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.: AO29-203001
County: Hillsborough

Enclosed is Permit Number AO29-203001 to operate a 298 MMBTU/hr. steam generator designated as Unit #1, 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.

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

6. Signature — Agent
X

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**

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 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 23 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 INSURANCE 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

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 TECO A029-202997 " " -202998 " " -202999 " " -203000 " " -203001 " " -203002	

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 TECO A029-202997 " " -202998 " " -202999 " " -203000 A029-203001 " " -203002	

Executed in Tampa, Florida

Sincerely,

J. Harry Kerns

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.

Marilyn Quispe
Clerk

DEC 19 1991
Date

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-734

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: AO29-203001
County: Hillsborough
Expiration Date: 12/01/96
Project: Hooker's Point
Station Unit #1

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 298 MMBTU/hr. steam generator designated as Unit #1. 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: 01

Replaces Permit No.: AO29-125685

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.]

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 (± 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) Sulfur Dioxide*
(X) Opacity**

* Compliance with the sulfur dioxide emission limits may be demonstrated by calculating SO_2 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 ± 10% of the maximum permitted heat input rate (298 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

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 #1
2) Design Fuel Consumption Rate: 43 barrels per hour
3) Steam Flow: 220,000 pounds per hour
4) Operating Temperature: 900° 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:

<u>Continuously Monitored and Recorded</u>

Steam Flow
Steam Temperature
Steam Pressure
Excess Air

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
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)

A029-203801

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

Source Type: Air Pollution Renewal of DER Permit No. A029-125685

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 1

Source Location: Street: Foot of Hemlock City: Tampa

UTM: East 358.000 North 3,091.000

Latitude: 27° 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. Enclosed

2. Have there been any alterations to the plant since last permitted? [ ] Yes [X] 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 6/18/91

4. Have previous permit conditions been adhered to? [X] 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 [X] 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? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach.

5. Please provide the following information if applicable:

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

Description	Contaminant Type	Contaminant Wt %	Utilization Rate lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr**	Maximum Heat Input (MMBTU/hr)
Fuel Oil	25.4*	43.0	298

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 emisisons inventories

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.

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

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

NOTARY PUBLIC
Diana R. Hofer
Notary Public
Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. DEC. 4,1993
BONDED THRU GENERAL INS. UND.

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:

Boiler	Service Date	Manufacturer	Type
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.

Boiler	Fuel Consumption (bbls/hr)	Steam Flow (lbs/hr)	Operating Temperature (^{o}F)	Operating Pressure (psi)
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.

TAMPA ELECTRIC
A TECO ENERGY COMPANY

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,

W N Cantrell

William N. Cantrell
Vice President
Energy Resources Planning

sn/GG398

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 statuates of the State of Florida and the rules and the regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintainance and operation of the pollution control facilities* and, if applicable, pollution sources.

Signed 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)

Affix seal here

Florida Registration No. 38663

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

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

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. AO29-125685, 86, 87, 89, 90 and 91.

Enclosed are amended permits No. AO29-125685, 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

813-985-7402
SunCom - 570-8000

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

PERMIT/CERTIFICATION
Permit No.: AO29-125685
County: Hillsborough
Issuance Date: 12-29-86
Amended Date: 1-14-87
Expiration Date: 12-22-91
Project: Hooker's Point
Station Unit #1

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 298 MMBTU/hr steam generator designated as Unit #1. 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: 01

Replaces Permit No.: AO29-47726

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.

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 recurrance of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by 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.

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

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_2 emission rate from this unit shall be 1.1 pounds of SO_2 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_2 emission standard may be demonstrated by calculating SO_2 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.

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. 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 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.].

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

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 #1

Enclosed is Permit Number AO29-125685 to operate a 298 MMBTU/hr steam generator designated as Unit #1, 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.

P 433 083 923

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

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	

PS Form 3800, June 1985

☆ U.S.G.P.O. 1985-480-794

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

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.

[signature] 12/29/86
Clerk Date

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

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

PERMIT/CERTIFICATION
Permit No.: AO29-125685
County: Hillsborough
Expiration Date: 12-22-91
Project: Hooker's Point
Station Unit #1

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 298 MMBTU/hr steam generator designated as Unit #1. 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: 01

Replaces Permit No.: AO29-47726

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.

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 recurrance of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by 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.

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

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_2 emission rate from this unit shall be 1.1 pounds of SO_2 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_2 emission standard may be demonstrated by calculating SO_2 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.

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 conposite 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.].

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

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 25, 1986

Dr. Richard D. Garrity, Ph.D.
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610-9544

Mr. Roger P. Stewart
Hillsborough County Environmental
Protection Commission
1900 - 9th Avenue
Tampa, Florida 33605

Re: Tampa Electric Company
Air Operations Permit
Renewal Application
Hookers Point Station
Boiler Nos. 1, 2, 3, 4, 5, and 6

Gentlemen:

Enclosed please find an original and four (4) copies of an Application for Renewal of Permit to Operate an Air Pollution Source for each boiler, including an operation and maintenance plan for the station and an authorization letter for the applicant.

The six application packages, together with a check for a total of $2,070.00 ($345.00 per application) to the Hillsborough County Board of County Commissioners and a check for a total of $3,000.00 ($500.00 per application) to the Florida Department of Environmental Regulation, are included with Mr. Stewart's copy.

If you should have any questions, please feel free to call.

Sincerely,

A. Spencer Autry
Manager
Environmental Planning

ASA/jst/020/EE1

Enclosures

D. E. R.

OCT 0 2 1986

SOUT ST DISTRICT
TAMPA

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

A029-125685

PAID OCT 2 1986

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. A029-47726

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 1

Source Location: Street: Hemlock Avenue City: Tampa

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

Latitude: 27° 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 [X] No
   If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/14/86.

4. Have previous permit conditions been adhered to? [X] 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 [X] 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? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] 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 Type	%Wt	Utilization Rate	lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption* BBLS/HR Avg/hr*	Max/hr**	Maximum Heat Input (MMBTU/hr)
Fuel Oil	25.4*	43.0	298

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
Date

(813) 228-4111
Telephone No.

NOTARY PUBLIC

9/25/86

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

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. A029-47726

Company Name: Tampa Electric Company County: Hillsborough

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

Hookers Point Station Boiler 1

Source Location: Street: Hemlock Avenue City: Tampa

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

Latitude: 27° 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 [X] No If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/14/86.

4. Have previous permit conditions been adhered to? [X] 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 [X] 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? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach.

I. Please provide the following information if applicable:

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

Description	Contaminant Type	%Wt	Utilization Rate lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption* (BBLS/HR) Avg/hr*	Max/hr**	Maximum Heat Input (MMBTU/hr)
Fuel Oil	25.4*	43.0	298

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

A. Spencer Autry (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
Date

(813) 228-4111
Telephone No.

DIANA D. HOFER NOTARY PUBLIC

9/25/86
Diana D. Hofer
NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV 24, 1989
BONDED THRU GENERAL INS. UND.

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 25, 1986

RE: Hookers Point Station Boiler No. 1
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 G. Turner

Heywood A. Turner
Senior Vice President
Production

HAT/tb

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601 (813) 228-4111

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:

Boiler	Service Date	Manufacturer	Type
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.

Boiler	Fuel Consumption	Steam Flow	Operating Temperature	Operating Pressure
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.

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CHECK NO.

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TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

TWO THOUSAND SEVENTY AND NO/100 ****** $ ******2,070.00
DOLLARS **********

TO THE ORDER OF HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS

W.H. Stoel

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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	HIL076	HILLSBOROUGH COUNTY B	2,070.00

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

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2-65563
CHECK NO.

65563

TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

THREE THOUSAND AND NO/100 DOLLARS **** $ ******3,000.00

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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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	FL0004	FLORIDA DEPT OF ENVIR	3,000.00

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

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 25, 1986

RE: Hookers Point Station Boiler No. 1
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 G. Turner

Heywood A. Turner
Senior Vice President
Production

HAT/tb

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601 (813) 228-4111

63-27
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TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

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

$ ******2,070.00

TO THE ORDER OF HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS

W.H. Steel

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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092286F	092286	222233	PERMIT 345.00		345.00

CHECK NO.	DATE	VENDOR NO.	VENDOR NAME	TOTAL AMOUNT
65447	092486	HIL076	HILLSBOROUGH COUNTY B	2,070.00

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

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TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

THREE THOUSAND AND NO/100 DOLLARS **** $ ******3,000.00

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION

W. H. Stall

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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CHECK NO.	DATE	VENDOR NO.	VENDOR NAME	TOTAL AMOUNT
65563	092486	FL0004	FLORIDA DEPT OF ENVIR	3,000.00

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

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 25, 1986

RE: Hookers Point Station Boiler No. 1
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

Heywood A. Turner
Senior Vice President
Production

HAT/tb

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601 (813) 228-4111

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. A029-47726

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 1

Source Location: Street: Hemlock Avenue City: Tampa

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

Latitude: 27° 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 [X] No If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/14/86.

4. Have previous permit conditions been adhered to? [X] 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 [X] 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? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach.

. Please provide the following information if applicable:

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

Description	Contaminant Type	%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	25.4*	43.0	298

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.

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perate an air pollution source are true, correct and complete to the best of his knowledge
nd belief. Further, the undersigned agrees to maintain and operate the pollution source
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*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
Date

(813) 228-4111
Telephone No.

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV 24, 1989
BONDED THRU GENERAL INS. UND.

9/25/86

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:

Boiler	Service Date	Manufacturer	Type
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.

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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

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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.

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CHECK NO.

65447

TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

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

$ ******2,070.00

TO THE ORDER OF HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS

W.H. Stacy

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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

INVOICE NO.	DATE	VOUCHER	GROSS AMOUNT	DISCOUNT	NET AMOUNT
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CHECK NO.	DATE	VENDOR NO.	VENDOR NAME	TOTAL AMOUNT
65447	092486	HIL076	HILLSBOROUGH COUNTY B	2,070.00

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

63-27
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2-65563
CHECK NO.

65563

TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

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TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION

W. H. Stall

ONLY ONE SIGNATURE REQUIREQ ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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65563	092486	FL0004	FLORIDA DEPT OF ENVIR	3,000.00

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

ATTACHMENT A

HOOKERS POINT STATION - BOILERS 1 THROUGH 6

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Introduction

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TAMPA ELECTRIC
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POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

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W.H. Steele

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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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	HIL076	HILLSBOROUGH COUNTY B	2,070.00

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

63-27
631

2-65563
CHECK NO.

65563

TAMPA ELECTRIC
A TECO ENERGY COMPANY

POST OFFICE BOX 111
TAMPA, FLORIDA 33601

PAY:

DATE 09 24 86

THREE THOUSAND AND NO/100 DOLLARS **** $ ******3,000.00

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION

B E Bedford
W. H. Stoll

ONLY ONE SIGNATURE REQUIRED ON CHECKS OF $2500.00 OR LESS

NCNB NATIONAL BANK OF FLORIDA • TAMPA, FLORIDA

[redacted]

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	FL0004	FLORIDA DEPT OF ENVIR	3,000.00

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

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 25, 1986

RE: Hookers Point Station Boiler No. 1
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

Heywood A. Turner
Senior Vice President
Production

HAT/tb

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601 (813) 228-4111

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. A029-47726

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 1

Source Location: Street: Hemlock Avenue City: Tampa

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

Latitude: 27° 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 [X] No
If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/14/86.

4. Have previous permit conditions been adhered to? [X] 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 [X] 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? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] 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 Type	Contaminant %Wt	Utilization Rate	Utilization lbs/hr

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

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr** BBLS/HR	Maximum Heat Input (MMBTU/hr)
Fuel Oil	25.4*	43.0	298

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
Date

(813) 228-4111
Telephone No.

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

9/25/86
Diana [illegible]
NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. 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:

Boiler	Service Date	Manufacturer	Type
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.

Boiler	Fuel Consumption	Steam Flow	Operating Temperature	Operating Pressure
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.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

To: _____ Loctn.: _____
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: The Files

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	AO29-22018	AO29-47726
2.	Boiler No. 2	AO29-22019	AO29-47725
3.	Boiler No. 3	AO29-25432	AO29-47724
4.	Boiler No. 4	AO29-7103	AO29-47723
5.	Boiler No. 5	AO29-12942	AO29-47722
6.	Boiler No. 6	AO29-7104	AO29-47721

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#000000047726 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 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 10:45:20
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 1

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR
~~VICTORIA TSCHINKEL~~
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 AO29-47726, 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,

W.K. Hennessey
District Manager

cc: HCEPC
William N. Cantrell

Enclosure

DER Form 17-1.122(66) 1/2

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

APPLICANT:

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

PERMIT/CERTIFICATION NO. AO29-47726

COUNTY: Hillsborough

PROJECT: FFSG No. 1
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 298 MMBTU/hr heat input steam generator No. 1, oil fired

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

UTM: 17-358.0E and 3091.0N

Replaces Permit NO: AO29-22018 NEDS NO: 0038 Point ID: 01

Expires: January 25, 1987

DER FORM 17-1.122(63) 1/4 (1/80)

PERMIT NO.: AO29-47726
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 penalities 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

March 11, 1982

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

RE: Permit Nos. AO29-47721 through AO29-47731
and AO29-47735

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 SO2 per million BTU heat input for this unit.

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

A. Process Parameters

1.	MMBTU Input:	298
2.	Fuel:	Low Sulfur No. 6 Fuel Oil
3.	BBL/hr burned:	43
4.	Ash Content:	--
5.	Steam Temp.:	900 F
6.	Steam Press:	960 psig
7.	Steam Flow:	220 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 11th 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 SO2 per million BTU heat input for this unit.

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

A. Process Parameters

1.	MMBTU Input:	2.98
2.	Fuel:	Low Sulfur No. 6 Fuel Oil
3.	BBL/hr burned:	86
4.	Ash Content:	--
5.	Steam Temp.:	900 F
6.	Steam Press:	960 psig
7.	Steam Flow:	220 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 27th day of January, 1982.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

William K. Hennessey
District Manager

EXPIRATION DATE: January 25, 1987

D.E.R.

PAID SEP 17 1981

SEP 17 1981

SOUTHWEST DISTRICT
TAMPA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

RECEIVED

SEP 15 1981

U.C.L.P.C.

SOURCE TYPE: AIR POLLUTION [ ] New[1] [X] Existing[1]

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) Hooker's Point Station Boiler 1

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

Jerry L. Williams, Manager Environmental 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)

(Affix Seal)

Tampa Electric Company
Company Name (Please Type)

P. O. Box 111, Tampa, Florida 33601
Mailing Address (Please Type)

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

[1]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.)

Oil Conversion (Boilers 1-6) $3,069,000 (High Sulfur to Low Sulfur)

Stack Extension (Boilers 1-6) $2,325,000

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A029-2093 May, 1973 to June 39, 1974

A029-2514 July 11, 1977 to May 30, 1979

A029-22018 Sept. 25, 1979 to Sept. 5, 1984

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 Deterioriation" (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.

* Variable

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[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual* T/yr			lbs/hr	T/yr	
Sulfur Dioxide	327.8	92.9	1.1 lbs/MMBTU	327.8	327.8	1436	Fig 1
Particulates	29.8	3.6	0.1 lbs/MMBTU	29.8	29.8	131	

* 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[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]

[1] See Section V, Item 2.

[2] 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)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

E. Fuels From 1980 Emissions Inventory

Type (Be Specific)	Consumption* Gal/Hr		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Fuel Oil	1085	1810	~~2.98~~ 298

*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 $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			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: _____

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

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.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE

A. Company Monitored Data

1. _____ no sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location) _____

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

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

C. Computer Models Used

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^2	_____ 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.

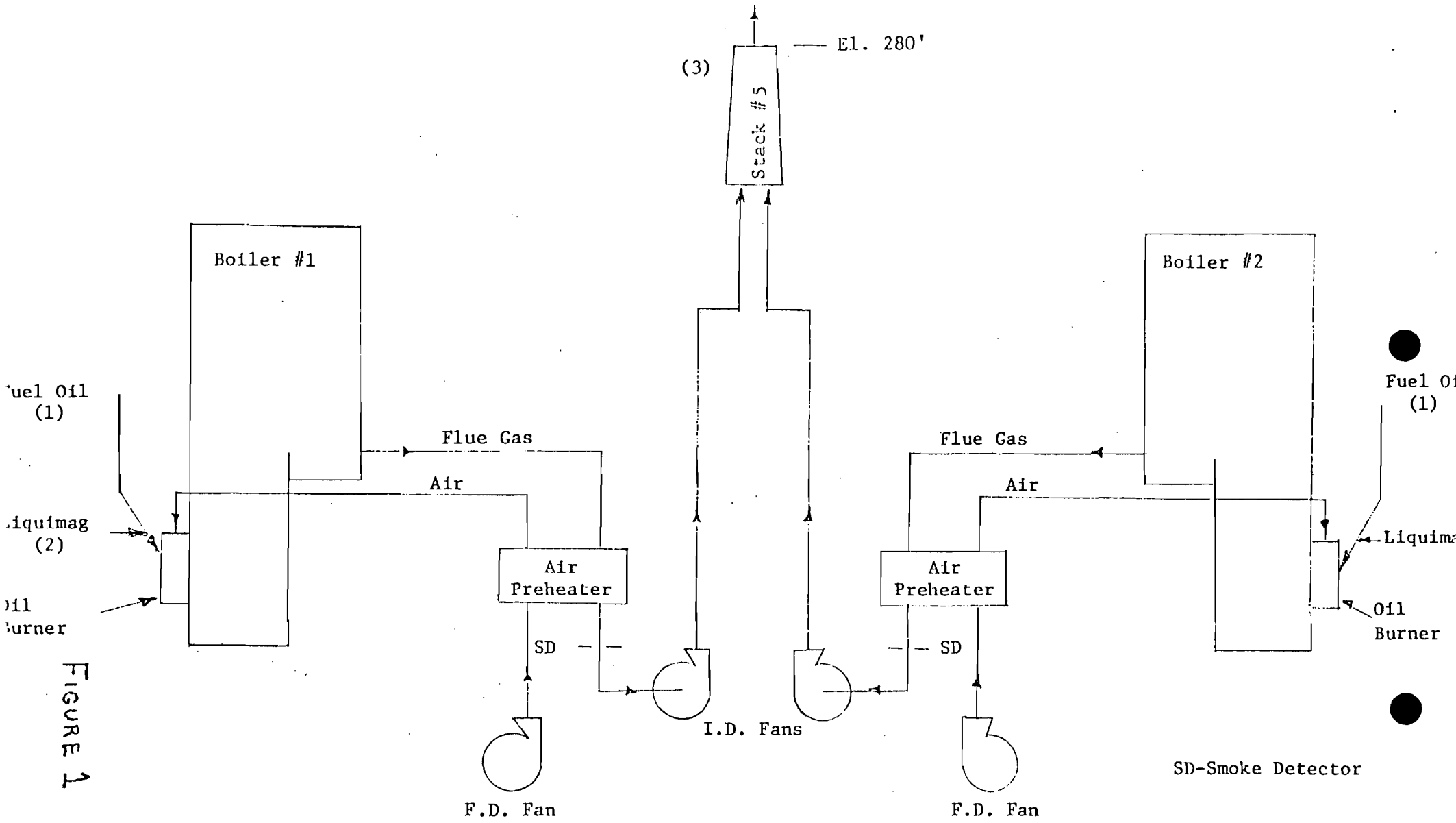


FIGURE 1

Note: There is one Hogging Jet Vent, one Blowdown Tank Vent, two Deaerator Vents, and two Evaporator Vents associated with the combustion of No. 1 and No. 2 Boilers. All these vent lines release steam to the atmosphere periodically.

FLOW DIAGRAM
BOILER NO.1
TAMPA ELECTRIC COMPANY

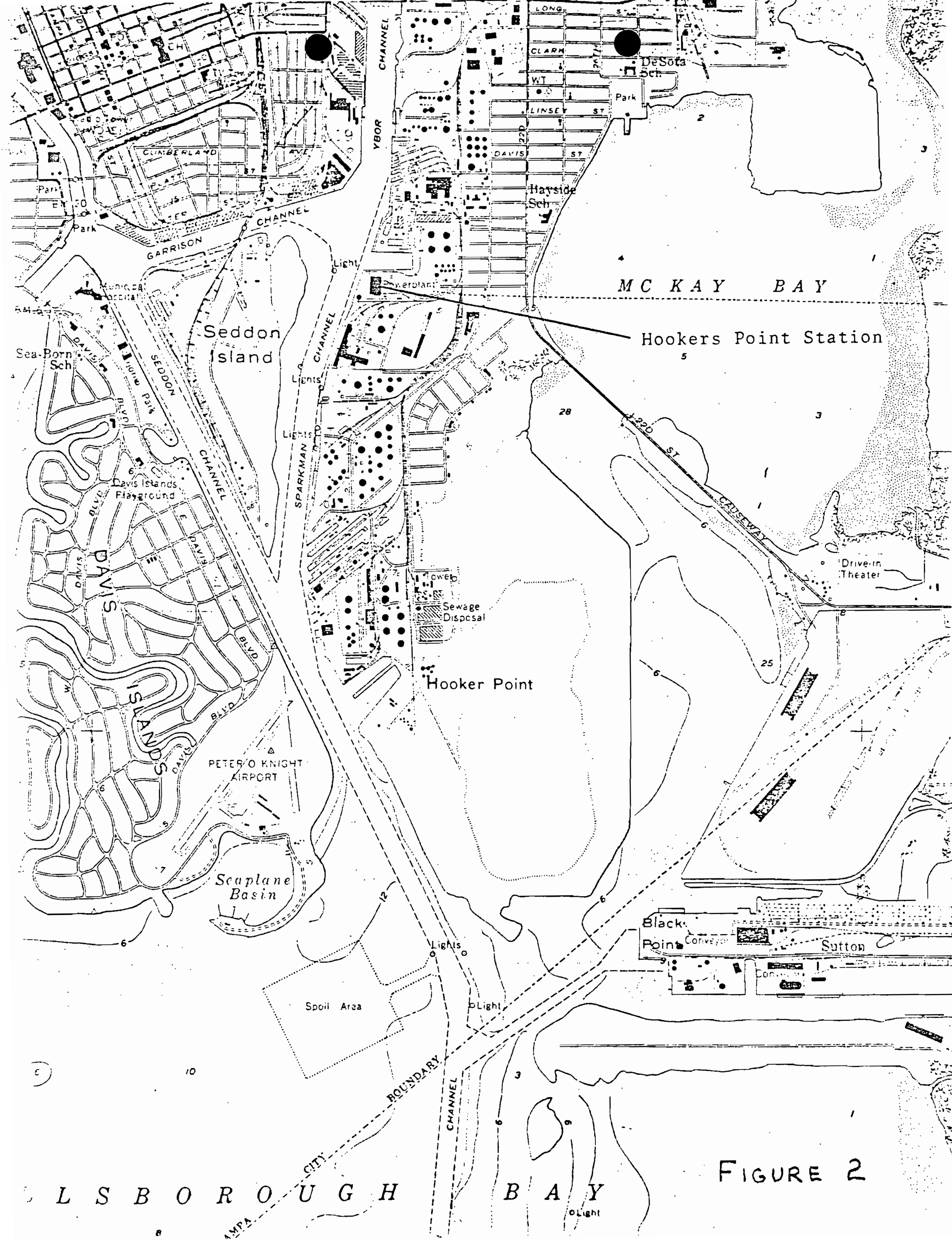

Hookers Point Station
MC KAY BAY
Seddon Island
Hooker Point
Sewage Disposal
Powerplant
DeSoto Sch
Hayside Sch
Park
Davis Islands Playground
DAVIS ISLANDS
PETER O KNIGHT AIRPORT
Seaplane Basin
Spoil Area
Black Point
Sutton
Drive-in Theater
SPARKMAN CHANNEL
YBOR CHANNEL
GARRISON CHANNEL
SEDDON CHANNEL
CITY BOUNDARY
22D ST CAUSEWAY
LSBOROUGH BAY
Sea-Born Sch
CUMBERLAND
PLATT
LONG
CLARK
LINSEY ST
DAVIS ST

FIGURE 2

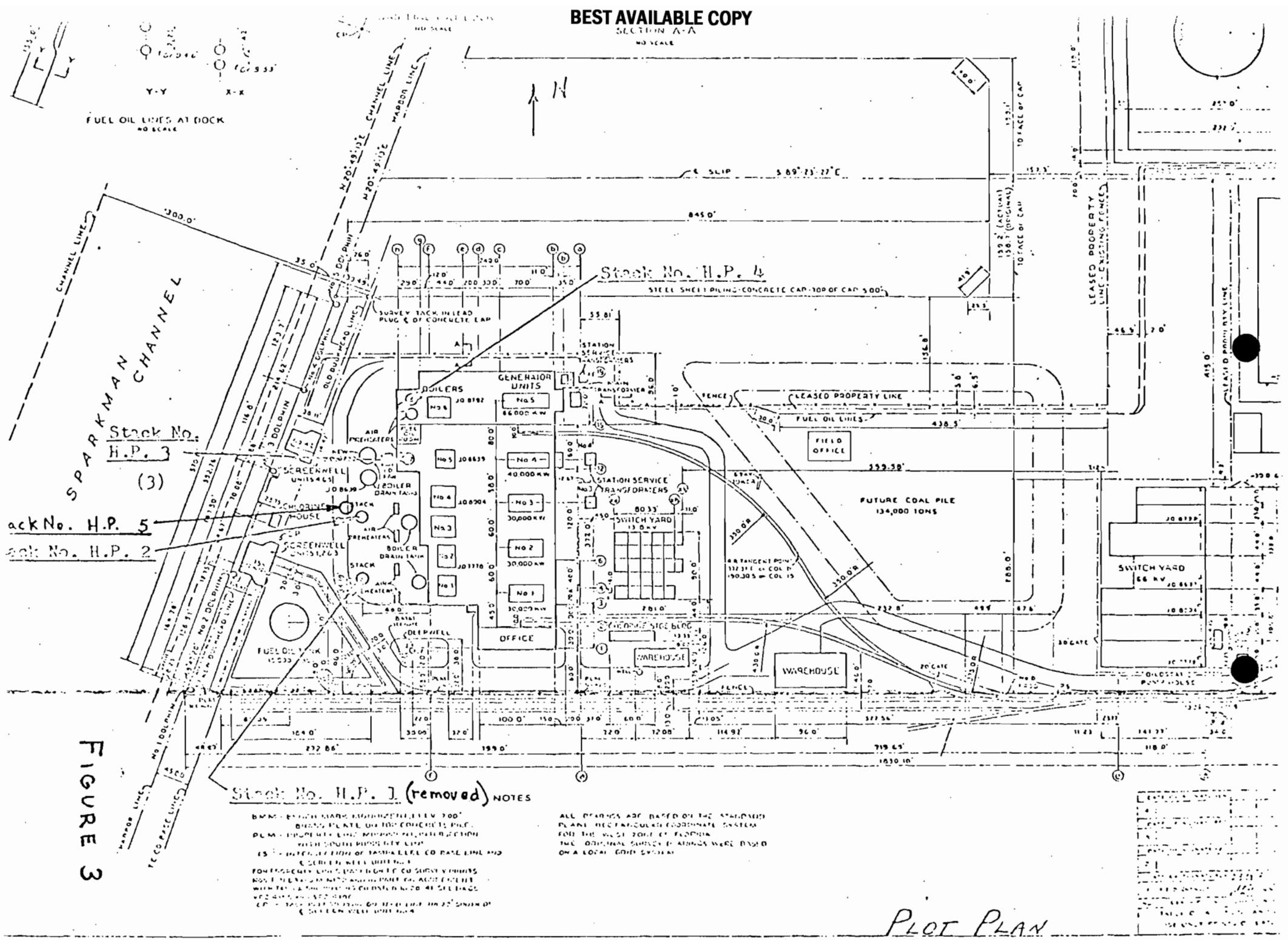


FIGURE 3

PLOT PLAN

ATTACHMENT

HOOKERS POINT 1

CALCULATIONS

- Maximum/Allowable Emissions

SO_2 $\frac{1.1 \text{ lbs. } SO_2}{\text{MMBTU}} \times \frac{298 \text{ MMBTU}}{\text{HOUR}} = 327.8 \frac{\text{lbs. } SO_2}{\text{HOUR}}$

Particulate $\frac{0.1 \text{ lbs.}}{\text{MMBTU}} \times \frac{298 \text{ MMBTU}}{\text{HOUR}} = 29.8 \frac{\text{lbs. Part.}}{\text{HOUR}}$

- Potential Emissions

SO_2 $\frac{327.8 \text{ lbs. } SO_2}{\text{HOUR}} \times \frac{8760 \text{ Hour}}{\text{YEAR}} \times \frac{1 \text{ Ton}}{2000 \text{ lbs.}} = 1436 \frac{\text{Tons } SO_2}{\text{YEAR}}$

Particulate $\frac{29.8 \text{ lbs.}}{\text{HOUR}} \times \frac{8760 \text{ Hour}}{\text{YEAR}} \times \frac{1 \text{ Ton}}{2000 \text{ lbs.}} = 131 \frac{\text{Tons}}{\text{YEAR}}$

- Test Methods for Compliance

SO_2 - Fuel Analysis

Particulate - EPA Reference Method 17

TECO
TAMPA ELECTRIC COMPANY

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:

BOILER	SERVICE DATE	MANUFACTURER	TYPE
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.

BOILER	DESIGN FUEL CONSUMPTION	DESIGN STEAM FLOW
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.

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

Hillsborough County AP
Tampa Electric Company

Mr. William J. Johnson
Tampa Electric Company
P.O. Box 111
Tampa, Fla. 33601

Dear Mr. Johnson:

Enclosed is Permit Number AO29-22018, dated September 25, 1979 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 28-5.15, 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,

P. David Puchaty
District Manager

cc: Record Center
HCEPC

Enclosure

RULES OF THE ADMINISTRATIVE 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.

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

APPLICANT:

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

PERMIT/CERTIFICATION NO. AO29-22018

COUNTY: Hillsborough

PROJECT: Hookers Point #1

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 Hookers Point #1 oil fired steam generating station producing 21 MW electricity.

Located at foot of Hemlock Avenue, Tampa.

UTM: 17 East 358.0 North 3091.0

Replaces Permit NO: AO29-2514 NEDS NO: 0038 Point ID: 01

Expires: September 5, 1984

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 penalities 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)

SPECIFIC CONDITIONS:

PERMIT NO.: AO29-22018
APPLICANT: Tampa Electric Company

1. Test for particulates at intervals of 12 months from the date of 1/3/79 and submit a copy of the test to the District Engineer of this agency within fifteen days of such testing. (Chapter 17-2.08(1), Florida Administrative Code (F.A.C.)

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 emission (note calculation basis)
   (C) Any changes in the information contained in the permit application.

4. This source shall be tested for TSP & SO_2 (sulfur analysis may be substituted for stack test) on a yearly basis starting 1/3/79. Unless, however, the quarterly test procedure is elected.

Expiration Date: September 5, 1984

Issued this 25 day of September, 1979.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

P. David Puchaty
District Manager

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#000000022018 COE# DER PROCESSOR:BROWN DER OFFICE:TPA
FILE NAME:TECO DATE FIRST REC: 06/29/79 APPLICATION TYPE:AO
APPL NAME:TECO - HOOKERS POINT NO 1 APPL PHONE:(813)879-4111 PROJECT COUNTY:29
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601
AGNT NAME:W.J. JOHNSON AGNT PHONE:(813)879-4111
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: 06/29/79 COMMENTS NEC:N DATE REQ: / / DATE REC: / /
LETTER OF INTENT NEC: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 *** 09/25/79 15:19:09
FEE PD DATE#1:07/19/79 $0020 RECEIPT#00032455 REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:IS DATE:09/25/79
REMARKS:HOOKERS POINT NO. 1 BOILER

PERMIT REVIEW CHECKLIST
SOUTHWEST DISTRICT

County Hillsborough Type of Permit Operate

Applicant TECO - Hookers Point

21 MW - FFSG #1

No Controls

		Eng IV Initials	PE II Initials	PE III Initials
1.	The permit package is complete, properly signed by applicant and/or engineer, all required documents included.	RJ 9		DW
2.	The calculations (if required) are correct and justified.	RJ 9		DW
3.	Written review comments are attached with recommendations, and a written statement regarding the anticipated impact of the project on water or air quality and whether the project will comply with all applicable rules.	RJ 9		DW
4.	The project description on the placard accurately describes the project which is to be permitted, and clearly defines what is and is not included in the project.	RJ 9		DW
5.	The project location is correct and adequate for the purpose of relocating the project site.	RJ 9		DW
6.	The expiration date is correct on the placard.	RJ 9		DW
7.	The effluent limits are correct and justified.	RJ 9		DW
8.	All provisos are correct and justified in the review comments, and are necessary to protect water or air quality.	RJ 9		DW
9.	The placard is correctly signed by the local program head if applicable.	RJ 9		NA
10.	The application has been checked as to the need to obtain permits from other sections within the department, and if so, the appropriate sections have been consulted.	RJ 9		NA

SIGNED: DATE:

Eng. IV Robert A. Garrett 9/19/79

PE II

PE III Don G. Williams 9/25/79

State of Florida

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices Or To Other Than The Addressee

To: _____ Loctn.: _____

To: _____ Loctn.: _____

To: _____ Loctn.: _____

From: _____ Date: _____

TO: P. David Puchaty

THRU: Dan A. Williams

FROM: William H. Brown

DATE: September 10, 1979

SUBJECT: TECO Hookers Point #1 AO29-22018

This application is for a 21 MW #6 oil fired steam generating station.

A stack test for TSP and a material balance for SO_2 run on 1/3/79 showed this unit to be in compliance.

HCEPC recommends approval.

After a review I concur and recommend this unit be approved.

WHB/rkt

7-19-79 HB
LA029-22018

D.E.R.
JUL 19 1979
SOUTHWEST DISTRICT
TAMPA

RECEIVED
JUL 29 1979
H.C.E.P.C.

STATE OF FLORIDA
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 No. 1 Boiler County: Hillsborough

Source Location: Street: Foot of Hemlock Avenue City: Tampa

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

Appl. Name and Title: Tampa Electric Company
Appl. Address: P. O. Box 111 Tampa, FL 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: June 26, 1979 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 profesional 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: W. J. Johnson (Please Type)
Company Name: Tampa Electric Company
Florida Registration Number: 17142
(Affix Seal)

STATE OF FLORIDA 17142 REGISTERED ENGINEER

Mailing Address: P. O. Box 111, Tampa, FL 33601
Telephone No.: 813/879-4111
Date: June 26, 1979

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.

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).

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 $3,069,000 - latest estimate, Hookers Point 1-6

Stack Extension $2,325,000 - latest estimate Hookers Point 1-6

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

A029-2514 - dated July 11, 1977, expiration date 5/30/79

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

AIR POLLUTION SOURCES & CONTROL DEVICES
(other than incinerators)

A. Identification of Air Contaminants

1) [xx] Particulates
   a) [ ] Dust b) [xx] Fly Ash c) [ ] Smoke d) [ ] Other (Identify)

2) [xx] Sulfur Compounds
   a) a) [xx] SO_x as SO_2 b) [ ] Reduced Sulfur as H_2S c) [ ] Other (Identify)

3) [xx] Nitrogen Compounds
   a) [xx] NO_x as NO_2 b) [ ] NH_3 c) [ ] Other (Identify)

4) [ ] Flourides 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.	
None				

C. Process Rate:

1) Total Process input Rate* N/A Units.
2) Product ~~Weight~~* electricity 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.	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Sulfur Dioxide	290.85	451.98	1.1 lbs/MMBTU	304.7	(3)
Particulates	13.85	21.52	0.1 lbs/MMBTU	27.7	(3)

*Refer to Chapter 17-2.04(2), Florida Administrative Code.
(Discharge Criteria: Rate=#/ton P_2O_5, #/M BTU/hr., etc.)
**Estimate only if this is an application to construct.

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

Name of Contaminant	Hourly Emission (~~lbs/hr~~) lbs/MMBTU	Daily Emission (lb./day)	Yearly Emission (T/yr.)	Basis for Emission Estimate (Test Data, Material Balance)
Sulfur Dioxide	1.05	See previous	page	Fuel analysis data from
				Jan. 3, 1979 source test
Particulates	0.05	See previous	page	Test data from Jan. 3, 1979
				Source test*
	*NOTE: test data previously sent to HCEPC			

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 * gal/day		Maximum Heat Input MBTU/hr.
	Avg./hr.	Max./hr.	
#6 fuel oil			298
(.99%S)	26,568	43,440	

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

Fuel Analysis:

Percent Sulfur .99 Percent Ash _____

Density 7.627 lb./gal.

Heat Capacity 18,651 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.

Combustion of oil to generate steam which is used to generate electricity

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

None

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

Stack Height 280 ft, Stack Diameter 11.25 ft.

Gas Flow Rate 179,994 ACFM, Gas Exit Temperature 265 °F

J. Required Supplements:

1. Total process input rate and product weight – show deviation. Maximum design input is 298 x 10^6 BTU/hr. Operating range is from 25% 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. *)³	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.) _____

Hookers Point #1
Permit Calculations

Actual Discharges

Sulfur Dioxide

$$\frac{1.05 \text{ lbs}}{\text{MMBTU}} \times \frac{277 \text{ MMBTU}}{\text{hour}} = \frac{290.85 \text{ lbs}}{\text{hour}}$$

$$\frac{290.85 \text{ lbs}}{\text{hour}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{3108 \text{ hrs}}{\text{year}} = \frac{451.98 \text{ tons}}{\text{year}}$$

Particulate

$$\frac{0.05 \text{ lbs}}{\text{MMBTU}} \times \frac{277 \text{ MMBTU}}{\text{hour}} = \frac{13.85 \text{ lbs}}{\text{hour}}$$

$$\frac{13.85 \text{ lbs}}{\text{hour}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{3108 \text{ hrs}}{\text{year}} = \frac{21.52 \text{ tons}}{\text{year}}$$

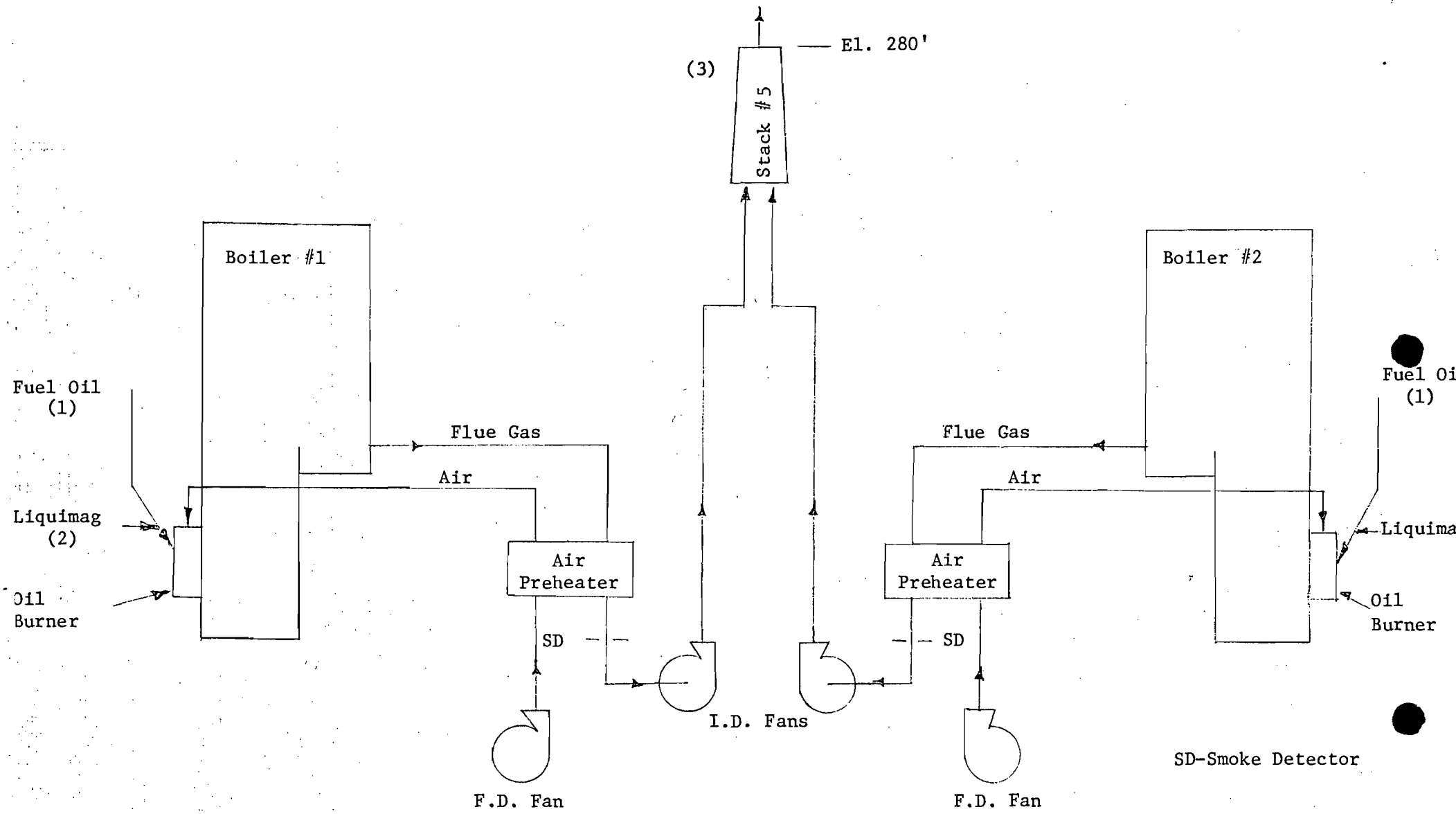
Allowable Discharges

Sulfur Dioxide

$$\frac{1.1 \text{ lbs}}{\text{MMBTU}} \times \frac{277 \text{ MMBTU}}{\text{hour}} = \frac{304.7 \text{ lbs}}{\text{hour}}$$

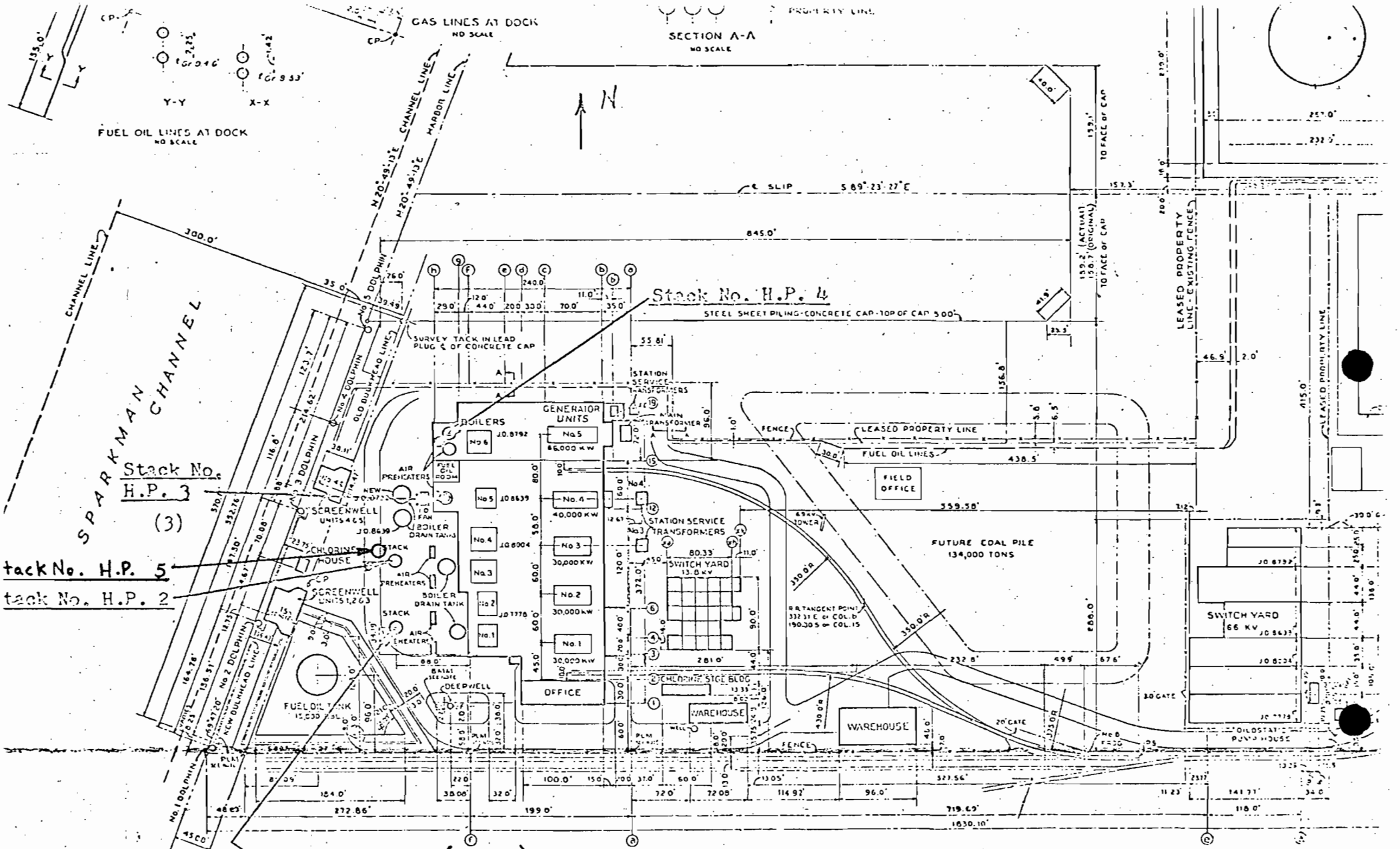
Particulate

$$\frac{0.1 \text{ lbs}}{\text{MMBTU}} \times \frac{277 \text{ MMBTU}}{\text{hour}} = \frac{27.7 \text{ lbs}}{\text{hour}}$$



Note: There is one Hogging Jet Vent, one Blowdown Tank Vent, two Deaerator Vents, and two Evaporator Vents associated with the combustion of No. 1 and No. 2 Boilers. All these vent lines release steam to the atmosphere periodically.

FLOW DIAGRAM
BOILER NO.1
TAMPA ELECTRIC COMPANY

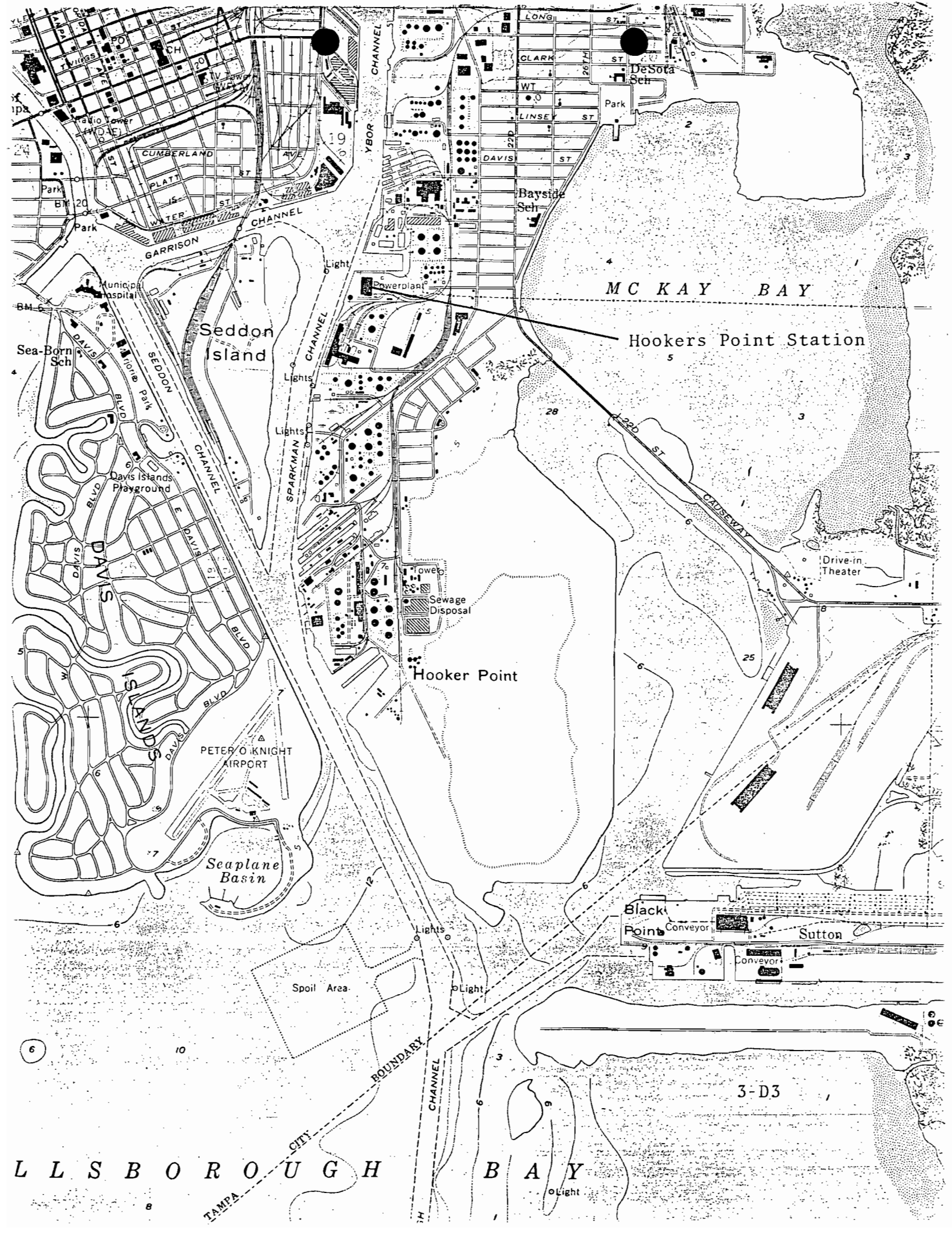


BMM - BENCH MARK MONUMENT, ELEV 7.00' BRASS PLATE ON TOP CONCRETE PILE.
PLM - PROPERTY LINE MONUMENT, INTERSECTION WITH SOUTH PROPERTY LINE.
IS - INTERSECTION OF TAMPA ELEC CO BASE LINE AND ℄ SCREEN WELL UNIT NO 1
FOR PROPERTY LINES PER TAMPA ELEC CO SURVEY PRINTS NOS E-4 & 5 AND M-1 AND 2 AND AS PART OF AGREEMENT WITH TECO & SUNSHINE CO DATED 6-28-41 SEE PAGES 422 AND 423 DEED BOOK 422.
CP - TACK IN LEAD PLUG ON TECO LINE 118.22' SOUTH OF ℄ SCREEN WELL UNIT NO 4

ALL BEARINGS ARE BASED ON THE STATEWIDE PLANE RECTANGULAR COORDINATE SYSTEM FOR THE WEST ZONE OF FLORIDA
THE ORIGINAL SURVEY BEARINGS WERE BASED ON A LOCAL GRID SYSTEM

3-D2

PLOT PLAN


Radio Tower (WDAE)
TV Tower (WFLA)
CUMBERLAND AVE
PLATT ST
WATER ST
GARRISON CHANNEL
Park
BM 20
Municipal Hospital
BM 6
Sea-Born Sch
DAVIS BLVD
SEDDON CHANNEL
Victoria Park
Seddon Island
Davis Islands Playground
DAVIS ISLANDS
PETER O KNIGHT AIRPORT
Seaplane Basin
YBOR CHANNEL
SPARKMAN CHANNEL
Light
Powerplant
Lights
Tower
Sewage Disposal
Hooker Point
LONG ST
CLARK ST
WT
LINSEY ST
DeSota Sch
Park
DAVIS ST
Baysde Sch
MC KAY BAY
Hookers Point Station
22D ST
CAUSEWAY
Drive-in Theater
Black Point
Conveyor
Sutton
Spoil Area
BOUNDARY CHANNEL
3-D3
TAMPA CITY
L L S B O R O U G H B A Y

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.

SECRETARY OF STATE

CER 101 8-15-77

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

July 11, 1977

Hillsborough County - - A.P.
Tampa Electric Co

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

Mr. Alex Kaiser
Director Power Plant Operations
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Mr. Kaiser:

Pursuant to your recent application, please find enclosed a permit (No. A029-2514) dated July 11, 1977 to ~~construct~~/operate the subject pollution source.

This permit will expire on 5/30/79 , and will be subject to the conditions, requirements, and restrictions checked or indicated otherwise in the attached sheet "~~Construction~~/Operation Permit Conditions".

This permit is issued under the authority of Florida Statute 403.061(16). The time limits imposed herein are a condition to this permit and are enforceable under Florida Statute 403.161. You are hereby placed on Notice that the department will review this permit before the scheduled date of expiry and will seek court action for violation of the conditions and requirements of this permit.

You have ten days from the date of receipt hereof within which to seek a review of the conditions and requirements contained in this permit. Failure to file a written request to review or modify the conditions or requirements contained in this permit shall be deemed a waiver of any objections thereto.

Your continued cooperation in this matter is appreciated and in future communication please refer to your permit number.

Yours very truly,

P. David Puchaty
Interim District Manager
Southwest District

cc: Central Files
HCEPC

SERIAL Nº 06441

101800052003801

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

OPERATION PERMIT

FOR TAMPA ELECTRIC COMPANY
P. O. BOX 111
TAMPA, FLORIDA 33601

PERMIT NO A029-2514 DATE OF ISSUE July 11, 1977

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:

ALEX KAISER, DIRECTOR POWER PLANT ENGINEERING

FOR THE OPERATION OF THE FOLLOWING:

THE NUMBER 1 OIL FIRED, STEAM GENERATOR SUBJECT TO ATTACHED CONDITIONS OF APPROVAL NOS. 1,2,3,4,5,6,7,9,11

LOCATED AND OF HEMLOCK AVENUE, TAMPA

UTM: 17-385 OE - 3091 ON

IN ACCORDANCE WITH THE APPLICATION DATED 5/25/77

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 5/30/79 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 County Env. Protection Comm.

DISTRICT MANAGER

101800052003801

DER Form PERM 11-3 (Mar. 76)

OPERATION PERMIT PROVISOS

FOR AIR POLLUTION SOURCE

Permit No.: A029-2514 **Best Available Copy** Date: July 11, 1977

(X) 1. Fugitive dusts, odors and other pollutants from all sources shall be effectively controlled or eliminated by suitable means. (Chapter 17-2.04 (3)(4)(5))

(X) 2. The pollution control equipment shall be maintained and operated in such a manner that all emissions will be in compliance with applicable rules and regulations of the DER. A log of maintenance activities shall be kept and available for DER review. (Chapter 17-2.03 (7))

(X) 3. Report any problems encountered in the operation of the source that may result in discharge of pollutants in amounts higher than permitted herein. Cease operation forthwith unless permission has been obtained from the regional office of the DER to operate the source for an interim period. (Chapter 17-4.13)

(X) 4. This permit is issued on the basis of the data submitted in the application and the existing requirements of this agency as set forth in Chapter 17-2 (revised January 18, 1972) Florida Administrative Code. The owner shall obtain written permission from the DER before making changes in the operation of the source (i.e. higher production rate, different raw materials and fuels, etc.) that may increase the quantity of pollutants or change their composition. (Chapter 17-2.01)

(X) 5. This permit is not transferable. Upon the sale or legal transfer of the source covered by this permit, the new owner must apply by letter for a transfer of this permit within thirty days. (Chapter 17-4.12)

(X) 6. Test the emissions for the following pollutant(S) at intervals of (12 Months) from the date of (February 1, 1977) 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 (FAC).

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

Fuel analysis will be accepted in lieu of SO2 Stack Sampling

(X) 7. Provide such sampling and testing facilities as may be necessary for the proper determination of the nature and quantity of air pollutants emitted from this source. (Chapter 17-2.07)

( ) 8. Identify the pollution source and/or control equipment by its manufacturer, model number, serial number, capacity, and any other pertinent information. Submit this information on or before

(X) 9. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceeding calendar year containing the following information:

a) Annual amount of materials and/or fuel utilized.
b) Annual emissions.
c) Any changes in the information contained in the permit applicatio

( ) 10. Submit emissions data on particulates and sulfur dioxide within 30 days of permit.

(X) 11. Issuance of this permit does not indicate an endorsement or approval of any other required permits by this Department.

( ) 12. Incinerators shall comply with the provision of Chapter 17-2.04(6)(a) Florida Administrative Code, and Chapter 1-3.03 VI, A of the Hillsborough County Environmental Protection Commission Rules and Regulat

( ) 13. Incinerators shall not incinerate radioactive materials.

APPROVED
JUN 16 1977

A029 25574
0038
01

D.E.R.
JUN 22 1977
SOUTH WEST DISTRICT
ST. PETERSBURG
H.C.E.P.C.

RECEIVED
JUN 2 1977

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

PAID
6/22/77 tm

Source Type: Air Pollution |XX| Incinerator | |
Type application: |XX| Operation [ ] Construction
Source Status: | | New |XX| Existing | | Modification

Source Name: Hookers Point Station No. 1 Boiler County: Hillsborough

Source Location: Street: Foot of Hemlock Avenue City: Tampa

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

Appl. Name and Title: Tampa Electric Company
Appl. Address: P. O. Box 111, Tampa, Fla. 33601

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Signature of the Owner or Authorized Representative

Date: 5/25/77 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.

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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 profesional 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: W. J. Johnson (Please Type)
Company Name: Tampa Electric Company
Florida Registration Number: 13342
(Affix Seal)

Mailing Address: P. O. Box 111
Tampa, Fla. 33601
Telephone No.: 813/879-4111
Date: 5-25-77

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.

The source is an oil-fired boiler which generates steam to drive a turbine and produce electricity.

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Oil conversion - $3,069,000 - latest revised estimate, Hookers Point Units 1-6

Stack extension - $2,325,000 - latest revised estimate, Hookers Point Units 1-6

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

AO29-2093 - dated May, 1973, expiration date June 30, 1974

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

AIR POLLUTION SOURCES & CONTROL DEVICES
(other than incinerators)

A. Identification of Air Contaminants

1) [XX] Particulates
a) [ ] Dust b) [XX] Fly Ash c) [ ] Smoke d) [ ] Other (Identify)

2) [XX] Sulfur Compounds
a) a) [XX] SO_x as SO_2 b) [ ] Reduced Sulfur as H_2S c) [ ] Other (Identify)

3) [XX] Nitrogen Compounds
a) [XX] NO_x as NO_2 b) [ ] NH_3 c) [ ] Other (Identify)

4) [ ] Flourides 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.	
NONE				

C. Process Rate:

1) Total Process input Rate* N/A Units.

2) Product XXXXX* electricity 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 lbs./hr.	Actual** Discharge T/yr.	Discharge Criteria Rate*	Allowable Discharge Lbs./hr.	Relate to Flow Diagram
Sulfur dioxide	202.0 (1)	1099.0 (2)	1.1 lbs/MMBTU	227.7	(3)
Particulates	11.5 (3)	55.5 (3)	0.1 lbs/MMBTU	20.7	(3)

(1) Calculated using fuel analysis from the Dec. 6-9, 1976 source test.
(2) Calculated using 60% capacity factor and the allowable emission rate of 1.1 #SO_2/MMBTU
(3) Calculated using 60% capacity factor and the emission rates from the Dec. 6-9, 1976 source test.

*Refer to Chapter 17-2.04(2), Florida Administrative Code.

(Discharge Criteria: Rate= #/ton P_2O_5, #/M BTU/hr., etc.)

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

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

Name of Contaminant	Hourly Emission #/MMBTU	Daily Emission (lb./day)	Yearly Emission (T/yr.)	Basis for Emission Estimate (Test Data, Material Balance)
Sulfur dioxide	.976	see previous page		Fuel analysis from Dec. 6-9. 1976 source test
Particulates	.056	see previous page		Test data from Dec. 6-9. 1976 source test*
*NOTE: test data previously sent to HCEPC				

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 *		Maximum Heat Input MBTU/hr.
	Avg./hr.	Max./hr.	
#6 fuel oil (.94%S)	10,030	13,805	271

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

Fuel Analysis:

Percent Sulfur 94 Percent Ash --

Density 7.627 lb./gal.

Heat Capacity 19,017 BTU/lb. 145,043 BTU/gal.

Other Fuel Contaminants N.A.

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

Combustion of oil to generate steam which is used to generate electricity.

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

NONE

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

Stack Height 280 ft, Stack Diameter 11.25 ft.

Gas Flow Rate 179,994 ACFM, Gas Exit Temperature 265 °F

J. Required Supplements:

1. Total process input rate and product weight -- show deviation. Maximum design input is 271 X 10^6 BTU/hr. Operating range is from 25% 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: _____

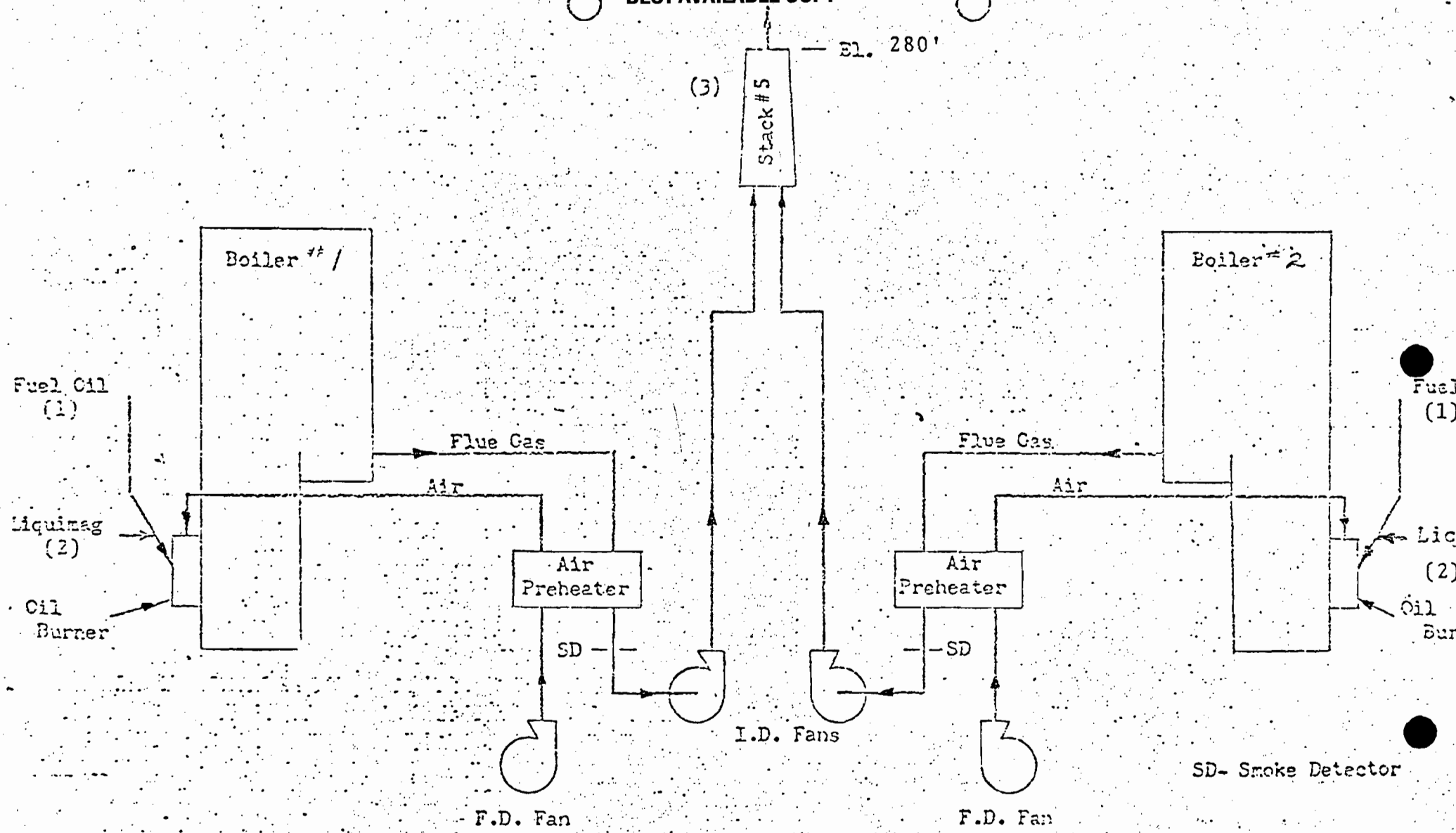
	Volume (ft. *)³	Heat Release (BTU/hr.)	Fuel		Temp. (° F)
			Type	BTU/hr.	
Primary Chamber					
Secondary Chamber					

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.) _____



Note: There is one Hogging Jet Vent, one Blowdown Tank Vent, two Deaerator Vents, and two Evaporator Vents associated with the combination of No.1 and No. 2 Boilers. All these vent lines release steam to the atmosphere periodically.

FLOW DIAGRAM
BOILER No. 1
TAMPA ELECTRIC COMPANY

Dwg. No. PD22753-3 2-27-63

Stack No. H.P. 1 (removed)

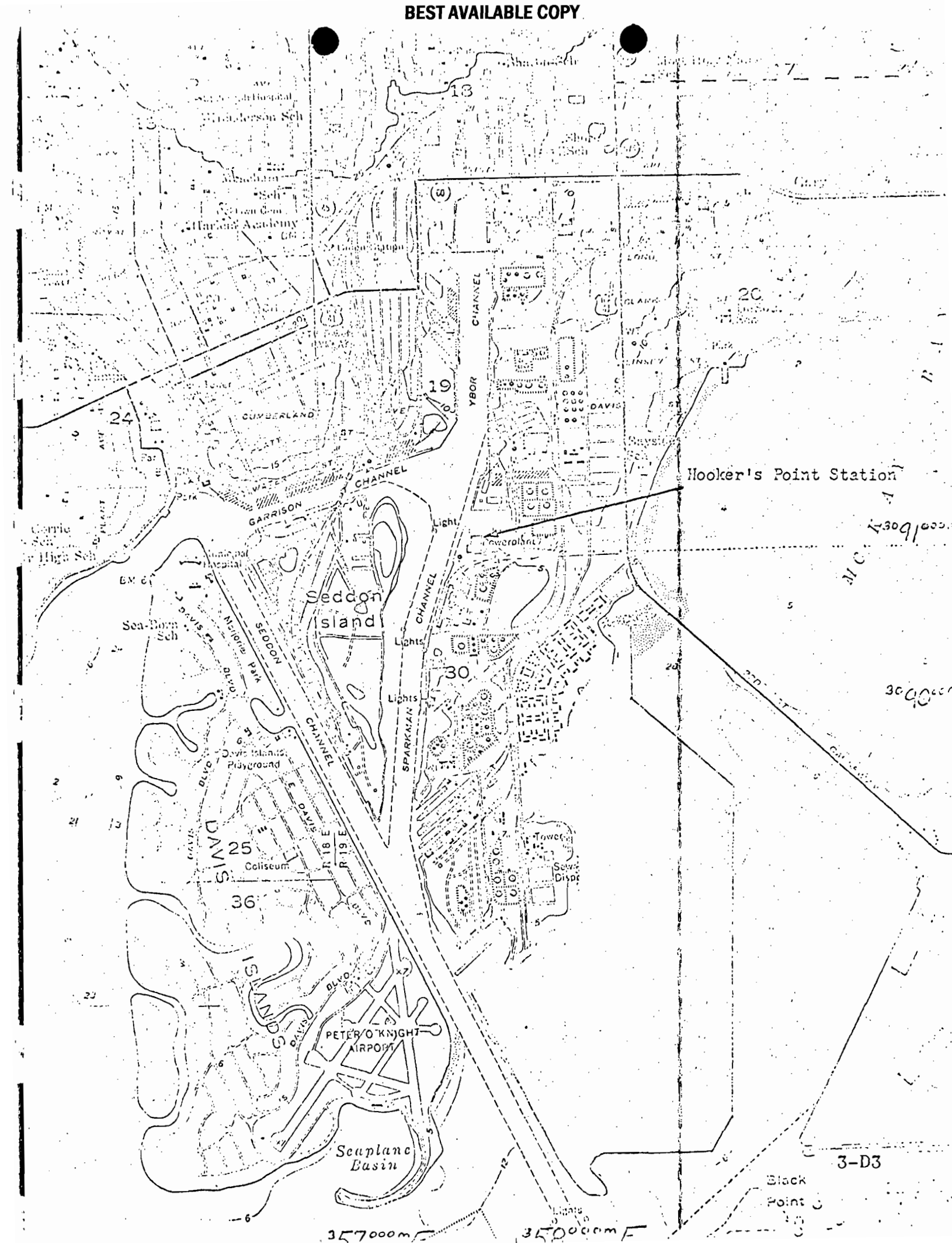
NOTES

BMM - BENCH MARK MONUMENT, ELEV. 7.00', BRASS PLATE ON TOP CONCRETE PILE.
PLM - PROPERTY LINE MONUMENT, INTERSECTION WITH SOUTH PROPERTY LINE.
IS - INTERSECTION OF TAMPA ELEC CO BASE LINE AND (SCREEN WELL UNIT No.)
FOR PROPERTY LINES, BASIS OF TEC CO SURVEY PRINTS NOS. E-1834-A-1 AND A-1 AND PART OF AGREEMENT WITH TEXAS GULF INC. DATED MAY 26, 1941. ALL BEARINGS AND DISTANCES ARE GRID.
CP - TACK IN TOP OF CONCRETE LINE 1.75' SOUTH OF (SCREEN WELL UNIT No.)

ALL BEARINGS ARE BASED ON THE STATE PLANE RECTANGULAR COORDINATE SYSTEM FOR THE WEST ZONE OF FLORIDA. THE ORIGINAL SURVEY DIMENSIONS WERE BASED ON A LOCAL GRID SYSTEM.

PLOT PLAN

3-D2



STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING, TALLAHASSEE, FLORIDA 32301

PETER BALJET
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

June 4, 1973
Hillsborough Co. - AP
TECO (Hookers Pt.)

Mr. R. D. Welch
Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601

Dear Mr. Welch:

Pursuant to your application, please find enclosed a permit (No. A029-2093) dated 5/25/73 to operate the subject pollution source.

This permit will expire on 6/30/74 in accordance with your compliance schedule, and will be subject to the conditions, requirements and restrictions checked or indicated otherwise in the attached sheet Operation Permit Conditions .

This permit is issued under the authority of Florida Statutes 403.061 (16), Departmett Rule 17-4.08 and in order to comply with section 51.15 (a) (1), 40 CFR 51 Environmental Protection Agency. The time limits imposed herein are a condition to this permit and are enforceable under Florida Statute 403.161. You are hereby placed on Notice that the Department will review this permit before the scheduled date of expiry and will seek court action for violation of the conditions and requirements of this permit.

Your continued cooperation in this matter is appreciated and in future communication please refer to your permit number.

Yours very truly,

H. E. Lunie

Acting REGIONAL ENGINEER
WEST CENTRAL REGION

file

LGK/ WMH/pcd
cc: Bates Fountain
HCPC

FOR AIR POLLUTION SOURCES

(An "X" indicates applicable conditions)

DATE: 5/25/73 AO 29-2093 Units 1 to 6 PERMIT NO.

(X) 1. The density of visible emissions for existing sources, until July 1, 1975, shall not exceed a Ringelmann Number Two or an equivalent 40% opacity. The density of visible emissions for all sources after July 1, 1975, shall not exceed a Ringlemann Number One or an equivalent 20% opacity. If the presence of uncombined water is the only reason for failure to meet these visible emissions standards, such a failure shall not be in violation of this rule. (Chapter 17-2.04 (1) (a) (b) (d))

(X) 2. Test the emissions for the following pollutant(s) at intervals of annually from the date of this permit and submit four copies of test results to the regional engineer of this agency within fifteen days of such testing. (Chapter 17-2.07(1))

(x)	Particulates	(x)	Sulfur Oxides
( )	Fluorides	( )	Nitrogen Oxides
( )	Plume Density	( )	Hydrocarbons

(X) 3. According to revised Chapter 17-2 (Revised 1-18-72), this facility must be modified, up graded, or eliminated in order to comply with applicable emission limitations. * To insure compliance pursuant to the time limitation specified in Section 17-2.03(2), Chapter 17-2, Florida Administrative Code, the following steps toward compliance are made a condition of this permit.

(A) Submit on or before N.A. a final control plan for complying with Chapter 17-2, Florida Administrative Code. This plan is subject to approval by the regional office.

(B) Submit on or before N.A. a copy of contract(s) for modification/control equipment and/or fuels necessary to comply with Chapter 17-2.

(C) On or before N.A., construction and/or modification must be initiated. Submit 60 days prior to this date construction permit applications and necessary information.

(D) Construction and/or modifications toward compliance must be completed by 12/30/73. Submit no later than 1/14/74 confirmation of this condition.

(E) Submit on or before 6/30/74 proof of compliance. This must include any changes in the construction permit application as submitted, and a final engineering report and stack samples to prove compliance. (test results and/or calculations)

* The applicable emission limitation for this facility is: 17-2.04 Section (6)(e) 2 abce Chapter 17-2, Florida Administrative Code.

(X) 4. Submit for this facility, each calander year, on or before March 1, an emission report for the preceding calander year containing the following information.

(A) Annual amount of materials and/or fuels utilized.

(B) Annual emissions.

(C) Any changes in the information contained in the permit application.

This Permit Expires on 6/30/74

STATE OF FLORIDA

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

OPERATION PERMIT

FOR Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601

PERMIT NO. AO 29-2093 DATE 5/25/73

PURSUANT TO THE PROVISIONS OF SECTION 403.061 (16) OF CHAPTER 403 FLORIDA STATUTES AND CHAPTER 17-4 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
R. D. Welch , Director

FOR THE OPERATION OF THE FOLLOWING:
Hookers Point Station Units 1 to 6
fossil fuel steam generators

LOCATED AT: Hooker's Point, Tampa, Hillsborough Co., Florida
UTM 17-357.6 E -- 3090.9 N

IN ACCORDANCE WITH THE APPLICATION DATED 2/25/71

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT. or until 6/30/74, whichever is earlier.

DAVID H. SCOTT, CHIEF
BUREAU OF PERMITTING

Robert's
REGIONAL ENGINEER
WEST CENTRAL REGION

VINCENT D. PATTON
EXECUTIVE DIRECTOR

FORM 1-1

29-969

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

Unit #1

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. 1 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

B. D. Kitching
Signature

6503
Florida Registration Number

For Department's Use Only Permit No. #1 Date:

1-D

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

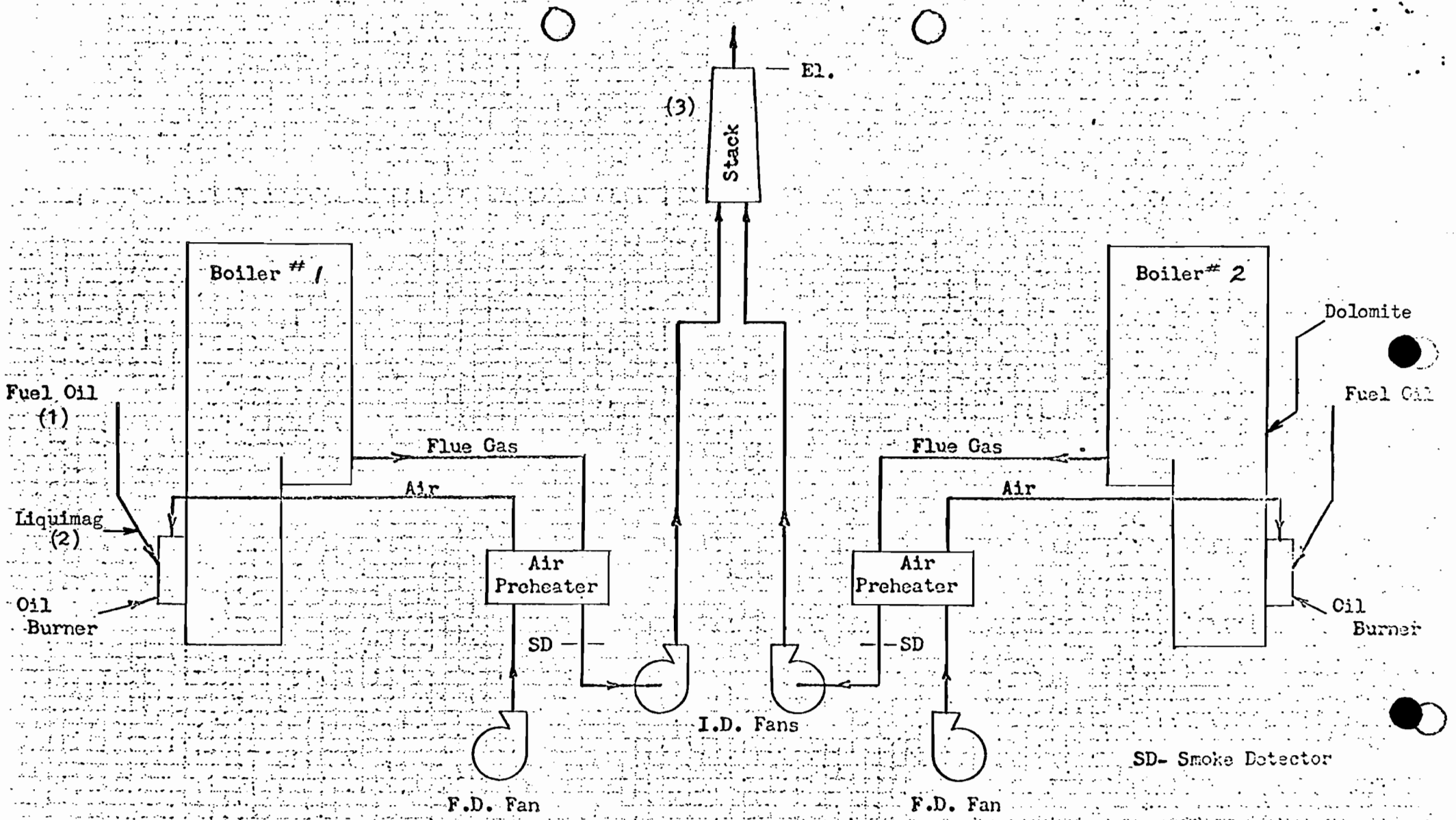
3. Include an 8½" x 11" plot plan showing location of manufacturing processes and location of outlets for airborne emissions. Relate all flows to the flow diagram.
P. 3-D2

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	
None				



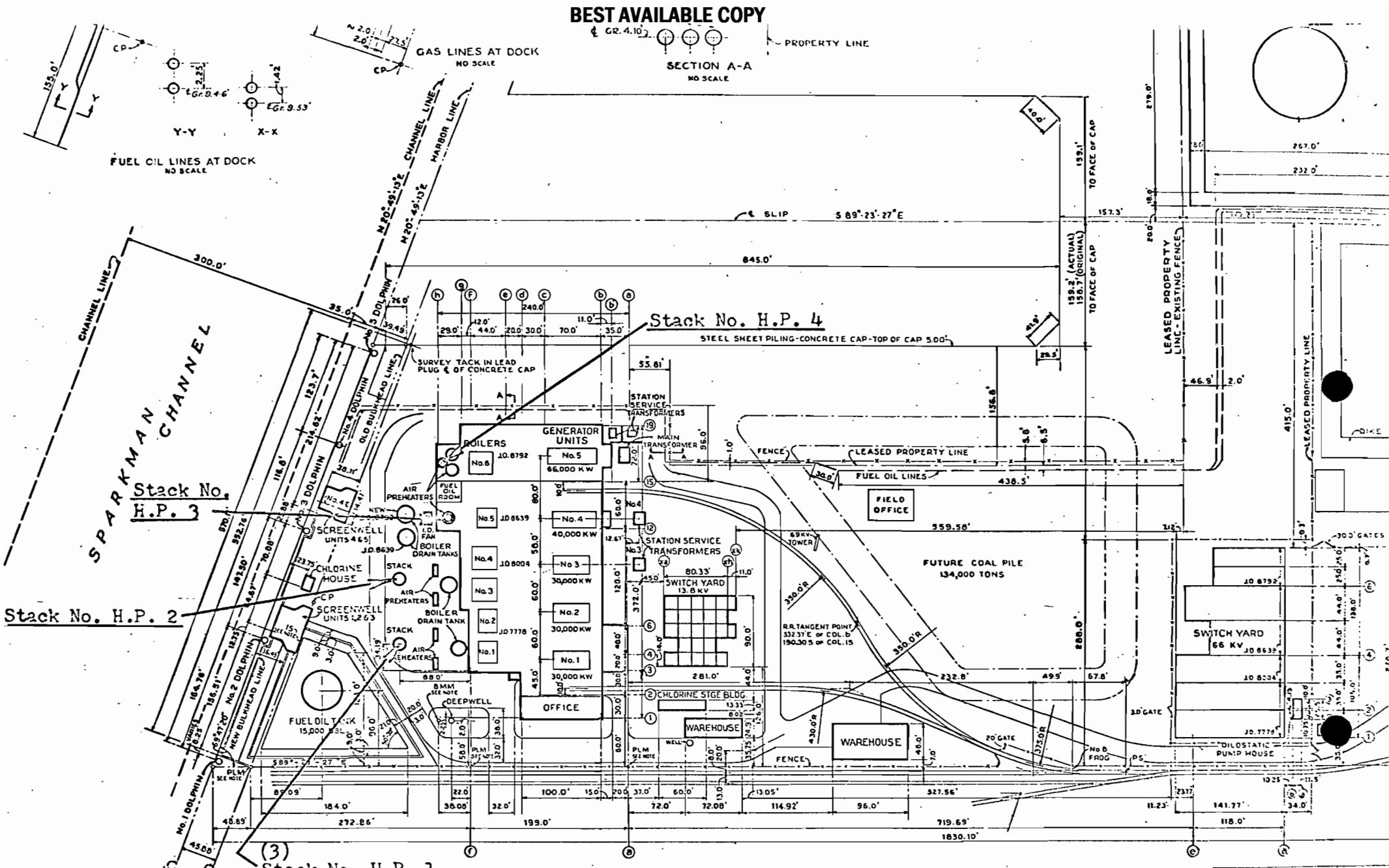
Note: There is one Hogging Jet Vent, one Blowdown Tank Vent, two Deaerator Vents, and two Evaporator Vents associated with the combination of No.1 and No. 2 Boilers. All these vents release steam to the atmosphere periodically.

FLOW DIAGRAM
BOILER No. 1
TAMPA ELECTRIC COMPANY

3-D1

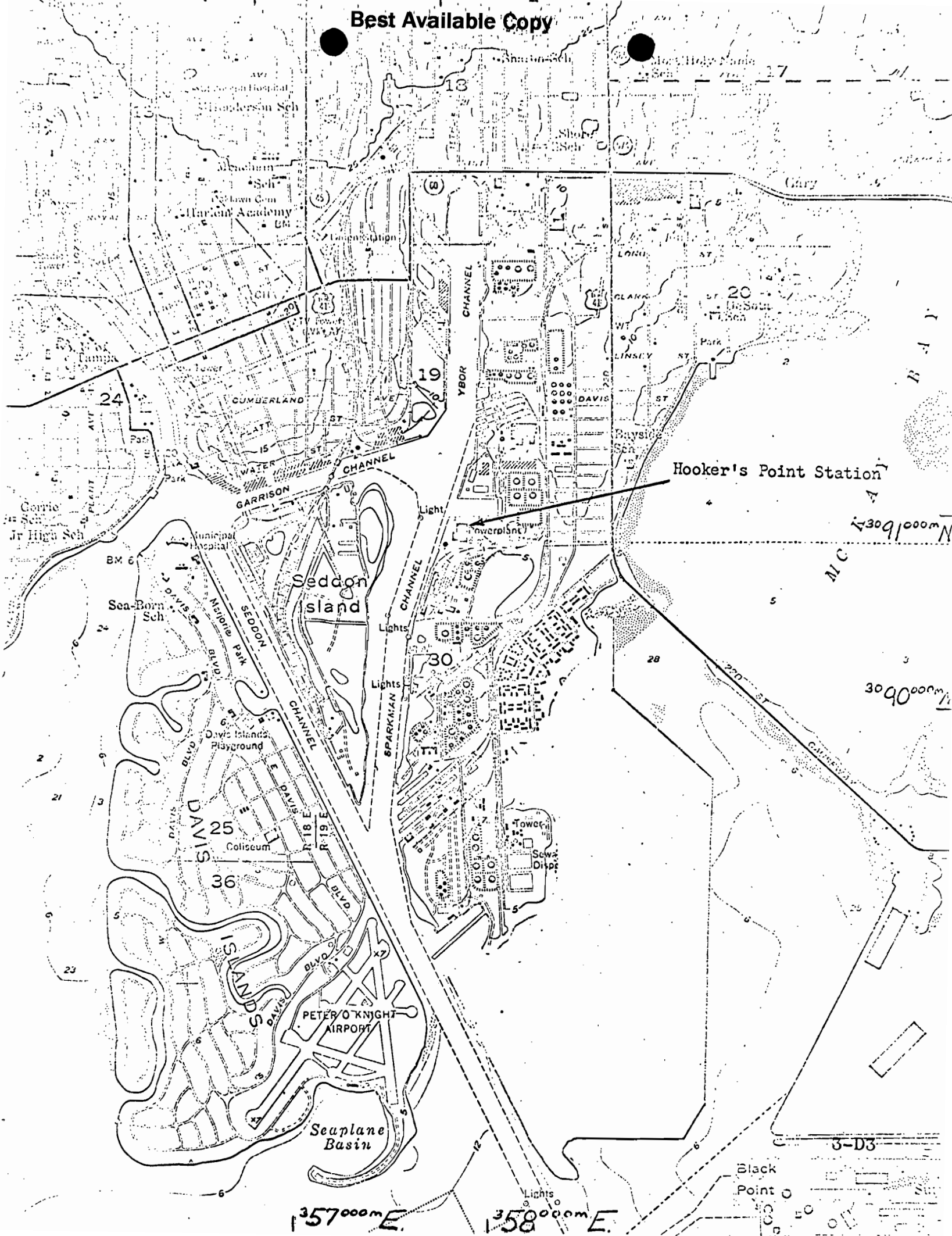
Dwg. No. PD22763-3

2-27-63



PLOT PLAN

3-D2



B. Fuels

2270 MM BTU/Day

Type (Be Specific)	Daily Consumption	Gross Maximum Heat Output	Relate to Flow Diagram
"Bunker C" Fuel Oil	123,700 lb/day	2.27×10^9 BTU/day 94.6 mm/hr	(1)
Liquimag	55 lb/day	3.47×10^5 BTU/day	(2)

C. Products

Description	Average Daily Production (Tons/Day. Lbs/Hr. etc.)
Electricity	195.5 MWH/day 8.1 MW

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

If operation or process is seasonal, describe: _____

allowable part 227.

SO_2 1816

II Identification of Air Contaminants

Compounds of:		Also –			
Chlorine	☐	Hydrocarbons	☐	Acid Mists	☐
Flourine	☐	Smoke	☐	Odors	☐
Nitrogen	☐	Fly Ash	☒	Radioisotopes	☐
Sulfur	☒	Dusts	☐	Other _____	☐

Specific Compounds SO_2, SO_3

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_x	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.

IV. Contaminant Balance

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

	Pounds Contaminant per Day	
	Input	Output
List ~~Raw Materials~~ Fuel:		
Fuel Ash	62	
Fuel Sulfur	2540	
Fuel MgO	32	
List Manufactured Products:		
Electricity		
List Solid Wastes:		
None		
List Liquid Wastes:		
None		
Totals	2634	0
Airborne Wastes (Total input minus total output)	2634	

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	Periods of Flow Day/ Yr.	Temp. of Discharge (°F)
Stack	(3)	150	95	22.3	199	260° F

B. Tabulation of Discharged Contaminants

	Discharge Point – Relate to Flow Diagram	Flow Rate at Std. Cond. (cfm)	Total Contaminants Discharged: Particulates Gr/ft3 (Std.Cond.)	Particulates lbs./ Day	Other Contaminants (~~NOx~~, SO2, ~~Nonmethane~~) Gr/ft3 (Std. Cond.)	Other Contaminants lbs/ Day	Other Contaminants Gr/ft3 (Std.Cond)	Other Contaminants lbs/ Day
Avg Cond.	Stack (3)	22,100	0.0223	94	1.200	5,080		
Peak Emission	Stack (3)	86,100	0.0223	-	1.200			
	Totals							

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 • 3804 Coconut Palm • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia B. Wetherell, Secretary

April 13, 1993

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

permitx.ltr

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

D.E.R.

DEC 16 1991

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

SOUTHWEST DISTRICT
TAMPA

M E M O R A N D U M

DATE: December 11, 1991

TO: J. Harry Kerns, P.E.

FROM: Sterlin Woodard SKW THRU: Jerry Campbell, P.E. JC

SUBJECT: Permit Renewal - TECO - Hookers Point Unit #1

Attached is Permit No. AO29-203001 for the operation of the above company's steam generator designated as Unit #1. 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_2 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:AO203001

PERMIT APPLICATION STATUS SHEET

COMPANY: Tampa Electric Co.

PROCESSOR: G. Maier

PERMIT NO.: A029-203001

DATE RECEIVED: 09/23/91

PE SEAL & SIGNATURE: (Y) N

CHECK: (Y) N

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

DATA FOLLOW UP

ISSUE DATE UPDATED ON PATS:	DEC 19 1991	MQ
UPDATED ON WANG:	DEC 19 1991	MQ

(10-06-89)

DEC 1 9 1991

APPLICATION TRACKING SYSTEM 10/02/91

APPL NO:203001
APPL RECVD:09/23/91 TYPE CODE:AO SUBCODE:00 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-SEQMENT:__.___
(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 #1
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:__/__/__ AMOUNT PAID:NOFEE RECEIPT NUMBER:________

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 - - - - - - - - - - - - 09/23/91
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:

Received 9:00 AM
10-4-91

Tampa Electric Co. A029-203001

Renewal of A029-125685

Hooker Point #1

Test looks OK application complete. 10-21-91

COMPANY NAME Harper Electric Co.

JJ.
Processor

File Number A029-125685

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Hillsborough

Date Recieved 10/6/86

P.E. seal & signature ☑
Check ☑
No check ☐
Letter of corp. standing ☐

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	10/6/86	KDW
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	23 Dec	
83	Permit Package to Dist. Engr.		
85	Permit Package to Dist. Manager	12/29/86	
90	Final Issuance/denial		

*If needed, If not indicate by N/A

TO: Teco - Hookers Point File

THRU: W.C. Thomas WCT 12/29/86

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:125685
APPL RECVD:10/02/86 TYPE CODE:AO 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:__.__.__/__.__.__
(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 1
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 AUTRY
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:

HOOKERS POINT A029-47726

TAMPA ELECTRIC
A TECO ENERGY COMPANY

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.

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601-0111 (813) 228-4111

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

Sincerely,

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:

Source	Permit Number	Specific Condition
Hookers Point		
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 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
Big Bend		
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:

Source	Permit Number	Specific Condition
F.J. Gannon		
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.

Source	Permit Number	Specific Condition
Hookers Point		
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

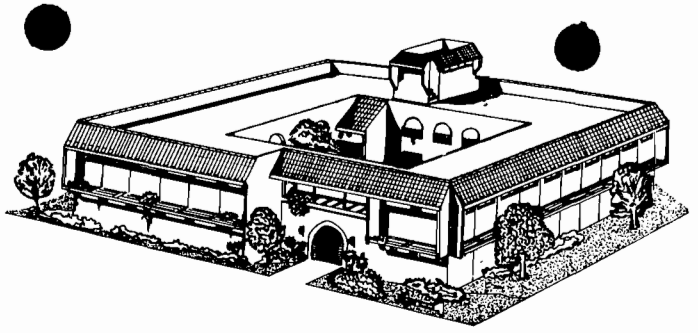
4. Specify that excess emissions refer to 6-minute average opacity.

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

Source	Permit Number	Specific Condition
F.J. Gannon		
Unit 4	A029-80043	7
Big Bend		
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 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

D. E. R.

JUN 16 1986

SOUTH WEST DISTRICT
TAMPA

Date June 12, 1986

To Jim Estler

From Jerry Campbell JC

Subject: TECO Permit Amendments

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 condtiion #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 AO 29-41942, 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.

Change specific condition #3 to read:

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

Big Bend Combustion Turbine #1 (A029-85100)
Change specific condition #1 to read:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date March 19, 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 #5 to read:

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

Big Bend Unit #1 (A029-63296)
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 December 21, 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.

Change specific condition #6 to read:

6. 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 emissions shall be defined as all six minute averages of opacity greater than 20 percent, except as specified in Specific Condition No. 5. 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.

Change spcific 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

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. A029-47726

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.

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

Sincerely,

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

JWE/js

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
Clerk

6/13/86
Date

PLANT 0038 TECO HOOKERS POINT UTILITY FILE STATUS NEW ADD
FOOT OF MEMLOCK AVE POWER PLANT
TAMPA FL. 33605
ALEX KAISER AQCR=052 SIC=4911
PO BOX 111 LAT=28:02:32N LON=82:25:31W
TAMPA FL . 33601 UTM ZONE 17 358.0KM E. 3091.0KM N.

POINT 01 CONST PATS# OPER PATS# A029-22018
ISS= / / EXP= / / ISS=09/25/79 EXP=05/09/84
TECO HOOKERS POINT BOILER NO ONE
SOURCE= IPP=00 COMM.PNTS. -
STACK HT= 280FT DIAM=11.2FT TEMP= 265F FLOW= 179994CFM PLUME= 0FT
BOILER CAP= 298MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=78 RAW MATERIAL= 0 OTHER
PRODUCT 0 OTHER FUEL 0 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE HRS/DAY DAYS/WK WKS/YR
AOR FOR / / HRS/DAY DAYS/WK WKS/YR

COMPLIANCE NEDS=1 QRC= UPDATE / SCHED. / UPDATED / /
PERMIT= YOR= INSPECTED / / NEXT DUE /00/00

/

SCC'S H

1-01-004-01 YOR= SOURCE=B RATE= 13125 MAX= 1.810
FUEL CONT SO2= .00% ASH= 0.0% 146MBTU FYOR= CONFID=2

POLLUTANTS MONITORED

TSP 11101 NORM= 0.00 EST/METH= 60/1 MAX.ALW= 111 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 01/14/83 TEST/FREQ=1
TESTED 01/14/82 AGENCY=3 REG=250(3) COMPLIANCE=1
EMITTED= 16.50 ALLOWED= 82.50LBS/HR OP-RATE= 275 MBTU/P
CO 42101 NORM= 0.00 EST/METH= 33/3 MAX.ALW= 0 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=
SO2 42401 NORM= 0.00 EST/METH= 848/1 MAX.ALW= 1221 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 01/13/83 TEST/FREQ=1
TESTED 01/13/82 AGENCY=3 REG=600(5)(A) COMPLIANCE=1
EMITTED= 294.25 ALLOWED= 302.50LBS/HR OP-RATE= 275 MBTU/P
NOX 42603 NORM= 0.00 EST/METH= 689/3 MAX.ALW= 0 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=
TESTED 00/00/78 AGENCY= REG= COMPLIANCE=
EMITTED= 1.21 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER

PLANT 0038 TECO HOOKERS POINT UTILITY FILE STATUS NEW ADD
FOOT OF MEMLOCK AVE POWER PLANT
TAMPA FL. 33605
ALEX KAISER AQCR=052 SIC=4911
PO BOX 111 LAT=28:02:32N LON=82:25:31W
TAMPA FL 33601 UTM ZONE 17 358.0KM E. 3091.0KM N.

POINT 06 CONST PATS# OPER PATS# A029-47721
ISS= / / EXP= / / ISS=01/27/82 EXP=01/25/87
HOOKERS POINT UNIT #6 RESIDUAL OIL
SOURCE= IPP=91 ECAP=2 COMM.PNTS. -
STACK HT= 280FT DIAM= 9.4FT TEMP= 325F FLOW= 245000CFM PLUME= 0FT
BOILER CAP= 778MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=78 RAW MATERIAL= 443 OTHER
PRODUCT 0 OTHER FUEL 443 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE HRS/DAY DAYS/WK WKS/YR
AOR FOR / / HRS/DAY DAYS/WK WKS/YR

COMPLIANCE NEDS=1 ORC= UPDATE / SCHED. / UPDATED / /
PERMIT= YOR= INSPECTED / / NEXT DUE /00/00

/

SCC'S

1-01-004-01 YOR= SOURCE=B RATE= 40078 MAX= 6.083
FUEL CONT SO2=9.00% ASH= 0.0% 148MBTU FYOR= CONFID=2

POLLUTANTS MONITORED

TSP 11101 NORM= 46.30 EST/METH= 154/2 MAX.ALW= 302 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/ TEST/FREQ=
TESTED 03/08/78 AGENCY= REG= COMPLIANCE=
EMITTED= 20.37 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
CO 42101 NORM= 0.00 EST/METH= 102/3 MAX.ALW= 0 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=
SO2 42401 NORM= 12.73 EST/METH= 2825/2 MAX.ALW= 3328 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/ TEST/FREQ=
TESTED 03/08/78 AGENCY= REG= COMPLIANCE=
EMITTED= 4.63 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
NOX 42603 NORM= 0.00 EST/METH= 2146/3 MAX.ALW= 0 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=
TESTED 00/00/78 AGENCY= REG= COMPLIANCE=
EMITTED= 4.18 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER

UNIT: 1 HOOKERS POINT 1984

928 GAL. OIL/HR × 151,387 BTU/GAL. = 140.5 MMBTU/HR (AVG)

DESIGN = 298.0 MMBTU/HR. (MAX.)

929,293 GAL. OIL / 19 × 151,387 BTU/GAL. = 140,683 MMBTU/1984 (ACTUAL)

PARTICULATE EMISSIONS

0.06 lbs. PART/MM BTU × 140.5 MMBTU/HR = 8.43 lbs. PART./HR. (AVG.)

0.06 lbs. PART/MM BTU × 298.0 MMBTU/HR = 17.9 lbs. PART/HR. (MAX.)

0.06 lbs. PART/MM BTU × 140,683 MM BTU/1984 × 1 TON/2,000 # = 4.2 TONS PART/1984

SULFUR DIOXIDE EMISSIONS

1.07* lbs. SO_2/MM BTU × 140.5 MMBTU/HR = 150.3 lbs SO_2/HR (AVG)

1.07* lbs. SO_2/MM BTU × 298.0 MMBTU/HR = 318.9 lbs. SO_2/HR (MAX)

1.07* lbs. SO_2/MM BTU × 140,683 MM BTU/1984 × 1 TON/2000 lb. = 75.3 TONS SO_2/1984

* lbs SO_2/MMBTU value of 1.07 is a 1984 weighted average.

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						

a. Wet scrubber, electrostatic precipitator, fabric filter, etc.

b. 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.

SECTION IV - 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 Temp °F	Pollutant	Technique	Quantity tons/yr	Average lb/hr	Maximum lb/hr
HP 1	280	11.25	29.14	265	Particulate	Stack Test	4.2	8.4	17.9
					Sulf Dioxide	Fuel Anal.	75.3	150.3	318.9
HP 2	Common With Boiler	1			Particulate	Stack Test	4.1	5.3	11.9
					Sulf.Dioxide	Fuel Anal.	108.6	141.8	318.9
HP 3	280	12.0	16.15	255	Particulate	Stack Test	11.3	9.0	20.6
					Sulf.Dioxide	Fuel Anal.	241.6	192.8	439.8
HP 4	Common With Boiler	3			Particulate	Stack Test	22.2	8.3	20.6
					Sulf.Dioxide	Fuel Anal.	475.2	177.1	439.8

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION
ANNUAL OPERATING REPORT

Representing Calendar Year 1984
Date Submitted: March 8, 1985

SECTION I - GENERAL INFORMATION

Plant, Institution or Establishment Name: Tampa Electric Company (Hookers Point Station)
Plant Address: P.O. Box 111 (Street) Tampa (City) Florida (State) 33601 (Zip)
Telephone: (813) 228-4838

Person to Contact Regarding This Report A. Spencer Autry Title Manager, Environmental Plannin
Mailing Address: P.O. Box 111 (Street) Tampa (City) Florida (State) 33601 (Zip)

Actual Operating Hours: 24 hrs/day 7 days/wk 52 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 Percent Distribution by Season: Spring March/May	Summer June/Aug	Fall Sept/Nov	Winter Dec/Feb	Hourly Consumption Maximum	Average	Heat Content BTU/Quan	Percent Sulfur d	Percent Ash d
HP 1	No. 6 Oil	929	17.96	28.78	26.35	26.91	1,810	928	151,387	0.99	NA
HP 2	No. 6 Oil	1,340	12.83	33.69	25.60	27.88	1,810	875	151,387	0.99	NA
HP 3	No. 6 Oil	2,983	23.37	14.90	25.27	36.46	2,495	1,190	151,387	0.99	NA
HP 4	No. 6 Oil	5,867	17.25	37.09	28.02	17.64	2,495	1,093	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^3

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

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION
AIR POLLUTANT EMISSION REPORT

Representing Calender Year 1984
Date submitted: March 1, 1985

SECTION I - GENERAL INFORMATION

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)
Plant, institution, or establishment address: P.O. Box 111 (Street or Box Number) Tampa (City) FL (State) 33601 (Zip)
Person to contact regarding this report: A. Spencer Autry Title: Environmental Planning Manager Telephone: 228-4838
Mailing address: P.O. Box 111 (Street or Box Number) Tampa (City) FL (State) 33601 (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[a,b]	Processes or Operations Releasing Pollutants to the Atmosphere[c,d]	Raw Materials Used for Processes or Operations,				Products of Processes or Operations,				Intermittent Operation Only
		Type	Quantity Hourly Process Rate, lbs.			Type	Quantity Hourly Process Rate, lbs.			
			Annual Average[f]	Design	Maximum		Annual Average[f]	Design	Maximum	Average Hours/Week[h]

a. 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.
b. Multiple sources may be grouped if similar in size and type.
c. 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).
d The pollutants to be covered in this report are listed in the accompanying instructions.
e. Sulfur burned:pig, foundry returns, or scrap aluminum melted;limestone, cement rock, clay,iron ore used; etc.
f. Pounds, tons, gallons, barrels, etc.
g. Sulfuric acid produced; aluminum ingots produced; etc.
h. For intermittent processes, indicate average number of hours per week of operation so that estimates of yearly emissions may be obtained.

SECTION III - FUEL COMBUSTION FOR GENERATION OF HEAT, STEAM, AND/OR POWER

Source Code[a]	Type of Fuel[b]	Annual Consumption[c]					Hourly Consumption[c]		Heat Content BTU/Quan.[c]	Percent Sulfur[c]	Percent Ash (Solid) Fuel Only[c]
		Quantity[d] X 1,000	Percent Distribution by Season Spring March/ May	Summer June/ Aug.	Fall Sept./ Nov.	Winter Dec./ Febr	Maximum	Average Quantity			
Hookers Point 1	No. 6 Oil	929	17.96	28.78	26.35	26.91	1,810	928	151,387	0.99	NA
Hookers Point 2	No. 6 Oil	1,340	12.83	33.69	25.60	27.88	1,810	875	151,387	0.99	NA
Hookers Point 3	No. 6 Oil	2,983	23.37	14.90	25.27	36.46	2,495	1,190	151,387	0.99	NA
Hookers Point 4	No. 6 Oil	5,867	17.25	37.09	28.02	17.64	2,495	1,093	151,387	0.99	NA

a. List code numbers corresponding to each emissions source reported in Section II.
b. Coke, bituminous coal, anthracite coal, lignite; No. 1, 2, 4, 5, and 6 fuel oil; natural gas; LPG; refinery or coke oven gas; etc. (Note: Indicate if two or more fuels are burned in the same boiler and provide all data pertinent to each fuel type).
c. Fuel data are to be reported on an "as burned" basis.
d. Solid fuel, tons; liquid fuel, gallons; gaseous fuel, 1000 cubic feet.
e. If unknown, please give name and address of fuel supplier.

SECTION IV - AIR CLEANING EQUIPMENT

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

a. Wet scrubber, electrostatic precipitator, fabric filter, etc.
b. Please list future equipment separately.
c. The pollutants to be covered in this survey are specified in the accompanying instructions.
d. Give efficiency in terms of pollutant removed.
e. Give maximum normal operating pressure drop across air cleaning system.

COMPANY NAME Tampa Electric Co. PRG Processor

Hookers Point
Boiler # 1

File Number AO29-47726

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Hillsborough

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	9/21/81	PKT
5	Review by Sec. head and transfer to permitting Engineer	11-3-81	
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	1-27-82	

*If needed, If not indicate by N/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:

BOILER	SERVICE DATE	MANUFACTURER	TYPE
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.

BOILER	DESIGN FUEL CONSUMPTION	DESIGN STEAM FLOW
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.

TAMPA ELECTRIC
A TECO ENERGY COMPANY

D.E.R.

JAN 21 1982

SOUTHWEST DISTRICT
TAMPA

January 18, 1982

Mr. William K. Hennessey
Southwest District Manager
Florida Department of Environmental
Regulation
7601 Highway 301 North
Tampa, Florida 33610

Re: Hookers Point and Gannon Stations
RACT Permits

Dear Mr. Hennessey:

Enclosed please find revised operation and maintenance plans for Hookers Point Station, Boilers 1 through 6, and Gannon Station Units 1 through 6. These plans contain the information required by FAC 17-2.650 in addition to information requested by Mr. Robert R. Garrett's letter of December 7, 1981.

As noted in our December 11, 1981 letter, we feel that our original plans provided the required information. However, in that letter we agreed to waive the 90-Day permit processing time and cooperate with the Department in supplying the additional information.

The revised plans contain most of the additional information requested by Mr. Garrett. The remainder of the information is provided below:

1. Are fuel additions used?

   A fuel additive, magnesium oxide, is added to the No. 6 fuel oil. This additive serves many purposes, but mainly provides better heat distribution within the boiler and helps prevent corrosion.

2. Under what conditions do you hook into other company's load sharing equipment? How long does it take?

   Our system is tied directly into the state system grid. We rely on generation from other companies, if available, when for various reasons,

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601 (813) 228-4111

(emergency outages, severe weather, etc.) we are unable to meet our system load requirements with our own generating equipment. We also purchase power from other utilities when it is economical to do so.

3. When is flyash reinjected into the boiler? Is this a cleaning technique?

   Flyash is reinjected into the boiler when it is produced at a rate greater than it can be removed from the site by the contractor to whom it is sold. Flyash reinjected into the boiler converts to slag which is more easily handled and stored.

4. How many sections of this ESP can be out and still maintain compliance?

   A blanket statement as to the number of precipitator sections which may be out of service and still maintain compliance cannot be made. The precipitator collection efficiency is a function of a number of variables including the ash content of the fuel, the ash chemistry and the unit load. For instance, for a given number of sections out of service, a unit could maintain compliance at one load and not at another.

I trust that the above, along with the enclosures, will provide the information the Department felt necessary to finalize the subject permits.

Should you have any questions concerning this matter, please do not hesitate to call.

Sincerely,

Jerry L. Williams

Jerry L. Williams
Director
Environmental Planning

JLW:dh
Enclosures
cc: Mr. Dan Williams
Mr. Robert R. Garrett

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:

Boiler	Service Date	Manufacturer	Type
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. Four samples are taken for analysis, one of the four being sent to the fuel supplier. 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.

Boiler	Fuel Consumption	Steam Flow	Operating Temperature	Operating Pressure
1	86.0 BBLS/HR	220,000 LBS/HR	900°F	960 psi
2	86.0	220,000	900°	960
3	118.8	275,000	900°	960
4	118.8	275,000	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 weekly 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 and 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. On-going 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 on magnetic tape for future reference.

F.J. GANNON STATION - UNITS 1 THROUGH 4

Operation and Maintenance Plan

Introduction

F.J. Gannon Station is owned and operated by Tampa Electric Company. The plant is located on the eastern shore of Hillsborough Bay at Port Sutton. The plant consists of six steam electric generating units. Units 1 through 4 are oil fired while Units 5 and 6 fire coal.

Gannon Station Units 1 through 4 boilers were manufactured by the Babcock and Wilcox Company and are cyclone type furnaces. The boilers were originally designed to burn coal but have been converted to burn oil. The date each unit was placed in service and the generator nameplate capacities are listed below.

Unit No.	Service Date	Capacity, MW
1	1957	125.0
2	1958	125.0
3	1960	179.52
4	1963	187.5

Boiler exhaust gases from these units are exhausted through stacks at an elevation of 306 feet.

Process System Performance Parameters

Units 1 through 4 burn low sulfur No. 6 fuel oil. Fuel oil quality is monitored upon delivery. Three samples are taken for analysis, one of the three being sent to the fuel supplier. 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.

Unit No.	Fuel Consumption	Steam Flow	Operating Temperature	Operating Pressure
1	201 BBL/HR	950,000 LBS/HR	1000°F	1580 psi
2	201	950,000	1000°	1580
3	258	1,160,000	1000°	2175
4	307	1,260,000	1000°	2250

Fuel input to the boilers is monitored continuously and recorded daily. 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 and recorded on control room charts 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. Typically, planned outages are scheduled during non-peak periods such as the spring or fall.

During major outages, the boilers, controls, auxileries, 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. All repair information is stored on magnetic tape for future reference.

F.J. GANNON STATION - UNIT 5

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

Introduction

F.J. Gannon Station is owned and operated by Tampa Electric Company. The plant is located on the eastern shore of Hillsborough Bay at Port Sutton. The plant consists of six steam electric generating units. Units 1 through 4 are oil fired while Units 5 and 6 fire coal.

Unit 5 was placed in service in 1965 with a generator nameplate capacity of 239.4 MW. The boiler was manufactured by the Riley Stoker Corporation and is of the "wet" bottom, opposed firing type. Boiler exhaust gases pass through electrostatic precipitators prior to discharge through a 306' high stack.

Process System Performance Parameters

The Unit 5 boiler burns low sulfur pulverized coal. The design fuel consumption at 100% rating is 93.4 tons/hr., operating pressure is 2250 psi and operating temperature is 1000^{o}F. Fuel input is monitored and recorded daily. Pressure and temperature are continuously monitored and recorded on control room charts.

The maximum design steam capacity of the boiler is 1,660,000 lbs/hr steam flow is recorded on a continuous basis.

Particulate Control Equipment Data

Gannon Unit 5 is equipped with two electrostatic precipitators for the control of particulate matter emissions. Two precipitators, model number G.O. 3129 and G.O. 2791 were manufactured by Research Cottrell, Inc. Flyash collected by the precipitators is either pneumatically transported to a storage silo for sale or reinjected into the boiler. Reinjection is used during particulate emission testing or when the silo is full. Important design information and data applicable to the particulate control system are listed below:

	G.O. 3129	G.O. 2791
Design Flow Rate	820,000 cfm	700,000 cfm
Primary Voltage	430-480 volts	430-460 volts
Primary Current	241 amps	152 amps
Secondary Voltage	53.5 volts	53.5 volts
Secondary Current	1500 milliamps	1000 milliamps
Design Efficiency	99.78%	98.5%
Pressure Drop	0.5 inches of H_2O	.5 inches of H_2O
Static Pressure	+15 inches of H_2O	+15 inches of H_2O
Rapper Frequency	1/2 minutes	1/2 minutes
Rapper Duration	Impact	Impact
Temperature	293°F	289°F

Particulate Control Equipment Data Performance Parameters

Precipitator performance parameters are recorded routinely on a daily basis. The information recorded includes primary voltage, primary current, secondary current, and spark rate. This information is kept in the precipitator technician's office in a log book for each section of the ESP. Flyash hopper high levels are alarmed in the control room.

Maintenance and Inspection Schedules

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

The Unit 5 particulate control system receives regular preventive maintenance. The following preventive maintenance procedures are performed on a weekly basis:

- Inspect penthouse pressurizing fan filters. Replace as needed.
- Observe operation of all rappers and vibrators weekly. Check lift of rappers, intensity of vibrators and sequence of operation.

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

- Inspect system controls. Make minor adjustments as needed.
- Check operation of inlet duct distribution plate rappers.

Should these procedures indicate repairs are necessary, maintenance job requests are initiated. All repair information is stored on magnetic tape for future reference.

F.J. GANNON STATION - UNIT 6

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

Introduction

F.J. Gannon Station is owned and operated by Tampa Electric Company. The plant is located on the eastern shore of Hillsborough Bay at Port Sutton. The plant consists of six steam electric generating units. Units 1 through 4 are oil fired while Units 5 and 6 fire coal.

Unit 6 was placed in service in 1967 with a generator nameplate capacity of 414MW. The boiler was manufactured by the Riley Stoker Corporation and is of the "wet" bottom, opposed firing type. Boiler exhaust gases pass through electrostatic precipitators prior to discharge through a 306' high stack.

Process System Performance Parameters

The Unit 6 boiler burns low sulfur pulverized coal. The design fuel consumption at 100% rating is 151.4 tons/hr., operating pressure is 2600 psi and operating temperature is 1000°F. Fuel input is monitored and recorded daily. Pressure and temperature are continuously monitored and recorded on control room charts.

The maximum design steam capacity of the boiler is 2,700,000 pounds per hour. Steam flow is recorded on a continuous basis.

Particulate Control Equipment Data

Gannon Unit 6 is equipped with an electrostatic precipitator for the control of particulate matter emissions. The precipitator, model number G.O. 3118 was manufactured by Research Cottrell, Inc. Flyash collected by the precipitator is either pneumatically transported to a storage silo for sale or reinjected into the boiler. Reinjection is used during particulate emission testing or when the silo is full. Important design information and data applicable to the particulate control system are listed below:

	G.O. 3118
Design Flow Rate	1,350,000 cfm
Primary Voltage	430-480 volts
Primary Current	241 amps

Secondary Voltage	53.5 volts
Secondary Current	1500 milliamps
Design Efficiency	98.5%
Pressure Drop	0.5 inches of H_2O
Static Pressure	+15 inches of H_2O
Rapper Frequency	1/2 minutes
Rapper Duration	Impact
Temperature	290°F

Particulate Control Equipment Data Performance Parameters

Precipitator performance parameters are recorded routinely on a daily basis. The information recorded includes primary voltage, primary current, secondary current, and spark rate. This information is kept in the precipitator technician's office in a log book for each section of the ESP. Flyash hopper high levels are alarmed in the control room.

Maintenance and Inspection Schedules

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

The Unit 6 particulate control system receives regular preventive maintenance. The following preventive maintenance procedures are performed on a weekly basis:

- Inspect penthouse pressurizing fan filters. Replace as needed.
- Observe operation of all rappers and vibrators weekly. Check lift of rappers, intensity of vibrators and sequence of operation.

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

- Inspect system controls. Make minor adjustments as needed.
- Check operation of inlet duct distribution plate rappers.

Should these procedures indicate repairs are necessary, maintenance job requests are initiated. All repair information is stored on magnetic tape for future reference.

H.P.

HOOKERS POINT STATION FUEL QUALITY p.3 1980

Footnote "f" — Sulfur and Ash Content Should be a weighted Average.

$$\text{WT. AVG.} = \sum_{n=1}^{12} WF_n\ (\%S_n) \qquad n = \text{Number of Month}$$

MONTH	% Sn	BTU/GAL n	WFn	WFn (% Sn)	WFn (BTU/GAL n)
J	1.02	150,074	.043	.04386	6,453
F	.94	150,123	.073	.06862	10,959
M	.92	150,522	.065	.0598	9,784
A	.99	150,441	.036	.03564	5,416
M	.95	149,622	.076	.0722	11,371
J	.82	149,755	.105	.0861	15,724
J	.96	148,552	.166	.15936	24,660
A	.95	150,101	.106	.1007	15,911
S	1.00	151,024	.096	.096	14,498
O	1.08	150,664	.083	.08964	12,505
N	1.07	149,860	.071	.07597	10,640
D	1.00	148,612	.080	.080	11,889
			TOTAL	.96789	149,810

$$WF_n = \frac{\text{MONTHLY OIL CONSUMPTION}}{\text{YEARLY OIL CONSUMPTION}}$$

FOR the year: % S = 0.97

BTU/GAL = 149,810

NOTE: $(\%S_n)(WF_n) = WF_n(\%S_n)$

$(BTU/GAL\ n)(WF_n) = WF_n(BTU/GAL\ n)$

HOOKERS POINT STATION p.3 1980

TOTAL STEAM GENERATED (YEAR) = 3,867,856 Thousand Pounds

TOTAL OIL BURNED = 841,936.68 BBLS 42 gal/bbl

= 35,361,340.56 GALLONS

BOILER 1

$\frac{131,777}{3,867,856}$ # STM × # STM = 35,361,340.56 = 1,204,953 GAL

BOILER 2

$\frac{113,729}{3,867,856}$ # STM × # STM 35,361,340.56 = 1,039,752 GAL

BOILER 3

$\frac{326,211}{3,867,856}$ # STM × # STM 35,361,340.56 = 2,982,339 GAL

BOILER 4

$\frac{302,053}{3,867,856}$ # STM × # STM 35,361,340.56 = 2,761,478 GAL.

BOILER 5

$\frac{1,127,290}{3,867,856}$ # STM × # STM 35,361,340.56 = 10,306,093 GAL

BOILER 6

$\frac{1,867,796}{3,867,856}$ # STM × # STM 35,361,340.56 = 17,076,068 GAL

HOOKERS POINT STATION p.3 1980

BOILER #	HOURS OF OPERATION	GALLONS OIL	CONSUMPTION (gal/hr)	
1	1110	1,204,753	1085	STACK 5 42/3
2	827	1,039,752	1257	
3	1960	2,982,339	1522	STACK 2 3136
4	1711	2,761,478	1614	
5	5508	10,306,093	1871	
6	4826	17,076,068	3538	STACK 4 3538

EXIT VELOCITY = $(\text{gal/hr})(\#/\text{gal})(\text{hr/sec})\left(\frac{239.5 \text{ ft. gas}}{\text{lb. oil}}\right)(^\circ R/^\circ R)(1/\text{AREA ft.}^2) = \text{fps}$

FLOW = $(V \text{ fps})(A \text{ ft}^2)(60 \text{ sec/min}) = \text{ft}^3/\text{min.}$

STACK 5 (Boilers 1, 2, 5)

$V = (4213 \text{ GAL/HR})(7.708 \#/\text{GAL})\left(\frac{1 \text{ HR}}{3600 \text{ sec}}\right)\left(\frac{239.5 \text{ ft.}^3}{\# \text{ OIL}}\right)\left(\frac{725^\circ R}{492^\circ R}\right)(1/98.52 \text{ ft}^2) = 32.31 \text{ fps (AVG)}$

$Q = (32.31 \text{ fps})(98.52 \text{ ft}^2)(60 \text{ sec/min}) = 190,991 \text{ ft}^3/\text{min (AVG)}$

$356,400 \text{ ft}^3/\text{min (DESIGN)}$

STACK 4 (Boiler 6)

$V = (3538 \text{ GAL/HR})(7.708 \#/\text{GAL})\left(\frac{1 \text{ HR}}{3600 \text{ sec}}\right)\left(\frac{239.5 \text{ ft}^3}{\# \text{ OIL}}\right)\left(\frac{725^\circ R}{492^\circ R}\right)(1/69.54 \text{ ft}^2) = 38.44 \text{ fps AVG}$

$Q = (38.44 \text{ fps})(69.54 \text{ ft}^2)(60 \text{ sec/min}) = 160,387 \text{ ft}^3/\text{min (AVG)}$

$245,500 \text{ ft}^3/\text{min (DESIGN)}$

STACK 2 (Boilers 3, 4)

$V = (3136 \text{ GAL/HR})(7.708 \#/\text{GAL})\left(\frac{1 \text{ HR}}{3600 \text{ sec}}\right)\left(\frac{239.5 \text{ ft}^3}{\# \text{ OIL}}\right)\left(\frac{725^\circ R}{492^\circ R}\right)(1/113.10 \text{ ft}^2) = 20.95 \text{ fps AVG}$

$Q = (20.95 \text{ fps})(113.10 \text{ ft}^2)(60 \text{ sec/min}) = 142,167 \text{ ft}^3/\text{min (AVG)}$

~~1979~~ 1980 - P.3

1000 lbs STEAM GENERATED

BOILER UNIT HP 1		HRS.
MAR	9,142	81
APR	illegible	2
MAY	21,250	165
	30,748	
JUNE	28,409	205
JULY	32,089	260
AUG	15,106	113
	75,604	
SEPT	0	0
OCT	0	0
NOV	0	0
	0	
DEC	11,926	125
JAN	3,980	36
FEB	9,519	123
	25,425	
TOTAL	131,777	
SPRING	$\frac{30,748}{131,777} = 23.33$	
SUMMER	$\frac{75,604}{131,777} = 57.37$	
FALL	$\frac{0}{131,777} = 0$	
WINTER	$\frac{25,425}{131,777} = 19.29$	

BOILER UNIT HP 2		HRS.
MAR	5,255	33
APR	illegible	21
MAY	21,213	140
	28,743	
JUNE	31,192	206
JULY	32,814	246
AUG	6,793	48
	70,799	
SEPT	0	0
OCT	0	0
NOV	0	0
	0	
DEC	14,187	133
JAN	0	0
FEB	0	0
	14,187	
TOTAL	113,729	
SPRING	$\frac{28,743}{113,729} = 25.27$	
SUMMER	$\frac{70,799}{113,729} = 62.25$	
FALL	$\frac{0}{113,729} = 0$	
WINTER	$\frac{14,187}{113,729} = 12.47$	

~~1979~~ 1980 F-5

BOILER 1000 lbs STEAM GENERATED

~~UNIT~~ 3		HRS.
MAR	48,218	359
APR	71,391	490
MAY	40,957	211
	160,566	
JUNE	53,056	284
JULY	48,590	257
AUG	0	0
	101,646	
SEPT	0	0
OCT	0	0
NOV	3,663	29
	3,663	
DEC	36,763	167
JAN	3,360	24
FEB	20,213	139
	60,336	
TOTAL	326,211	

BOILER UNIT 4		HRS
MAR	36,846	238
APR	57,238	242
MAY	53,095	209
	107,179	
JUNE	60,291	288
JULY	81,169	423
AUG	23,448	118
	164,908	
SEPT	0	0
OCT	0	0
NOV	0	0
	0	
DEC	0 Out of Service	0 Out of Service
JAN	5,310	40
FEB	24,656	153
	29,966	
TOTAL	302,053	

SPRING	$\frac{160,566}{326,211} = 49.22$	$\frac{107,179}{302,053} = 35.48$
SUMMER	$\frac{101,646}{326,211} = 31.16$	$\frac{164,908}{302,053} = 54.60$
FALL	$\frac{3,663}{326,211} = 1.12$	$\frac{0}{302,053} = 0$
WINTER	$\frac{60,336}{326,211} = 18.50$	$\frac{29,966}{302,053} = 9.92$

~~1979~~ 1980 P-5

1000 lbs STEAM GENERATED

BOILER ~~UNIT~~ 5		HRS.	BOILER ~~UNIT~~ 6		HRS.
MAR	72,762	379	MAR	67,281	157
APR	0,362	3	APR	20,013	60
MAY	144,070	583	MAY	53,946	123
	217,194			141,240	
JUNE	148,263	693	JUNE	70,053	161
JULY	157,584	741	JULY	287,946	687
AUG	50,057	202	AUG	306,211	723
	355,904			664,210	
SEPT	186,712	634	SEPT	216,486	529
OCT	64,783	228	OCT	265,438	745
NOV	33,508	154	NOV	235,303	720
	285,003			717,227	
DEC	93,089	453	DEC	172,772	487
JAN	93,321	742	JAN	51,541	133
FEB	112,779	696	FEB	119,806	301
	299,189			344,119	
TOTAL	1,157,290		TOTAL	1,866,796	
SPRING	$\frac{217,194}{1,157,290} = 18.77$		SPRING	$\frac{141,240}{1,866,796} = 7.57$	
SUMMER	$\frac{355,904}{1,157,290} = 30.75$		SUMMER	$\frac{664,210}{1,866,796} = 35.58$	
FALL	$\frac{285,003}{1,157,290} = 24.63$		FALL	$\frac{717,227}{1,866,796} = 38.42$	
WINTER	$\frac{299,189}{1,157,290} = 25.85$		WINTER	$\frac{344,119}{1,866,796} = 18.43$	

HOOKERS POINT STATION

p. 7 1980

EMISSIONS TESTING

	PARTICULATE #/mmBTU	SO_2 #/mmBTU	DATE
H.P. 1	0.04	1.03	8/17/79
HP 2	0.04	1.06	10/25/79
HP 3	0.03	0.96	7/2/79
HP 4	0.08	1.01	4/28/80
HP 5	0.03	1.04	9/17/80
HP 6	0.05	1.07	7/24/80

HOOKERS POINT

UNIT: H.P. 1 p. 7 1980

1085 GAL. OIL/HR × 149,810 BTU/GAL. = 162.5 MMBTU/HR (AVG)

DESIGN = 298.0 MMBTU/HR. (MAX.)

1,204,753 GAL. OIL/1980 × 149,810 BTU/GAL. = 180,484 MMBTU/1980 (ACTUAL)

PARTICULATE EMISSIONS

0.04 lbs. PART/MM BTU × 162.5 MMBTU/HR = 6.5 lbs. PART./HR. (AVG.)

0.04 lbs. PART/MM BTU × 298.0 MMBTU/HR = 11.92 lbs. PART/HR. (MAX.)

0.04 lbs. PART/MM BTU × 180,484 MM BTU/1979 × 1 TON/2,000# = 3.61 TONS PART/1979

SULFUR DIOXIDE EMISSIONS

1.03 lbs. SO_2/MM BTU × 162.5 MMBTU/HR = 167.4 lbs SO_2/HR (AVG)

1.03 lbs. SO_2/MM BTU × 298.0 MMBTU/HR = 306.9 lbs. SO_2/HR (MAX)

1.03 lbs. SO_2/MM BTU × 180,484 MM BTU/1979 × 1 TON/2000 lb. = 92.95 TONS SO_2/1979

HOOKERS POINT

UNIT: H.P. 2

p.-7 1980

1257 GAL. OIL / HR × 149,810 BTU / GAL. = 188.3 MMBTU / HR (AVG)

DESIGN = 298.0 MMBTU / HR. (MAX.)

1,039,752 GAL. OIL / 1978 × 149,810 BTU / GAL. = 155,765 MMBTU / 1980 (ACTUAL)

PARTICULATE EMISSIONS

0.04 lbs. PART / MM BTU × 188.3 MMBTU / HR = 7.5 lbs. PART. / HR. (AVG.)

0.04 lbs. PART / MM BTU × 298.0 MMBTU / HR = 11.9 lbs. PART / HR. (MAX.)

0.04 lbs. PART / MM BTU × 155,765 MM BTU / 1980 × 1 TON / 2,000 # = 3.1 TONS PART / 1980

SULFUR DIOXIDE EMISSIONS

1.06 lbs. SO_2 / MM BTU × 188.3 MMBTU / HR = 199.6 lbs SO_2 / HR (AVG)

1.06 lbs. SO_2 / MM BTU × 298.0 MMBTU / HR = 315.9 lbs. SO_2 / HR (MAX.)

1.06 lbs. SO_2 / MM BTU × 155,765 MM BTU / 1980 × 1 TON / 2000 lb. = 82.5 tons SO_2 / 1980

HOOKERS POINT

UNIT: H.P. 3

p.-7 1980

$1522 \frac{\text{GAL. OIL}}{\text{HR}} \times 149{,}810 \frac{\text{BTU}}{\text{GAL.}} = 228.0 \frac{\text{MMBTU}}{\text{HR}}$ (AVG)

DESIGN = 411 $\frac{\text{MMBTU}}{\text{HR.}}$ (MAX.)

$2{,}982{,}339 \frac{\text{GAL. OIL}}{1979} \times 149{,}810 \frac{\text{BTU}}{\text{GAL.}} = 446{,}784 \frac{\text{MMBTU}}{1979}$ (ACTUAL)

PARTICULATE EMISSIONS

$0.03 \frac{\text{lbs. PART}}{\text{MM BTU}} \times 228 \frac{\text{MMBTU}}{\text{HR}} = 6.84 \frac{\text{lbs. PART.}}{\text{HR.}}$ (AVG.)

$0.03 \frac{\text{lbs. PART}}{\text{MM BTU}} \times 411 \frac{\text{MMBTU}}{\text{HR}} = 12.3 \frac{\text{lbs. PART}}{\text{HR.}}$ (MAX.)

$0.03 \frac{\text{lbs. PART}}{\text{MM BTU}} \times 446{,}784 \frac{\text{MM BTU}}{1979} \times \frac{1 \text{ TON}}{2{,}000\#} = 6.70 \frac{\text{TONS PART}}{1979}$

SULFUR DIOXIDE EMISSIONS

$0.96 \frac{\text{lbs. } SO_2}{\text{MM BTU}} \times 228 \frac{\text{MMBTU}}{\text{HR}} = 218.9 \frac{\text{lbs } SO_2}{\text{HR}}$ (AVG)

$0.96 \frac{\text{lbs. } SO_2}{\text{MM BTU}} \times 411 \frac{\text{MMBTU}}{\text{HR}} = 394.6 \frac{\text{lbs. } SO_2}{\text{HR}}$ (MAX.)

$0.96 \frac{\text{lbs. } SO_2}{\text{MM BTU}} \times 446{,}784 \frac{\text{MM BTU}}{1979} \times \frac{1 \text{ TON}}{2000 \text{ lb.}} = 214.5 \frac{\text{tons } SO_2}{1979}$

HOOKERS POINT

UNIT: H.P. 4

p-7 1980

1614 GAL. OIL/HR × 149,810 BTU/GAL. = 241.8 MMBTU/HR (AVG)

DESIGN = 411.0 MMBTU/HR. (MAX.)

2,761,478 GAL. OIL/1979 × 149,810 BTU/GAL. = 413,697 MMBTU/1979 (ACTUAL)

PARTICULATE EMISSIONS

0.08 lbs. PART/mm BTU × 241.8 MMBTU/HR = 19.3 lbs. PART./HR. (AVG.)

0.08 lbs. PART/mm BTU × 411.0 MMBTU/HR = 32.9 lbs. PART/HR. (MAX.)

0.08 lbs. PART/mm BTU × 413,697 mm BTU/1979 × 1 TON/2,000# = 16.5 TONS PART/1979

SULFUR DIOXIDE EMISSIONS

1.01 lbs. SO_2/mm BTU × 241.8 MMBTU/HR = 244.2 lbs SO_2/HR (AVG)

1.01 lbs. SO_2/mm BTU × 411 MMBTU/HR = 415.1 lbs. SO_2/HR (MAX.)

1.01 lbs. SO_2/mm BTU × 413,697 mm BTU/1979 × 1 TON/2000 lb. = 208.9 tons SO_2/1979

HOOKERS POINT

UNIT: H.P. 5

p. 7 1980

1871 GAL. OIL/HR × 149,810 BTU/GAL. = 280.3 MMBTU/HR (AVG)

DESIGN = 610 MMBTU/HR. (MAX.)

10,306,093 GAL. OIL/1979 × 149,810 BTU/GAL. = 1,543,956 MMBTU/1979 (ACTUAL)

PARTICULATE EMISSIONS

0.03 lbs. PART/MM BTU × 280.3 MMBTU/HR = 8.4 lbs. PART./HR. (AVG.)

0.03 lbs. PART/MM BTU × 610 MMBTU/HR = 18.3 lbs. PART/HR. (MAX.)

0.03 lbs. PART/MM BTU × 1,543,956 MM BTU/1979 × 1 TON/2,000# = 23.16 TONS PART/1979

SULFUR DIOXIDE EMISSIONS

1.04 lbs. SO_2/MM BTU × 280.3 MMBTU/HR = 291.5 lbs SO_2/HR (AVG)

1.04 lbs. SO_2/MM BTU × 610 MMBTU/HR = 634.4 lbs. SO_2/HR (MAX.)

1.04 lbs. SO_2/MM BTU × 1,543,956 MM BTU/1979 × 1 TON/2000 lb. = 802.9 TONS SO_2/1979

HOOKERS POINT

UNIT: H.P. 6

p.-7 1980

3538 GAL. OIL/HR × 149,810 BTU/GAL. = 530.0 MMBTU/HR (AVG)

DESIGN = 778.0 MMBTU/HR. (MAX.)

17,096,068 GAL. OIL/1979 × 149,810 BTU/GAL. = 2,558,166 MMBTU/1979 (ACTUAL)

PARTICULATE EMISSIONS

0.05 lbs. PART/mm BTU × 530 MMBTU/HR = 26.5 lbs. PART./HR. (AVG.)

0.05 lbs. PART/mm BTU × 778 MMBTU/HR = 38.9 lbs. PART/HR. (MAX.)

0.05 lbs. PART/mm BTU × 2,558,166 mm BTU/1979 × 1 TON/2,000# = 63.9 TONS PART/1979

SULFUR DIOXIDE EMISSIONS

1.07 lbs. SO_2/mm BTU × 530 MMBTU/HR = 567.1 lbs SO_2/HR (AVG)

1.07 lbs. SO_2/mm BTU × 778 MMBTU/HR = 832.5 lbs. SO_2/HR (MAX)

1.07 lbs. SO_2/mm BTU × 2,558,166 MMBTU/1979 × 1 TON/2000 lb. = 1368.6 tons SO_2/1979

TECO - Hookers Point #1 WHB

File Number AO 29-22018

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

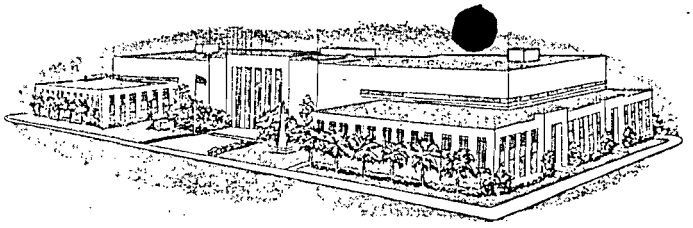
County Hillsborough

Date Recieved 6/29/79

P.E. seal & signature ☐
Check ☑
No check ☐
Letter of corp. standing ☐

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	6/19/79	RKP
5	Review by Sec. head and transfer to permitting Engineer	8/27/79	DW
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		
83	Permit Package to Dist. Engr.		
85	Permit Package to Dist. Manager	9-25-79	DW
90	Final ~~Issuance/denial~~	9/25/79	RKP

*If needed, If not indicate by N/A



COUNTY of HILLSBOROUGH

MEMORANDUM

Date 8-30-79

To Dan Williams - DER

From Joe Griffiths - Env. Prot. Comm. JG

Subject: Air Permit Applications

Transmitted this date the following:

Recommend permit for TECO Hooker's Point No. 1 Steam Generator. Previous recommendation sent 7/18/79.

D.E.R.
SEP 4 1979
SOUTHWEST DISTRICT
TAMPA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

No 32455

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from TECO Date 7-19-79

Address P.O. Box 111, Tampa Dollars $ 40.00

Applicant Name & Address same as above

Source of Revenue Hookers Point Station #1 & 2 Boilers

Revenue Code 0101 Application Number A029-22018 & 22019

By Florelle Bannon

1-44199

FILE FORM
10-73

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

POINT SOURCE INPUT FORM

DATE 6-14-77

NAME OF PERSON COMPLETING FORM H.CEPC.

STATE (1-2)	COUNTY (3-6)	AQCR (7-9)	PLANT ID NUMBER (10-13)
10	1800	052	0038

CITY (14-17)	UTM ZONE (18-19)	YEAR OF RECORD (20-21)	ESTABLISHMENT NAME AND ADDRESS (22-61)	CONTACT-PERSONAL (62-73)	OWN (74)	ACTION (78)	79	CC (80)
4360	17	77	TECO-HOOKERS PT. HEMLOCK AVE. TAMPA FLA.	ALEX KAISER	U	C	P	1

POINT ID (14-15)	YEAR OF RECORD (16-17)	SIC (18-21)	IPP PROCESS (22-23)	UTM COORDINATES HORIZ. KM (24-27)	VERT. KM (28-32)	STACK HEIGHT (FT) (33-36)	DIAM (FT) (37-39)	TEMP (°F) (40-43)	FLOW RATE (FT³/MIN) (44-50)	PLUME HEIGHT IF NO STACK-FT (51-54)	POINTS WITH COMMON STACK (55-59)	ACTION (78)	79	CC (80)
01	77	4911	00	3580	30910	280	112	265	179994	0	0	C		2

YEAR OF RECORD (16-17)	BOILER DESIGN CAPACITY 10^6 BTU HR (18-22)	CONTROL EQUIPMENT: PRIMARY PART.	SECOND PART.	PRIMARY SO_2	SECOND SO_2	PRIMARY NO_x	SECOND NO_x	PRIMARY HC	SECOND HC	PRIMARY CO	SECOND CO	EST. CONTROL EFFICIENCY (%): PART	SO_2	NO_x	HC	CO	ACTION (78)	79	CC (80)
77	298	000	000	000	000	000	000	000	000	000	000	0	0	0	0	0	C	P	3

YEAR OF RECORD	% ANNUAL THRUPUT DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV	NORMAL OPERATING HR/DAY	D/WK	WK/YR	EMISSION ESTIMATES (TONS/YEAR) PARTICULATE	SO_2	NO_x	HC	CO	ESTIMATION METHOD PART	SO_2	NO_x	HC	CO	% SPACE HEAT	ACTION	79	CC
77	25	25	25	25	24	7	50	60	848	689	7	33	1	1	3	3	3	0	C	P	4

YEAR OF RECORD	ALLOWABLE EMISSIONS (TONS/YEAR) PARTICULATE	SO_2	NO_x	HC	CO	COMP. STAT	COMPLIANCE SCHEDULE YEAR	MONTH	COMPLIANCE STATUS UPDATE YEAR	MONTH	DAY	ECAP	CONTROL REGULATIONS REG 1	REG 2	REG 3	ACTION	79	CC
77	111	1221	9999999	9999999	9999999	1						0				C	P	5

YEAR OF RECORD	SCC I	II	III	IV	FUEL PROCESS SOLID WASTE OPERATING RATE	MAX DESIGN RATE	% SULFUR CONTENT	% ASH CONTENT	HEAT CONTENT 10^6 BTU/SCC	COMMENTS	SOURCE	CONFID	ACTION	79	CC
77	1	01	004	01	13125	1810	100	0	146	UNIT #1 - #6 FUEL OIL	B	2	C	P	6
														P	6
														P	6
														P	6
														P	6

PERM 12-7
11-75

FILE 70117

STATE OF FLORIDA

Best Available Copy

NAME OF PERSON COMPLETING FORM: G.W. RICHARDSON

2

10-75 MOD. 2

DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR PERMIT AND INVENTORY SYSTEM

POINT SOURCE CODING FORM

ACTIONS

DELETE 1	
ADD 2	
CHANGE 3	

STATE	COUNTY	AQCR	PLANT #	POINT ID
10	1800	052	0038	01

YEAR OF RECORD	COMPANY NAME	COMPANY MAILING ADDRESS	COMPANY CITY	ZIP CODE	ACTION
77	TAMPA ELECTRIC CO	PO BOX 111	TAMPA FL	33601	2

YEAR OF RECORD	CONSTRUCTION PERMIT	ISSUE DATE	EXPIRATION DATE	OPERATING PERMIT	ISSUE DATE	EXPIRATION DATE	LATITUDE	LONGITUDE	PERMIT TYPE	SOURCE TYPE	ACTION
77	C —			A029-2514	06 29 77	05 30 79			2	32	2

YEAR OF RECORD	FINAL CONTROL PLAN DATE	SUB. OF CONTRACTS TO BE LET	START CONSTRUCTION	END CONSTRUCTION	FINAL COMPLIANCE	TESTING DATE	INSPECTION SCHEDULE J F M A M J J A S O N D	POLLUTANT (IF APP)	ACTION
									0 9

YEAR OF RECORD	DESCRIPTION OF POINT SOURCE	ACTION
77	TECO HOOKERS POINT BOILER NO ONE	2

YEAR OF RECORD	MOST RECENT DATE OF EMISSIONS TESTING FOR PARTICULATES	MOST RECENT DATE OF EMISSIONS TESTING FOR SO_2	DUE DATE FOR PARTICULATE EMISSIONS TEST RESULTS	DUE DATE FOR SO_2 EMISSIONS TEST RESULTS	STATUS CODE	DATE OF RECORDING OF STATUS CODE	TSP FREQ. (CODE)	SO_2 FREQ. (CODE)	MOST RECENT DATE OF INSPECTION BY DEPARTMENT	VE FREQ. (CODE)	MOST RECENT DATE OF VISIBLE EMISSIONS TEST	VE - PERM	SOURCE CATEGORY	VE - DER	ACTION
77	12 06 76		06 29 78	06 29 78	A	06 29 77	1	1		1					2

PERMIT WORK SHEET

SOURCE TECO HOOKERS POINT # 1 DATE 6-29-77

COUNTY HILLSBOROUGH TYPE PERMIT O

ACTION	INITIAL WHEN COMPLETED	DATE
Preliminary Review	GWR	6-29-77
Assigned for Review to		
Review Comments		

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.

By Clark Tet
JK Wilson

George W Richardson

Number Assigned	AO 29-2514	6-29
Permit Issued & Signed		
Permit Logged		
Permit Mailed		
Data Forms Completed		
Permit Denied		

INFORMATION CONFIDENTIAL? YES _____ NO X

TYPE PERMIT ACTION		DESCRIPTION OF PRIMARY SOURCE	
New Source (No related permits)	____	Boiler	X
Renewed or modified permit	X	Solid Waste (Incinerato	
Point source deleted	____	Other Combustion	____
Point source added	____	Process	____
New Source replacing old source	____	Product (Name)	____

BRIEF DESCRIPTION OF PROCESS

This is a fossil fuel steam generator that produces steam to drive a turbine & produce electricity

OPERATING TIME: 24 HR/Da 7 Da/Wk 52 Wk/

STACK DATA

Height (FT) 280
Diam. (FT.) 11.25
Temp. (°F) 265
Flow Rate (CFM) 179,994
Plume Height (FT) _____
Common Stack (Explain) _____

OPERATING DATA

Process Rate 21 MW 271 X 10^6 BTU/HR
Process Rate _____ TON
Max Design Rate 21 MW
Combustion (Units) Gal TONS FT
Rate 10030 gal Unit/Hr _____ Unit/
Heat Content 145,043 BTU/Ga
Boiler Capacity 271 MM BTU/Hr
Max Design Rate 271 MM BTU/H
Fuel (Name) #6 .94 %S — %A

COMMENTS:

2254 10^3 gal No. 6 at .94% S

Pa[redacted]lates

Particulates

Particulates

SO_2

NO_x

HC

F[redacted]

NONE

EMISSIONS

POLLUTANT	lb/hr		lb/ton Product		lb/10^6 BTU		Regulatio
	Emission	Allowable	Emission	Allowable	Emission	Allowable	
rticulate	.056						
2	.976						
x							

CITY Test _____ Allowable _____

SIS FOR ESTIMATE

X Stack Test Results Date 12-6-76 Report Received 2-28-77

_____ V. E. Test Date _____ Report Received _____

_____ Other tests or emission measurement

_____ Material balance of process using engineering knowledge

_____ Emissions calculated using EPA emission factors

_____ Other Method (Describe): _____

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

ANNUAL OPERATIONS REPORT FORM FOR AIR EMISSIONS SOURCES

D.E.R.

MAR 13 1978
SOUTHWEST DISTRICT
TAMPA

For each permitted emission point, please submit a separate report for calendar year 19 77 prior to March 1st of the following year.

I GENERAL INFORMATION:

1. Source Name: Tampa Electric Company (Hookers Point Boiler #1)
2. Permit Number: AO 29-2514
3. Source Address: P. O. Box 111
   Tampa, Florida 33601
4. Description of Source: Fossil fuel steam generator

II OPERATING SCHEDULE:

24 hrs/day 7 days/wk 52 wks/yr
actual hours of operation 1191

III RAW MATERIAL INPUT PROCESS WEIGHT:

Raw Material	Input Process Weight
	tons/yr
	tons/yr
N/A	N/A tons/yr
	tons/yr
	tons/yr

IV TOTAL FUEL USAGE, including standby fuels. If fuel is oil, specify weight and sulfur content (e.g., No. 6 oil with 1%S).

____ 10^6 cubic feet Natural Gas	1377 10^3 gallons No. 6 Oil, 0.9 %S
____ 10^3 gallons Propane	____ 10^3 gallons Kerosene
____ tons Coal	____ 10^6 lb Black Liquor Solids
____ tons Carbonaceous	____ tons Refuse

Other (Specify type and units) ____

V EMISSION LEVEL (tons/yr):

A.

6.1 Particulates	____ Carbon Monoxide
____ Nitrogen Oxide	____ Total Reduced Sulfur
____ Hydrocarbon	____ Flouride
94.3 Sulfur Dioxide	

Other (Specify type and units) ____

B. Method of calculating emission rates (e.g., use of fuel analysis and materials balance, emission factors drawn from AP 42, etc.)
Fuel analysis and/or compliance testing.

VI CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

W. J. Johnson
Signature of Owner or Authorized Representative

W.J. Johnson, Acting Manager, Environmental Planning
Typed Name and Title

3/8/78
Date

DER Form PERM 12-15 (Jan 78)

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 1)

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

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 1714

b. DESIGN CRITERIA: MAXIMUM OUTPUT 21 MW (from FPC-67 Form)
e.g. 850 MW, 750 tons/dy

c. ~~NORMAL~~(AVERAGE) OUTPUT 15.8 MW (during actual hours of operation)
e.g. 424 MW, 670 tons/dy.

d. MAXIMUM PEAK THAT OCCURED DURING ANY ONE DAY 21 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
N.A.	N.A. 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 2254 10^3 gal NO. 6 OIL .94 %SULFUR

-- 10^3 gal PROPANE -- 10^3 gal KEROSENE

-- tons COAL -- 10^6 lb BLACK LIQUOR SOLIDS

-- OTHER, specify type and units

SECTION 5: EMISSION: ESTIMATED/TESTED EMISSIONS (TONS PER YEAR)

a. 9.1 tons of particulates 160 tons of sulfur dioxide

-- tons of nitrogen dioxide -- tons of carbon monoxide

-- tons of hydrocarbon -- tons -- (other)

b. ~~METHOD~~ METHOD OF CALULATIONS USED IN DETERMINING EMISSION RATES

Particulates - gallons oil $\times \frac{\text{BTU}}{\text{gal.}} \times \frac{\text{tons part.}}{\text{BTU}}$ = tons particulate

SO_2 - gallons oil $\times \frac{\text{BTU}}{\text{gal.}} \times \frac{\text{tons } SO_2}{\text{BTU}}$ = tons SO_2

$\frac{\text{tons part.}}{\text{BTU}}$ and $\frac{\text{tons } SO_2}{\text{BTU}}$ are from test data

ANNUAL OPERATING REPORT
calendar year 1976

SECTION 5(cont't)

c. STACK TESTED: Dec. 6-7, 1976 date

STACK TEST CONDITIONS: 16 MW PROCESS RATE DURING TEST

STACK TEST CONDUCTED BY: Environmental Science & Engineering, Inc.

STACK TEST WITNESSED BY: Mr. Jim Tucker, HCEPC

SECTION 6: OPERATIONAL PROBLEMS, IF ANY: Routine

a. IMPROVEMENTS MADE TO PROCESS/POLLUTION CONTROL EQUIPMENT: None

b. TYPE OF MAINTENANCE PERFORMED: Routine

c. NUMBER OF UPSETS LASTING MORE THAN FOUR HOURS DURING THE YEAR: 0

d. NUMBER OF UPSETS LASTING MORE THAN ONE HOUR BUT NOT MORE THAN FOUR HOURS: Unknown

e. 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 representative

Alex Kaiser, Director of Power Plant Engineering
Typed name and title

April 5, 1977
Date

DER - St Pete

Hookers Pt 1

TECO
TAMPA ELECTRIC COMPANY

POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 876-4111

February 22, 1977

D.E.R.
FEB 23 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

RECEIVED
FEB 23 1977
H.C.E.P.C.

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

RE: Sulfur Dioxide Emissions Test -
Gannon Units 1 and 2
Particulate Emissions Test -
Hookers Point Units 1, 2 and 3
Tampa Electric Company

Dear Mr. Tucker:

Attached are three copies each of the sulfur dioxide emissions test on Gannon Units 1 and 2 and the particulate emissions test on Hookers Point Units 1, 2 and 3 performed by Environmental Science & Engineering, Inc. As stated in the Executive Summary on Page iii of each report, the results indicate that Gannon Units 1 and 2 were operating within the SO2 limits of compliance set forth in 17-2.04(6)(e)2c and that Hookers Point Units 1, 2 and 3 were operating within the TSP limits of compliance set forth in 17-2.04(6)(e)2a and 17-2.04(6)(e)3b of the Rules of the State of Florida Administrative Code.

Also attached are the visible emissions reports for Hookers Point Boilers 1, 2 and 3, Gannon Unit No. 2, and Big Bend Unit No. 2. You will note that at Hookers Point and Big Bend more than one boiler was utilizing the stacks during the tests. However, the emissions were still below the allowable and, therefore, should not be a problem.

Also attached are copies of the process statement for each of the tests.

If you have any questions or require additional information, please contact us.

Yours very truly,

William N. Cantrell

William N. Cantrell
Engineer
Environmental Planning

WNC:sac
Attachments

TAMPA ELECTRIC COMPANY

DW NAYAK 278 ~~1980~~ 277-1980

June 4, 1976

D.E.R.
JUN 9 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

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

RE: Notice to Correct Violation
Hookers Point Station
Stack from Units 1 through 5

problems #6 Jones 8/k

Dear Mr. Stewart:

On May 14, 1976, Hookers Point Station had to bring up Units 3 and 4/Boilers 3 and 4 at essentially the same time. The demand on these units was for full load. After obtaining full load conditions, the soot blowers were placed into service which was approximately 4:25 p.m. to 5:45 p.m. The stack appearance at that time ranged from 20% to 90% opacity as indicated on our smoke charts, thus the reason for the incident.

On April 23, 1976, Mr. Jones visited our plant at which time we explained to him the causes for such occurrences and what our program was for abatement of future incidents like these.

Repeating then, Boiler 1 through 5 have been and still are experiencing problems with back pressure in their common stack. This presents a flow problem hence causing combustion problems, which our consultants, Stone & Webster, have been working to correct. They conducted tests at Hookers Point on June 2, 1976 to provide them with the necessary data to make recommendations for design changes.

Also, Hookers Point Station has been designated as a cycling duty station. This requires the station to pick-up loads quickly and drop them quickly. So that these functions can be accomplished without combustion upset, it has been necessary that modification of our combustion controls on the boilers be implemented. The status to date: Boilers 1 and 2 are now presently equipped with new Bailey Controls; Boiler 3 is in the process of being converted over; and the others are to follow as quickly as we can implement their modification. Lastly, in the future, our operating procedures will be to avoid soot blowing at full load conditions or while bringing up a unit unless absolutely required by the boiler for efficient operations.

We trust this letter has answered all necessary questions so as to comply with Section 3 A, B, and C of your "Notice to Correct Violation".

If there are any questions, please do not hesitate to call.

Very truly yours,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: County Commissioners
County Attorney
J. W. Landers
Banks Vest THIS COPY FOR

January 11, 1974

Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
906 Jackson Street
Tampa, Florida 33602

RE: Compliance Schedule, Tampa Electric Company
Hookers Point Station, SO_2 Control
Permit No. A029-2093

Dear Mr. Stewart:

The fourth increment of progress (construction completion) for this project was scheduled for December 30, 1973. Due to system load demand and a design problem on a small but significant part of the system, we have not been able to complete the work at this time.

Through December, 1973 expenditures on this project totaled $2,056,976 out of a total projected cost of approximately $2,400,000.

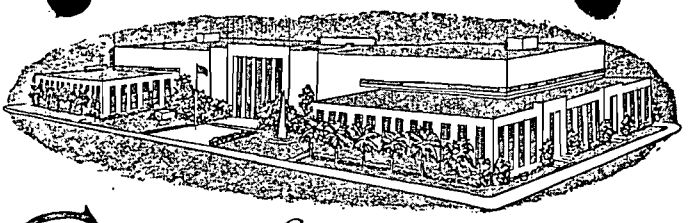
We anticipate that work on this project should be completed by June 1, 1974, which would allow Tampa Electric Company to meet the final compliance date of June 30, 1974 if we are allowed to burn the low sulfur oil at that time.

We, therefore, respectfully request that you extend our fourth increment of progress date to June 1, 1974. If you have any questions, please don't hesitate to contact us.

Yours very truly,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: Mr. W. E. Linne
Regional Administrator



COUNTY of HILLSBOROUGH
Tampa, Florida 33601

ROGER P. STEWART
DIRECTOR

7402 NORTH 56th STREET
BUILDING 500
TAMPA, FLORIDA 33617

TELEPHONE (813) 272-5960

D. E. R.

MAY 25

SOUTH WEST DISTRICT
ST. PETERSBURG

Hookers Pt. Div.

May 24, 1976

CERTIFIED MAIL

NOTICE TO CORRECT VIOLATION

Mr. H. L. Culbreth, President
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Sir:

1. Pursuant to Section 19 of the Hillsborough County Environmental Protection Act, Chapter 67-1504, Laws of Florida, as amended, you are in violation of the following provisions of Chapter 67-1504, as amended and the Rules of the Hillsborough County Environmental Protection Commission as follows:

   A. Section 18 of the Hillsborough County Environmental Protection Act by taking such action as may reasonably be expected to cause air pollution in Hillsborough County as defined in Section 3 (3) of the Hillsborough County Environmental Protection Act.

   B. Chapter 1-3.03 of the Rules by causing, letting, permitting, suffering or allowing the discharge of excessive visible emissions.

2. Pusuant to Section 19 (2) (b) of the Hillsborough County Environmental Protection Act, the facts constituting the violation are as follows:

   On May 14, 1976, the stack for Units 1 through 5 at Tampa Electric Company - Hooker's Point Station was observed to be in violation of our visible emissions standard. Visible emission evaluations ranged from 40% opacity to 80% opacity. This stack has also been observed to be emitting excessive visible emissions on other occasions prior to May 14, 1976.

3. You are hereby directed to:

   A. Submit to this office by June 4, 1976 a report indicating the cause of the excessive visible emissions observed May 14, 1976.

B. Submit to this office by June 18, 1976 a plan to provide for the elimination of excessive visible emissions from the Hooker's Point Station. Include in this plan a compliance schedule.

C. Institute said plan as soon as possible but no later than July 1, 1976.

3. Be advised that under the provisions of Section 9 of the Hillsborough County Environmental Protection Act you have the right to appeal the above action by filing a written notice of such appeal with the Commission within twenty (20) days. Failure to request an administrative hearing within twenty (20) days shall constitute a waiver thereof. If you do not comply with the requirements of this Notice and if you do not file a written notice of appeal, the Director shall proceed to seek an order requiring compliance.

Sincerely,

Roger P. Stewart
Director
Hillsborough County Environmental
Protection Commission

RPS/JDM/fd

cc: County Commissioners
County Attorney
J. Landers
Banks Vest

GANNON STATION
UNIT NOS. 3 & 4 (OIL)
SO_2 EMISSIONS
January through March, 1976

Month	Sample	BTU/lb.	% S	$\#SO_2/10^6$ BTU*
January	0-937	19,091	0.98	1.01
February	0-962	19,118	0.97	1.00
March	0-975	19,204	0.90	0.93

HOOKERS POINT STATION
SO_2 EMISSIONS
January through March, 1976

Month	Sample	BTU/lb.	% S	$\#SO_2/10^6$ BTU*
January	0-934	19,059	0.96	0.99
February	0-964	19,144	0.93	0.96
March	0-972	19,203	0.98	1.01

*Amount of SO_2 emitted when fuel is burned is calculated assuming 98.7% conversion S to SO_2.

SUMMARY OF VISIBLE EMISSION TESTS

TAMPA ELECTRIC COMPANY

Station	Stack No.	Date	Time	MW	lbs. Steam/ Hour	Opacity
Hookers Point	#1	6-23-75	12:30pm	---	314,000	1.5%
Hookers Point	#2	6-23-75	11:30pm	---	320,000	0.1%
Hookers Point	#3	6-23-75	12:35pm	---	400,000	0.7%

Best Available Copy

VISIBLE EMISSIONS REPORT

observation date 6/23/75 distance to stack 500'

time 12:30 pm wind direction/speed E / 5-10

stack location - Hookers Point Stack # 1 - TECO (Units #1 & #2)

UTM coordinates 358,000 mE 3,091,000 mN

process description Steam Generator

at 12:30 pm → 314,000 lbs steam/hr.

observer [illegible]

opacity observations in percent

min \ sec	0	15	30	45
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	5	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	5	0
12	0	0	0	20
13	100	5	0	0
14	0	0	0	0
15	0	0	0	10

min \ sec	0	15	30	45
16	40	20	20	20
17	15	10	15	10
18	15	10	10	10
19	5	5	5	5
20	0	5	0	0
21	0	0	0	5
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

opacity observations in percent

sec / min	0	15	30	45
31	0	0	0	0
32	0	0	0	0
33	0	0	0	0
34	0	0	0	0
35	0	0	0	0
36	0	0	0	0
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0
40	0	0	0	0
41	0	0	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	0	0	0

sec / min	0	15	30	45
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	0	0	0
50	0	0	0	0
51	0	0	0	0
52	0	0	0	0
53	0	0	0	0
54	0	0	0	0
55	0	0	0	0
56	0	0	0	0
57	0	0	0	0
58	0	0	0	0
59	0	0	0	0
60	0	0	0	0

sum of readings recorded 370

total number of readings 244

opacity % $\frac{\text{sum}}{\text{total}} = \frac{370}{244} = 1.5\%$

comments:

PARTLY CLOUDY SKY.

2 READINGS GREATER THAN 20%.

(SOUTHERN MOST STACK ASSUMED TO BE #1)

observer
certification card

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

Orlando
Location of School

7 May 1975
Date

This is to Certify That

WILLIAM E. SCHROEDER has completed the STATE OF FLORIDA PLUME EVALUATION SCHOOL and is qualified to cite visible emissions pursuant to Chapter 17-2.04(A)(B).

Certifying Official

Training Officer
Title

Form 1-8 (3/73)

JLJ

TECO
TAMPA ELECTRIC COMPANY

POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 876-4111

July 1, 1975

Mr. J. H. Kerns, P.E.
Regional Engineer
West Central Region
Florida Department of Pollution Control
P. O. Box 9205
Winter Haven, Florida 33880

RE: Permit Nos. A029-2092
A029-2093
A029-2191

Dear Mr. Kerns:

As required by the Florida Department of Pollution Control regulations Chapter 17-2.04(1) we are submitting to you the results of visible emission tests for our fossil fueled steam generators as covered by the above listed permits.

Visible emission tests have not been performed for Big Bend Unit 2, Gannon Unit 5, or Hookers Point Unit 6 as these units were not operating at the time of the tests. As soon as testing of these units can be arranged, we will submit the results to you.

Gannon Units 1, 2 and 3 and Big Bend Unit 1 failed to pass the visible emission test. As we have discussed with the Florida Department of Pollution Control and the Environmental Protection Agency in the past, we have projects underway to convert Gannon Units 1, 2 and 3 from burning coal to burning low sulfur oil and to install an additional electrostatic precipitator on Big Bend Unit 1, which will bring all of these units into compliance with the visible emission regulations. These projects will be

completed as expeditiously as possible. We expect the oil conversion on Gannon Units 1, 2 and 3 to be completed by July 1, 1976 and we expect that Big Bend Unit 1 will be removed from service by December 1, 1975 to tie in the new electrostatic precipitator. These schedules have been previously discussed with and approved by the Florida Department of Pollution Control and the Environmental Protection Agency.

If additional information is required, please feel free to contact us.

Very truly yours,

J. L. Hudson, Jr.
Chemical Engineer
Environmental Planning

JLH:sac

cc: Mr. Roger P. Stewart, HCEPC

SUMMARY OF VISIBLE EMISSION TESTS
TAMPA ELECTRIC COMPANY

Station	Stack No.	Date	Time	MW	lbs. Steam/ hour	Opacity
Hookers Point	#1	6-23-75	12:30p.m.	---	314,000	1.5%
Hookers Point	#2	6-23-75	11:30p.m.	---	320,000	0.1%
Hookers Point	#3	6-23-75	12:35p.m.	---	400,000	0.7%
Gannon	#1	6-23-75	8:20a.m.	90	---	15.7%
Gannon	#2	6-23-75	9:20a.m.	100	---	10.3%
Gannon	#3	6-23-75	9:25a.m.	155	---	15.8%
Gannon	#4a	6-23-75	8:15a.m.	135	---	6.1%
Gannon	#4b	6-23-75	10:25a.m.	155	---	5.7%
Gannon	#6	6-23-75	2:30p.m.	315	---	13.3%
Big Bend	#1	6-29-75	10:50a.m.	325	---	26.5%

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

POST OFFICE BOX 9205
500 EAST CENTRAL AVENUE
WINTER HAVEN, FLORIDA 33880

PETER P. BALJET
EXECUTIVE DIRECTOR

W.D. FREDERICK, JR.
CHAIRMAN

June 12, 1975
Hillsborough County - AP

Mr. R. D. Welch
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Re: Permit AO29-2092
AO29-2093
AO29-2191

Dear Mr. Welch:

The Department of Pollution Control Regulations require that visible emissions meet compliance of 20 percent opacity by July 1, 1975. (Chapter 17-2.04(1))

1) Visible Emissions-No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere any air pollutants from:
   a) Existing Sources, until July 1, 1975, the density of which is equal to or greater than that designated as Number 2 on the Ringelmann Chart or the opacity of which is equal to or greater than 40 percent.
   b) New Sources, and after July 1, 1975, existing sources, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart or the opacity of which is equal to or greater than 20 percent.
   c) This subsection 17-2.04(1) does not apply to emissions emitted in accordance with specified emission limiting standards or in accordance with the process weight table (Table I) provided in this chapter.
   d) If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this section such failure shall not be a violation of this rule.

This letter is to notify you that visible emission test for each point source shall be submitted to the DPC West Central office in Winter Haven, by a certified observer no later than July 1, 1975.

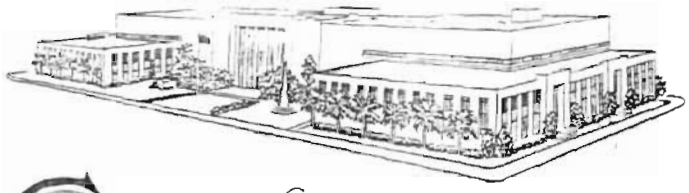
If you have conducted a visible emission test within the last 6 months, a test need not be performed.

If you have any questions, please contact this office.

Sincerely,

J. H. Kerns, P.E.
Regional Engineer
West Central Region

JHK/JLT/pm



COUNTY of HILLSBOROUGH
Tampa, Florida 33601

ROGER P. STEWART
DIRECTOR

STOVALL PROFESSIONAL BLDG
305 N. MORGAN ST.
6th FLOOR
TAMPA, FLORIDA 33602

TELEPHONE (813) 223-1311
EXT. 643

CERTIFIED MAIL

NOTICE TO CORRECT VIOLATION

May 22, 1975

Mr. H. L. Culbreath, President
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Sir:

1. Observations by members of our staff of your Hooker's Point electric generating facility between 3:15 P.M. and 3:26 P.M. on May 9, 1975, reveals you to be in violation of Section 18 of the Hillsborough County Environmental Protection Act and Chapter 1-3.03 VI, D, 2b of the Rules of the Hillsborough County Environmental Protection Commission, by allowing visible emissions of 100 percent opacity for a period of ten (10) minutes from Hooker's Point Unit NO. 2.

2. The letter directed to Mr. Caramella of our office by Mr. Hudson of your company on May 16, 1975 is accepted as a reasonable assurance such an incident will not recur.

3. Be advised that under the provisions of Section 9 of the Hillsborough County Environmental Protection Act, you have the right to appeal the above action by filing a written notice of such appeal with the Commission within twenty (20) days.

Sincerely,

Roger P. Stewart
Director
Hillsborough County Environmental
Protection Commission

RPS/fd

cc: Commission Members
Resident County Attorney
Peter Baljet
W. E. Linne
Mayor William Poe

File

D. P. C.
FEB 21 1975
WEST CENTRAL REGION
WINTER HAVEN

February 20, 1975

Mr. Alex Kaiser
Director, Power Plant Engineering
and Environmental Planning
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

229-3809
876-4111

Dear Mr. Kaiser:

Please be advised of the following deficiencies in Department of Pollution Control Permits at TECO generating units.

Big Bend

AC-523 expired 9/15/74 Unit # 1 precipitator upgrade
AC-29-2209 expired 6/27/74 Gas Turbine Peaking Unit #1
AC-29-2210 expired 6/27/74 Gas Turbine Peaking Un it # 2

Hooker's Point

AO-29-2093 expired 6/30/74 Units # 1-6

Gannon

No construction permit for Unit # 4 upgrade

If you have any questions concerning the necessary procedure for obtaining permits please contact this office.

Sincerely,

Ron Elliott
Environmental Specialist
Hillsborough County Environmental
Protection Commission

RE/fd

cc: Otis Smith, DPC-Winter Haven

THORNTON LABORATORIES, INC.
ANALYTICAL AND CONSULTING CHEMISTS
1145 EAST CASS STREET
TAMPA, FLORIDA 33601

CHARLES C. THORNTON, PRESIDENT
K. KHAJEH-NOORI, VICE-PRES.

TELEPHONE 229-2641
AREA CODE 813
P. O. BOX 2880

November 21, 1974

Laboratory Mark 455082 and 456978 (Additional Work)

Sample of Fuel Oil

Date Received Sept. 12, and Nov. 5, 1974

For Tampa Electric Company Attn: Jim Hudson
P. O. Box 111
Marks: Tampa, Florida

P.O. #03652 Marks shown below

CERTIFICATE OF ANALYSIS

MARKS	CONRADSON CARBON ASH
# 751	0.01%
# 753	0.01%

We were unable to locate the following samples:

MARK	RECEIVED	THORNTON LAB. NO.
#749 Armonia	8/6/74	#453765
#750 Armonia	8/6/74	#454021
S/S WILLAMETTE, Belcher Oil Co.	8/8/74	#454188
#752 OCEAN BARGE # 96	9/27/74	#455841

lcc: Invoice Auditing Dept.
Tampa Electric Co.

THORNTON LABORATORIES, INC.

Kamran Noori

DJR
WLH

THORNTON LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1145 EAST CASS STREET

TAMPA, FLORIDA 33601

CHARLES C. THORNTON, PRESIDENT
K. KHAJEH-NOORI, VICE-PRES.

TELEPHONE 229-2641
AREA CODE 813
P. O. BOX 2880

November 5, 1974

Laboratory Mark	456978	
Sample of	Fuel Oil	
Date Received	October 21, 1974	
For	Tampa Electric Company	P. O. #96473
Marks:	P. O. Box 111 Tampa, Florida	

Ship: Armonia Cargo #753

CERTIFICATE OF ANALYSIS

Flash Point, Cleveland Open Cup	304°F
Fire Point, Cleveland Open Cup	372°F
Viscosity, Saybolt Furol @ 122°F	54.3 sec.
Sediment by extraction	0.004%
Water by distillation	0.30%
Sulfur	1.02%
A.P.I. Gravity @ 60°F	18.2
Weight per gallon, lbs.	7.872
B.T.U./lb	18,566
B.T.U. /gallon	146,152
B.T.U. /42 gallon barrel	6,138,384
Specific Gravity @ 60°F/60	0.9452
Vanadium	25 ppm
Sodium (Na)	13 ppm

THORNTON LABORATORIES, INC.

Kamran Noori

lcc: Tampa Electric Company
Invoice Auditing Dept.

9/20/73 RBT

TECO
Hooker's Point

Boilers #1-6 A029-2093

Emissions	Part	SO_2	
#1	94	5080	common stack
#2	104	5320	common stack
#3	195	10460	common stack
#4	203	10880	common stack
#5	310	15700	
#6	470	25300	
	1376	72740	

allowable	Part	SO_2
#1	227	1816
#2	248	1984
#3	469	3752
#4	486	3888
#5	703	5624
#6	1132	9056
	3265	26120

6 boilers all on one permit

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

LOCAL TRAVEL

TRAVELER: ______________________________

Period covered by Report: ______________________________

*Program code

LOCALITIES VISITED	DATE	PURPOSE OF VISIT	P.C.*	AUTHORIZED OR REQUESTED BY

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT
SECTION I - GENERAL INFORMATION

FORM APPROVED
OMB NUMBER 158-R75

For Official Use Only:

Date Sent: _____

Date Returned: _____

UTM Grid Coordinates: _____

SIC No.: _____

Source ID: _____

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

Plant, institution, or establishment address: P. O. Box 111 (Street or Box Number) Tampa (City) Florida (State) 33601 (Zip)

Person to contact regarding this report: Jeff Rankin Title: Engineer, Environmental Plan Telephone: (813) 876-4111

Mailing address: P. O. Box 111 (Street or Box Number) Tampa (City) Florida (State) 33601 (Zip)

Approximate number of employees at plant, institution, or establishment location: ☒ Less than 100 ☐ 100 or more.

Elevation of plant, institution, or establishment in relationship to mean sea level: 7.0 feet above mean sea level, _____ feet below mean sea level.

Information is representative of calendar year: 1973

Land area at plant location: 24 acres. Enclose a sketch of layout if there is more than one building. (See Attachment "A")

Plant location: (give nearest cross streets, describe by landmarks or enclose a map, engineering drawing, or sketch) See Attachment B

☐ Air pollutants of the type indicated in the instructions for the completion of this report, i.e., _____ are not emitted at this plant, institution or establishment. Therefore, no other Sections of the report need be completed.

_____ (Signed) _____ (Title)

Please return all sections of this report to: _____

Additional forms may be obtained from the above address.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION II - FUEL COMBUSTION FOR GENERATION OF HEAT, STEAM, AND POWER

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

Normal operating schedule for fuel use: 24 Hours per day 7 Days per week -- Weeks per year -- Hours per year.

Dates of annually occurring shutdowns of operations: No specific annual dates. Additional operating information enclosed [X] (See Attachme

Source[a,e] Code	Number of Combustion Sources[b,e] (Boilers)	Size of Unit (Input)[c,e] 10^6BTU/hr.	Type of Unit[d,e]	Installation Date[e]	Percent Excess Air Used In Combustion (Design)[e]	Power Output Megawatts[e,f]
Hookers Pt. 1	1	298	Front Fired	1948	20	21
Hookers Pt. 2	1	298	Front Fired	1948	20	21
Hookers Pt. 3	1	411	Front Fired	1950	20	31
Hookers Pt. 4	1	411	Front Fired	1950	20	31
Hookers Pt. 5	1	610	Front Fired	1953	13	45
Hookers Pt. 6	1	778	Tangential Fired	1955	15	76

a. List a separate code number to represent each source (e.g., II-a, II-b, II-c, etc.), then enter the same code number and the required data on the continuation of this Section on Page 3, and in Sections V and VI.

b. Multiple sources may be grouped if units are similar in size and type, burn the same fuel, or are vented to the same stack.

c. Nameplate data are sufficient (give rated or maximum capacity, whichever is greater).

d. Hand-fired, underfeed, overfeed, traveling-grate or spreader stoker; cyclone furnace; pulverized, wet or dry bottom with or without fly ash reinjection; rotary or gun type oil burner; etc.

e. List separately future equipment and expected date of installation.

f. Power generation only.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION II - FUEL COMBUSTION FOR GENERATION OF HEAT, STEAM, AND POWER (continued)

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

Source Code[a]	Type of Fuel[b]	Annual Consumption[c]					Hourly Consumption[d]		Percent Used for Space Heat	Heat Content BTU/Quan.[e]	Percent Sulfur[e,f] See Note	Percent Ash (Solid Fuel Only)[e,f]	Delivered Cost of Fuel $/Quantity	Future Use[g]
		Quantity[d] X10^{-3}	Percent Distribution by Season				Maximum	Average						
			Spring March/ May	Summer June/ Aug.	Fall Sept./ Nov.	Winter Dec./ Febr.								
HP 1	#6oil	6,410.5	23.5	27.9	24.3	24.3	1810	786.0	0	18,503	1.88	--	3.48	3.6
HP 2	#6oil	6,010.5	26.4	28.7	24.4	20.6	1810	743.0	0	18,503	1.88	--	3.48	3.6
HP 3	#6oil	12,399.3	27.4	23.8	24.6	24.2	2495	1551	0	18,503	1.88	--	3.48	3.6
HP 4	#6oil	12,664.3	25.7	26.7	20.5	27.1	2495	1583	0	18,503	1.88	--	3.48	3.6
HP 5	#6oil	20,643.3	27.4	28.4	20.1	24.1	3620	2620	0	18,503	1.88	--	3.48	3.6
HP 6	#6oil	29,729.4	25.6	25.2	22.3	26.9	5292	3837	0	18,503	1.88	--	3.48	3.6

a. List code numbers corresponding to each source referred to on page 2, (e.g., II-a, II-b, II-c, etc.), then enter required data on this page, and for the same code number sources in Sections V and VI.
b. Coke, bituminous coal, anthracite coal, lignite; No. 1, 2, 4, 5 and 6 fuel oil; natural gas; LPG; refinery or coke oven gas; residual coke; wood; bark; sludge; etc. (Note: Indicate if two or more fuels are burned in the same boiler and provide all data pertinent to each fuel type.)
c. Fuel data are to be reported on an "as burned" basis.
d. Solid fuel, tons; liquid fuel, gallons; gaseous fuel, 1000 cubic feet.
e. If unknown, please give name and address of fuel supplier.
f. Sulfur and ash content for each fuel should be a weighted average.
g. Estimated percent increase or decrease in fuel usage (by fuel type) per year for the five years after the calendar year for which this report is completed. If increase is due to new equipment, please list this equipment separately on page 2 and the expected fuel use on this page.

NOTE: The maximum percent sulfur we receive or anticipate receiving is approximately 3.0% sulfur on a per cargo basis with the annual average maximum expected to be approximately 2.5% sulfur.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION III - COMBUSTIBLE SOLID AND LIQUID WASTES DISPOSAL

NOT APPLICABLE

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

Combustible solid and liquid wastes disposed of ☐ on site, ☐ off site, ☐ both on and off site. If off site, location of disposal site and/or name of hauler: _____

_____ (If disposal of solid and liquid wastes is partly or wholly on site, complete remainder of this page and Sections IV, V and VI; otherwise, skip to Section IV.)

Normal on-site combustion operating schedule: _____ Hours per day _____ Days per week _____ Weeks per year _____ Hours per year.

Seasonal and/or peak operation period: (Specify) _____

Dates of annually occurring shutdowns of operations: _____. Additional operating information enclosed ☐.

Source Code[a]	Waste Material			Method of Disposal[d]	Installation Date	Hourly Burning Rate, lbs.		Auxiliary Fuel Use[e]	Percent Excess Air Used in Combustion (Design)	Future Disposal[f]
	Type[b]	Amount Per Year[c]	Percent Combustible			Average	Maximum			
				NOT APPLICABLE						

a. List a separate code number to represent each source (e.g., III-a, III-b, III-c, etc.), then enter required data on this page and for the same code number sources in Section V and VI.
b. Rubbish, garbage, mixed garbage and rubbish, waste paper, wood chips or sawdust, etc.
c. Tons, pounds, or gallons/year.
d. Open burning dump; incinerator, single chamber; etc. (See instructions for examples and use appropriate identification numbers; other non-listed methods, specify.)
e. Indicate whether auxiliary fuel is used in incinerators and pit burning, and the amount.
f. Estimated increase or decrease in combustible solid and liquid wastes disposal rate for the five years after the calendar year for which this report is completed. If increase is due to new equipment, please list this equipment separately.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION IV - PROCESS/OPERATIONS EMISSIONS

NOT APPLICABLE

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

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 information enclosed ☐.

Source Code[a]	Processes or Operations Releasing Pollutants to the Atmosphere[b,c,d]	Date Installation Went on Line	Raw Materials[e] Used for Processes or Operations				Products[g] of Processes or Operations				Intermittent Operation Only: Average Hours/week[h]	Future Increase or Decrease in Process Rate
			Type	Quantity			Type	Annual Average[f]	Quantity			
				Annual Average[f]	Hourly Process Rate, lbs.				Hourly Process Rate, lbs.			
					Design	Maximum			Design	Maximum		
				NOT APPLICABLE								

a. 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 Sections V and VI.
b. Multiple sources may be grouped if similar in size and type.
c. Sulfuric acid-contact; aluminum smelting-crucible furnace; cement manufacturing-dry process; etc. (See instruction for examples and use appropriate identification numbers; other non-listed processes and operations, specify.)
d. The pollutants to be covered in this report are listed in the accompanying instructions.
e. Sulfur burned; pig, foundry returns, or scrap aluminum melted; limestone, cement rock, clay, iron ore used; etc.
f. Pounds, tons, gallons, barrels, etc.
g. Sulfuric acid produced; aluminum ingots produced; cement produced; etc.
h. For intermittent processes, indicate average number of hours per week of operation so that estimates of yearly emissions may be obtained.
j. Estimated percent increase or decrease in process rate on a total plant basis for the five years after the calendar year for which this report is completed. If increase is due to new equipment, please list this equipment separately.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION V - AIR CLEANING EQUIPMENT

NOT APPLICABLE

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

Source Code[a]	Type of Air Cleaning Equipment[b,c]	Installation Date[c]	Pollutant Removed[c,d]	Efficiency[e]		Inlet Gas Temperature, °F	Inlet Gas Flow Rate,[f] CFM	Exit Gas Pressure, PSI
				Design Percent	Operating Percent			
HP 1	None							
HP 2	None							
HP 3	None							
HP 4	None							
HP 5	None		NOT APPLICABLE					
HP 6	None							

a. List code numbers corresponding to each emissions source reported in Sections II, III, and IV.

b. Wet scrubber, electrostatic precipitator, fabric filter, etc. (See instructions for examples and use appropriate identification numbers; other non-listed type, specify.)

c. Please list future equipment separately.

d. The pollutants to be covered in this survey are specified in the accompanying instructions.

e. Give efficiency in terms of pollutant removed.

f. At actual flow conditions.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

Date Report Submitted: March 1, 1974

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION VI - STACK AND POLLUTANT EMISSIONS DATA

Plant, institution, or establishment name: Tampa Electric Company (Hookers Point Station)

STACK DATA							ESTIMATE OF POLLUTANT EMISSIONS[e]			
Source Code[a]	Height Above Grade ft.	Inside Diameter at Top, ft.	Exit Gas Velocity,[b] ft./sec.	Exit Gas Temperature,[b] °F	Exit Gas Flow Rate, CFM[c]		Pollutant[d]	Quantity		
					Average	Maximum		Tons Per Year	Lbs. Per Hour	
									Average	Maximum
HP 1	150	12.0	9.8	260	66,444	188,600	Particulate / SO_2	49.7 / 1880	11.3 / 430	29.0 / 1090
HP 2	Common stack with Hookers Point 1									
HP 3	150	13.0	19.7	255	157,206	255,000	Particulate / SO_2	100.3 / 3790	22.9 / 860	39.9 / 1510
HP 4	Common stack with Hookers Point 3									
HP 5	173	12.0	18.0	285	122,040	167,800	Particulate / SO_2	82.6 / 3120	21.0 / 790	29.0 / 1090
HP 6	173	12.75	23.4	325	179,150	245,500	Particulate / SO_2	118.9 / 4490	30.7 / 1160	42.3 / 1600

a. List code numbers corresponding to each emissions source reported in Sections II, III, and IV.

b. Values should be representative of average flow conditions for hours of operation.

c. At actual flow conditions.

d. The pollutants to be covered in this survey are specified in the accompanying instructions.

e. Give stack test data if available (indicate stack sampling method used), otherwise, specify basis used. If unknown, please do not complete these columns.

NOTE: Please read reverse side of this page. Use additional sheets if necessary. Retain last copy.

November 22, 1974

Mr. Bennie J. Caramella
Environmental Engineer
Hillsborough County Environmental
Protection Commission
P. O. Box 1110
Tampa, Florida 33601

File
J.L.T
Hookers Point St.

SUBJECT: Stack Test Results
Submitted on 10/10/74
for Hookers Point Station

Dear Sir:

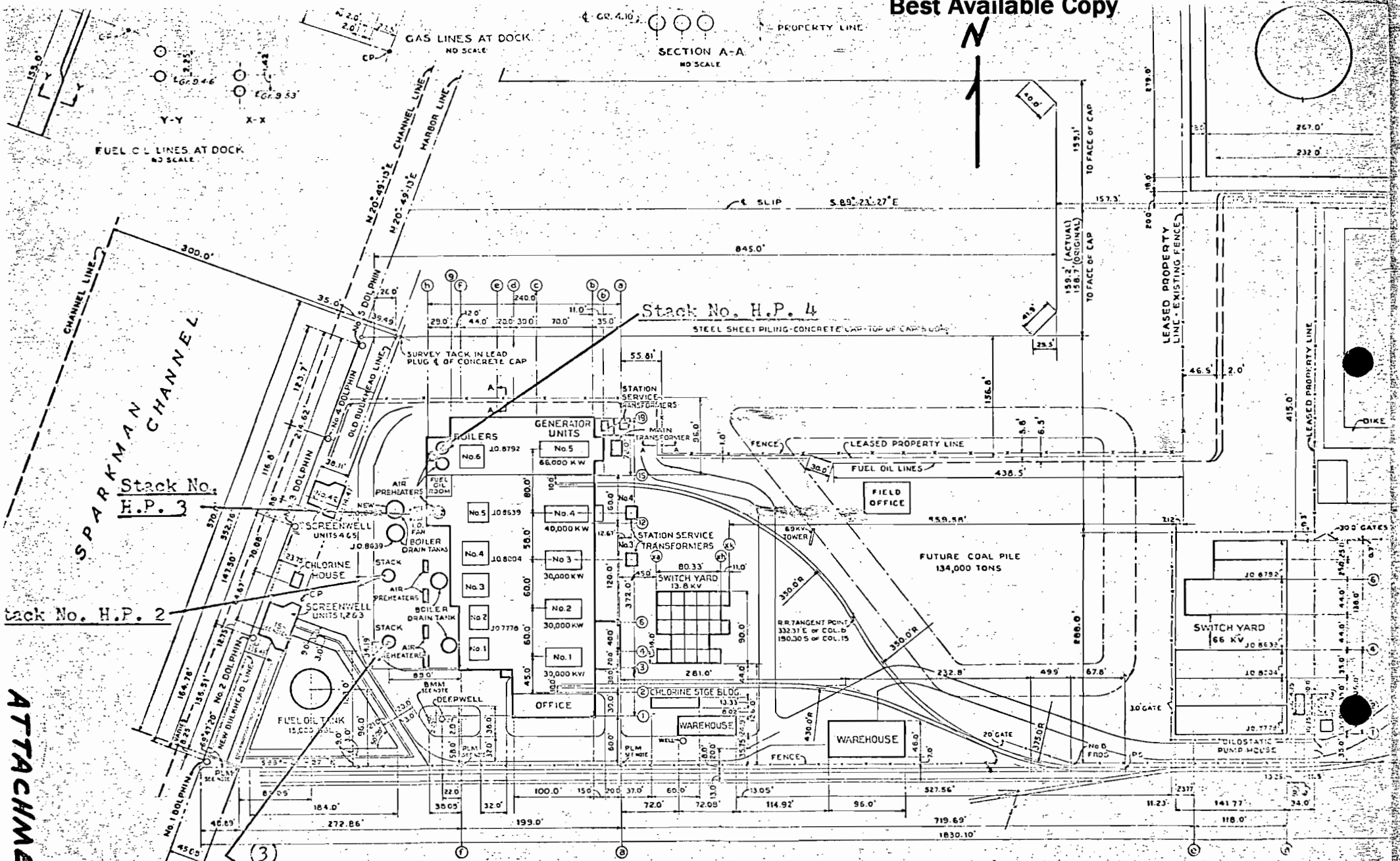
In reply to your letter of November 5, 1974, requesting substantiating data that Hookers Point Station has begun burning cleaner, lower sulfur fuel oil, we are enclosing a copy of the most recent fuel oil analysis which is typical of the oil which we are presently burning at Hookers Point Station. Comparison of this analysis with the enclosed analysis of oil which we were burning in Unit No. 6 at the time the particulate tests were performed on June 25, 1974, show that ash content of oil has decreased substantially from .06% to .01%, obviously greatly reducing the particulate emissions from this unit.

From this information, we believe that Hookers Point Station is in compliance with the particulate emission requirements.

Yours very truly,

Alex Kaiser, Director of
Power Plant Engineering &
Environmental Planning

Enclosure
JLH:cf
cc: Mr. W. E. Linne
Regional Administrator
Florida Department of Pollution Control



NOTES

BMM - BENCH MARK MONUMENT, ELEV. 7.00' BRASS PLATE ON TOP CONCRETE PILE.
PLM - PROPERTY LINE MONUMENT, INTERSECTION WITH SOUTH PROPERTY LINE.
IS - INTERSECTION OF TAMPA ELEC. CO. BASE LINE AND ℄ SCREEN WELL UNIT NO. 1.
FOR PROPERTY LINES BASED ON T.E. CO. SURVEY PRINTS NOS. F-N 63 AND M-11122 AND IN PART ON AGREEMENT WITH TAMPA SHIPBUILDING CO. DATED 10-28-41, SEE DWGS VEZ-4185 AND VEZ-4186.
CP - TACK IN LEAD PLUG ON T.E.CO. LINE 116.22' SOUTH OF ℄ SCREEN WELL UNIT NO. 4.

ALL BEARINGS ARE BASED ON THE STANDARD PLANE RECTANGULAR COORDINATE SYSTEM FOR THE WEST ZONE OF FLORIDA. THE ORIGINAL SURVEY BEARINGS WERE BASED ON A LOCAL GRID SYSTEM.

PLOT PLAN

ATTACHMENT "A"

ATTACHMENT C

Hookers Point Station has six boilers. The steam output from the first five boilers serves a common header system which supplies steam to four turbine generating units. The sixth boiler is tied directly to the fifth turbine.

Hookers Point Station has four stacks. Boiler Nos. 1 and 2 exhaust into Stack No. 1, Boiler Nos. 3 and 4 exhaust into Stack No. 2, Boiler No. 5 exhausts into Stack No. 3 and Boiler No. 6 exhausts into Stack No. 4.

H.21

SO_2 Emissions

Stack #1 (Bo Nos 1 of 2)

@ $(6,410,500 + 6,010,500)\frac{gal}{yr} \times 8.038\frac{\#oil}{gal} \times .0188\frac{\#S}{\#oil} \times 2\frac{\#SO_2}{\#S} \times \frac{1ton}{2000\#} = 1880\ T/y$

ⓑ $\left(\frac{6410 \text{ and } 6,010,500}{7760}\right)\frac{gal}{hr} \times 8.038\frac{\#oil}{gal} \times 0.0188\frac{\#S}{\#oil} \times 2\frac{\#SO_2}{\#S} = 430\ \#SO_2/hr$ avg

ⓒ $(1810 + 1810)\frac{gal}{hr} \times 8.038 \times 0.0188 \times 2 = 1090\ \#SO_2/hr$ max

Stack #2 (Bo Nos 3 & 4)

@ $\left(12,399,300 + 12,664,300\right) \times 8.038 \times 0.0188 \times 2 \times \frac{1}{2000} = 3790\ T/y$

ⓑ $\left(\frac{12,399,300 + 12,664,300}{8760}\right) \times 8.038 \times 0.0188 \times 2 = 860\ \#SO_2/hr$

ⓒ $(2415 + 2415) \times 8.038 \times 0.0188 \times 2 = 1,510\ \#SO_2/hr$

Stack #3 (#5 Bo)

@ $20,643,300 \times 8.038 \times 0.0188 \times 2 \times \frac{1}{2000} = 3120\ T/y$ SO_2

ⓑ $2620 \times 8.038 \times 0.0188 \times 2 = 790\ \#SO_2/hr$

ⓒ $3620 \times 8.038 \times 0.0188 \times 2 = 1090\ \#SO_2/hr$

Stack #4 (#6 Bo)

@ $29,729,100 \times 8.038 \times 0.0188 \times 2 \times \frac{1}{2000} = 4490\ T/y$

ⓑ $3857 \times 8.038 \times 0.0188 \times 2 = 1160\ \#SO_2/hr$

ⓒ $5792 \times 8.038 \times 0.0188 \times 2 = 1,600\ \#SO_2/hr$

H.P.

Part Emission

Emission from "Compilation of Air Pollutant Emission Factors" U.S. EPA Feb 1972 p.1-7 (8 # part/10^3 gal)

Stack #1 (Bo Nos 1 & 2)

@ $(6,410,500 + 6,010,500)\frac{gal}{yr} \times \frac{8\ \#}{10^3\ gal} \times \frac{1\ TON}{2000\ \#} = 49.7 \frac{TON\ part.}{yr}$

ⓑ $\left(\frac{6,410,500 + 6,010,500}{8760}\right)\frac{gal}{hr} \times 8\frac{\#\ part.}{10^3\ gal} = 11.3\ \#\ part/hr$ avg

ⓒ $(1810 + 1810) \times 8/10^3 = 29.0\ \#\ part/hr$ max

Stack #2 (Bo Nos 3 & 4)

@ $(12,399,300 + 12,664,300) \times \frac{8}{10^3} \times \frac{1}{2000} = 100.5$ TPY

ⓑ $\left(\frac{12,399,300 + 12,664,300}{8760}\right) \times \frac{8}{10^3} = 22.9\ \#/hr$

ⓒ $(2495 + 2495) \times \frac{8}{10^3} = 39.9\ \#/hr$

Stack #3 Bo #5

@ $20,443,300 \times \frac{8}{10^3} \times \frac{1}{2000} = 82.6$ TPY

ⓑ $2620\frac{gal}{hr} \times \frac{8}{10^3} = 21.0\ \#/hr$

ⓒ $3620 \times \frac{8}{10^3} = 29.0\ \#/hr$

Stack #4 (Bo #6)

@ $29,729,400 \times \frac{8}{10^3} \times \frac{1}{2000} = 118.9$ TPY

ⓑ $3937 \times \frac{8}{10^3} = 30.7\ \#/hr$

ⓒ $5292 \times \frac{8}{10^3} = 42.3\ \#/hr$

FLOW DIAGRAM

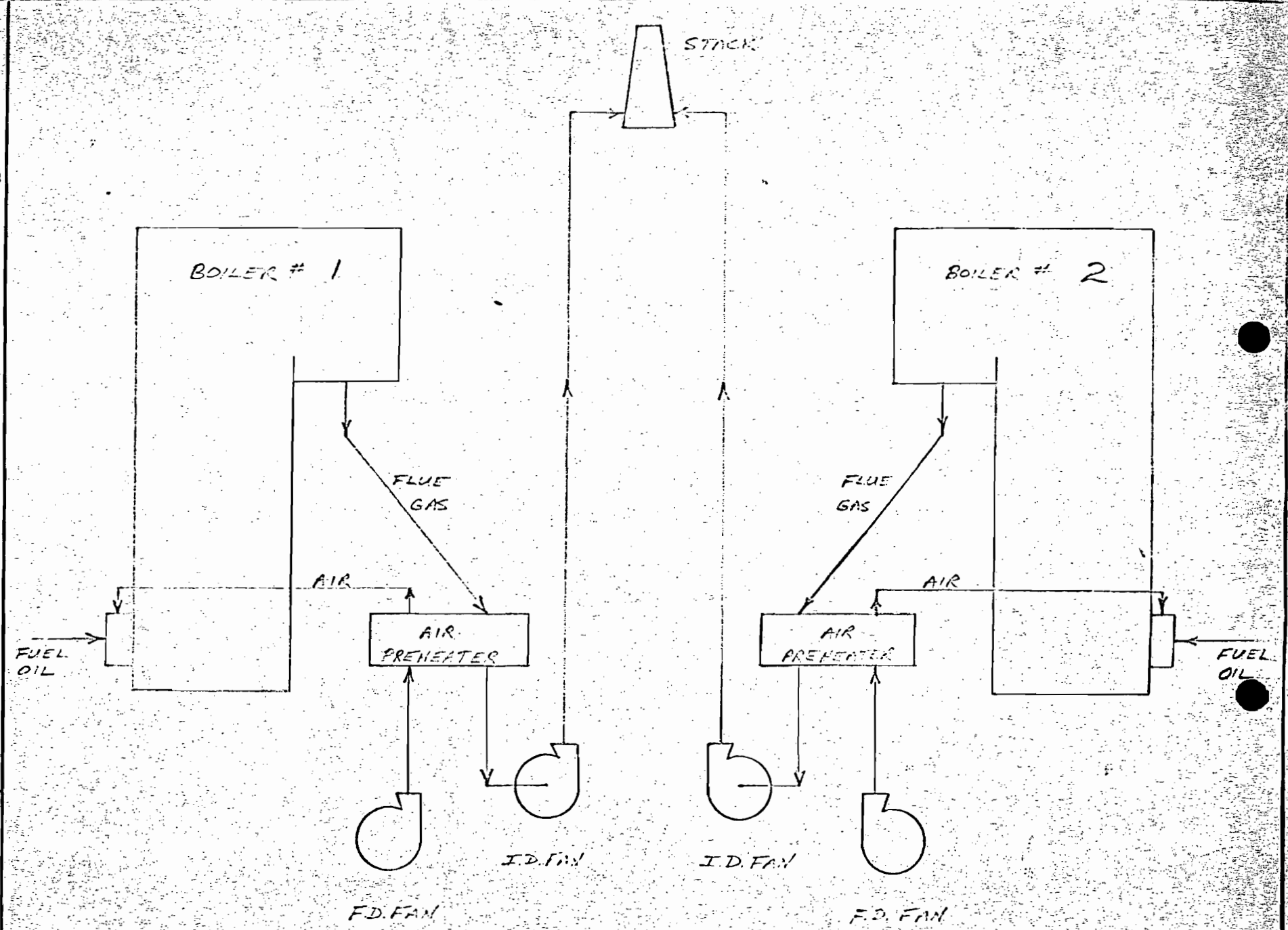
HOOKERS POINT ROTORS #1 & #2

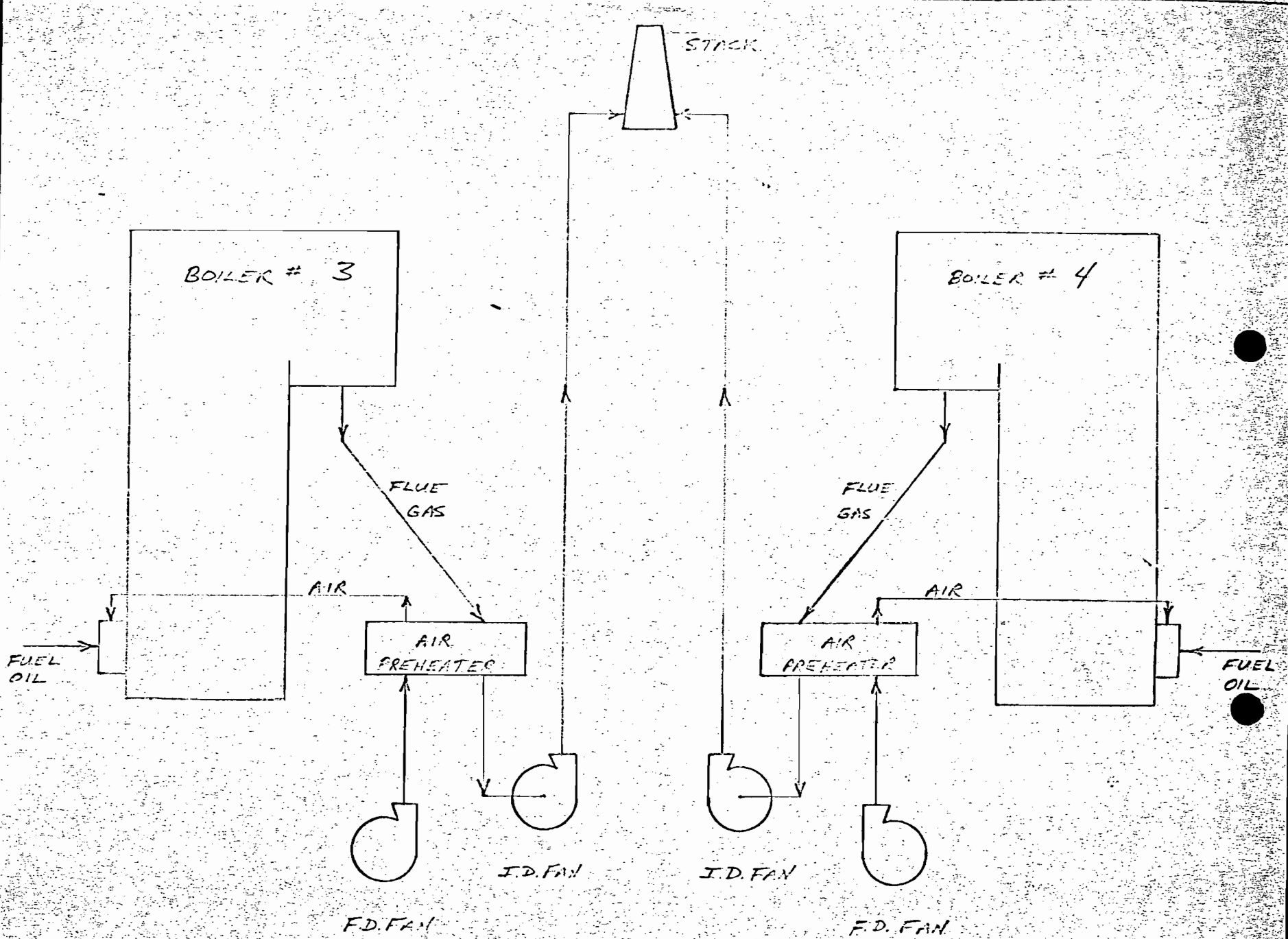
TAMPA ELECTRIC COMPANY

DATE:

APPR:

DWG





TAMPA ELECTRIC COMPANY

FLOW DIAGRAM

HOOKERS POINT BOILERS # 3 & 4

DATE:

APPR:

DVP

FLOW DIAGRAM

HOOKERS POINT BOILER # 5

TAMPA ELECTRIC COMPANY

DATE: 12-26-74

APPR:

DJR

FLOW DIAGRAM

HOOKERS POINT BOILER # 6

TAMPA ELECTRIC COMPANY

DWR

DATE: 2-26-71

APPR:

TECO Z-9

TAMPA ELECTRIC COMPA

January 11, 1974

D.P.C.
JAN 21 1974
WEST CENTRAL REGION

Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
906 Jackson Street
Tampa, Florida 33602

RE: Compliance Schedule, Tampa Electric Company
Hookers Point Station, SO_2 Control
Permit No. A029-2093

File

Dear Mr. Stewart:

The fourth increment of progress (construction completion) for this project was scheduled for December 30, 1973. Due to system load demand and a design problem on a small but significant part of the system, we have not been able to complete the work at this time.

Through December, 1973 expenditures on this project totaled $2,056,976 out of a total projected cost of approximately $2,400,000.

We anticipate that work on this project should be completed by June 1, 1974, which would allow Tampa Electric Company to meet the final compliance date of June 30, 1974 if we are allowed to burn the low sulfur oil at that time.

We, therefore, respectfully request that you extend our fourth increment of progress date to June 1, 1974. If you have any questions, please don't hesitate to contact us.

Yours very truly,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: Mr. W. E. Linne
Regional Administrator

Sequence number assigned by main office — Section 1
region code 05 Mo Yr 0573 number 3

Source name 1 Tampa Electric Co.

street address Hookers Point city Tampa

ZIP 33601 county code 29

Section 2

(col 1-10 duplicate) Owner or Agent name 2 Tampa Electric Company

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

Section 3

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

Industry Type (SIC code)

Location UTM or East 0 7357600 North 3090900

Latitude deg min sec Longitude deg min sec

Effluent description 6 boilers at Hookers Point Plant

continued effluent description (if needed) — Section 4

(col 1-10 duplicate) 4

Section 5

Liquid effluent disposal and analysis

(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
(drainage ditch = 1 , river = 2 , etc.)

station number assigned to influent

effluent

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

5 day BOD load lb/day

Section 6

Liquid effluent additional remarks

(col 1-10 duplicate) 6

Section

AIR POLLUTION DISPOSAL AND ANALYSIS

(col 1-10 duplicate) Number of discharges this application 7 6 (11-12)

Number of discharges, this site (15-17) number currently not permitted (19-20)

Average total flow rate SCFM (21-30)

Total particulate, lb/day (31-40) sulfur oxides, lb/day (41-50)

nitrogen oxides, lb/day (51-60) fluoride lb/day (61-70)

other pollutants, lb/day (81-90)

Section

SIGNIFICANT DATES AND PERMIT NUMBERS

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

permit issued modyyr 8052573 (11-17) Permit number A029-2093 (18-27)

CONSTRUCTION PERMITS AND TEMPORARY PERMITS

Project completion date (28-33) Permit expires modyyr 063074 (34-39)

OPERATING PERMITS

Temporary or old construction permit number (40-47)

Implementation schedule:

A. Estimated filing of application modyyr (50-55)

B. Estimated start of construction (56-61)

C. Estimated date for compliance (62-67)

Lee Kerner

June 6, 1972

Reg. Eng.
Asst. Reg. Eng.
Ch Chemist
Air Engineer
Water Eng.
Permit Eng.
Biologist
Poll. Spec.
Water Chem.
Air Chemist
Amb. Air
Plant Air
Secretaries

Mr. J. D. Hicks
Vice President-Operations
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Mr. Hicks:

In response to your letter dated May 31, 1972 in regard to construction permits to modify fuel burning devices, please be advised that the modifications to Hooker Point Station to burn low sulfur fuel oil and conversion of Gannon Units #1, #2, #3 and #4 from coal to low sulfur fuel oil do not need construction permits from this department. Please be advised also that this is based on the information you had submitted to indicate that such conversions and modifications will bring the units in question into compliance with our regulations before July 1, 1975.

Sincerely,

W. E. Linne, Acting Chief
Bureau of Permitting

WEL:sns

cc: Mr. C. G. Mauriello
Dr. J. P. Subramani
Mr. Lee Kerner w/attach.
Mr. Roger Stewart

Tampa Electric Company
TECO
P. O. BOX 111, TAMPA, FLORIDA 33601

May 31, 1972

Dr. J. P. Subramoni
Florida Department of Pollution Control
Suite 300
Tallahassee Bank Building
Tallahassee, Florida 32301

Dear Sir:

As outlined in our letter to Mr. L. G. Kerner dated April 17, 1972, Tampa Electric Company proposes to modify Hookers Point Station to burn low sulfur oil as fuel and to convert Gannon Station Unit Nos. 1, 2, 3 and 4 from coal fuel to low sulfur oil fuel.

These changes are designed to reduce SO_2 emissions from these units and bring them into compliance with the emission regulations adopted on January 11, 1972, by the Board of the Florida Department of Pollution Control.

It is our understanding that a construction permit application is not required by your department for the modification required to fire the low sulfur oil. However, the county building inspector has said that he needs to see a permit or a letter indicating that a permit is not required before he can issue the county permits that Tampa Electric Company is required to have. To satisfy this local requirement, we would appreciate a letter indicating that a Florida Department of Pollution Control construction permit is not required for the modifications at Hookers Point Station or at Gannon Station Unit Nos. 1-4.

Yours very truly,

J. D. Hicks
Vice President-Operations