{1 \text{ ton}}{2000 \text{ lbs.}} \times \frac{7570 \text{ hrs.}}{\text{Year}} = 1798 \text{ tons/year}$$

$$\text{Part.} \quad 0.05 \text{ lbs/MMBTU} \times 617 \text{ MMBTU/hr} = 30.85 \text{ lbs/hr}$$

$$30.85 \text{ lbs/hr} \times \frac{1 \text{ ton}}{2000 \text{ lbs.}} \times \frac{7570 \text{ hrs}}{\text{Years}} = 117 \text{ tons/year}$$

ALLOWABLE DISCHARGE

$$\text{SO}_2 \quad 1.1 \text{ lbs/MMBTU} \times 617 \text{ MMBTU/hr} = 679 \text{ lbs/hr}$$

$$\text{Part.} \quad 0.1 \text{ lbs/MMBTU} \times 617 \text{ MMBTU/hr} = 62 \text{ lbs/hr}$$

# State of Florida

DEPARTMENT OF STATE • DIVISION OF CORPORATIONS

I certify from the records of this office that TAMPA ELECTRIC COMPANY, is a corporation organized under the laws of the State of Florida.

The charter number for this corporation is 157782.

I further certify that said corporation has filed all annual reports and paid all annual report filing fees due this office through December 31, 1977, and has until July 1, 1978 to file its 1978 annual report, before becoming delinquent.

GIVEN under my hand and the Great  
Seal of the State of Florida, at  
Tallahassee, the Capital, this the  
22nd day of March, 1978.



*Gene A. Smathers*  
SECRETARY OF STATE

# PERMIT APPLICATION DATA INPUT SHEET

Sequence number assigned by main office  
region code 1 Mo Yr 3 6 number 7 10

Section 1

Source name 1 Tampa Electric Co.

street address Foot of Hemlock Ave Tampa

ZIP 33601 county code 29

(col 1-10 duplicate) Owner or Agent name 2 H. A. Moshell Jr.

Section 2

street address P.O. Box 111 city Tampa zip 33601

(col 1-10 duplicate) Application Type code 3 0 AP

Section 3

Industry Type (SIC code) 17 22

Location UTM East U North 31 37

Latitude deg 1 min 29 sec 24 Longitude deg 1 min 31 sec 27

Effluent description Boiler # 5 Hookers Point Station

continued effluent description (if needed)

Section 4

(col 1-10 duplicate) 4 11 12 45 46 80

## Liquid effluent disposal and analysis

Section 5

(col 1-10 duplicate) Type of receiving body - code 5  
(surface fresh = 1, salt = 2, etc.)  
(central sewer system = 7)

Additional description of surface waters - code 13  
(drainage ditch = 1, river = 2, etc.)

station number assigned to influent 14

effluent 26

Record raw influent and final effluent analysis on water quality report forms, use agency code APPLIC if analysis is from applicant.

effluent flow rate MGD 34 45

5 day BOD load lb/day 46 57

## Liquid effluent additional remarks

Section 6

(col 1-10 duplicate) 6 11 12 45 46 80

AIR POLLUTION DISPOSAL AND ANALYSIS(col 1-10 duplicate) Number of discharges this application 7  
11 12Number of discharges, this site 15 number currently not permitted 20  
15 17 18 20Average total flow rate SCFM 64,200  
21 30Total particulate, lb/day 310 sulfur oxides, lb/day 15,700  
31 40 41 50nitrogen oxides, lb/day 60 fluoride, lb/day 70  
51 60 61 70other pollutants, lb/day 90  
71 90SIGNIFICANT DATES AND PERMIT NUMBERS

(col 1-10 duplicate) Use month-day-year, all dates

permit issued 8 modyyr

11 12 17

Permit number 16 27  
16 27CONSTRUCTION PERMITS AND TEMPORARY PERMITSProject completion date 28 33  
28 33Permit expires 34 39 modyyr  
34 39OPERATING PERMITSTemporary or old construction permit number 40 49  
40 49

Implementation schedule:

A. Estimated filing of application 50 55 modyyr  
50 55B. Estimated start of construction 56 61  
56 61C. Estimated date for compliance 62 69  
62 69



Unit #5



RECEIVED

 FEB 26 1971  
 DEPT. OF A.W.P.C.  
 WEST CENTRAL REGION  
 WINTER HAVEN

 State of Florida  
 Department of Air and Water Pollution Control

 Application For Permit to Operate Air Pollution  
 Control Facilities

 Applicant  
 (Owner or authorized agent)

 H. A. Moshell, Jr.  
 General Manager of Production

(Name and Title)

Name of Establishment

 TAMPA ELECTRIC COMPANY  
 Hookers Point Station - No. 5 Boiler

(Corporation, Company, Political SD, Firm, etc.)

Mailing Address

P.O. Box 111 Tampa, Florida 33601

Location of Pollution Source

 Foot of Hemlock Avenue, Tampa  
 (Number and Street) (City)

 Hillsborough  
 (County)

Nature of Industrial Operation

Generation of Electricity

Permit Applied For Operating:

New Source

☐

Existing Source

☒

Existing Source after modification

☐

Existing Source after Expansion

☐Existing Source After relocation,  
expansion or reconstruction☐

Project Engineer:

B. D. Kitching

Name

TAMPA ELECTRIC COMPANY

Firm

P.O. Box 111, Tampa, Florida 33601

Mailing Address

Signature

6503

Florida Registration Number

For Department's Use Only

Permit No.

#5

Date:

The undersigned owner or authorized representative\* of TAMPA ELECTRIC COMPANY  
is fully aware that the statements made in this form and the attached exhibits and statements constitute the  
application for a Operating Permit from the Florida Department of Air and Water Pollution  
Control and certifies that the information in this application is true, correct and complete to the best of his  
knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403 Florida  
Statutes and all the rules and regulations of the Department or revisions thereof. He also understands that the  
Permit is non transferable and, if granted a permit, will promptly notify the Department upon sale or legal  
transfer of the permitted establishment.

H. A. Moshell, Jr.

Signature of owner or agent.

H. A. Moshell, Jr.  
General Manager of Production

Name and Title

Date: 2-25-71

\*Attach letter of authorization.

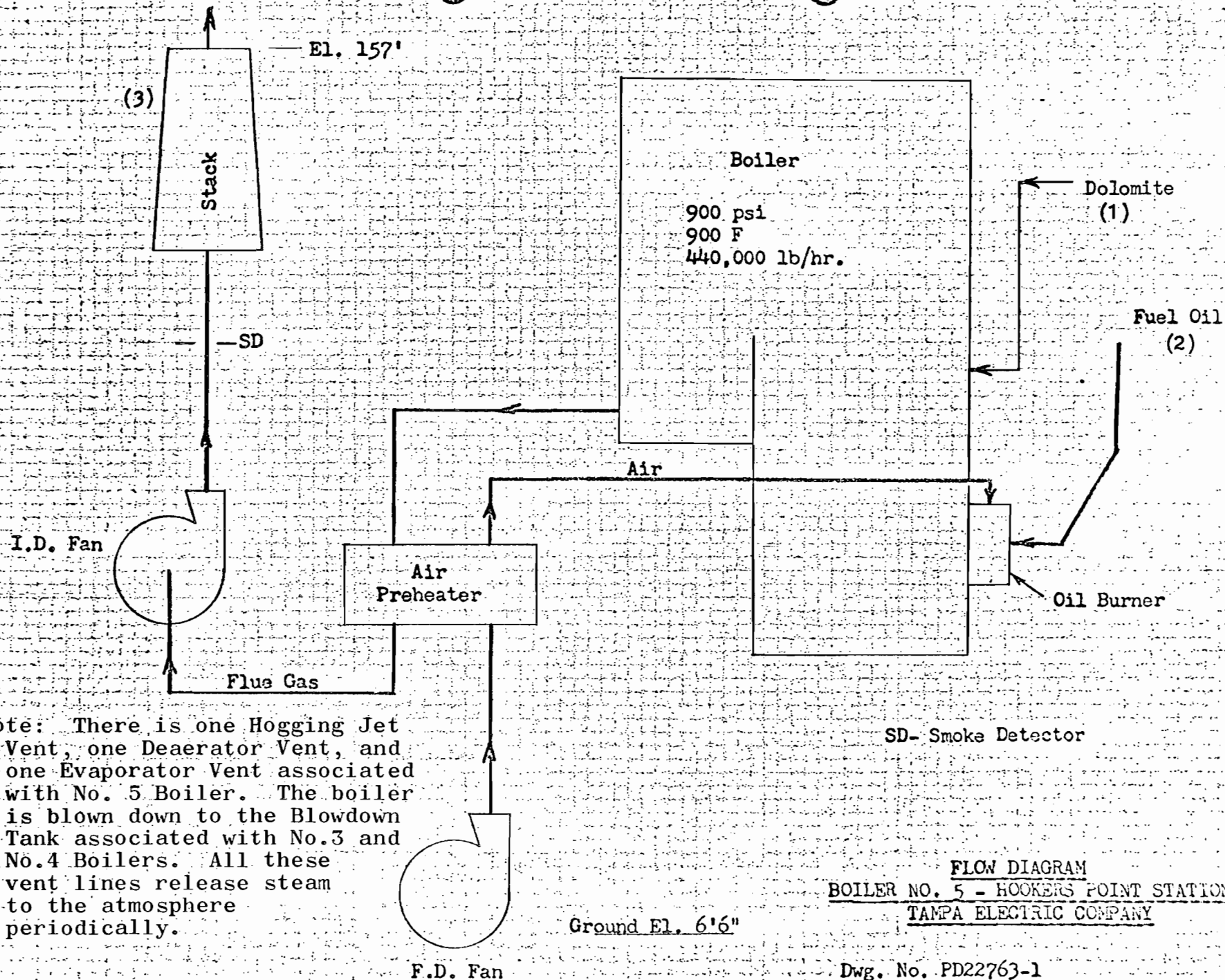
**Information Regarding Pollution Sources  
and Proposed Control Facilities**

1. Estimated cost of ~~proposed~~ control facilities \$ 0
2. Prepare and attach an 8½" x 11" flow diagram, without revealing trade secrets, identifying the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.  
P. 3-D1
3. Include an 8½" x 11" plot plan showing location of manufacturing processes and location of outlets for airborne emissions. Relate all flows to the flow diagram.  
P. 3-D2
4. Submit an 8½" x 11" plot plan showing the exact location of the establishment and points of discharge in relation to the surrounding area, residences and other permanent structures and roadways.  
P. 3-D3

**I General**

**A. Raw Materials and Chemicals Used.**

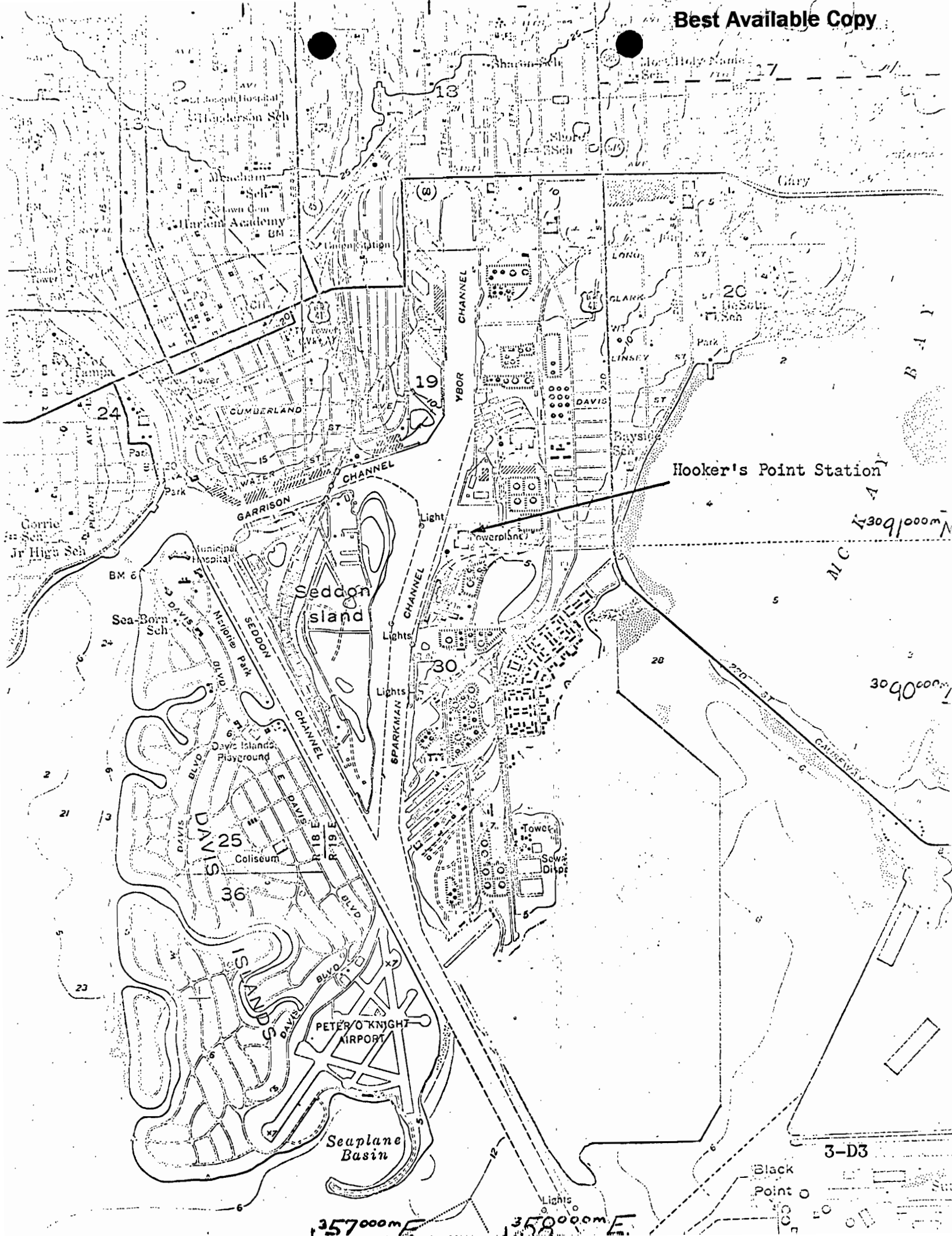
Description	Utilization Tons/day, Lbs./day, etc.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	Percent Dry Weight	
Dolomite	223	CaCO <sub>3</sub>	60%	(1)
		MgCO <sub>3</sub>	40%	



FLOW DIAGRAM  
BOILER NO. 5 - HOOKERS POINT STATION  
TAMPA ELECTRIC COMPANY

Dwg. No. PD22763-1





# B. Fuels

Type (Be Specific)	Daily Consumption	Gross Maximum Heat Output	Relate to Flow Diagram
Bunker "C" Fuel Oil	383,000 lb/day	$7.03 \times 10^9$ BTU/day $\rightarrow 293 \text{ mm/hr}$ (2)	

7030 mm BTU/day

# C. Products

Description	Average Daily Production (Tons/Day, Lbs/Hr. etc.)
Electricity	604 MWH/day $\rightarrow 25 \text{ MW}$

D. Normal operation: Hours/Day 24 hr/day Day and Week 7 days/wk

If operation or process is seasonal, describe: \_\_\_\_\_

allowable part 703  
502 5624

# II Identification of Air Contaminants

Compounds of:

Chlorine	<input type="checkbox"/>	Also -		
Flourine	<input type="checkbox"/>	Hydrocarbons	<input type="checkbox"/>	Acid Mists <input type="checkbox"/>
Nitrogen	<input type="checkbox"/>	Smoke	<input type="checkbox"/>	Odors <input type="checkbox"/>
Sulfur	<input checked="" type="checkbox"/>	Fly Ash	<input checked="" type="checkbox"/>	Radioisotopes <input type="checkbox"/>
		Dusts	<input type="checkbox"/>	Other _____ <input type="checkbox"/>

Specific Compounds SO<sub>2</sub>, SO<sub>3</sub>, Ash

### III Air Pollution Control Devices

Contaminant	Control Device	Relate to Flow Diagram	Operating Efficiency	Conditions (Particle Size Range, Temp. etc.)
Ash	None		N/A	N/A
SO <sub>x</sub>	None		N/A	N/A

Provide a brief description of the control device or treatment system. Attach separate sheets giving details regarding principle of operation, manufacturer, model, size, type and capacity of control/treatment device and the basis for calculating its efficiency. Show any bypasses of the control device and specify when such bypasses are to be used and under what conditions.

N/A



#### IV. Contaminant Balance

From contaminant content in raw materials, waste products, and manufactured products, summarize daily contaminant flow:

	Pounds Contaminant per Day	
	Input	Output
<b>List Raw Materials:</b>		
Fuel Ash	192	
Fuel Sulfur	7,850	
MgO Ash	43	
CaO Ash	75	
<b>List Manufactured Products:</b>		
Electricity		
<b>List Solid Wastes:</b>		
None		
<b>List Liquid Wastes:</b>		
None		
<b>Totals</b>	<b>8,160</b>	<b>0</b>
<b>Airborne Wastes (Total input minus total output)</b>	<b>8,160</b>	

Note: If more than one contaminant, specify each  
 Contaminants recovered in control devices should be shown as either a liquid or a solid waste.

## V. Discharged Emmissions to Atmosphere

### A. Discharge Points and Design Conditions

Discharge Point Description	Relate to Flow Diagram	Height above Ground (ft.)	Cross Sect. Area (sq. ft.)	Periods of Flow Hrs./Day	days/yr.	Temp. of Discharge (°F)
Stack	(3)	172.7	108	23.8	348	285° <b>F</b>

### B. Tabulation of Discharged Contaminants

		Total Contaminants Discharged					
	Discharge Point — Relate to Flow Diagram	Flow Rate at Std. Cond. (cfm)	Particulates		Other Contaminants ( <del>CO</del> , SO <sub>2</sub> , <del>NO<sub>x</sub></del> , etc.)		
			Gr/ft3 (Std. Cond.)	lbs./Day	Gr/ft3 (Std. Cond.)	lbs./Day	Gr/ft3 (Std. Cond.)
Avg. Cond	Stack (3)	64,200	0.0236	310	1.200	15,700	
Peak Emission	Stack (3)	114,200	0.0236	-	1.200	-	
	Totals			310		15,700	

NOTE: Standard conditions used are 20° C and 1 atm.

**VI. Treatment and Disposal of Liquid and  
Solid Waste**

1. Identify the contaminants which will be discharged as liquid or solid wastes.

None

2. Describe the treatment and disposal of liquid and solid wastes. Indicate the concentrations and volume of individual contaminants in treated wastes before disposal.

None



# Florida Department of Environmental Regulation

**Southwest District**

Lawton Chiles, Governor

3804 Coconut Palm

813-744-6100

April 13, 1993

Tampa, Florida 33619

Virginia B. Wetherell, Secretary

MR LYNN ROBINSON  
MGR ENV PLANNING  
TAMPA ELECTRIC CO  
PO BOX 111  
TAMPA FL 33601-0111

Dear Permittee:

RE: Permit Expiration Letters for Non-delegated Facility in  
Hillsborough County

The Department recently delegated air permitting authority to the Environmental Protection Commission of Hillsborough County, except for a few non-delegated facilities, such as yours. This letter is to advise you that in the future, the Department will not continue the practice of notifying your facility of permits due to expire. This service was provided by the County in the past.

For information purposes only please note the following:

Pursuant to Rule 17-4.080(3), F.A.C., *Modification of Permit Conditions*, the permittee, may, for good cause, request that a construction permit be extended. Such a request shall be submitted to the Department at least 60 days prior to the expiration date of the permit.

Pursuant to Rule 17-4.090(1), F.A.C., *Renewals*, an application to renew an operating permit shall be submitted to the Department no later than 60 days prior to the expiration date of the permit.

Thank you for your cooperation in this matter. If you have any questions, please call Mr. J. Harry Kerns, P.E., District Air Engineer, of my staff at (813)744-6100 extension 419.

Sincerely,

W. C. Thomas, P.E.  
Air Program Administrator

WCT/HK/ss

cc: Read file  
EPCHC

permittx.ltr

COMMISSION  
PHYLLIS BUSANSKY  
JOE CHILLURA  
PAM IORIO  
SYLVIA KIMBELL  
JAN KAMINIS PLATT  
JAMES D. SELVEY  
ED TURANCHIK

FAX (813) 272-5157



ROGER P. STEWART  
EXECUTIVE DIRECTOR  
ADMINISTRATIVE OFFICES  
AND  
WATER MANAGEMENT DIVISION  
1900 - 9TH AVENUE  
TAMPA, FLORIDA 33605  
TELEPHONE (813) 272-5960  
  
AIR MANAGEMENT DIVISION  
TELEPHONE (813) 272-5530  
  
WASTE MANAGEMENT DIVISION  
TELEPHONE (813) 272-5788  
  
ECOSYSTEMS MANAGEMENT DIVISION  
TELEPHONE (813) 272-7104

D. E. R.  
DEC 16 1991

SOUTHWEST DISTRICT  
TAMPA

MEMORANDUM

DATE: December 11, 1991

TO: J. Harry Kerns, P.E. *JK*

FROM: Sterlin Woodard *SW* THRU: Jerry Campbell, P.E. *Jc*

SUBJECT: Permit Renewal - TECO - Hookers Point Unit #5

Attached is Permit No. A029-202997 for the operation of the above company's steam generator designated as Unit #5. The unit had been on long-term reserve standby since April 1986. All start-up stack testing has been done (copy attached).

The source is subject to 17-2.600(5)(a) and RACT with a particulate matter emission standard of 0.1 lbs./MMBTU, a SO<sub>2</sub> emission standard of 1.1 lb./MMBTU and a 20% opacity standard, except during one 2 minute period per hour of 40% opacity.

On December 6, 1991, I met with Janice Taylor (TECO) to discuss the draft permit and all issues were resolved.

The EPC/HC recommends issuing the above operating permit. A draft and diskette are enclosed for your review.

SKW:A0202997

PERMIT APPLICATION STATUS SHEET

COMPANY: Tampa Electric Co.

PROCESSOR: Gi. Maier

PERMIT NO.: A029-202997

DATE RECEIVED: 09/23/91

PE SEAL & SIGNATURE (Y) N

CHECK: (Y) N

	<u>DATE TASK COMPLETED</u>	<u>INITIALS</u>
DATE RECEIVED BY SECTION:	<u>10/02/91</u>	<u>MQ</u>
LOGGED BY SECTION SECRETARY:	<u>—</u>	<u>—</u>
PERMITTING ENGINEER SUBMIT FINISHED PERMIT PACKAGE & RECOMMENDATIONS TO DISTRICT AIR ENGINEER:	<u>12-17-91</u>	<u>JK</u>
PERMIT PACKAGE TO DISTRICT AIR ADMINISTRATOR:	<u>12/18/91</u>	<u>WST</u>
PERMIT PACKAGE TO DISTRICT DEPUTY ASSISTANT SECRETARY:	<u>—</u>	<u>—</u>
PERMIT PACKAGE MAILED OUT:	<u>DEC 19 1991</u>	<u>ThQ</u>

DATA FOLLOW UP

ISSUE DATE UPDATED ON PATS:	<u>DEC 19 1991</u>	<u>MQ</u>
UPDATED ON WANG:	<u>DEC 19 1991</u>	<u>MQ</u>

(10-06-89)

## APPLICATION TRACKING SYSTEM

DEC 19 1991

10/02/91

APPL NO:202997

APPL RECVD:09/23/91 TYPE CODE:AO SUBCODE:2A

LAST UPDATE:10/02/91

DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:\_\_\_ APPLICATION COMPLETE:\_\_\_/\_\_\_/\_\_\_

DER PROCESSOR:AIR MAIER

APPL STATUS:AC DATE:09/23/91 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)

RELIEF:\_\_\_ (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING

DISTRICT:40 COUNTY:29

(Y/N) N OGC HEARING REQUESTED

LAT/LONG:27.56.20/82.26.34

(Y/N) N PUBLIC NOTICE REQD?

BASIN-SEGMENT:\_\_\_

(Y/N) N GOV BODY LOCAL APPROVAL REQD?

COE #:

(Y/N) Y LETTER OF INTENT REQD? \_ (I/ISSUE D/DENY)

ALT#:\_\_\_

PROJECT SOURCE NAME:HOOKERS POINT STATION #5

STREET:FOOT OF HEMLOCK

CITY:TAMPA

STATE:FL

ZIP:\_\_\_

PHONE:\_\_\_

APPLICATION NAME:TAMPA ELECTRIC COMPANY

STREET:P.O. BOX 111

CITY:TAMPA

STATE:FL

ZIP:33601

PHONE:813-228-4836

AGENT NAME:\_\_\_

STREET:\_\_\_

CITY:\_\_\_

STATE:\_\_\_

ZIP:\_\_\_

PHONE:\_\_\_

FEE #1 DATE PAID:09/30/91

AMOUNT PAID:02000

RECEIPT NUMBER:00179100

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - - - / / /  
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - / / /  
D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP. - - - - - / / /  
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / /  
F DATE LAST 45 DAY LETTER WAS SENT - - - - - / / /  
G DATE FIELD REPORT WAS REQ--REC - - - - - / / /  
H DATE DNR REVIEW WAS COMPLETED - - - - - / / /  
I DATE APPLICATION WAS COMPLETE - - - - - 9/29/91  
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - - - - / / /  
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - - / / /  
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - / / /  
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - - - - / / /  
N WAIVER DATE BEGIN--END (DAY 90) - - - - - / / /

COMMENTS:

TO: Alvina Krug

FROM: Harry Kerns

DATE: Sept. 30, 91

SUBJECT: Air Permit Application Tampa Electric Hookers Point  
Six steam Boilers

Fee submitted is: correct ( ☒ ), incorrect ( )  
Correct fee should be \$ \_\_\_\_\_

Sub Type IC

Comments: Similar Source - Need to  
file numbers



Tampa Electric A029-202997

Renewal of A029-125690  
Hooker Point # 5

Compliance test on 3-15-91

Burns fuel oil.

Examined stack test. Looks OK.

In my opinion, this application is complete,  
J.A.M. 10-21-91



D.E.R.

SEP 30 1991

SOUTHWEST DISTRICT  
TAMPA

September 20, 1991

D.E.R.

SEP 29 1991

SOUTHWEST DISTRICT  
TAMPA

SEP 23 1991

ENV. PROT. COM.  
CEH

Mr. Roger P. Stewart, Director  
Environmental Protection Commission  
of Hillsborough County  
1900 Ninth Avenue  
Tampa, FL 33605

Certified Mail #P276823521  
Return Receipt Requested

Richard D. Garrity, Ph.D.  
Florida Department of  
Environmental Regulation  
Southwest District  
4520 Oak Fair Boulevard  
Tampa, FL 33610

Certified Mail #P276823522  
Return Receipt Requested

Re: Tampa Electric Company  
Air Operation Permits - Renewal Application  
Hookers Point Units 1-6

Gentlemen:

Enclosed please find an original and three (3) copies of an application for renewal of permit to operate each above referenced air pollution source, including an operation and maintenance plan for the unit, and an authorization letter for the applicant. Each unit is being submitted on a separate application to facilitate your review process.

The application packages, together with a check for \$15,870 (\$2,645 for each source), to the Hillsborough County Board of County Commissioners, and a check for \$2,000 to the Florida Department of Environmental Regulation, are included in Mr. Stewart's copy. Please note that these permit applications are being submitted as similar sources, therefore, a similar source fee to FDER is applicable, pursuant to Chapter 17-4.050(3), F.A.C.

**TAMPA ELECTRIC COMPANY**

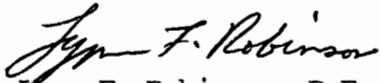
P.O. Box 111 Tampa, Florida 33601-0111 (813) 228-4111  
P.O. Box 271 Winter Haven, Florida 33882-0271 (813) 294-4171  
P.O. Drawer N Plant City, Florida 33564-9009 (813) 752-1115  
P.O. Box 588 Dade City, Florida 33526-0588 (904) 567-5101

P.O. Box 907 Ruskin, Florida 33570-0907 (813) 645-6461  
(Ruskin Engineering & All Other Inquiries (813) 641-1411)  
137 S. Parsons Av. Brandon, Florida 33511-5224 (813) 681-4451  
P.O. Box 215 Mulberry, Florida 33860-0215 (813) 425-4988

Mr. Roger P. Stewart  
Richard D. Garrity, Ph.D.  
September 20, 1991  
Page Two

Should you have any questions, please feel free to call Ms. Janice Taylor or me at 228-4836.

Sincerely,

A handwritten signature in cursive script, reading "Lynn F. Robinson".

Lynn F. Robinson, P.E.  
Manager  
Environmental Planning

sn/QQ428

Enclosure

COMPANY NAME

Jompa Electric Co.

Processor

File Number A029-125690

## PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air OperationCounty HillsboroughDate Received 10/2/86P.E. seal & signature ☒Check ☒

No Check

Letter of Corp. standing

Clock  
Days

Date Task Completed

Initials

3	Logging by Sec'y	<u>10/6/86</u>	<u>Law</u>
5	Review by Sec. head and transfer to permitting Engineer	_____	_____
28	Completeness Review	_____	_____
	request additional info *	_____	_____
	information received *	_____	_____
	Public Notice Published * (for Air Construction Only)	_____	_____
55	Letter of Intent sent to * Supervisor	_____	_____
60	Letter of Intent submitted to District Manager	_____	_____
75	Intent to issue/deny mailed*	_____	_____
80	Permitting Eng'r submit finished permit package & recommendations to supervisor	_____	_____
83	Permit Package to Dist. Engr.	_____	_____
85	Permit Package to Dist. Manager	<u>12/29/86</u>	<u>W</u>
90	Final Issuance/denial	_____	_____

\*If needed, If not indicate by N/A

TO: Teco - Hookers Point File  
THRU: W.C. Thomas *WCT 12/28/86*  
THRU: J. Estler  
FROM: Tom John *TJ*  
DATE: December 22, 1986  
SUBJECT: Recommend that permit Nos. AO29-125685, 125686,  
125687, 125689, 125690, and 125691 be issued  
to TECO Hookers Point Stations No. 1, 2, 3, 4, 5,  
and 6 respectively

From the information received, both HCEPC and I recommend that permit Nos. AO29-125685, 86, 87, 89, 90, and 91 be issued respectively to TECO Hookers point stations Nos. 1, 2, 3, 4, 5, and 6, as conditioned. All the units are temporarily shut down, but will be returned to service after 1989. A compliance test is to be run on each unit shortly after startup.

## APPLICATION TRACKING SYSTEM

10/03/86

APPL NO:125690.

APPL RECVD:10/02/86 TYPE CODE:A0 SUBCODE:06

LAST UPDATE:10/03/86

DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:\_\_\_ APPLICATION COMPLETE:\_\_\_/\_\_\_/\_\_\_

DER PROCESSOR:ESTLER

APPL STATUS:AC DATE:10/02/86 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)

RELIEF:\_\_\_ (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING

DISTRICT:40 COUNTY:29

(Y/N) N DNR REVIEW REQD?

LAT/LONG:27.56.20/82.26.34

(Y/N) N PUBLIC NOTICE REQD?

BASIN-SEGMENT:\_\_\_

(Y/N) N GOV BODY LOCAL APPROVAL REQD?

COE #:\_\_\_\_\_

(Y/N) Y LETTER OF INTENT REQD? \_ (I/ISSUE D/DENY)

ALT#:\_\_\_\_\_

PROJECT SOURCE NAME:HOOKERS POINT STATION BOILER 5

STREET:HEMLOCK AVE.

CITY:TAMPA

STATE:FL

ZIP:\_\_\_\_\_

PHONE:\_\_\_\_\_

APPLICATION NAME:TAMPA ELECTRIC CO.

STREET:P.O. BOX 111

CITY:TAMPA

STATE:FL

ZIP:33601

PHONE:813-228-4111

AGENT NAME:A. SPENCER AUTREY

STREET:P.O. BOX 111

CITY:TAMPA

STATE:FL

ZIP:33601

PHONE:813-228-4111

FEE #1 DATE PAID:10/02/86 AMOUNT PAID:00500 RECEIPT NUMBER:00105557

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - - - / / / / /  
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - / / / / /  
D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP. - - - - - / / / / /  
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - / / / / /  
F DATE GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS - - - - - / / / / /  
G DATE FIELD REPORT WAS REQ--REC - - - - - / / / / /  
H DATE DNR REVIEW WAS COMPLETED - - - - - / / / / /  
  
I DATE APPLICATION WAS COMPLETE - - - - - / / / / /  
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - - - - / / / / /  
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - - / / / / /  
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - / / / / /  
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - - - - / / / / /  
N WAIVER DATE-BEGIN--END (DAY 90) - - - - - / / / / /

COMMENTS:



HOPKERS PT A029-47722

June 2, 1986

Mr. Bill Thomas  
Florida Department of  
Environmental Regulation  
District Office  
7601 Highway 301 North  
Tampa, Florida 33610-9544

Re: Tampa Electric Company  
Administrative Changes to  
Air Permits

Dear Mr. Thomas:

During a recent review of Tampa Electric Company's air permits, administrative inconsistencies were identified that have lead to hardships on us that we feel are not intended by the Department. As shown on the attachment, the inconsistencies involve stack test scheduling, notifications and reporting requirements contained in older air permits. The requested modifications reflect recent changes in Department regulations which depart from previous Department rules or policies.

In order to communicate our concerns and get feedback from the Department, members of my staff met with Mr. Jim Estler of your staff and Mr. Jerry Campbell of the Hillsborough County Environmental Protection Commission on May 29, 1986. Based on this meeting, it is our understanding that neither Mr. Estler nor Mr. Campbell are opposed to modifying the applicable air permits to provide consistency as outlined to them.

Tampa Electric Company respectfully requests that the air permits listed on the attachment be modified to reflect consistent administrative conditions as stated. The requested modification will not change our environmental limits, they only clarify the conditions and time frames for compliance related reports.

We would greatly appreciate an expeditious review of our request for permit modifications, especially as they relate to Units 4, 5 and 6 at Gannon Station which will required compliance testing or excess opacity report submittal in the near future.

D. E. R.

JUN 04 1986

SOUTH WEST DISTRICT  
TAMPA

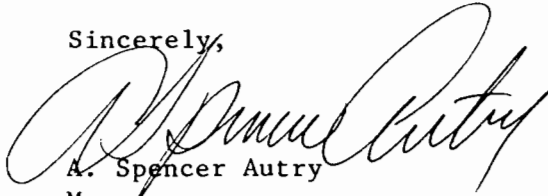
Mr: Bill Thomas

June 2, 1986

Page 2

Thank you for your cooperation, and, please call me if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Spencer Autry".

A. Spencer Autry  
Manager

Environmental Planning

ASA/jst/004/EE1

Attachment

cc: Jim Estler, FDER  
Jerry Campbell, HCEPC



INCONSISTENCIES IN ADMINISTRATIVE PROCEDURES

DER AIR PERMITS  
TAMPA ELECTRIC COMPANY (TEC)

The following modifications will provide consistent reporting and administrative requirements for the two major reports required in TEC's air permits:

1. Specify that all annual compliance testing should be done within a 90 day period prior to the specified annual test date. (The regulations require annual test during Fiscal year - October 1 to September 30.)

The permits below either do not address the 90 day test window, or are more stringent than 90 days:

<u>Source</u>	<u>Permit Number</u>	<u>Specific Condition</u>
<u>Hookers Point</u>		
Unit 1	A029-47726	1
Unit 2	A029-47725	1
Unit 3	A029-47724	1
Unit 4	A029-47723	1
Unit 5	A029-47722	1
Unit 6	A029-47721	1
 <u>F.J. Gannon</u>		
Unit 4	A029-80043	4
Unit 5	A029-47728	1
Unit 6	A029-47727	1
Combustion Turbine 1	A029-85099	1
Fly Ash Silo 1	A029-80048	1
Fly Ash Silo 2	A029-80046	1
Economiser Silo	A029-87409	1
 <u>Big Bend</u>		
Unit 1	A029-63296	1
Combustion Turbine 1	A029-85100	1

2. Specify that all compliance test notifications be non-written notifications pursuant to 17-2.700(2)(a)5:

The permits below contain a written notification requirement:

<u>Source</u>	<u>Permit Number</u>	<u>Specific Condition</u>
<u>F.J. Gannon</u>		
Combustion Turbine 1	A029-85099	4
Fly Ash Silo 1	A029-80048	5
Fly Ash Silo 2	A029-80046	3
Economiser Ash Silo	A029-87409	3

Big Bend

Combustion Turbine 1	A029-85100	5
----------------------	------------	---

3. Specify that all compliance test submittals shall be within 45 days as required in 17-2.700(7).

The permits below contain a test submittal date more stringent than 45 days.

<u>Source</u>	<u>Permit Number</u>	<u>Specific Condition</u>
<u>Hookers Point</u>		
Unit 1	A029-47726	1
Unit 2	A029-47725	1
Unit 3	A029-47724	1
Unit 4	A029-47723	1
Unit 5	A029-47722	1
Unit 6	A029-47721	1

F.J. Gannon

Unit 5	A029-47728	1
Unit 6	A029-47727	1

4. Specify that excess emissions refer to 6-minute average opacity.

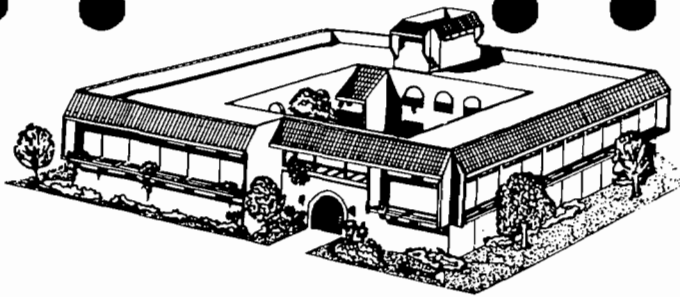
The permits below either do not address the averaging time or specify a 1-minute average:

<u>Source</u>	<u>Permit Number</u>	<u>Specific Condition</u>
<u>F.J. Gannon</u>		
Unit 4	A029-80043	7
<u>Big Bend</u>		
Unit 1	A029-63296	6

HILLSBOROUGH COUNTY  
ENVIRONMENTAL PROTECTION

COMMISSION

RODNEY COLSON  
RON GLICKMAN  
PAM IORIO  
RUBIN E. PADGETT  
JAN KAMINIS PLATT  
JAMES D. SELVEY  
PICKENS C. TALLEY II



ROGER P. STEWART  
DIRECTOR

1900 - 8th AVE  
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

D. E. R.

Date June 12, 1986

To Jim Estler

From Jerry Campbell *JC*

Subject: TECO Permit Amendments

JUN 16 1986

SOUTH WEST DISTRICT  
TAMPA

Having reviewed TECO's requests in Spencer Autry's letter of June 2, 1986 to Bill Thomas, I recommend approval of the following amendments:

Gannon Unit 4 (A029-80043)

Change Specific condition #4 to read:

4. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of May 30, 1984 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C.

Change specific condition #7 to read:

7. A report shall be submitted to both the Department of Environmental Regulation and the Hillsborough County Environmental Protection Commission within 30 days following each calendar quarter detailing any excess opacity readings recorded during the three month period. For the purpose of this report, excess emission shall be defined as all six minute averages of opacity greater than 20 percent, except as specified in Specific Condition No. 2. The information supplied in this report shall be consistent with the reporting requirements of 40 CFR 51 Appendix P [Section 17-2.710(1), F.A.C.]. This report shall be submitted in duplicate to the Hillsborough County Environmental Protection Commission.

Gannon Unit 5 (A029-47728)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of July 29, 1981 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing.

Gannon Unit #6 (A029-47727)

Change Specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of July 29, 1981 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing.

Hookers Point Unit #1 (A029-47726)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Hookers Point Unit #2 (A029-47725)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Hookers Point Unit #3 (A029-47724)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Hookers Point Unit #4 (A029-47723)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Hookers Point Unit #5 (A029-47722)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Hookers Point Unit #6 (A029-47721)

Change specific condition #1 to read:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test report shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing. A fuel analysis may be submitted in lieu of stack testing for sulfur dioxide.

Gannon Combustion Turbine #1 (A029-85099)

Change specific condition #1 to read:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date March 15, 1984, or within a ninety (90) day period prior to this date, and submit 2 copies of test data to the Air Section of the Hillsborough County Environmental Protection Commission office within forty five days of such testing [Section 17-2.700 (2), Florida Administrative Code, (F.A.C.)].

( ) Particulates	( ) Sulfur Oxides
( ) Fluorides	( ) Nitrogen Oxides
(X) Opacity	( ) Hydrocarbons
	( ) Total Reduced Sulfur

\*Fuel analysis may be submitted for required sulfur dioxide emission test.

Change specific condition #4 to read:

4. The Hillsborough County Environmental Protection Commission shall be notified 15 days prior to compliance testing.

Gannon Fly Ash Silo #1 - 4 (A029-80048)

Change specific condition #1 to read:

1. Compliance with the opacity standard set forth below shall be demonstrated by conducting 30 minute visible emission tests as units #3, #2 & #1 are converted to coal and begin utilizing this silo. By November 15, 1984, 60 days prior to the expiration of construction permit #AC29-41941, a visible emission test shall be submitted while loading the silo from Units #3 & #4. By January 15, 1986, 60 days prior to the expiration of construction permit A029-41942, a visible emission test shall be submitted while loading the silo from Units #2, #3 & #4. By January 15, 1987, 60 days prior to the expiration of construction permit AC29-41943, a visible emission test shall be submitted while loading the silo from Unit #1 and two of the remaining 3 units. Thereafter, visible emissions tests shall be conducted while loading the silo from 3 of the 4 units at 12 month intervals. Tests can be conducted within a ninety (90) day period prior to the dates specified above.

Change specific condition #5 to read:

5. The Hillsborough County Environmental Protection Commission shall be notified 15 days prior to compliance testing.

Gannon Fly Ash Silo #5-6 (A029-80046)

Change specific condition #1 to read:

1. Test the baghouse for visible emissions at intervals of twelve months from the date of November 15, 1983 or within a ninety (90) day period prior to this date. The compliance test shall be conducted using EPA Method #9 (opacity). The Method #9 test interval on this source shall be thirty (30) minutes. Two copies of the test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing.

Change specific condition #3 to read:

3. The Hillsborough County Environmental Protection Commission shall be notified 15 days prior to compliance testing.

Gannon Economiser Silo (A029-87409)

Change specific condition #1 to read:

1. Test the baghouse for visible emissions at intervals of twelve months from the date of December 4, 1983 or within a ninety (90) day period prior to this date. The compliance test shall be conducted using EPA Method #9 (opacity). The Method #9 test interval on this source shall be thirty (30) minutes. Two copies of the test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of testing.

Page 6

Change specific condition #2 to read:

2. The Hillsborough County Environmental Protection Commission shall be notified 15 days prior to compliance testing.

If you have any questions concerning the contents of this memorandum, please contact me.

JC/ch

CH2/16

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



**SOUTHWEST DISTRICT**

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

813-985-7402  
SunCom - 570-8000

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

June 12, 1986

Mr. A. Spencer Autry, Manager  
Environmental Planning  
Tampa Electric Company  
Post Office Box 111  
Tampa, FL 33601-0111

RE: Modification of Conditions  
Permit No. A029-47722

Dear Mr. Autry:

We are in receipt of your request for a modification of the permit conditions.  
The conditions are changed as follows:

Specific Condition No. 1

From:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from date of permit and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing. (Chapter 17-2.700(2), F.A.C.)

- |                   |                          |
|-------------------|--------------------------|
| (X) Particulates  | (X) Sulfur Oxides*       |
| ( ) Fluorides     | ( ) Nitrogen Oxides      |
| (X) Plume Density | ( ) Hydrocarbons         |
|                   | ( ) Total Reduced Sulfur |

\*Fuel analysis is acceptable

To:

1. This unit shall be stack tested for particulate matter (under both soot blowing and non-soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of January 27, 1982 or within a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. A fuel analysis can be submitted for the required sulfur dioxide emission test. Two copies of test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission Office within forty-five days of such testing.

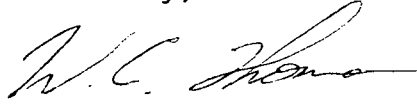


Mr. A. Spencer Autry, Manager  
Tampa, FL

Page Two

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. C. Thomas".

W. C. Thomas, P.E.  
District Air Engineer

JWE/js

Mr. A. Spencer Autry, Manager  
Tampa, FL

Page Three

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 6-13-86 to the listed persons.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(10), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

Jean Sebesta      6/13/86  
Clerk                      Date

### SECTION III - AIR CLEANING EQUIPMENT

Source Code	Type of Air Cleaning Equipment a,b	Pollutant Removed c	Inlet Gas Temp °F	Inlet Gas Flow Rate ACFM	Maximum Pressure Drop PSI d	Efficiency e	
						Design Percent	Operating Percent
	Not Applicable						

Wet scrubber, electrostatic precipitator, fabric filter, etc.

Please list future equipment separately

- c. Pollutants to be covered in this survey are specified in the accompanying instructions.
- d. Give maximum normal operating pressure drop across air cleaning system.
- e. Give efficiency in terms of pollutant removed.

SOUTH WEST DISTRICT  
TAMPA

Mar 1 1960

10

#### SECTION IV - STACK AND POLLUTANT EMISSIONS DATA

[illegible]

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION  
ANNUAL OPERATING REPORT

Representing Calendar Year 1984  
Date Submitted: \_\_\_\_\_

SECTION I - GENERAL INFORMATION

Plant, Institution or Establishment Name: \_\_\_\_\_

Plant Address: \_\_\_\_\_

Telephone: (     )     Street     City     State     Zip

Person to Contact Regarding This Report     Title

Mailing Address: \_\_\_\_\_

Street     City     State     Zip

Actual Operating Hours:     hrs/day     days/wk     wks/yr

SECTION II - FUEL COMBUSTION FOR GENERATION OF HEAT OR STEAM

Source Code	Type of Fuel a	Quantity c  X 1,000	Annual Consumption    b				Hourly Consumption		Heat Content BTU/Quan	Percent Sulfur d	Percent Ash d
			Percent Distribution by Season				Maximum	Average			
			Spring March/ May	Summer June/ Aug	Fall Sept/ Nov	Winter Dec/ Feb					
HP 5	No. 6 Oil	5,518	32.71	15.05	23.11	29.13	3,620	1,735	151,387	0.99	NA
HP 6	No. 6 Oil	6,088	17.75	28.81	43.03	10.41	5,292	3,189	151,387	0.99	NA

a. Coke, bituminous, anthracite, or lignite coal No. 1, 2, 3, 4, 5, or 6 Fuel Oil, Nat. Gas, LPG; Refinery or Coke Oven Gas Etc. Indicate if two or more fuels are burned in the same boiler and provide all data pertinent to each fuel type.

b. Fuel Data Reported on 'as burned' Basis

c. Solid Fuel: Tons, Liquid Fuel: Gals.: Gaseous Fuel: 1000 ft<sup>3</sup>

d. If unknown, please give name and address of fuel supplier.

UNIT: 5

HOOKERS POINT

1984

$$\frac{1735 \text{ GAL. OIL}}{\text{HR}} \times 151,387 \frac{\text{BTU}}{\text{GAL.}} = 262.7 \frac{\text{MMBTU}}{\text{HR}} \text{ (AVG)}$$

$$\text{DESIGN} = 610.0 \frac{\text{MMBTU}}{\text{HR.}} \text{ (MAX.)}$$

$$\frac{5518,079 \text{ GAL. OIL}}{1984} \times 151,387 \frac{\text{BTU}}{\text{GAL.}} = 835,365 \frac{\text{MMBTU}}{1984} \text{ (ACTUAL)}$$

PARTICULATE EMISSIONS

$$\frac{0.04 \text{ lbs. PART}}{\text{MMBTU}} \times 262.7 \frac{\text{MMBTU}}{\text{HR}} = 10.5 \frac{\text{lbs. PART}}{\text{HR.}} \text{ (AVG.)}$$

$$\frac{0.04 \text{ lbs. PART}}{\text{MMBTU}} \times 610.0 \frac{\text{MMBTU}}{\text{HR}} = 24.4 \frac{\text{lbs. PART}}{\text{HR.}} \text{ (MAX.)}$$

$$\frac{0.04 \text{ lbs. PART}}{\text{MMBTU}} \times \frac{835,365 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2,000 \text{ lb}} = 16.7 \frac{\text{Tons PART}}{1984}$$

SULFUR DIOXIDE EMISSIONS

$$\frac{1.07 \text{ lbs. SO}_2}{\text{MMBTU}} \times 262.7 \frac{\text{MMBTU}}{\text{HR}} = 281.1 \frac{\text{lbs SO}_2}{\text{HR.}} \text{ (AVG.)}$$

$$\frac{1.07 \text{ lbs. SO}_2}{\text{MMBTU}} \times 610.0 \frac{\text{MMBTU}}{\text{HR}} = 652.7 \frac{\text{lbs SO}_2}{\text{HR.}} \text{ (MAX.)}$$

$$\frac{1.07 \text{ lbs. SO}_2}{\text{MMBTU}} \times \frac{835,365 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2000 \text{ lb}} = 446.9 \frac{\text{Tons SO}_2}{1984}$$

1.07 lbs SO<sub>2</sub>/MMBTU value at 1.07 is a 1984 weighted average,

# GANNON STATION

1994

## GANNON 1-4 FLYASH SILO

$$\text{EMISSION} = \left( 1.32 \frac{\text{lb}}{\text{hr}} \right) \left( \frac{8021 \text{ hrs OP.}}{\text{YR}} \right) \left( \frac{1 \text{ TON}}{2000 \text{ lbs}} \right) = 5.29 \text{ TONS/YR}$$

## GANNON 5+6 FLYASH SILO

$$\text{EMISSION} = \left( \overset{\text{DESIGN}}{2.07} \frac{\text{lb}}{\text{hr}} \right) \left( \frac{8287 \text{ hrs. OP.}}{\text{YR}} \right) \left( \frac{1 \text{ TON}}{2000 \text{ lbs}} \right) = 8.58 \text{ TONS/YR}$$

## GANNON 4- ELONDAPIZER ASH SILO

$$\text{EMISSION} = \left( \overset{\text{DESIGN}}{0.14} \frac{\text{lb}}{\text{hr}} \right) \left( \frac{7133 \text{ hrs OP.}}{\text{YR}} \right) \left( \frac{1 \text{ TON}}{2000 \text{ lbs}} \right) = 0.50 \text{ TONS/YR}$$

# GANNON STATION

## GIAS TURBINE FUEL CONSUMED

1984

TOTAL CONSUMPTION = 3174.11 BBLs = 133,313 GALS.  
TOTAL GENERATED = 885,000 KWH

AVG % Sulfur = 0.37  
AVG Btu/lb = 19,468  
AVG Density (lb/gal) = 7.121

AVG Hourly Consumption =  $\frac{133,313 \text{ gal oil 1984}}{120 \text{ hrs. operation}} = 1111 \frac{\text{gal}}{\text{hr}}$

$$V = (133,313 \text{ gal}) (7.121 \frac{\text{lb}}{\text{gal}}) \left( \frac{1 \text{ yr}}{120 \text{ hrs. op.}} \right) \left( \frac{1}{3600 \text{ sec}} \right) \left( \frac{239.7 \text{ gal}}{1 \text{ bbl}} \right) \left( \frac{17470^\circ \text{R}}{492^\circ \text{R}} \right) \left( \frac{1}{95.7 \text{ ft}^3} \right) = 16.40 \text{ fps}$$

$$\text{Flow (avg)} = (16.40 \text{ fps}) (95.7 \text{ ft}^3) (60 \frac{\text{sec}}{\text{min}}) = 94,169 \text{ Cfm}$$

## SULFUR DIOXIDE (AVG)

$$\left( \frac{133,313 \text{ gal}}{\text{yr}} \right) (7.121 \frac{\text{lb}}{\text{gal}}) \left( \frac{0.0037 \text{ TONS}}{\text{TON OIL}} \right) (1.9 \frac{\text{TON SO}_2}{\text{TON S}}) \left( \frac{1 \text{ TON}}{2000 \text{ lb}} \right) = 3.3 \frac{\text{TON}}{\text{YR}}$$

$$\left( 1111 \frac{\text{gal}}{\text{hr}} \right) (7.121 \frac{\text{lb}}{\text{gal}}) (0.0037 \frac{\text{TON S}}{\text{TON OIL}}) (1.9) = 55.6 \frac{\text{TL}}{\text{hr.}}$$

## SULFUR DIOXIDE (MAX)

$$(1885 \frac{\text{gal}}{\text{hr}}) (7.121 \frac{\text{lb}}{\text{gal}}) (0.0037 \frac{\text{TON S}}{\text{TON OIL}}) (1.9 \frac{\text{TON SO}_2}{\text{TON S}}) = 94.4 \frac{\text{lb}}{\text{hr}}$$

## PARTICULATE (AVG)

$$\left( \frac{133,313 \text{ gal}}{\text{yr}} \right) (7.121 \frac{\text{lb}}{\text{gal}}) (19468 \frac{\text{Btu}}{\text{lb}}) \left( \frac{0.1 \text{ lb}}{\text{TON Btu}} \right) \left( \frac{1 \text{ TON}}{2000 \text{ lbs}} \right) = 0.921 \frac{\text{TON}}{\text{YR}}$$

$$\left( 1111 \frac{\text{gal}}{\text{hr}} \right) (7.121 \frac{\text{lb}}{\text{gal}}) (19,468 \frac{\text{Btu}}{\text{lb}}) \left( \frac{0.1 \text{ lb}}{\text{TON Btu}} \right) = 15.4 \frac{\text{lb}}{\text{hr.}}$$

## PARTICULATE (MAX)

$$(1885 \frac{\text{gal}}{\text{hr}}) (7.121 \frac{\text{lb}}{\text{gal}}) (19468 \frac{\text{Btu}}{\text{lb}}) \left( \frac{0.1 \text{ lb}}{\text{TON Btu}} \right) = 26.1 \frac{\text{lb}}{\text{hr}}$$

# GANNON

UNIT: 5

YEAR 1984

$$75.7 \frac{\text{TONS}}{\text{HR}} \times \frac{2,000 \text{ lbs.}}{\text{TON}} \times \frac{12,325 \text{ BTU}}{\text{lb.}} = 1866.0 \frac{\text{MMBTU}}{\text{HR.}} \quad (\text{AVG})$$

$$\text{DESIGN} = 3,798 \frac{\text{MMBTU}}{\text{HR.}} \quad (\text{MAX})$$

$$501,312 \frac{\text{TONS}}{\text{YR.}} \times \frac{2,000 \text{ lbs.}}{\text{TON}} \times \frac{12,325 \text{ BTU}}{\text{lb.}} = 12,357,341 \frac{\text{MMBTU}}{1984} \quad (\text{ACTUAL})$$

## PARTICULATE EMISSIONS

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times 1866.0 \frac{\text{MMBTU}}{\text{HR.}} = 37.3 \frac{\text{lbs. PART.}}{\text{HR.}} \quad (\text{AVG})$$

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times 3,798 \frac{\text{MMBTU}}{\text{HR.}} = 76.0 \frac{\text{lbs. PART.}}{\text{HR.}} \quad (\text{MAX})$$

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times \frac{12,357,341 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2,000 \text{ lb.}} = 123.6 \frac{\text{TONS PART.}}{1984}$$

## SULFUR DIOXIDE EMISSIONS

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times 1866.0 \frac{\text{MMBTU}}{\text{HR.}} = 3,508.1 \frac{\text{lbs. SO}_2}{\text{HR.}} \quad (\text{AVG})$$

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times 3,798 \frac{\text{MMBTU}}{\text{HR.}} = 7,140.2 \frac{\text{lbs. SO}_2}{\text{HR.}} \quad (\text{MAX})$$

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times \frac{12,357,341 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2,000 \text{ lb.}} = 11,615.9 \frac{\text{TONS SO}_2}{1984}$$

\* lbs. SO<sub>2</sub> value of 1.88 is a weighted average for 1984.  
MM BTU



# GANNON

UNIT: 5

YEAR 1984

$$75.7 \frac{\text{TONS}}{\text{HR}} \times \frac{2,000 \text{ lbs.}}{\text{TON}} \times \frac{12,325 \text{ BTU}}{\text{lb.}} = 1866.0 \frac{\text{MMBTU}}{\text{HR.}} \quad (\text{AVG})$$

$$\text{DESIGN} = 3,798 \frac{\text{MMBTU}}{\text{HR.}} \quad (\text{MAX})$$

$$501,312 \frac{\text{TONS}}{\text{YR.}} \times \frac{2,000 \text{ lbs.}}{\text{TON}} \times \frac{12,325 \text{ BTU}}{\text{lb.}} = 12,357,341 \frac{\text{MMBTU}}{1984} \quad (\text{ACTUAL})$$

## PARTICULATE EMISSIONS

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times 1866.0 \frac{\text{MMBTU}}{\text{HR.}} = 37.3 \frac{\text{lbs. PART.}}{\text{HR.}} \quad (\text{AVG})$$

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times 3,798 \frac{\text{MMBTU}}{\text{HR.}} = 76.0 \frac{\text{lbs. PART.}}{\text{HR.}} \quad (\text{MAX})$$

$$0.02 \frac{\text{lbs. PART.}}{\text{MM BTU}} \times \frac{12,357,341 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2,000 \text{ lb.}} = 123.6 \frac{\text{TONS PART.}}{1984}$$

## SULFUR DIOXIDE EMISSIONS

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times 1866.0 \frac{\text{MMBTU}}{\text{HR.}} = 3,508.1 \frac{\text{lbs. SO}_2}{\text{HR.}} \quad (\text{AVG})$$

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times 3,798 \frac{\text{MMBTU}}{\text{HR.}} = 7,140.2 \frac{\text{lbs. SO}_2}{\text{HR.}} \quad (\text{MAX})$$

$$1.88^* \frac{\text{lbs. SO}_2}{\text{MM BTU}} \times \frac{12,357,341 \text{ MMBTU}}{1984} \times \frac{1 \text{ TON}}{2,000 \text{ lb.}} = 11,615.9 \frac{\text{TONS SO}_2}{1984}$$

\* lbs SO<sub>2</sub> value of 1.88 is a weighted average for 1984.  
MM Btu

BEST AVAILABLE COPY

D. E. R.

MAR 1 1 1985

SOUTH WEST DISTRICT  
TAMPA

## HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION

## AIR POLLUTANT EMISSION REPORT

Representing Calendar Year 1984

Date submitted: March 1, 1985SECTION I - GENERAL INFORMATION

Plant, institution, or establishment name Tampa Electric Company (Hookers Point Station)  
 Plant, institution, or establishment address: P.O. Box 111 Tampa FL 33601  
 (Street or Box Number) (City) Manager (State) (Zip)  
 Person to contact regarding this report: A. Spencer Autry Title: Environmental Planning Telephone: 228-4838  
 Mailing address: P.O. Box 111 Tampa FL 33601  
 (Street or Box Number) (City) (State) (Zip)

NOT APPLICABLE

SECTION II - PROCESS/OPERATIONS EMISSIONS

Normal operating schedule: \_\_\_\_\_ Hours per day \_\_\_\_\_ Days per week \_\_\_\_\_ Weeks per year \_\_\_\_\_ Hours per year.  
 Seasonal and/or peak operation period: \_\_\_\_\_  
 Dates of annually occurring shutdowns of operations: \_\_\_\_\_ Additional operating info. enclosed

Source Code.,	Processes or Operations Releasing Pollutants to the At- mosphere.,	Raw Materials Used for Processes or Operations.				Products of Processes or Operations.				Intermittent Operation Only  Average Hours/Week ,
		Type	Quantity			Type	Quantity			
			Hourly Process Rate,lbs.				Hourly Process Rate,lbs.			
			Annual Average ,	Design	Maximum		Annual Average ,	Design	Maximum	

- List a separate code number to represent each source (e.g., IV-a, IV-b, IV-c, etc.) then enter required data on this page and for the same code number sources in Section III, IV, and V.
- Multiple sources may be grouped if similar in size and type.
- Sulfuric acid-contact: aluminum smelting-crucible furnace; cement manufacturing-dry process; etc (See instruction for examples and use approximate identification numbers); other non-listed processes and operations (specify).
- The pollutants to be covered in this report are listed in the accompanying instructions.
- Sulfur burned: pig, foundry returns, or scrap aluminum melted; limestone, cement rock, clay, iron ore used; etc.
- Pounds, tons, gallons, barrels, etc.
- Sulfuric acid produced; aluminum ingots produced; etc.
- For intermittent processes, indicate average number of hours per week of operation so that estimates of yearly emissions may be obtained.

SECTION V - STACK AND POLLUTANT EMISSIONS DATA

STACK DATA					ESTIMATE OF POLLUTANT EMISSIONS				
Source Code	Height Above Grade ft.	Inside Diameter at Top ft.	Exit Gas Velocity ft./sec.	Exit Gas Temperature °F.	Pollutant	Technique	Quantity tons/yr.	Average lb/hr.	Maximum lb/hr.
Hookers Point 5	Common with Boiler	No. 1			Particulate	Stack Test	16.7	10.5	24.4
					Sulf. Dioxide	Fuel Anal.	446.9	281.1	652.7
Hookers Point 6	280	9.41	40.29	325	Particulate	Stack Test	27.7	29.0	46.7
					Sulf. Dioxide	Fuel Anal.	493.1	516.6	832.5

- List code numbers corresponding to each emissions source reported in Section II, III, and IV.
- Values should be representative of average flow conditions for hours of operation.
- At actual flow conditions.
- The pollutants to be covered in this survey are specified in the accompanying instructions.
- Give stack test data if available (indicate stack sampling method used), otherwise, specify basis used. If unknown, please do not complete these columns.
- Note technique used to arrive at estimation; AP-42, stack test, etc.

COMPANY NAME

Lampa Electric Co.

RRG

GUR

Processor

Hookers Point  
Boiler # 5

File Number A029-47722

## PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Hillborough

Date Recieved 9/15/81

P.E. seal & signature ☐Check ☒No check ☐Letter of corp. standing ☐CLOCK  
DAYS

DATE TASK COMPLETED

INITIALS

3 Logging by Sec'y

5 Review by Sec. head and  
transfer to permitting  
Engineer

28 Completeness Review

request additional info \*

information received \*

Public Notice Published \*  
(for Air Construction only)

55 Letter of Intent sent to \*  
Supervisor

60 Letter of Intent submitted \*  
to District Manager

75 Intent to issue/deny mailed \*

80 Permitting Eng'r submit finished  
permit package & recommendations  
to supervisor

83 Permit Package to Dist. Engr.

85 Permit Package to Dist. Manager

90 Final Issuance/denial

9/21/81

PKT

11-3-81

DW

1-27-82

PKT

\*If needed, If not indicate by N/A



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

November 3, 1980

Mr. Joe Griffiths  
Hillsborough County Environmental  
Protection Commission  
1900 9th Avenue  
Tampa, Florida 33605

D.E.R.

NOV 5 1980

SOUTHWEST DISTRICT  
TAMPA

RE: Stack Emission Test  
Hookers Point No. 5  
Tampa Electric Company

Dear Joe:

Enclosed please find two (2) copies of a stack test report for a compliance test performed on Hookers Point No. 5 on September 17, 1980.

As stated in the Summary of Results, the average particulate emission rate for three test runs was 0.03 lbs. per million BTU, which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(e)(1)(b)2.b of 0.1 lbs. per million BTU.

Included in the Summary of Results, the average sulfur dioxide emission rate from fuel analysis conducted by our Central Testing Laboratory was 1.04 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(c)(1)(b)2.b of 1.10 lbs. per million BTU.

Also included are nitrogen dioxide results, a process statement, and visible emission report. If you have any questions, please call.

Yours truly,



Jerry L. Williams  
Manager  
Environmental Planning

enclosure  
cc: Dan Williams



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

November 3, 1980

Mr. Joe Griffiths  
Hillsborough County Environmental  
Protection Commission  
1900 9th Avenue  
Tampa, Florida 33605

RE: Stack Emission Test  
Big Bend Unit No. 3  
Tampa Electric Company

Dear Joe:

Enclosed please find two (2) copies of a stack test report for a compliance test performed on Big Bend Unit No. 3 on August 6, 1980.

As stated in the Summary of Results, the average particulate emission rate for three test runs was 0.02 lbs. per million BTU, which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(e)(1)(b)2.b of 0.1 lbs. per million BTU.

Included in the Summary of Results, the average sulfur dioxide emission rate from fuel analysis conducted by our Central Testing Laboratory was 5.49 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(c)(1)(b)2.b of 6.5 lbs. per million BTU.

Also included are nitrogen dioxide results, a process statement, and visible emission report. If you have any questions, please call.

Yours truly,

Jerry L. Williams  
Manager  
Environmental Planning

enclosure  
cc: Dan Williams



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

November 3, 1980

Mr. Joe Griffiths  
Hillsborough County Environmental  
Protection Commission  
1900 9th Avenue  
Tampa, Florida 33605

RE: Stack Emission Test  
Gannon Unit No. 2  
Tampa Electric Company

Dear Joe:

Enclosed please find two (2) copies of a stack test report for a compliance test performed on Gannon Unit No. 2 on September 3, 1980.

As stated in the Summary of Results, the average particulate emission rate for three test runs was 0.05 lbs. per million BTU, which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(e)(1)(b)2.b of 0.1 lbs. per million BTU.

Included in the Summary of Results, the average sulfur dioxide emission rate from fuel analysis conducted by our Central Testing Laboratory was 0.97 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(e)(1)(b)2.b of 1.1 lbs. per million BTU.

Also included are nitrogen dioxide results, a process statement, and visible emission report. If you have any questions, please call.

Yours truly,

Jerry L. Williams  
Manager  
Environmental Planning

enclosure

cc: Dan Williams, FDER





POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

November 3, 1980

Mr. Joe Griffiths  
Hillsborough County Environmental  
Protection Commission  
1900 9th Avenue  
Tampa, Florida 33605

RE: Stack Emission Test  
Big Bend Unit No. 2  
Tampa Electric Company

Dear Joe:

Enclosed please find two (2) copies of a stack test report for a compliance test performed on Big Bend Unit No. 2 on October 8, 1980.

As stated in the Summary of Results, the average particulate emission rate for three test runs was 0.06 lbs. per million BTU, which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(e)(1)(b)2.b of 0.1 lbs. per million BTU.

Included in the Summary of Results, the average sulfur dioxide emission rate from fuel analysis conducted by our Central Testing Laboratory was 3.64 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05 (6)(c)(1)(b)2.b of 6.5 lbs. per million BTU.

Also included are nitrogen dioxide results, a process statement, and visible emission report. If you have any questions, please call.

Yours truly,

Jerry L. Williams  
Manager  
Environmental Planning

enclosure  
cc: Dan Williams



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

August 25, 1978

Mr. Roger P. Stewart  
Hillsborough County Environmental  
Protection Commission  
7402 N. 56th St., Bldg. 500  
Tampa, Florida 33617

Mr. P. David Puchaty  
Florida Department of Environmental  
Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

RECEIVED

AUG 28 1978

H.C.E.P.C.

RE: Operating Permit Application  
Hookers Point Station No. 5  
Tampa Electric Company

Gentlemen:

Enclosed please find the original and four (4) copies of an operating permit application for the subject boiler.

Also enclosed please find a Certificate of Good Standing for Tampa Electric Company and a letter of authorization for the applicant, as well as checks for \$50.00 and \$20.00 to Hillsborough County Environmental Protection Commission and Florida Department of Environmental Regulation.

If you have any questions, please call.

Yours very truly,

William J. Johnson, Ph.D.  
Senior Consulting Engineer  
Acting Manager,  
Environmental Planning

WJJ:sac

Enclosures

cc: Mr. Jose Rodriguez, HCEPC  
Mr. Dan Williams, FDER

D.E.R.

SEP 11 1978

SOUTHWEST DISTRICT  
TAMPA

# HOOKERS POINT STATION - BOILERS 1 THROUGH 6

## Operation and Maintenance Plan

### Introduction

Hookers Point Station is owned and operated by Tampa Electric Company. The plant is located on the shore of Hillsborough Bay off Sparkman Channel. The plant consists of six boilers and five turbine generator units. Boilers 1 through 5 are connected to a header system which supplies steam to four turbine generators. Boiler 6 supplies steam to turbine generator number 5.

The Hookers Point boilers burn No. 6 fuel oil. The boiler manufacturers, types, and in service dates are listed below:

<u>BOILER</u>	<u>SERVICE DATE</u>	<u>MANUFACTURER</u>	<u>TYPE</u>
1	1948	Babcock and Wilcox	Front Firing
2	1948	Babcock and Wilcox	Front Firing
3	1950	Babcock and Wilcox	Front Firing
4	1950	Babcock and Wilcox	Front Firing
5	1953	Babcock and Wilcox	Front Firing
6	1955	Combustion Engineering	Front Firing

The boilers exhaust gases through stacks at an elevation of 280 feet.

### Process System Performance Parameters

Boiler 1 through 6 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. In addition, daily samples are taken for a monthly composite analysis. The design fuel consumption and steam flow rates are listed below.

<u>BOILER</u>	<u>DESIGN FUEL CONSUMPTION</u>	<u>DESIGN STEAM FLOW</u>
1	86 BBLS./HR	200,000 lbs./HR
2	86 BBLS./HR	200,000 lbs./HR
3	118.8 BBLS./HR	275,000 lbs./HR
4	118.8 BBLS./HR	275,000 lbs./HR
5	86.2 BBLS./HR	440,000 lbs./HR
6	126 BBLS./HR	625,000 lbs./HR

Actual fuel input to the boilers is monitored continuously and calculated on a weekly basis. Steam flow is monitored and recorded each shift. Fuel oil temperature and pressure are maintained at optimum levels. Temperature is recorded continuously while pressure is recorded each hour. Excess air is monitored and maintained at levels to produce efficient fuel combustion.

### Maintenance and Inspection

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.

During major outages, the boilers, controls, auxiliaries and duct work are inspected and repaired as necessary. On-going procedures include burner inspections and cleanings, burner tip replacements and maintenance of optimum flame patterns to achieve efficient fuel combustion.

TECO

Hooker Point Station #5

File Number A029-12942

## PERMIT APPLICATION STATUS SHEET

Type of permit applied for

Air Operation

County

Hillsborough

Date Received

8/28/78P.E. seal & signature ☒Check ☒No. check ☐Letter of corp. standing ☒CLOCK  
DAYS

DATE TASK COMPLETED

INITIALS

3	Logging by Sec'y	<u>9/11/78</u>	<u>RHT</u>
5	Review by Sec. head and transfer to permitting Engineer	<u>10-2-78</u>	<u>SW</u>
28	Completeness Review		
	request additiona info *		
	information received *		
	Public Notice Published * (for Air Construction only)		
55	Letter of Intent sent to * Supervisor		
60	Letter of Intent submitted * to District Manager		
75	Intent to issue/deny mailed *		
80	Permitting Eng'r submit finished permit package & recommendations to supervisor	<u>10/18/78</u>	<u>SW</u>
83	Permit Package to Dist. Engr.	<u>10/19/78</u>	<u>SW</u>
85	Permit Package to Dist. Manager	<u>10-19-78</u>	<u>SK</u>
90	Final Issuance/denial	<u>10-23-78</u>	

\*If needed, If not indicate by N/A

PERMIT WORKSHOP

SOURCE TECO Hookers Point # 5 DATE 10/11/78  
 COUNTY Hallstrough TYPE PERMIT Q029-12942

ACTION	INITIAL WHEN COMPLETED	DATE
Preliminary Review		
Assigned for Review to	<u>TD</u>	<u>10-10-78</u>
Review Comments	<u>TD</u>	<u>10-11-78</u>

I have reviewed the plans and applications submitted and find that the above mentioned source will not reasonably be expected to cause pollution in violation of the Department standards, rules and regulations. I recommend approval of this permit.

Number Assigned		
Permit Issued & Signed		
Permit Logged		
Permit Mailed		
Data Forms Completed	<u>TD</u>	<u>10-11-78</u>
Permit Denied		

REVIEWED BY: WABDATE: 10-11-78

IS INFORMATION CONFIDENTIAL?

YES

NO ☒

## TYPE PERMIT ACTION

## DESCRIPTION OF PRIMARY SOURCE

New Source (No related permits)

Boiler ☒Renewed or modified permit ☒

Solid Waste (Incinerator)

Point source deleted

Other Combustion

Point source added

Process

New Source replacing old source

Product (Name)

## BRIEF DESCRIPTION OF PROCESS

oil (#6) fired steam generator7570 Hr/yr

OPERATING TIME:

HR/Da

Da/Wk

Wk/Yr

## STACK DATA

Height (FT)

280'

Diam. (FT.)

11.3

Temp. (°F)

265°F

Flow Rate (CFM)

356400  
190104

Plume Height (FT)

Common Stack (Explain)

## OPERATING DATA

Process Rate

#/Hr

Process Rate

TONS/Yr

Max Design Rate

#/Hr.

Combustion (Units) Gal ✓ TONSFT<sup>3</sup>

Rate

Unit/Hr

Unit/Yr

Heat Content

1.44 x 10<sup>6</sup>

BTU/Gal.

Boiler Capacity

610 MMBTU/Hr.

Max Design Rate

Unit/Hr.

Fuel (Nmme) #6

%S

0.76

%A

COMMENTS:

Test date March 29-78SO<sub>2</sub> 16/MMBTU/hrTest  
.077allowed1.1TSP 16/MMBTU/hr.05 0.0771.1

# CONTROL EQUIPMENT

Pollutant	Control Method	Efficiency
Particulates	ESP	99
SO <sub>2</sub>		
NO <sub>x</sub>		
HC		
CO		
F <sup>-</sup>		

POLLUTANT	LB/HR.	EMISSION ESTIMATE			TEST DATA
		TONS/HR.	LB/TON (PROD.)	LB/10 <sup>6</sup> BTU	
Particulates				0.05	✓
SO <sub>2</sub>				0.77	✓
NO <sub>x</sub>					
HC					
CO					
F <sup>-</sup>					

## BASIS FOR ESTIMATE:

- ☐ Not applicable (if emissions are negligible)  
☒ Stack test results or emission measurements  
☒ Material balance of process using engineering knowledge  
☐ Emissions calculated using EPA emission factors  
☐ Guess  
☐ Emission factor difference from official EPA factor

## ALLOWABLE EMISSIONS

POLLUTANT	LBS/HR.	LBS/TON (PROD.)	LBS/10 <sup>6</sup> BTU	APPLICABLE REGULATIONS
PARTICULATES			0.1	
SO <sub>2</sub>			1.1	
NO <sub>x</sub>				
HC				
CO				



## POINT SOURCE INPUT FORM

DATE 10-12-78

NAME OF PERSON  
COMPLETING FORM

W. H. Brown

STATE		COUNTY				AQCR			PLANT ID NUMBER			
1	2	3	4	5	6	7	8	9	10	11	12	13
1	0	1	8	0	0	0	5	2	0	0	3	8

[illegible]

DEPARTMENT OF ENVIRONMENTAL REGULATION

## POINT SOURCE CODING FORM

2

STATE		COUNTY				AQCR			PLANT #				POINT ID	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0	1	8	0	0	0	5	2	0	0	3	8	0	5

DELETE	1	
ADD	2	✓
CHANGE	3	

YEAR OF RECORD	COMPANY NAME																																								COMPANY MAILING ADDRESS																COMPANY CITY								ZIP CODE				ACTION	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80					
	7	8	T	E	C	O		H	O	O	K	E	R	S		P	T		S								P	O		B	O	X		1	1	1						T	A	M	P	A								3	3	6	0	1	2	0	7									

[illegible][illegible][illegible]

YEAR OF RECORD	MOST RECENT DATE OF EMISSIONS TESTING FOR PARTICULATES						MOST RECENT DATE OF EMISSIONS TESTING FOR SO2						DUE DATE FOR PARTICULATE EMISSIONS TEST RESULTS						DUE DATE FOR SO2 EMISSIONS. TEST RESULTS						STATUS CODE	DATE OF RECORDING OF STATUS CODE						TSP FREQ. (CODE)	SO2 FREQ. (CODE)	MOST RECENT DATE OF INSPECTION BY DEPARTMENT						VE FREQ. (CODE)	MOST RECENT DATE OF VISIBLE EMISSIONS TEST						VE - PERM SOURCE CATEGORY	VE - DEF	ACTION																
	M	M	D	D	Y	Y	M	M	D	D	Y	Y	M	M	D	D	Y	Y	M	M	D	D	Y	Y				M	M	D	D	Y	Y		M	M	D	D	Y	Y																									
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
7	8	0	3	2	9	7	8		0	3	2	9	7	8		0	5	2	9	7	8		0	5	2	9	7	8		B		1	0	1	8	7	8		1		1							1					0	3	2	9	7	8	0				2	1	



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

August 21, 1978

Mr. Jose Rodriguez  
Hillsborough County Environmental  
Protection Commission  
7402 N. 56th St., Bldg. 500  
Tampa, Florida 33617

Dear Mr. Rodriguez:

This is to inform you that Dr. William J. Johnson  
is an authorized representative of Tampa Electric  
Company.

Very truly yours,



J. D. Hicks  
Vice President-Operations

# TECHNICAL SERVICES, INC.

103 Stockton Street  
P. O. Box 628  
Jacksonville, Fla. 32201

D. P. C.

NOV 19 1974

RECEIVED  
OCT 15 1974

## SOURCE SAMPLING CALCULATIONS PARTICULATE EMISSIONS

WEST CENTRAL REGION

PLANT- TECO HOOKERS POINT

STACK- UNIT 5

WEATHER CONDITIONS- CLOUDY

AS- 70.25 SQ. FEET TS- 862.6 DEGREES R TM- 564.1 DEGREES R H- 0.82 IN H2O

ΔH- 1.58 IN H2O AN- 0.000341 SQ FT CP- 0.83 VM- 72.55 CF VC- 149 ML

TOTAL TIME- 96 MIN NPTS- .24 ORSAT: CO2-10.60 O2- 5.90 CO- 0 N2-83.50

DATE- 7/9/74

RUN 2 FROM 15:50-18:22

PB- 30.04 IN HG

PS- 29.97 IN HG

1. Volume Water Vapor	1. 7.063	SCF
2. Stack Gas Volume - STPD	2. 68.702	SCFD
3. Total Volume	3. 75.765	SCF
4. Moisture in Stack Gas - Volume Fraction	4. 0.093	
5. Dry Stack Gas - Volume Fraction	5. 0.907	
6. Assumed Moisture in Stack Gas - Volume Fraction	6. 0.1	
7. Molecular Weight of Stack Gas - Dry Basis	7. 29.93	
8. Molecular Weight of Stack Gas - Stack Conditions	8. 28.82	
9. Specific Gravity of Stack Gas Relative to Air	9. 0.99	
10. Excess Air - Percent	10. 36.	%
11. Average of Factor ( $\sqrt{VH \times TS}$ )	11. 24.081	
12. Average Stack Velocity	12. 3485.1	FFM
13. Actual Stack Gas Flow Rate	13. 244825	ACFM
14. Actual Stack Gas Flow Rate Dry	14. 222003	CFMD
15. Stack Gas Flow Rate - STPD	15. 136628	SCFM
16. Percent Isokinetic	16. 107.9	%

MG	GR/SCF	GR/ACF	MG/SCF	MG/ACF	LBS/HR
PART. - 233.2	0.0523	0.0292	119.85	66.87	61.36
TOTALS - 233.2	0.0523	0.0292	119.85	66.87	61.36

Comments: Operating at maximum attainable load of 440,000 lb/hr steam  
607.4 X 10<sup>6</sup> BTU/hr. heat input

Test Conducted By: A. E. Henderson & H. C. Gray, Jr.

## SOURCE SAMPLING FIELD DATA SHEET

Plant TECO HOOKERS POINT  
Sampling Location \_\_\_\_\_ Unit #5  
Date \_\_\_\_\_ Run No. 2  
Time Start 1550 Time End 1822  
Sampling Time/Point \_\_\_\_\_ 4 min.  
DB \_\_\_\_\_ °F, WB 10 °F, VF @ DP \_\_\_\_\_ "Hg  
Moisture \_\_\_\_\_ %, FDA \_\_\_\_\_, Gas Density Factor \_\_\_\_\_  
Barometric Press 30.04 Hg, Stack Press 29.97 Hg  
Weather \_\_\_\_\_  
Temp. \_\_\_\_\_ °F, W/D \_\_\_\_\_, W/S \_\_\_\_\_  
Sample Box No. 1 Meter Box No. 1  
Meter AHE \_\_\_\_\_ Pitot Corr. Factor .83  
Nozzle Dia. 1/4 in., Probe Length 10 ft  
Probe Heater Setting \_\_\_\_\_  
Stack Dimensions: Inside Diameter \_\_\_\_\_ in  
Inside Area 70.25 ft<sup>2</sup>  
Height \_\_\_\_\_ ft

Mat'l Processing Rate	440,000#	steam/hr.
Final Gas Meter Reading	218.575	ft <sup>3</sup>
Initial Gas Meter Reading	146.025	ft <sup>3</sup>
Total Condensate in Impingers	130	ml
Moisture in Silica Gel	19	gm
Silica Gel Container No.	2	Filter No. 12
Orsat: CO <sub>2</sub>	10.6%	
O <sub>2</sub>	5.9%	
CO	0.0%	
N <sub>2</sub>	83.5%	
Excess Air		

Test Conducted by: A. E. Henderson, Jr.  
H. C. Gray, Jr.

Remarks: \_\_\_\_\_

Port and Transverse Point No.	Distance from End of Port (in.)	Clock Time	Gas Meter Reading (ft <sup>3</sup> )	Stack Velocity Head ("H <sub>2</sub> O)	Meter Orifice Press. Diff. ("H <sub>2</sub> O)		Stack Gas Temp. (°F)	Gas Sample Temp. & Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impinger Test (°F)	Vacuum on Sample Train ("Hg)
					Calc.	Actual		In	Out			
		1550	146.025									
4-1		1554	148.3	.47	1.10	1.10	403	97	97			12
4-2		1558	151.2	.57	1.31	1.31	403	98	97			7
4-3		1602	154.1	.60	1.40	1.40	404	100	98			6 ½
4-4		1606	157.1	.62	1.45	1.45	403	102	98			6 ½
4-5		1610	159.9	.60	1.40	1.40	403	103	99			6 ½
4-6		1614 1707	162.7	.55	1.28	1.28	403	103	100			6 ½

[illegible]

## SOURCE EMISSION TEST DATA

Test Number -  
 Plant Name -  
 Source Tested -  
 Type of Plant -  
 Control Equipment -  
 Pollutant Sampled -

	1	2	
1. Run Number	7/9/74	7/9/74	
2. Date	13:14	15:50	
3. Time Began	15:03	18:22	
4. Time End	96	96	
5. T - Net Time of Test, Minutes	29.98	30.04	
6. PB - Barometric Pressure, Inches Hg	29.91	29.97	
7. PS - Stack Pressure, Inches Hg	1.59	1.58	
8. ΔH - Gas Meter Orifice Pressure Drop, Inches H <sub>2</sub> O	103.3	104.1	
9. TM - Gas Meter Average Temperature, °F	155	149	
10. VC - Total H <sub>2</sub> O Collected, ml	7.35	7.06	
11. VWV - Volume H <sub>2</sub> O Vapor Collected, cubic ft., STP	70.175	72.55	
12. VM - Volume Dry Gas Sampled, cu. ft., Meter Cond.	66.414	68.702	
13. VSTPD - Volume Dry Gas Sampled, cu. ft., STP	10	9.3	
14. W(PCT) - Stack Gas Moisture, PCT Volume	403.8	402.6	
15. TS - Average Stack Gas Temperature, °F	10.8	10.6	
16. CO <sub>2</sub> - Stack Gas CO <sub>2</sub> , PCT Volume	7.6	5.9	
17. O <sub>2</sub> - Stack Gas O <sub>2</sub> , PCT Volume	0	0	
18. CO - Stack Gas CO, PCT Volume	81.6	83.5	
19. N <sub>2</sub> - Stack Gas N <sub>2</sub> , PCT Volume	54.	36.	
20. EA - Stack Gas Excess Air, PCT Volume	30.03	29.93	
21. MD - Stack Gas Molecular Weight, Dry	28.83	28.82	
22. MS - Stack Gas Molecular Weight, Stack Cond.	0.99	0.99	
23. GS - Stack Gas Specific Gravity, Ref Air	0.823	0.82	
24. H - Average Square Root Velocity Head, Inches H <sub>2</sub> O	24.172	24.081	
25. Average Square Root (Stk Temp x Vel Head)	0.83	0.83	
26. CP - Pitot Tube Correction Factor	3501	3485.1	
27. U - Stack Gas Velocity, Feet/Minute	70.25	70.25	
28. AS - Stack Area, Square Feet	70.25	70.25	
29. AS' - Effective Stack Area, Square Feet	245946	244825	
30. QS - Stack Gas Flow Rate, cu.ft./min., Stk Cond.	135836	136628	
31. QSTPD - Stack Gas Flow Rate, cu.ft./min. STP	0.25	0.25	
32. DN - Sampling Nozzle Diameter, inches	0.00034	0.00034	
33. AN - Sampling Nozzle Area, Square Feet	104.9	107.9	
34. PCT ISO - Isokinetic Sampling, Percent			

\*\*\* STP - Dry, 70 Degrees F, 29.92 Inches Hg

# TECHNICAL SERVICES, INC.

103 Stockton Street  
P. O. Box 628  
Jacksonville, Fla. 32201

RECEIVED  
OCT 15 1974

D. P. C.

NOV 19 1974

## SOURCE SAMPLING CALCULATIONS PARTICULATE EMISSIONS

PLANT- TECO HOOKERS  
STACK- UNIT 5  
WEATHER CONDITIONS- CLOUDY

AS'- 70.25 SQ. FEET TS- 863.8 DEGREES R TM- 563.3 DEGREES R PB- 29.98 IN HG PS- 29.91 IN HG  
ΔH- 1.59 IN H2O AN- 0.000341 SQ FT CP- 0.83 VM- 70.175 CF H- 0.823 IN H2O VC- 155 ML  
TOTAL TIME- 96 MIN NPTS- 24 ORSAT: CO2-10.80 O2- 7.60 CO- 0 N2-81.60

WEST CENTRAL REGION  
DATE- 7/9/74  
RUN 1 FROM 13:14-15:03

1. Volume Water Vapor
2. Stack Gas Volume - STPD
3. Total Volume
4. Moisture in Stack Gas - Volume Fraction
5. Dry Stack Gas - Volume Fraction
6. Assumed Moisture in Stack Gas - Volume Fraction
7. Molecular Weight of Stack Gas - Dry Basis
8. Molecular Weight of Stack Gas - Stack Conditions
9. Specific Gravity of Stack Gas Relative to Air
10. Excess Air - Percent
11. Average of Factor ( $\sqrt{VH \times TS}$ )
12. Average Stack Velocity
13. Actual Stack Gas Flow Rate
14. Actual Stack Gas Flow Rate Dry
15. Stack Gas Flow Rate - STPD
16. Percent Isokinetic

1.	7.347	SCF
2.	66.414	SCFD
3.	73.761	SCF
4.	0.1	
5.	0.9	
6.	0.1	
7.	30.03	
8.	28.83	
9.	0.99	
10.	54.	%
11.	24.172	
12.	3501	FFM
13.	245946	ACFM
14.	221449	CFMD
15.	135836	SCFM
16.	104.9	%

MG	GR/SCF	GR/ACF	MG/SCF	MG/ACF	LBS/HR
PART. - 221.0	0.0512	0.0283	117.50	64.88	59.80
TOTALS - 221.0	0.0512	0.0283	117.50	64.88	59.80

Comments: Operating at maximum attainable load of 440,000 lb/hr steam  
607.4 X 10<sup>6</sup> BTU/hr heat input

Test Conducted By: A. E. Henderson & H. C. Gray, Jr.



## SOURCE SAMPLING FIELD DATA SHEET

Plant TECO HOOKERS POINT  
 Sampling Location Unit 5  
 Date 7-9-74 Run No. 1  
 Time Start 1314 Time End 1503  
 Sampling Time/Point 4 Min.  
 DB °F, WB °F, VF @ DP "Hg  
 Moisture 10 %, FIA       , Gas Density Factor         
 Barometric Press 29.98" HG Stack Press 29.91" HG  
 Weather         
 Temp. °F, W/D       , W/S         
 Sample Box No. 1 Meter Box No. 1  
 Meter M@        Pitot Corr. Factor .83  
 Nozzle Dia. ½ in., Probe Length 10 ft  
 Probe Heater Setting         
 Stack Dimensions: Inside Diameter        in  
                             Inside Area 70.25 ft<sup>2</sup>  
                             Height        ft

Mat'l Processing Rate 440,000# steam/hr.  
 Final Gas Meter Reading 145.980 ft<sup>3</sup>  
 Initial Gas Meter Reading 75.805 ft<sup>3</sup>  
 Total Condensate in Impingers 135 ml  
 Moisture in Silica Gel 20 gm  
 Silica Gel Container No. 1 Filter No. 10F  
 Orsat: CO<sub>2</sub> 10.8%  
           O<sub>2</sub> 7.6%  
           CO 0.0%  
           N<sub>2</sub> 81.6%  
 Excess Air         
 Test Conducted by: A. E. Henderson, Jr.  
                             H. C. Gray, Jr.  
 Remarks:       

Port and Transverse Point No.	Distance from End of Port (in.)	Clock Time	Gas Meter Reading (ft <sup>3</sup> )	Stack Velocity Head ("H <sub>2</sub> O)	Meter Orifice Press. Diff. ("H <sub>2</sub> O)		Stack Gas Temp. (°F)	Gas Sample Temp. & Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impinger Test (°F)	Vacuum on Sample Train ("Hg)
					Calc.	Actual		In	Out			
		13.14	75.805									
1-1	5 7/8	13.18	78.7	.70	1.62	1.62	400	93	91			5½
1-2	17 ½	13.22	82.2	.95	2.19	2.19	400	93	92			7
1-3	29 ½	13.26	85.9	1.02	2.38	2.38	402	94	92			8
1-4	40 ¾	13.30	89.6	1.02	2.38	2.38	402	95	93			8 ½
1-5	52 ½	13.34	93.1	.98	2.27	2.27	402	98	94			8 ½
1-6	64 1/8	13.38 13.40	96.5	.90	2.10	2.10	408	102	94			8 ½

[illegible]

# TECHNICAL SERVICES, INC.

103 Stockton Street  
P. O. Box 628  
Jacksonville, Fla. 32201

## SOURCE SAMPLING CALCULATIONS PARTICULATE EMISSIONS

PLANT- TECO HOOKERS POINT  
STACK- UNIT 5

DATE- 7/9/74

RUN 2 FROM 15:50-18:22

WEATHER CONDITIONS- CLOUDY

AS'- 70.25 SQ. FEET TS- 862.6 DEGREES R PB- 30.04 IN HG PS- 29.97 IN HG  
AH- 1.58 IN H2O AN- 0.000341 SQ FT CP- 0.83 VM- 72.55 CF VC- 149 ML  
TOTAL TIME- 96 MIN NPTS- 24 ORSAT: CO2-10.60 O2- 5.90 CO- 0 N2-83.50

1. Volume Water Vapor	1. 7.063	SCF
2. Stack Gas Volume - STPD	2. 68.702	SCF
3. Total Volume	3. 75.765	SCF
4. Moisture in Stack Gas - Volume Fraction	4. 0.093	
5. Dry Stack Gas - Volume Fraction	5. 0.907	
6. Assumed Moisture in Stack Gas - Volume Fraction	6. 0.1	
7. Molecular Weight of Stack Gas - Dry Basis	7. 29.93	
8. Molecular Weight of Stack Gas - Stack Conditions	8. 28.82	
9. Specific Gravity of Stack Gas Relative to Air	9. 0.99	
10. Excess Air - Percent	10. 36	%
11. Average of Factor ( $\sqrt{VH \times TS}$ )	11. 24.081	
12. Average Stack Velocity	12. 3485.1	FFM
13. Actual Stack Gas Flow Rate	13. 244825	ACFM
14. Actual Stack Gas Flow Rate Dry	14. 222003	CFMD
15. Stack Gas Flow Rate - STPD	15. 136628	SCFMD
16. Percent Isokinetic	16. 107.9	%

MG	GR/SCF	GR/ACF	MG/SCF	MG/ACF	LBS/HR
PART: - 233.2	0.0523	0.0292	119.85	66.87	61.36
TOTALS - 233.2	0.0523	0.0292	119.85	66.87	61.36

Comments: Operating at maximum attainable load of 440,000 lb/hr steam  
607.4 X 10<sup>6</sup> BTU/hr. heat input

Test Conducted By: A. E. Henderson & H. C. Gray, Jr.

Plant TECO HOOKERS POINT  
Sampling Location                      Unit #5  
Date                      Run No. 2  
Time Start 1550 Time End 1822  
Sampling Time/Point                      4 min.  
DB            °F, WB 10 °F, VF @ DP                      "Hg  
Moisture            %, FDA           , Gas Density Factor             
●            ometric Press 30.04 lg, Stack Press 29.97 "Hg  
Weather                       
Temp.            °F, W/D                     , W/S                       
Sample Box No. 1 Meter Box No. .1  
Meter MB            Pitot Corr. Factor .83  
Nozzle Dia. 1/4 in., Probe Length 10 ft  
Probe Heater Setting                       
Stack Dimensions: Inside Diameter            in  
                            Inside Area 70.25 ft<sup>2</sup>  
                            Height            ft

Mat'l Processing Rate	440,000#	steam/hr.
Final Gas Meter Reading	218.575	ft <sup>3</sup>
Initial Gas Meter Reading	146.025	ft <sup>3</sup>
Total Condensate in Impingers	130	ml
Moisture in Silica Gel	19	gm
Silica Gel Container No.	2	Filter No. 12
Orsat: CO <sub>2</sub>	10.6%	
O <sub>2</sub>	5.9%	
CO	0.0%	
N <sub>2</sub>	83.5%	
Excess Air		

Test Conducted by: A. E. Henderson, Jr.  
H. C. Gray, Jr.

Remarks:

Port and Inverse Point No.	Distance from End of Port (in.)	Clock Time	Gas Meter Reading (ft <sup>3</sup> )	Stack Velocity Head ("H <sub>2</sub> O)	Meter Orifice Press. Diff. ("H <sub>2</sub> O)		Stack Gas Temp. (°F)	Gas Sample Temp. & Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impurer Test (°F)	Vacuum on Sample Train ("Hg)
					Calc.	Actual		In	Out			
		1550	146.025									
4-1		1554	148.3	.47	1.10	1.10	403	97	97			12
4-2		1558	151.2	.57	1.31	1.31	403	98	97			7
4-3		1602	154.1	.60	1.40	1.40	404	100	98			6 ½
4-4		1606	157.1	.62	1.45	1.45	403	102	98			6 ½
4-5		1610	159.9	.60	1.40	1.40	403	103	99			6 ½
		1614	162.7	.55	1.38	1.38	403	103	100			6 ½

[illegible]

## SOURCE EMISSION TEST DATA

Test Number -  
 Plant Name -  
 Source Tested -  
 Type of Plant -  
 Control Equipment -  
 Pollutant Sampled -

	1	2	
1. Run Number	7/9/74	7/9/74	
2. Date	13:14	15:50	
3. Time Began	15:03	18:22	
4. Time End	96	96	
5. T - Net Time of Test, Minutes	29.98	30.04	
6. PB - Barometric Pressure, Inches Hg	29.91	29.97	
7. PS - Stack Pressure, Inches Hg	1.59	1.58	
8. $\Delta H$ - Gas Meter Orifice Pressure Drop, Inches H <sub>2</sub> O	103.3	104.1	
9. TM - Gas Meter Average Temperature, °F	155	149	
10. VC - Total H <sub>2</sub> O Collected, ml	7.35	7.06	
11. VWV - Volume H <sub>2</sub> O Vapor Collected, cubic ft., STP	70.175	72.55	
12. VM - Volume Dry Gas Sampled, cu. ft., Meter Cond.	66.414	68.702	
13. VSTPD - Volume Dry Gas Sampled, cu. ft., STP	10	9.3	
14. W(PCT) - Stack Gas Moisture, PCT Volume	403.8	402.6	
15. TS - Average Stack Gas Temperature, °F	10.8	10.6	
16. CO <sub>2</sub> - Stack Gas CO <sub>2</sub> , PCT Volume	7.6	5.9	
17. O <sub>2</sub> - Stack Gas O <sub>2</sub> , PCT Volume	0	0	
18. CO - Stack Gas CO, PCT Volume	81.6	83.5	
19. N <sub>2</sub> - Stack Gas N <sub>2</sub> , PCT Volume	54.	36.	
20. EA - Stack Gas Excess Air, PCT Volume	30.03	29.93	
21. MD - Stack Gas Molecular Weight, Dry	28.83	28.82	
22. MS - Stack Gas Molecular Weight, Stack Cond.	0.99	0.99	
23. GS - Stack Gas Specific Gravity, Ref Air	0.823	0.82	
24. H - Average Square Root Velocity Head, Inches H <sub>2</sub> O	24.172	24.081	
25. Average Square Root (Stk Temp x Vel Head)	0.83	0.83	
26. CP - Pitot Tube Correction Factor	3501	3485.1	
27. U - Stack Gas Velocity, Feet/Minute	70.25	70.25	
28. AS - Stack Area, Square Feet	70.25	70.25	
29. AS' - Effective Stack Area, Square Feet	245946	244825	
30. QS - Stack Gas Flow Rate, cu.ft./min., Stk Cond.	135836	136628	
31. QSTPD - Stack Gas Flow Rate, cu.ft./min. STP	0.25	0.25	
32. DN - Sampling Nozzle Diameter, inches	0.00034	0.00034	
33. AN - Sampling Nozzle Area, Square Feet	104.9	107.9	
34. PCT ISO - Isokinetic Sampling, Percent			

\*\*\* STP - Dry, 70 Degrees F, 29.92 Inches Hg

# TECHNICAL SERVICES, INC.

103 Stockton Street  
P. O. Box 628  
Jacksonville, Fla. 32201

## SOURCE SAMPLING CALCULATIONS PARTICULATE EMISSIONS

PLANT- TECO HOOKERS POINT

STACK- UNIT 5

WEATHER CONDITIONS- CLOUDY

AS'- 70.25 SQ. FEET TS- 863.8 DEGREES R TM- 563.3 DEGREES R H- 0.823 IN H2O

ΔH- 1.59 IN H2O AN- 0.000341 SQ FT CP- 0.83 VM- 70.175 CF VC- 155 ML

TOTAL TIME- 96 MIN NPTS- 24 ORSAT: CO2-10.80 O2- 7.60 CO- 0 N2-81.60

DATE- 7/9/74

RUN 1 FROM 13:14-15:03

PB- 29.98 IN HG

PS- 29.91 IN HG

1. Volume Water Vapor
2. Stack Gas Volume - STPD
3. Total Volume
4. Moisture in Stack Gas - Volume Fraction
5. Dry Stack Gas - Volume Fraction
6. Assumed Moisture in Stack Gas - Volume Fraction
7. Molecular Weight of Stack Gas - Dry Basis
8. Molecular Weight of Stack Gas - Stack Conditions
9. Specific Gravity of Stack Gas Relative to Air
10. Excess Air - Percent
11. Average of Factor ( $\sqrt{VH \times TS}$ )
12. Average Stack Velocity
13. Actual Stack Gas Flow Rate
14. Actual Stack Gas Flow Rate Dry
15. Stack Gas Flow Rate - STPD
16. Percent Isokinetic

1.	7.347	SCF
2.	66.414	SCFM
3.	73.761	SCF
4.	0.1	
5.	0.9	
6.	0.1	
7.	30.03	
8.	28.83	
9.	0.99	
10.	54.	%
11.	24.172	
12.	3501	FFM
13.	245946	ACFM
14.	221449	CFMD
15.	135836	SCFM
16.	104.9	%

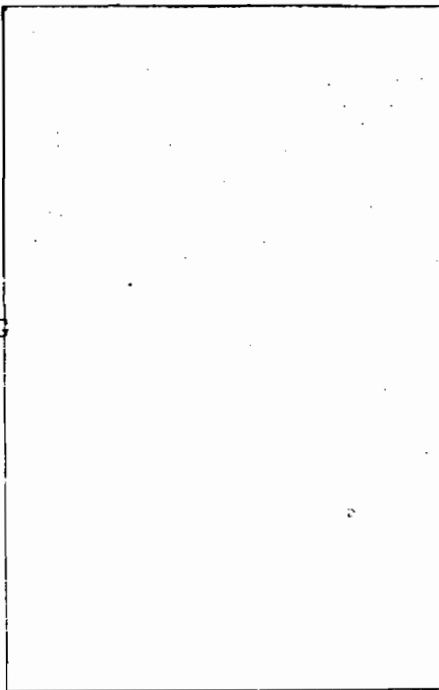
MG	GR/SCF	GR/ACF	MG/SCF	MG/ACF	LBS/HR
PART. - 221.0	0.0512	0.0283	117.50	64.88	59.80
TOTALS - 221.0	0.0512	0.0283	117.50	64.88	59.80

Comments: Operating at maximum attainable load of 440,000 lb/hr steam  
607.4 X 10<sup>6</sup> BTU/hr heat input

Test Conducted By: A. E. Henderson & H. C. Gray, Jr.

## SOURCE SAMPLING FIELD DATA SHEET

Plant TECO HOOKERS POINT  
 Sampling Location Unit 5  
 Date 7-9-74 Run No. 1  
 Time Start 1314 Time End 1503  
 Sampling Time/Point 4 Min.  
 DB      °F, WB      °F, VF @ DP      "Hg  
 Moisture 10 %, FMA     , Gas Density Factor       
 Barometric Press 29.98"HG Stack Press 29.91" HG  
 Other       
 Temp.      °F, W/D     , W/S       
 Sample Box No. 1 Meter Box No. 1  
 Meter All @      Pitot Corr. Factor .83  
 Nozzle Dia. ½ in., Probe Length 10 ft  
 Probe Heater Setting       
 Stack Dimensions: Inside Diameter      in  
                             Inside Area 70.25 ft<sup>2</sup>  
                             Height      ft



Mat'l Processing Rate 440,000# steam/hr.  
 Final Gas Meter Reading 145.980 ft<sup>3</sup>  
 Initial Gas Meter Reading 75.805 ft<sup>3</sup>  
 Total Condensate in Impingers 135 ml  
 Moisture in Silica Gel 20 gm  
 Silica Gel Container No. 1 Filter No. 10F  
 Orsat: CO<sub>2</sub> 10.8%  
           O<sub>2</sub> 7.6%  
           CO 0.0%  
           N<sub>2</sub> 81.6%  
 Excess Air       
 Test Conducted by: A. E. Henderson, Jr.  
                             H. C. Gray, Jr.  
 Remarks:       
      
    

Port and Inverse Point No.	Distance from End of Port (in.)	Clock Time	Gas Meter Reading (ft <sup>3</sup> )	Stack Velocity Head ("H <sub>2</sub> O)	Meter Orifice Press. Diff. ("H <sub>2</sub> O)		Stack Gas Temp. (°F)	Gas Sample Temp. & Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impinger Test (°F)	Vacuum on Sample Train ("Hg)
					Calc.	Actual		In	Out			
		13.14	75.805									
1-1	5 7/8	13.18	78.7	.70	1.62	1.62	400	93	91			5½
1-2	17 ½	13.22	82.2	.95	2.19	2.19	400	93	92			7
1-3	29 ½	13.26	85.9	1.02	2.38	2.38	402	94	92			8
1-4	40 3/4	13.30	89.6	1.02	2.38	2.38	402	95	93			8 ½
1-5	52 ½	13.34	93.1	.98	2.27	2.27	402	98	94			8 ½
	64 1/8	13.38 13.40	96.5	.90	2.10	2.10	408	102	94			8 ½



[illegible]

ANNUAL OPERATING REPORT  
Calendar year 1976

Submit a separate report for each permitted source by FEBRUARY 28, 1977

## SECTION 1: General

SOURCE NAME: Tampa Electric Company (Hookers Point Unit 5)

MAILING ADDRESS: P. O. Box 111 (Attention: Jeff Rankin)

Tampa, Florida 33601

TELEPHONE NO: 813/879-4111

OPERATING PERMIT NO: None

SOURCE DESCRIPTION: Fossil-fuel steam generator

**D. E. R.**  
**APR 15 1977**  
**SOUTH WEST DISTRICT**  
**ST. PETERSBURG**

## SECTION 2: PROCESS OPERATIONS:

- a. DURATION OF OPERATION AND FREQUENCY: 24 hrs/dy 7 dys/wk 52 wk/yr  
e.g. 8 hrs perday, 5 dys per wk and 50 wk/yr. actual hours operation 8441
- b. DESIGN CRITERIA: MAXIMUM OUTPUT 47 MW (from FPC-67 Form)  
e.g. 850 MW, 750 tons/dy
- c. ~~NOMINAL~~ (AVERAGE) OUTPUT 27.1 MW  
e.g. 424 MW, 670 tons/dy.
- d. MAXIMUM PEAK THAT OCCURED DURING ANY ONE DAY 47 MW  
e.g. 910 MW, 810 tons/dy.

## SECTION 3: TOTAL AMOUNT OF MATERIALS USED/PROCESSED, COMPUTED ON THE SAME BASIS AS PROCESS WEIGHT:

TYPE(MATERIAL)

INPUT PROCESS WEIGHT- DRY

	tons/yr
<u>N.A.</u>	<u>N.A.</u>
	tons/yr
	tons/yr
	tons/yr

## SECTION 4: TOTAL AMOUNT OF FUEL USED. IF FUEL IS OIL, SPECIFY WEIGHT, e.g. NO 2, and % sulfur by weight. INCLUDE STANDBY FUELS.

--	$10^6$ cu. ft	<u>19,060</u>	$10^3$ gal NO. <u>6</u> OIL <u>.94</u> %SULFUR
--	$10^3$ gal PROPANE	--	$10^3$ gal KEROSENE
--	tons COAL	--	$10^6$ lb BLACK LIQUOR SOLIDS
<u>OTHER, specify type and units</u>			

## SECTION 5: EMISSION: ESTIMATED/TESTED EMISSIONS(TONS PER YEAR)

- a. 138.5 tons of particulates 1349 tons of sulfur dioxide
- tons of nitrogen dioxide -- tons of carbon monoxide
- tons of hydrocarbon -- tons (other)

- b.
- ~~STATE~~
- METHOD OF CALULATIONS USED IN DETERMINING EMISSION RATES

Particulates - gallons oil X  $\frac{\text{BTU}}{\text{gal.}}$  X  $\frac{\text{tons part.}}{\text{BTU}}$  = tons particulate

SO<sub>2</sub> - gallons oil X  $\frac{\text{BTU}}{\text{gal.}}$  X  $\frac{\text{tons SO}_2}{\text{BTU}}$  = tons SO<sub>2</sub>

ANNUAL OPERATING REPORT  
calendar year 1976

## SECTION 5(cont't)

c. STACK TESTED: None yet date \_\_\_\_\_

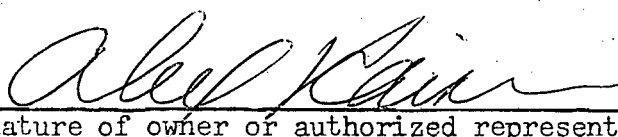
STACK TEST CONDITIONS: \_\_\_\_\_ PROCESS RATE DURING TEST \_\_\_\_\_

STACK TEST CONDUCTED BY: \_\_\_\_\_

STACK TEST WITNESSED BY: \_\_\_\_\_

SECTION 6: OPERATIONAL PROBLEMS, IF ANY: Routinea. IMPROVEMENTS MADE TO PROCESS/POLLUTION CONTROL EQUIPMENT: Noneb. TYPE OF MAINTENANCE PERFORMED: Routinec. NUMBER OF UPSETS LASTING MORE THAN FOUR HOURS DURING THE YEAR: 0d. NUMBER OF UPSETS LASTING MORE THAN ONE HOUR BUT NOT MORE THAN FOUR HOURS: Unknowne. NUMBER OF UPSETS LASTING LESS THAN ONE HOUR: Unknown

## CERTIFICATION:

I HEREBY CERTIFY THAT THE INFORMATION GIVEN IN THIS REPORT IS CORRECT TO THE  
BEST OF MY KNOWLEDGE.  
\_\_\_\_\_  
Signature of owner or authorized representativeAlex Kaiser, Director of Power Plant Engineering  
\_\_\_\_\_  
Typed name and titleApril 5, 1977  
\_\_\_\_\_  
Date