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:

Florida Power Corp.
P.O. Box 14042
St. Petersburg, Fla. 33733

PERMIT/CERTIFICATION
NO. AO52-20186

COUNTY: Pinellas

PROJECT: Higgins #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 a 42 MW Higgins #1 steam generator #6 oil fired.

Located at Oldsmar, Fla.

UTM: 17 East 336.54 North 3098.25

Replaces AO52-2040 NEDS NO: 0012 Point ID: 01

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:

1. Test for plume density (visible emissions) at intervals of 12 months from the date of 6/15/79 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 emissions (note calculation basis).
   (C) Any changes in the information contained in the permit application.

4. An annual stack test shall be made for total suspended particulates, and fuel analysis for SO_2 from October 1978.

Expiration Date:

July 16, 1984

Issued this 6th day of August,

1979.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

for P. David Puchaty
District Manager

PERMIT REVIEW CHECKLIST
SOUTHWEST DISTRICT

County Pinellas Type of Permit Operate

Applicant EPC - Higgins
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.	RG	___	DW
2.	The calculations (if required) are correct and justified.	RG	___	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.	RG	___	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.	RG	___	DW
5.	The project location is correct and adequate for the purpose of relocating the project site.	RG	___	DW
6.	The expiration date is correct on the placard.	RG	___	DW
7.	The effluent limits are correct and justified.	RG	___	DW
8.	All provisos are correct and justified in the review comments, and are necessary to protect water or air quality.	RG	___	DW
9.	The placard is correctly signed by the local program head if applicable.	RG	___	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.	RG	___	NA

SIGNED: DATE:

Eng. IV Robert A. Garrett 8-1-79

PE II ___

PE III Don A. Williams 8-2-79

FOR AIR POLLUTION SOURCES

(An "X" indicates applicable conditions)

Pinellas Co.-AP
Fla. Power Corp. (Higgins Plant-Unit 1)
Particulate Emission

REVISED
DATE: 7/24/73

PERMIT NO. A052-2040

( ) 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 9/1/73 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 2/1/74 a copy of contract(s) for modification/control equipment and/or fuels necessary to comply with Chapter 17-2.

(C) On or before 5/10/74, 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 7/7/74. Submit no later than 7/1/75 confirmation of this condition.

(E) Submit on or before 7/1/75 proof of compliance. This must include any changes in the construction permit application as submitted, and a final engineering report and emission test (test results and/or calculations) to prove compliance.

* The applicable emission limitation for this facility is: 17-2.04 Section 6(e) 2.a 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.

*Revised to agree with company schedule approval by hearing officer.

4-72

OPERATION PERMIT CONDITIONS
FOR AIR POLLUTION SOURCES

(An "X" indicates applicable conditions)

DATE: REVISED 7/24/73

Pinellas Co.-AP
Fla. Power Corp. (Higgins Plant)
Sulfur Oxide Emissions

PERMIT NO. A052-2040, A052-2041, A052-2042

( ) 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 (2) (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 _____ 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 _____ a copy of contract(s) for modification/control equipment and/or fuels necessary to comply with Chapter 17-2.

(C) On or before _____, 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 2/15/74. Submit no later than 2/15/74 confirmation of this condition.

(E) Submit on or before 2/15/74 proof of compliance. This must include any changes in the construction permit application as submitted, and a final engineering report and oil analysis or stack test (test results and/or calculations) to prove compliance.

* The applicable emission limitation for this facility is: 17-2.04 Section 6(e)2c 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.

*Revised to agree with company schedule approved by hearing officer.

A-72

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: August 2, 1979

SUBJECT: Florida Power Corp. Higgins #1

The application requests an operation permit renewal for a 42 M.W. steam generator. This is an existing source and burns #6 fuel oil and/or natural gas. The sulfur content of the oil averages 2.3%.

The last stack test taken 10/5/78 showed an emission rate of .053 lb TSP/MMBTU and the allowable is .1 lb TSP/MMBTU, fuel analysis for SO_2 was 2.5 lb/MMBTU with an allowable of 2.75 lb/ MMBTU.

The results of the tests and analysis show Higgins #1 to be in compliance, therefore I recommend the renewal of this permit.

WHB/rkt

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

Source Type: [X] Air Pollution [ ] Incinerator

Application Type: [ ] Construction [X] Operation [ ] Modification [ ] Renewal of DER Permit No. A052-2040

Company Name: Florida Power Corporation County: Pinellas

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): Higgins Plant, Boiler #1, Gas & Oil Fired

Source Location: Street: P. O. Box J City: Oldsmar, Florida 33557

UTM: East 336540 North 3098250

Latitude: ___ ___ ° ___ ___ ' ___ ___ "N. Longitude: ___ ___ ° ___ ___ ' ___ ___ "W.

Appl. Name and Title:

Appl. Address: P.O. Box 14042, St. Petersburg, Florida 33733

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative of* Florida Power Corporation

I certify that the statements made in this application for a renewal of operation 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 provisions 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 nontransferable and I will promptly notify the Department upon sale or legal transfer of the permitted establishment.

G. C. Moore
Name of Person Signing (please Type or Print)

G C Moore Asst. Vice Pres., Power Production
Signature of the Owner or Authorized Representative and Title

Date: May 14, 1979 Telephone No.: (813) 866-4140

*Attach a letter of authorization.

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and 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: W. P. Stewart

Name: W. P. Stewart (Please Type)

Company Name: Florida Power Corporation

Florida Registration Number: 12594

(Affix Seal)

Mailing Address: Florida Power Corporation
P.O. Box 14042
St. Petersburg, FL 33733

Telephone No.: (813) 866-4159

Date: May 14, 1979

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.

NA

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

Start of Construction: _____ Completion of Construction: _____

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

NA

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

DER Permit No. A052-2040 issued 6/11/76, expires 6/11/79

E. Is the emission point considered to be a New* or Existing* source, as defined in Chapter 17-2.02(5) & (6), Florida Administrative Code?
____ New ___X___ Existing

F. 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

G. Normal Equipment Operating Time: hrs/day: 24 ; days/wk: _____ ; wks/yr: _____ ; if seasonal, describe: _____

*Note

New Source: any source which came into existence, began operation or construction, or received a permit for the latter on or after January 18, 1972.

*Existing Source: any source in existence, operating or under construction (or with a permit to construct) prior to January 18, 1972.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES

(other than incinerators)

A. Raw Materials and Chemicals Used in Your Process: NA

Description	Utilization Rate lbs./hr.	Relate to Flow Diagram

B. Process Rate: NA

1) Total Process Input Rate (lbs./hr.): _____

2) Product Weight (lbs/hr): _____

C. Airborne Contaminants Discharged:

Name of Contaminant	Actual Discharge*		Allowed Discharge Rate Per Ch. 17-2, F.A.C.**	Allowable Discharge*** (lbs./hr.)	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulate	27.74	56.60	.1 lbs/BTU	54.4 lbs/hr	Stack
SO_2	566.97	1536.76	2.75 lbs/BTU	1496 lbs/hr	Stack

D. Control Devices: NONE

Name and Type (Model and Serial No.)	Contaminant	Efficiency†	Range of Particles Size Collected (in microns)	Basis for Efficiency††

*Estimate only if this is an application to construct.

**Specify units in accordance with emission standards prescribed within Section 17-2.04, F.A.C. (e.g. Section 17-2.04(6)(e)1.a. specifies that new fossil fuel steam generators are allowed to emit particulate matter at a rate of 0.1 lbs. per million BTU heat input computed as a maximum 2-hour average.)

***Using above example for a source with 260 million BTU per hour heat input: $\frac{0.1 \text{ lbs}}{\text{MMBTU}} \times \frac{260 \text{ MMBTU}}{\text{hr.}} = 26 \text{ lbs./hr.}$

†See Supplemental Requirements, page 5, number 2.

††Indicate whether the efficiency value is based upon performance testing of the device or design data.

++ This unit burns 1% sulfur oil to comply with applicable opacity standard. Florida Power Corp. reserves the right to use a higher sulfur fuel oil if modifications are made which will cause Unit 1 to meet the opacity standard and other emission standards are also met.

E. Fuels:

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg./hr.	Max./hr.	
Natural Gas	.31	.53	544
#6 Fuel Oil	17009.14	29529.91	544

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

Fuel Analysis:

Percent Sulfur: .96 Percent Ash: .03

Density: 8.22 lb./gal.

Heat Capacity: 18422 BTU/lb. 151392 BTU/gal.

Other Fuel Contaminants: Sediment

Gas - 1022 BTU/CF

F. If applicable, indicate the percent of fuel used for space heating: NA Annual Average: _____ Maximum: _____

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

All liquid wastes and bottom ash are directed to a permitted on-site evaporation/percolation pond. Recirculating cooling water discharged back to Tampa Bay.

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

Stack Height: 173.66 ft. Stack Diameter: 12.5 ft.

Gas Flow Rate: 150849.03 ACFM Gas Exit Temperature: 300 °F

Water Vapor Content: 10.49 %

SECTION IV: INCINERATOR INFORMATION

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		Temp. (^{o}F)
			Type	BTU/hr.	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp.: _____ ^{o}F

Gas Flow Rate: _____ ACFM _____ DSCFM*

*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 Device: _____

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 Required For All Pollution Sources:

1. Total process input rate and product weight - show derivation.
2. Efficiency estimation of control device(s) - show derivation. Include pertinent test and/or design data.
3. 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.
4. An 8½" x 11" plot plan of facility showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
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. (Example: Copy of USGS topographic map.)
6. Description and sketch of storm water control measures taken both during and after construction.
7. An application fee of $20.00, unless exempted by Chapter 17-4.05(3), FAC, made payable to the Department of Environmental Regulation.
8. With construction permit application, include design details for control device(s). Example: for baghouse, include cloth to air ratio; for scrubber, include cross-sectional sketch; etc.
9. Certification by the P.E. with the operation permit application that the source was constructed as shown in the construction permit application.

Florida Power
CORPORATION

May 7, 1979

United States Environmental Protection Agency
Florida Department of Environmental Regulation

Gentlemen:

Subject: Letter of Authorization

Please be advised that Mr. G. C. Moore, Assistant Vice President, Power Production, is properly authorized to be the representative in matters relating to Applications for Permits to Operate Existing Air and Water Pollution Sources of Florida Power Corporation.

Sincerely,

B. L. Griffin
Senior Vice President

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
9721 EXECUTIVE CENTER DRIVE, NORTH, SUITE 200
~~P.O. BOX 30260~~
ST. PETERSBURG, FLORIDA ~~33733~~ 33702

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

June 11, 1976
Pinellas County AP
Florida Power - Higgins #1

Mr. W. P. Stewart
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Stewart:

Pursuant to your recent application, please find enclosed a permit (No. AO 52-2040) dated June 11, 1976 to ~~construct~~/operate the subject pollution source.

This permit will expire on June 11, 1979 , 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.

BBV/smw
cc: Central Files

Yours very truly,

B. B. Vest

Banks B. Vest, Jr.
District Manager
Southwest District

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

OPERATION PERMIT CONDITIONS
FOR AIR POLLUTION SOURCES

(an "X" indicates applicable conditions)

Permit No.: AO 52-2040 Date: 6/11/76

(x) 1. The permit holder must comply with Florida Statute 403 and the applicable Chapters of the Department of Environmental Regulation in addition to the conditions of this permit. (Florida Statute 403, subsection (1b) of section 403.161).

(x) 2. Test the emissions for the following pollutant(s) at intervals of (yearly) from the date of (April 12, 1976) 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
( ) Fluorides
(x) Plume Density
(x) Sulfur Oxides
( ) Nitrogen Oxides
( ) Hydrocarbons
( ) Total Reduced Sulfur

(x) 3. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit input rates or to operate at conditions which do not reflect actual operating conditions may invalidate the data. Florida Statutes 403.161 Section (1c)

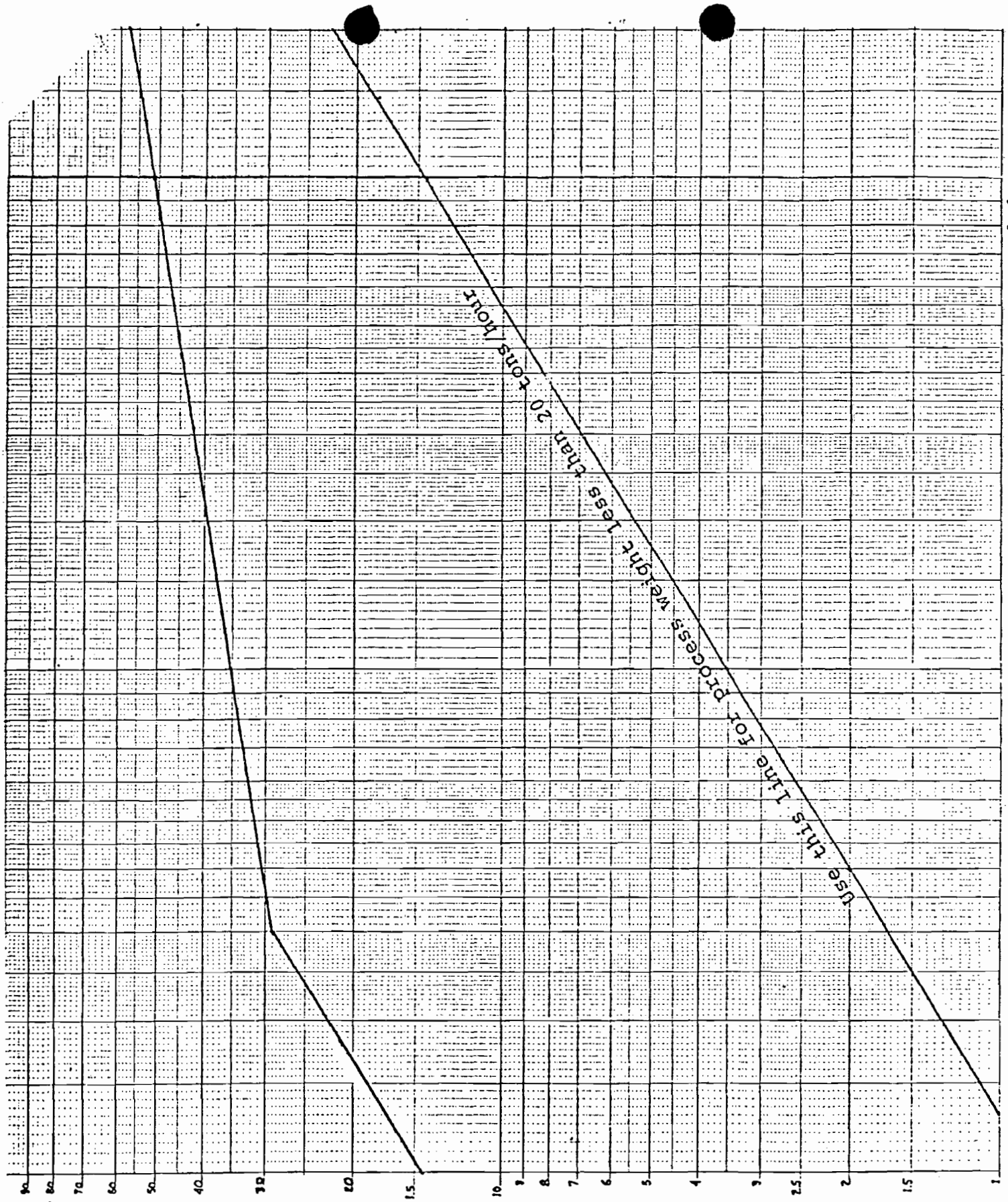
(x) 4. Submit for this source quarterly reports showing the type and monthly quantities of fuels used in the operation of this source. Also state the sulfur content of each fuel. Chapter 17-4.14 FAC.

(x) 5. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information: Chapter 17-4.14 FAC.

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

(x) 6. Report per Chapter 17-4.13 FAC any problems encountered in the operation of this source to the District Office that results in discharge of stack effluents in amounts higher than permitted herein. Cease operation forthwith unless permission has been obtained from the District Office of this agency to operate the source for an interim period. Chapter 17-4.13 FAC.

( ) 7. According to the Process Weight Table, the maximum allowable emission rate of particulates for a process rate of _____ tons/hour is _____ pounds/hour. At lesser process rates, the allowable emission rates can be determined from the graph.


use this line for process weight less than 20 tons/hour
POUNDS OF PARTICULATES
PROCESS WEIGHT TONS/HOUR

SERIAL Nº 06242

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

OPERATION PERMIT

FOR Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

PERMIT NO. AO 52-2040 DATE OF ISSUE June 11, 1976

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:
Mr. W. P. Stewart, Director, Power Production

FOR THE OPERATION OF THE FOLLOWING:
Higgins Plant, Boiler #1

LOCATED AT Shore Drive, Oldsmar, Pinellas County
UTM 336.5 East, 3098.2 North

IN ACCORDANCE WITH THE APPLICATION DATED June 27, 1975

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 June 11, 1979 OR UNLESS REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

J. E. Williams
DISTRICT ENGINEER

J. W. Landers Jr.
JOSEPH W. LANDERS, JR.
SECRETARY

DISTRICT MANAGER

DER Form PERM 11-3 (Mar. 76)

001201

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

SUITE 300, TALLAHASSEE BANK BUILDING

315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID M. LEVIN
CHAIRMAN

May 21, 1973
Pinellas County - AP
Fla. Power Co., (Higgins Plt.)

Mr. G. W. Marshall
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Marshall:

A052-2040
A052-2041
A052-2042

Pursuant to your application, please find enclosed a permit (No.) dated 5/18/73 to operate the subject pollution source.

This permit will expire on 7/1/75 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), Department 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,

L. G. Kerner, P.E.
Regional Engineer
West Central Region

LGK/pm/BG/pcd
cc: Bates Fountain

JOHN R. MIDDLEMAS
BOARD MEMBER

GEORGE RUPPEL
BOARD MEMBER

JAMES F. REDFORD, JR.

A. D. VINCENT

This Permit Expires on 7/1/75

STATE OF FLORIDA

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

OPERATION PERMIT

FOR Florida Power Corporation
P.O. Box J
Oldsmar, Florida 33557

PERMIT NO. AO 52-2040 DATE 5/18/73

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:
G. W. Marshall, Production Superintendent

FOR THE OPERATION OF THE FOLLOWING:
Higgins # 1 Plt., Electric Utility

LOCATED AT: Shore Drive, Oldsmar, Pinellas Co., Florida
UTM 17336540 E -- 3098250 N

IN ACCORDANCE WITH THE APPLICATION DATED March 3, 1971
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 7/1/75, whichever is earlier.

DAVID H. SCOTT, CHIEF
BUREAU OF PERMITTING

L. G. Kerner, P.E.
REGIONAL ENGINEER
WEST CENTRAL REGION

VINCENT D. PATTON
EXECUTIVE DIRECTOR

FORM 1-I

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

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

NOTICE OF PERMIT RE-ISSUANCE

CERTIFIED MAIL

In the Matter of an Application for permit by:

DER File No.: AO52-216382
County: Pinellas

Mr. W.J. Pardue, Manager
Environmental Programs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733
_____/

Enclosed is revised Permit Number AO52-216382 to operate the Higgins Unit No. 1 located in Oldsmar, issued pursuant to Section 403, Florida Statutes. This permit has been revised as a result the FPC comments submitted on March 17, 1993 and subsequent discussions between FPC and DER staff. Please replace the previously received version of permit number AO52-216382 with this revised version.

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, Florida 32399-2400, within 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 the 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 warrants reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this 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 rights 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 Street 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.

P 079 943 163

RECEIPT FOR CERTIFIED MAIL

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

MR W J PARDUE
MANAGER ENV PROGRAMS
FLORIDA POWER CORP
PO BOX 14042
ST PETERSBURG FL 33733

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 APR 26 1993	

PS Form 3800, June 1985

A052-216382, 383, 384, 412, 413

A052-216382, 383, 384, 412, 413

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

MR W J PARDUE
MANAGER ENV PROGRAMS
FLORIDA POWER CORP
PO BOX 14042
ST PETERSBURG FL 33733

4a. Article Number
P 079 943 163

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
APR 27 1993

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form **3811**, November 1990 ☆U.S. GPO: 1991—287-066 **DOMESTIC RETURN RECEIPT**

UNITED STATES POSTAL SERVICE

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D.E.R.

APR 2 8 1993

SOUTHWEST DISTRICT
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Print your name, address and ZIP Code here

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
3804 COCONUT PALM
TAMPA, FLORIDA 33619

Air

Executed in Tampa, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

David R. Zell

David R. Zell
Air Permitting Engineer
3804 Coconut Palm Drive
Tampa Florida 33619-8318
Phone (813) 744-6100 Ext. 412

DRZ/
Attachment

cc: Gary Robbins, Pinellas Co. Dept. of Environmental Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT RE-ISSUANCE and all copies were mailed by certified mail before the close of business on APR 26 1993 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

APR 26 1993
Date

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

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

PERMITTEE:
Florida Power Corporation
Higgins Plant
P.O. Box 14042
St. Petersburg, FL 33733

PERMIT/CERTIFICATION:
Permit No: AO52-216382
County: Pinellas
Expiration Date: 09/16/97
Project: Steam Generator
Higgins Unit No. 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 Higgins Unit No. 1, a fossil fuel fired electric utility steam generator rated at 43 MW/hour. The unit is fired with No. 6 fuel oil, with a maximum sulfur content of 2.5% by weight, at a maximum heat input rate of 548 MMBtu/hour (87 BBL/hour, 3,654 gallons/hour). As an alternate fuel when available, the unit can also be fired on natural gas at a maximum rate of 0.5×10^6 ft^3/hour.

Location: Higgins Plant, Shore Drive, Oldsmar

UTM: 17-336.54 E 3098.25 N **NEDS No:** 0012 **Point ID No:** 01

Replaces Permit No.: AO52-137124
(Note: This permit also replaces the 1st version of AO52-216382 issued January 26, 1993)

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions. [Rule 17-4.160, F.A.C.].

2. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 17-200 through 17-299, or any other requirements under federal, state or local law. [Rule 17-210.300, F.A.C.].

Operational and Emission Limitations

3. This boiler is permitted for continuous operation (8,760 hours per year).
[As requested by applicant].

4. This boiler shall be fired with No. 6 fuel oil, with natural gas as an alternate fuel when available. The maximum heat input rate to this boiler shall not exceed 548 MMBtu/hr (3,654 gallons/hour when firing No. 6 fuel oil). If firing 100% natural gas, the maximum heat input rate shall not exceed 525 MMBtu/hr (0.5 MMCF/hour). [Previous permits and information supplied with application}.

5. Sulfur content of the No. 6 fuel oil fired in this boiler shall not exceed 2.5% sulfur by weight.* In no case shall sulfur dioxide emissions from this boiler exceed 2.75 pounds/MMBtu of heat input nor 1,507 pounds per hour at the maximum heat input rate.
(* See also Specific Condition No. 14.)
[Previous permits and Rule 17-296.405(1)(c)1.k., F.A.C.].

6. Particulate emissions from this boiler shall be limited as follows:

A. During normal operations, particulate emissions shall not exceed 0.10 pounds/MMBtu, 54.8 pounds per hour, nor 240 tons per year;
B. During boiler cleaning (sootblowing) and load changes particulate matter emissions shall not exceed 0.30 pounds/MMBtu, nor 164.4 pounds per hour, and provided that best operational practices are adhered to minimize the magnitude and duration of the excess emissions.

[Rules 17-296.702(2)(a) and 17-210.700(3), F.A.C.].

SPECIFIC CONDITIONS:

7. Visible emissions from this boiler shall be limited as follows:

   A. During normal operations, visible emissions shall not exceed 40% opacity;
   B. During boiler cleaning (sootblowing) and load changes visible emissions shall not exceed 60% opacity, provided that the duration of such excess emissions shall not exceed a total of 3 hours in any 24 hour period, and provided that best operational practices are adhered to minimize the magnitude and duration of the excess emissions.

[Rules 17-296.702(2)(b), 17-296.405(1)(a) and 17-210.700(3), F.A.C. and OGC Order File No. 86-1580, December 11, 1986].

8. Excess emissions resulting from startup or shutdown are permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions is minimized. Excess emissions resulting from malfunctions are permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for a longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operations, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited. (See also Specific Condition No. 19). [Rules 17-210.700(1) and (2), F.A.C.].

Testing and Compliance Documentation Requirements

9. Test the emissions from the boiler for the following pollutants annually * within one month of the base date of May 5. A report of the test data shall be submitted to the Air Sections of the Southwest District Office of the Department and the Pinellas County Department of Environmental Management within 45 days of the testing. The test report shall include a statement of the boiler O_2 levels during the test, the fuel firing rate (in gallons/hour and MMBtu/hr) and the results of the fuel oil analysis (See Specific Condition No. 12).

   (X) Particulate matter (PM) (steady state and sootblowing)
   (X) Visible emissions (VE) (steady state and sootblowing)

(* Note: This source was authorized by Order of the Department Secretary dated December 11, 1986 (OGC File No. 86-1580) to test

(continued)

SPECIFIC CONDITIONS:

9. (continued)

particulate matter emissions and visible emissions annually with a 40% opacity limit. Failure of this source to meet either the particulate standard or the opacity standard in the future shall constitute grounds for revocation of this authorization and a return to more frequent testing.)
[Rules 17-297.340 and 17-297.570, F.A.C. and OGC Order File No. 86-1577].

10. The permittee shall notify the Air Quality Division of the Pinellas County Department of Environmental Management in writing at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.
[Rule 17-297.340(1)(i), F.A.C.].

11. Compliance with the emission limitations of Specific Condition Nos. 5, 6 and 7 shall be determined using the following methods contained in Rule 17-297, F.A.C. or in 40 CFR 60, Appendix A and adopted by reference in Rule 17-297, F.A.C.:

Pollutant	Test Method
Visible emissions	DER Method 9
Particulate Matter	EPA Method 5 or EPA Method 17 (only if stack temperature is less than 375 °F)
Sulfur dioxide (& %S)	Fuel analysis (EPA Method 19)

The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Rule 17-297, F.A.C. and 40 CFR 60, Appendix A.

12. Compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be demonstrated during all particulate and VE compliance tests based on analysis of an as-fired oil sample taken during the testing. Results of this analysis, and calculation of the resulting pound/MMBtu sulfur dioxide emission rate, shall be submitted with the test report.
[Rule 17-4.070(3), F.A.C.].

SPECIFIC CONDITIONS:

13. Documentation of ongoing compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be demonstrated through fuel analysis on a monthly basis. The permittee shall take a daily as-fired fuel oil sample for each day of operation and, on a monthly basis, analyze the monthly composite fuel oil sample for sulfur content and heat content (See O&M Plan, Specific Condition No. 15.B.5.). Based on the results of this monthly analysis, the permittee shall calculate the monthly average pound/MMBtu sulfur dioxide emission rate. The fuel analysis results and the monthly sulfur dioxide emission rate calculation shall be recorded in a permanent form suitable for inspection by the Department upon request, and shall be retained for at least a two year period. (See also Specific Condition No. 17 for quarterly reporting requirements.)
[Rule 17-4.070(3), F.A.C.].

14. Approved compliance testing of emissions must be conducted while firing No. 6 fuel oil operating within 90-100% of the permitted rates as stated in the Process Parameters Section of Specific Condition No. 15. However, based on the rate at which the May 1992 stack test was conducted, the maximum permitted fuel oil sulfur content for this boiler is currently limited to 1.0 % S by weight. A compliance test submitted at an operating rate less than 90% of the permitted rates will automatically constitute an amended permit at the lesser rate until another test, showing compliance at a higher rate, is submitted. Any time the above permitted fuel oil sulfur content (monthly average) is exceeded by more than 10% for two consecutive months or 20% for any single month then particulate and visible emissions compliance tests, conducted while using the higher sulfur content fuel oil, shall be performed within 45 days of the end of the month that triggers this requirement. The test results shall be submitted to the Air Sections of the Southwest District Office of the Department and the Pinellas County Department of Environmental Management 45 days of such testing. Acceptance of the test by the Department will constitute an amended permit at the tested higher sulfur content, not to exceed a maximum sulfur content of 2.5 %S by weight. Failure to submit the fuel oil firing rate and sulfur content, or operating at conditions during the test 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.].

SPECIFIC CONDITIONS:

Operation and Maintenance Plan

15. The following is the specified Operation and Maintenance Plan for Particulate Control as required by Rule 17-296.700(6), F.A.C. (Particulate Matter RACT).

A. Process Parameters (Rule 17-296.700(6)(d), F.A.C.)

1.	Heat Input Rate:	548 MMBtu/hour (maximum)
2.	Fuel:	No. 6 Fuel oil with a max. sulfur content of 2.5% (also natural gas when available).
3.	Fuel Firing Rate:	3,654 gallons/hour (87 BBL/hour) of No. 6 oil (maximum), 0.5 MMCF/hour of natural gas (max.)
4.	Ash content:	as sampled
5.	Steam Temperature:	950 °F
6.	Steam Pressure:	1,315 psi
7.	Steam Flow Rate:	450,000 pounds/hour
8.	Stack Height	174 feet
9.	Boiler Manufacturer:	Babcock and Wilcox
10.	Burner Arrangement:	Front fired

B. Inspection and Maintenance Program

1. Scheduled during major outages: Boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.
2. Scheduled during non-peak load periods in Spring and Fall: This schedule is affected by forced outage requirements.
3. The following operating parameters are to be continuously monitored and maintained at appropriate levels to produce efficient fuel combustion:

   a. fuel flow rate
   b. fuel temperature
   c. fuel pressure
   d. air flow rate
   e. steam flow rate
   f. steam temperature
   g. steam pressure

SPECIFIC CONDITIONS:

4. Plant operators are to monitor, adjust and record the following operating parameters at least once per day to assure efficient plant operation:

   a. temperatures (superheat, fuel)
   b. flows (steam, feedwater, fuel)
   c. unit load

5. Fuel oil quality is to be checked prior to delivery and a daily sample taken each day that the facility is operated for a monthly composite sample analysis. Fuel oil analysis (by ASTM Methods) is to be analyzed for the following:

   a. heat content (Btu/gallon)
   b. sulfur content (%S by weight)
   c. density
   d. API gravity

C. Recordkeeping (Rule 17-296.700(6)(e), F.A.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 Pinellas County Department of Environmental Management upon request.

[Rule 17-296.700(6), F.A.C.].

16. Based on the original permit application received by the Department and information submitted by the permittee with subsequent applications, the following are the maximum potential emission rates from this source based upon which this permit is issued:

Pollutant	pounds/hour	tons/year
Particulate (PM)	54.8	240.0
Sulfur dioxide (SO2)	1,507.0	6,600.7
Carbon Monoxide (CO)	20.0	87.6
Nitrogen Oxides (NOx)	383.7	1,680.0
Volatile Organics (VOC)	2.9	12.2

SPECIFIC CONDITIONS:

Reporting Requirements

17. Compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be documented by the permittee through submittal of quarterly reports of the Higgins Plant monthly average fuel oil sulfur content, heat content, and the resulting sulfur dioxide emission rate in pounds/MMBtu of heat input. These quarterly reports shall be submitted within 30 days of the end of each calendar quarter to the Air Sections of the Southwest District Office of the Department and the Pinellas County Department of Environmental Management. [Rule 17-4.070(3), F.A.C.].

18. Submit to the Southwest District Office of the Department and to the Pinellas County Department of Environmental Management each calendar year on or before March 1, an emission report for this source for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), F.S.:

A. Annual amount of materials and/or fuels utilized;
B. Annual emissions of PM, SO_2, NOx and hydrocarbons based on fuel use, operating hours and fuel analysis. Until further notice by the Department the permittee shall calculate PM emissions by multiplying the PM stack test results by the hours of operation. Other annual emissions shall be determined by multiplying the annual fuel use times the following emission factors:

Pollutant	No. 6 Oil Ef (lb/1000 gal)	Natural Gas Ef (lb/MMCF)
SO2	157(S)	0.6
CO	5	5
NOx	105	550
VOC	0.76	1.4

(Provide calculation sheets to document calculation method)

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

SPECIFIC CONDITIONS:

19. Excess emission notification. In the event that the permittee is unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Air Quality Division of the Pinellas County Department of Environmental Management. Notification shall be conducted in accordance with General Condition No. 8 of this permit. (See attached General Conditions.) In the case of excess emissions resulting from malfunctions, a full written report on the malfunction shall be submitted in a quarterly report if so requested by the Department. [Rule 17-210.700(6), F.A.C.].

Permit Renewal

20. Three applications to renew this operating permit shall be submitted to the Southwest District Office of the Department, with an additional copy sent to the Air Quality Division of the Pinellas County Department of Environmental Management, no later than July 17, 1997 (60 days prior to the expiration date of this permit). [Rule 17-4.090(1), F.A.C. and Pinellas County Ordinance 89-70, as amended, Subpart 2.210].

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

For Richard D. 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;

(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 Standard

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.

Florida Department of Environmental Regulation
Southwest District • 3804 Coconut Palm • Tampa, Florida 33619
Lawton Chiles, Governor 813-744-6100 Carol M. Browner, Secretary

NOTICE OF PERMIT ISSUANCE

-- CERTIFIED MAIL

In the Matter of an Application for permit by:

DER File No.: AO52-216382
County: Pinellas

Mr. W.J. Pardue, Manager
Environmental Programs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733
_____/

Enclosed is Permit Number AO52-216382 to operate the Higgins Unit No. 1 located in Oldsmar, issued pursuant to Section 403, Florida Statutes. Please read this new permit thoroughly as there are significant changes from the previous permit.

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, Florida 32399-2400, within 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 the 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 warrants reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this 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 rights 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 Street 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.

P 079 942 964

RECEIPT FOR CERTIFIED MAIL

MR W J PARDUE
MANAGER ENV PROGRAMS
FLORIDA POWER CORP
PO BOX 14042
ST PETERSBURG FL 33733

PS Form 3800, June 1985

JAN 26 1993

A052-216412 + 216413
A052-216382, 216383 + 216384

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery. A052-216412 +216413

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: A052-216382, 216383 + 216384 D2

MR W J PARDUE
MANAGER ENV PROGRAMS
FLORIDA POWER CORP
PO BOX 14042
ST PETERSBURG FL 33733

4a. Article Number P 079 942 964

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery JAN 27 1993

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form 3811, November 1990 ☆U.S. GPO: 1991—287-088 **DOMESTIC RETURN RECEIPT**

Executed in Tampa, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

David R. Zell

David R. Zell
Air Permitting Engineer
3804 Coconut Palm Drive
Tampa Florida 33619-8318
Phone (813) 744-6100 Ext. 412

DRZ/
Attachment

cc: Gary Robbins, Pinellas Co. Dept. of Environmental Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on JAN 26 1993 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

JAN 26 1993
Date

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Carol M. Browner, Secretary

PERMITTEE:
Florida Power Corporation
Higgins Plant
P.O. Box 14042
St. Petersburg, FL 33733

PERMIT/CERTIFICATION:
Permit No: AO52-216382
County: Pinellas
Expiration Date: 09/16/98
Project: Steam Generator
Higgins Unit No. 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 Higgins Unit No. 1, a fossil fuel fired electric utility steam generator rated at 43 MW/hour. The unit is fired with No. 6 fuel oil, with a maximum sulfur content of 2.5% by weight, at a maximum heat input rate of 548 MMBtu/hour (87 BBL/hour, 3,654 gallons/hour). As an alternate fuel when available, the unit can also be fired on natural gas at a maximum rate of 0.5×10^6 ft^3/hour.

Location: Higgins Plant, Shore Drive, Oldsmar

UTM: 17-336.54 E 3098.25 N **NEDS No:** 0012 **Point ID No:** 01

Replaces Permit No.: AO52-137124

PERMITTEE:
Florida Power Corp.
Higgins Plant
Oldsmar

PERMIT/PROJECT:
Permit No.: AO52-216382
County: Pinellas
Project: Higgins Unit 1

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions. [Rule 17-4.160, F.A.C.].

2. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 17-200 through 17-299, or any other requirements under federal, state or local law. [Rule 17-210.300, F.A.C.].

Operational and Emission Limitations

3. This boiler is permitted for continuous operation (8,760 hours per year).
[As requested by applicant].

4. This boiler shall be fired with No. 6 fuel oil, with natural gas as an alternate fuel when available. The maximum heat input rate to this boiler shall not exceed 548 MMBtu/hr (3,654 gallons/hour when firing No. 6 fuel oil). If firing 100% natural gas, the maximum heat input rate shall not exceed 525 MMBtu/hr (0.5 MMCF/hour). [Previous permits and information supplied with application}.

5. Sulfur content of the No. 6 fuel oil fired in this boiler shall not exceed 2.5% sulfur by weight.* (Based upon a No. 6 oil fuel heat content of 150,000 Btu/gallon, this represents a maximum sulfur dioxide emission rate of 2.62 pounds/MMBtu.) In no case shall sulfur dioxide emissions from this boiler exceed 2.75 pounds/MMBtu of heat input nor 1,434 pounds per hour at maximum heat input rate. (* See also Specific Condition No. 14.)
[Previous permits and Rule 17-296.405(1)(c)1.k., F.A.C.].

6. Particulate emissions from this boiler shall be limited as follows:

A. During normal operations, particulate emissions shall not exceed 0.10 pounds/MMBtu, 54.8 pounds per hour, nor 240 tons per year;
B. During boiler cleaning (sootblowing) and load changes particulate matter emissions shall not exceed 0.30 pounds/MMBtu, nor 164.4 pounds per hour, and provided that best operational practices are adhered to minimize the magnitude and duration of the excess emissions.

[Rules 17-296.702(2)(a) and 17-210.700(3), F.A.C.].

SPECIFIC CONDITIONS:

7. Visible emissions from this boiler shall be limited as follows:

   A. During normal operations, visible emissions shall not exceed 40% opacity;
   B. During boiler cleaning (sootblowing) and load changes visible emissions shall not exceed 60% opacity, provided that the duration of such excess emissions shall not exceed a total of 3 hours in any 24 hour period, and provided that best operational practices are adhered to minimize the magnitude and duration of the excess emissions.

[Rules 17-296.702(2)(b), 17-296.405(1)(a) and 17-210.700(3), F.A.C. and OGC Order File No. 86-1580, December 11, 1986].

8. Excess emissions resulting from startup or shutdown are permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions is minimized. Excess emissions resulting from malfunctions are permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for a longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operations, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited. (See also Specific Condition No. 19). [Rules 17-210.700(1) and (2), F.A.C.].

Testing and Compliance Documentation Requirements

9. Test the emissions from the boiler for the following pollutants annually * within one month of the base date of May 5. A report of the test data shall be submitted to the Air Sections of the Southwest District Office of the Department and the Pinellas County Department of Environmental Management within 45 days of the testing. The test report shall include a statement of the boiler O_2 levels during the test, the fuel firing rate (in gallons/hour and MMBtu/hr) and the results of the fuel oil analysis (See Specific Condition No. 12).

   (X) Particulate matter (PM) (steady state and sootblowing)
   (X) Visible emissions (VE) (steady state and sootblowing)

(* Note: This source was authorized by Order of the Department Secretary dated December 11, 1986 (OGC File No. 86-1580) to test particulate matter emissions and visible emissions annually with a

SPECIFIC CONDITIONS:

40% opacity limit. Failure of this source to meet either the particulate standard or the opacity standard in the future shall constitute grounds for revocation of this authorization and a return to more frequent testing.)
[Rules 17-297.340 and 17-297.570, F.A.C. and OGC Order File No. 86-1577].

10. The permittee shall notify the Air Quality Division of the Pinellas County Department of Environmental Management in writing at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.
[Rule 17-297.340(1)(i), F.A.C.].

11. Compliance with the emission limitations of Specific Condition Nos. 5, 6 and 7 shall be determined using the following methods contained in Rule 17-297, F.A.C. or in 40 CFR 60, Appendix A and adopted by reference in Rule 17-297, F.A.C.:

Pollutant	Test Method
Visible emissions	DER Method 9
Particulate Matter	EPA Method 5 or EPA Method 17 (only if stack temperature is less than 375 °F)
Sulfur dioxide (& %S)	Fuel analysis (EPA Method 19)

The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Rule 17-297, F.A.C. and 40 CFR 60, Appendix A.

12. Compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be demonstrated during the particulate and VE compliance tests based on analysis of an as-fired oil sample taken during the testing. Results of this analysis, and calculation of the resulting pound/MMBtu sulfur dioxide emission rate, shall be submitted with the test report.
[Rule 17-4.070(3), F.A.C.].

SPECIFIC CONDITIONS:

13. Documentation of ongoing compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be demonstrated through fuel analysis on a monthly basis. The permittee shall take a daily as-fired fuel oil sample for each day of operation and, on a monthly basis, analyze the monthly composite fuel oil sample for sulfur content and heat content (See O&M Plan, Specific Condition No. 15.B.5.). Based on the results of this monthly analysis, the permittee shall calculate the monthly average pound/MMBtu sulfur dioxide emission rate. The fuel analysis results and the monthly sulfur dioxide emission rate calculation shall be recorded in a permanent form suitable for inspection by the Department upon request, and shall be retained for at least a two year period. (See also Specific Condition No. 17 for quarterly reporting requirements.)
[Rule 17-4.070(3), F.A.C.].

14. Approved compliance testing of emissions must be conducted while firing No. 6 fuel oil operating within 90-100% of the permitted rates as stated in the Process Parameters Section of Specific Condition No. 15. However, based on the rate at which the May 1992 stack test was conducted, the maximum permitted fuel oil sulfur content for this boiler is currently limited to 1.0 % S by weight. A compliance test submitted at an operating rate less than 90% of the permitted rates will automatically constitute an amended permit at the lesser rate until another test, showing compliance at a higher rate, is submitted. Any time the above permitted fuel oil sulfur content is exceeded by more than 10% (monthly average) a compliance test shall be performed within 30 days of initiation of the use of the higher sulfur content fuel oil and the test results shall be submitted within 45 days of testing. Acceptance of the test by the Department will constitute an amended permit at the higher sulfur content not to exceed a maximum sulfur content of 2.5 %S by weight. Failure to submit the fuel oil firing rate and sulfur content, or operating at conditions during the test 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.].

SPECIFIC CONDITIONS:

Operation and Maintenance Plan

15. The following is the specified Operation and Maintenance Plan for Particulate Control as required by Rule 17-296.700(6), F.A.C. (Particulate Matter RACT).

A. Process Parameters (Rule 17-296.700(6)(d), F.A.C.)

1.	Heat Input Rate:	548 MMBtu/hour (maximum)
2.	Fuel:	No. 6 Fuel oil with a max. sulfur content of 2.5% (also natural gas when available).
3.	Fuel Firing Rate:	3,654 gallons/hour (87 BBL/hour) of No. 6 oil (maximum), 0.5 MMCF/hour of natural gas (max.)
4.	Ash content:	as sampled
5.	Steam Temperature:	950 °F
6.	Steam Pressure:	1,350 psi
7.	Steam Flow Rate:	450,000 pounds/hour
8.	Stack Height	174 feet
9.	Boiler Manufacturer:	Babcock and Wilcox
10.	Burner Arrangement:	Front fired

B. Inspection and Maintenance Program

1. Scheduled during major outages: Boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.
2. Scheduled during non-peak load periods in Spring and Fall: This schedule is affected by forced outage requirements.
3. The following operating parameters are to be continuously monitored and maintained at appropriate levels to produce efficient fuel combustion:

   a. fuel flow rate
   b. fuel temperature
   c. fuel pressure
   d. air flow rate
   e. steam flow rate
   f. steam temperature
   g. steam pressure

SPECIFIC CONDITIONS:

4. Plant operators are to monitor, adjust and record the following operating parameters at least once per day to assure efficient plant operation:

   a. pressures (furnace, superheat, reheat, air heater and windbox
   b. temperatures (superheat, reheat, and fuel)
   c. flows (steam, feedwater, fuel)
   d. unit load

5. Fuel oil quality is to be checked prior to delivery and a daily sample taken each day that the facility is operated for a monthly composite sample analysis. Fuel oil analysis (by ASTM Methods) is to be analyzed for the following:

   a. heat content (Btu/gallon)
   b. sulfur content (%S by weight)
   c. density
   d. API gravity

C. Recordkeeping (Rule 17-296.700(6)(e), F.A.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 Pinellas County Department of Environmental Management upon request. [Rule 17-296.700(6), F.A.C.].

16. Based on the original permit application received by the Department and information submitted by the permittee with subsequent applications, the following are the maximum potential emission rates from this source based upon which this permit is issued:

Pollutant	pounds/hour	tons/year
Particulate (PM)	54.8	240.0
Sulfur dioxide (SO2)	1,434.2	6,281.8
Carbon Monoxide (CO)	20.0	87.6
Nitrogen Oxides (NOx)	383.7	1,680.0
Volatile Organics (VOC)	2.9	12.2

SPECIFIC CONDITIONS:

Reporting Requirements

17. Compliance with the fuel oil sulfur content and sulfur dioxide emissions limitations of Specific Condition No. 5 shall be documented by the permittee through submittal of quarterly reports of the Higgins Plant monthly average fuel oil sulfur content, heat content, and the resulting sulfur dioxide emission rate in pounds/MMBtu of heat input. These quarterly reports shall be submitted within 30 days of the end of each calendar quarter to the Air Sections of the Southwest District Office of the Department and the Pinellas County Department of Environmental Management. [Rule 17-4.070(3), F.A.C.].

18. Submit to the Southwest District Office of the Department and to the Pinellas County Department of Environmental Management each calendar year on or before March 1, an emission report for this source for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), F.S.:

A. Annual amount of materials and/or fuels utilized;
B. Annual emissions of PM, SO_2, NOx and hydrocarbons based on fuel use, operating hours and fuel analysis. Until further notice by the Department the permittee shall calculate PM emissions by multiplying the PM stack test results by the hours of operation. Other annual emissions shall be determined by multiplying the annual fuel use times the following emission factors:

Pollutant	No. 6 Oil Ef (lb/1000 gal)	Natural Gas Ef (lb/MMCF)
SO2	157(S)	0.6
CO	5	5
NOx	105	550
VOC	0.76	1.4

(Provide calculation sheets to document calculation method)

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

PERMITTEE:
Florida Power Corp.
Higgins Plant
Oldsmar

PERMIT/PROJECT:
Permit No.: AO52-216382
County: Pinellas
Project: Higgins Unit 1

SPECIFIC CONDITIONS:

19. Excess emission notification. In the event that the permittee is unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Air Quality Division of the Pinellas County Department of Environmental Management. Notification shall be conducted in accordance with General Condition No. 8 of this permit. (See attached General Conditions.) In the case of excess emissions resulting from malfunctions, a full written report on the malfunction shall be submitted in a quarterly report if so requested by the Department.
[Rule 17-210.700(6), F.A.C.].

Permit Renewal

20. Three applications to renew this operating permit shall be submitted to the Southwest District Office of the Department, with an additional copy sent to the Air Quality Division of the Pinellas County Department of Environmental Management, no later than July 17, 1998 (60 days prior to the expiration date of this permit). [Rule 17-4.090(1), F.A.C. and Pinellas County Ordinance 89-70, as amended, Subpart 2.210].

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

For Richard D. 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;

(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 Standard

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.

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form #
Form Title
Effective Date
DER Application No.
(Filled in by DEP)

D.E.R.

A052-216382 JUL 16 1992

SOUTHWEST DISTRICT
TAMPA

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: Higgins Unit 1 Renewal of DER Permit No. A052-137124

Company Name: Florida Power Corporation County: Pinellas

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):

Fossil Fired Steam Generator Number 1

Source Location: Street: Shore Drive City: Oldsmar

UTM: East 17-336.54 North 3098.25

Latitude: 28° 00' 08"N. Longitude: 82° 39' 47"W.

NEDS NO: 0012 Point ID: 01

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. Compliance test performed on May 5 - 6, 1992

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.

Northwest District 160 Governmental Center Pensacola, Florida 32501-5794 904-436-8300
Northeast District 3426 Bills Rd. Jacksonville, Florida 32207 904-798-4200
Central District 3319 Maguire Blvd. Suite 232 Orlando, Florida 32803-3767 407-894-7555
Southwest District 4520 Oak Fair Blvd. Tampa, Florida 33610-7347 813-623-5561
South District 2269 Bay St. Fort Myers, Florida 33901-2896 813-332-2667
Southeast District 1900 S. Congress Ave., Suite A West Palm Beach, Florida 33406 407-964-9668

8. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type	Contaminant %Wt	Utilization Rate lbs/hr

B. Product Weight (lbs/hr): _____

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr**	Maximum Heat Input (MMBTU/hr)
Number 6 Fuel Oil (2.5%S)		87 BBL	548
Natural Gas	(when available) 0.5		548

D. Normal Equipment Operating Time: hrs/day _____; days/wk _____; wks/yr _____;

hrs/yr (power plants only) 8760; if seasonal, describe _____

_____

_____

The undersigned owner or authorized representative*** of Florida Power Corporation 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

W. J. Pardue

Signature, Owner or Authorized Representative (Notarization is mandatory)

W. J. Pardue, Mgr. - Environ. Pgrms.

Typed Name and Title

P.O. Box 14042

Address

St.Petersburg FL 33733

City State Zip

7-15-92

Date

813 866-4387

Telephone No.

DER Form 17-1.202(4)

Effective November 15, 1982

Page 2 of 2

OFFICIAL NOTARY SEAL
MARYJANE R BLAIN
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. CC184189
MY COMMISSION EXP. JUNE 3,1994

W. J. Pardue personally appeared before me this 15th day of July, 1992

M. J. R. Blain

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Richard Garrity, Deputy Assistant Secretary

May 2, 1989

Mr. R. E. Parnelle, P.E.
Supervisor, Air Programs
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Parnelle:

Re: Pinellas County - AP
Higgins Steam Generator Unit No. 1
A052-137124

The Department has received your request of April 19, 1989 for an amendment to permit No. A052-137124. As requested, the following amendment is hereby made in the referenced permit:

SPECIFIC CONDITION NO. 1

Change from: Test the emissions for the following pollutant(s) at intervals of 12 months from the date 7/29/86. The facility was granted a reduction in the frequency of testing to annual for this source by the State on December 11, 1986. Submit a copy...

Change to: Test the emissions for the following pollutant(s) at intervals of 12 months from the date 5/15/89. The facility was granted a reduction in the frequency of testing to annual for this source by the State on December 11, 1986. Submit a copy...

Persons whose substantial interests are affected by this permit amendment 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 32399-2400, 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 amendment 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 amendment will not be effective until further Order of the Department.

When the Order (Permit Amendment) 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.

This letter must be attached to the referenced permit and becomes a part of that permit. If you have any questions, please contact Mr. George W. Richardson of my staff at (813)623-5561.

Sincerely,

Richard D. Garrity, Ph.D.
Deputy Assistant Secretary
Southwest District

RDG/gr

cc: Pinellas County Department of
Environmetal Management

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT AMENDMENT and all copies were mailed before the close of business on MAY 03 1989 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.

Marilyn Quispe
Clerk

MAY 03 1989
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
4520 OAK FAIR BLVD.
TAMPA, FLORIDA 33610-7347
813-623-5561
Suncom—552-7612

November 25, 1987

Mr. A. W. Morneault
Environmental Operations
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Re: Pinellas County - AP
Permit No. AO52-137124

The Department is in receipt of your request to amend referenced permit. The following changes to Specific Conditions are hereby made in the permit:

From: 2. The visible emission limitation for this boiler is 40% opacity as set forth in Subsection 17-2.600(5)(b)1., F.A.C. and DER Order (OGC File No. 86-1581) dated December 11, 1986.

To: 2. The visible emission limitation for this boiler is 40% opacity as set forth in Subsection 17-2.600(5)(b)1..F.A.C. and DER Order (OGC File No. 86-1581) dated Decenber 11, 1986, except as provided for in Section 17-2.250, F.A.C..

Specific Condition 7B5 page 8 of 9.

From: 5. Fuel Oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite anaylsis. Fuel oil is analyzed for the following:

a. BTU
b. API Gravity
c. Density
d. Sulfur Content

To: 5. Fuel Oil quality is to be monitored prior to delivery and a monthly sample taken for analysis. Fuel oil is analyzed for the following:

a. BTU
b. API Gravity
c. Density
d. Sulfur Content

Persons whose substantial interests are affected by this permit amendment 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 32399-2400, 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 amendment 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.

When the Order (Permit Amendment) 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.

This letter must be attached to each permit and become a part of permit. If you have any questions please contact Mr. C. S. Lee of my staff.

Sincerely,

Richard D. Garrity, Ph.D.
District Manager
Southwest District

RDG/sl

cc: Pinellas County

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 12-3-87 to the listed persons.

Clerk Stamp

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

12-2-87
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
4520 OAK FAIR BLVD.
TAMPA, FLORIDA 33610-7347
813-623-5561
Suncom—552-7612

NOTICE OF PERMIT

Mr. J.A. Hancock
Vice President, Fossil Operations
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

Dear Mr. Hancock:

Re: Pinellas County - AP
Steam Generator Higgins Unit No. 1

Enclosed is Permit Number AO52-137124 to operate a fossil fuel steam generator (designated as Unit No. 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.

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,

James Wm. Estler
Air Permitting Engineer

JWE/dtw

Attachment: as stated

cc: PCDEM

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 10/2/87 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.

Doris J. Wright 10/2/87
Clerk Date

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
4520 OAK FAIR BLVD.
TAMPA, FLORIDA 33610-7347
813-623-5561
Suncom—552-7612

PERMITTEE:
Mr. J.A. Hancock
Vice President
Fossil Operations
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

PERMIT/CERTIFICATION
Permit No.: AO52-137124
County: Pinellas
Expiration Date: 9-16-92
Project: Steam Generator
Higgins Unit No. 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 fossil fuel steam generator (designated as Higgins Unit No. 1) rated at 43 MW/hour with a maximum heat input of 544 MMBTU/hour. Unit is fired on No. 6 fuel oil with a maximum sulfur content of 2.5%. Maximum fuel oil usage is 87 BBL/hour. When available, the unit is fired on natural gas at a rate of 0.5 MMCF/hour.

Location: Shore Drive, Oldsmar, Pinellas County, FL

UTM: 17-336.54E 3098.25N NEDS NO: 0012 Point ID: 01

Replaces Permit No.: AO52-56652

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. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of 7/29/86. The facility was granted a reduction in the frequency of testing to annual for this source by the state on December 11, 1986. Submit a copy of test data to the Air Sections of the Southwest District of the Department of Environmental Regulation and Pinellas County Environmental Management within 45 days of such testing, Section 17-2.700 (2), Florida Administrative Code (F.A.C.).

   (X) Particulates* (steady state and soot blowing
   (X) Sulfur Oxides **
   (X) Opacity (steady state and soot blowing)

* Annual Compliance test shall be conducted with steam generator being fired with number 6 fuel oil.

** Fuel analysis may be submitted for required sulfur dioxide emission test (Refer to permit condition number 5).

2. The visible emission limitation for this boiler is 40% opacity as set forth in Subsection 17-2.600(5)(b)1., F.A.C. and DER Order (OGC File No. 86-1580) dated December 11, 1986.

3. Sulfur dioxide emissions are limited to 2.75 pounds/MMBTU heat input.

4. Pursuant to Section 17-2.600(5)(b)2., F.A.C., the particulate emissions are limited to 0.10 pounds/MMBTU heat input except as provided for in Section 17-2.250, F.A.C.

5. Compliance with the emission limitations of Specific Conditions Nos. 1, 2, 3 and 4 shall be determined as follows:

Pollutant	Test Method
Visible Emissions: (Steady state and soot blowing)	DER Method 9
Particulate: (Steady state and soot blowing)	EPA Method 17[a] or EPA Method 5
Sulfur Oxides:	Fuel analysis[b]

a. Method 17 may be used only if the stack temperature is less than 375^{o} F.

b. Sulfur content shall be verified by submittal of monthly composite fuel analyses reports on a quarterly basis (within 30 days after the end of each calendar quarter) to the Air Sections of the Department of Environmental Regulation and Pinellas County Environmental Management.

The test methods listed above are contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

6. Testing of emissions must be conducted within ±10% of the permitted rate of 43 MW/hour. A compliance test submitted at operating levels less than 90% of permitted capacities will automatically constitute an amended permit at the lesser rate until another test (showing compliance) at the permitted rate, as stated above, is submitted. Failure to submit the input rates or operation at conditions during testing which do not reflect actual operating conditions may invalidate the data [Section 403.161(1)(c), Florida Statutes].

7. Operation and Maintenance Plan For Particulate Control, Section 17-2.650(2), Florida Statutes:

A. Process Parameters:

1.	Heat Input:	544 MMBTU/hour
2.	Fuel:	Number 6 fuel oil with a 2.5% sulfur content (natural gas when available)
3.	Fuel Consumption:	87 BBL/hour of Number 6 fuel oil 0.5 MMCF/hour of natural gas
4.	Ash Content:	as sampled
5.	Steam Temperature:	950° F
6.	Steam Pressure:	1315 psi
7.	Steam Flow:	450,000 pounds/hour
8.	Stack Height:	174 feet
9.	Boiler Make:	Babcock and Wilcox
10.	Arrangement:	Front fired

B. Inspection and Maintenance Program:

1. Conducted during major outages: boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.

2. Major outages may be scheduled anytime during the year. The schedule is affected by forced outage requirements.

3. The following are to be continuously monitored and maintained to produced efficient fuel combustion:

   a. fuel flow
   b. fuel temperature
   c. fuel pressure
   d. air flow
   e. steam flow
   f. steam temperature
   g. steam pressure

4. Plant operators are to monitor, adjust and record the following parameters tc assure efficient plant operation at least once per day:

   a. Pressures (superheat, condenser, & barometric)
   b. Temperatures (superheat and inlet water)
   c. Unit load
   d. Percent gas usage

5. Fuel oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite analysis. Fuel oil is analyzed for the following:

   a. BTU
   b. API Gravity
   c. Density
   d. Sulfur Content

C. Records:

Records of inspection, maintenance, and performance parameter shall be retained for a minimum of two years and shall be made available to the Department or Pinellas County Department of Environmental Management upon request as per Subsection 17-2.650(2)(g)5., F.A.C.

8. The Pinellas County Department of Environmental Management shall be notified in writing 15 days prior to compliance testing.

9. Submit for this facility, each calendar year, on or before March 1, and 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 Air Sections of the Southwest District Office of the Department of Environmental Regulation and Pinellas County Department of Environmental Management, Air Quality Division.

10. Three applications to renew this operating permit shall be submitted to the Southwest District of the Department of Environmental Regulation and one copy to the Pinellas County Department of Environmental Management, Air Quality Division sixty (60) days prior to the expiration date of this permit.

Issued this 1 day of Oct.
19 87

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

Richard D. Garrity, Ph.D.
District Manager

A052-137124

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

D. E. R.

JUL 20 1987

SOUTH WEST DISTRICT
TAMPA

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: Higgins Unit 1 Renewal of DER Permit No. A052-56652

Company Name: Florida Power Corporation County: Pinellas

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):

Fossil Fired Steam Generator Number 1

Source Location: Street: Shore Drive City: Oldsmar

UTM: East 17-336.54 North 3098.25

Latitude: __ __° __ __' __ __"N. Longitude: __ __° __ __' __ __"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 [XX] 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.

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.

NOTARY PUBLIC

3. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type	Contaminant %Wt	Utilization Rate lbs/hr

B. Product Weight (lbs/hr): _____

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr**	Maximum Heat Inout (MMBTU/hr)
Number 6 Fuel Oil		87 BBL	544
Natural Gas		(when available)	

D. Normal Equipment Operating Time: hrs/day _____; days/wk _____; wks/yr _____;

hrs/yr (power plants only) 8760; if seasonal, describe _____

_____

_____

The undersigned owner or authorized representative*** of Florida Power Corporation 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)

J.A. Hancock, Vice President, Fossil Operations
Typed Name and Title

P.O. Box 14042
Address

St. Petersburg FL 33733
City State Zip

7/14/87 813/866-4524
Date Telephone No.

Subscribed before me this 14th day of July, 1987

_____
Notary Public

RENEE D. TODD NOTARY PUBLIC Notary Public, State of Florida My Commission Expires June 4, 1988 Bonded Thru Troy Fain - Insurance, Inc.

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

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

APPLICANT:
Mr. George C. Moore, V.P.
Power Production
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

PERMIT/CERTIFICATION
No.: AO52-56652
County: Pinellas
Project: Steam Generator
Higgins No. 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 Higgins No. 1, a steam generating station rated at 43 MW/hour with a maximum heat input of 544 MMBTU/hour. Unit is fired on natural gas or No. 6 fuel oil with a maximum sulfur content of 2.5%.

Located at Shore Drive, Oldsmar, Pinellas County

UTM: 17-336.54 E 3098.25 N

Replaces Permit No.: AO52-20186 NEDS No.: 0012 Point ID: 01

Expiration Date: September 23, 1987

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 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 case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties, therefore, caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where 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

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of this permit and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700 (2), Florida Administrative Code (F.A.C.)).

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

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

The Pinellas County Department of Environmental Management must be notified at least fifteen (15) days in advance of any compliance test performed on this source so that a representative from the agency may be available to witness the test.

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 (Section 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 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.

Copies of this report shall be provided to the Department and Pinellas County Department of Environmental Management.

4. Particulate emissions are limited to 0.1 lbs. of TSP/MMBTU heat input except as provided for in Sections 17-2.600 and 17-2.250, Florida Administrative Code.

5. Visible emissions are limited as follows:

a. Visible emissions for steady state operations shall not exceed the opacity limitation (20% or 40%) determined by the following procedure. The permittee shall submit a letter indicating any change in particulate testing frequency election pursuant to Subsection 17-2.600(5)(b)1, F.A.C. This notification shall be used to determine the applicable opacity limitation which will apply, based on date of receipt by this Agency, until such time as amended by letter.

b. Pursuant to Subsection 17-2.250(3), F.A.C., visible emissions for soot blowing and load changes shall not exceed 60% opacity for more than 3 hours in any 24-hour period. Providing best operational practices to minimize emissions are adhered to and the duration of the excess emissions are minimized.

c. Pursuant to Subsection 17-2.350(3), F.A.C., an opacity greater than 60% is allowed for not more than four 6-minute periods during the 3-hour period, providing the unit has installed and is operating, or has committed to install and operate, continuous opacity monitors.

6. Sulfur dioxide emissons are limited to 2.75 lbs. of SO_2/MMBTU heat input.

7. Operation and Maintenance Plan For Particulate Control, Section 17-2.650(2), Florida Administrative Code:

A. Design Full Load Process Parameters:

1. Heat Input: 544 MMBTU/hr.
2. Fuel: No. 6 fuel oil with a 2.5% sulfur content (natural gas when available)
3. Fuel Consumption: 87 BBL/hr.
4. Ash Content: as sampled
5. Steam Temp: 950°F
6. Steam Press: 1315 psi
7. Steam Flow: 450,000 lbs/hr.
8. Stack Height: 174 ft.
9. Boiler Make: Babcock and Wilcox
10. Arrangement: Front fired

B. Inspection and Maintenance Program:

1. Conducted during major outages: boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.

2. Major outages may be scheduled any time during the year. The schedule is affected by forced outage requirements.

3. The following are to be continuously monitored and maintain to produce efficient fuel combustion:

a. fuel flow
b. fuel temperature
c. fuel pressure
d. air flow
e. steam flow
f. steam temperature
g. steam pressure

4. Plant operators are to monitor, adjust and record the following parameters to assure efficient plant operation at least once per day:
   a. Pressures (superheat, condenser, & barometric)
   b. Temperatures (superheat and inlet water)
   c. Unit Load
   d. Percent Gas Usage

5. Fuel oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite analysis. Fuel oil is analyzed for the following:

   a. BTU
   b. API Gravity
   c. Density
   d. Sulfur Content

C. Records

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

Originally issued October 7, 1982
Revised this 19th day of November
1982.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

W. K. Hennessey
District Manager

EXPIRATION DATE

September 23, 1987

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 62411

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Fl. Power Date June 10, 1982

Address P.O. Box 14042 Dollars $ 20.00

Applicant Name & Address same as above

Source of Revenue same as above

Revenue Code 0101 Application Number A052-56652

518472

By Dorothy Pelham

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

Mr. George C. Moore, V. P.
Power Production
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

Dear Mr. Moore:

Re: Pinellas County - AP
Steam Generator Higgins No. 1

Enclosed is Permit Number AO52-56652 dated Oct. 7, 1982 ,to operate the subject pollution source, issued pursuant to Section 403.061(14), 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, (copy enclosed). 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 may 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

WKH/scm

Enclosures
cc: PCDEM

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

APPLICANT:
Mr. George C. Moore, V.P.
Power Production
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

PERMIT/CERTIFICATION
No.: AO52-56652
County: Pinellas
Project: Steam Generator
Higgins No. 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 Higgins No. 1, a steam generating station rated at 43 MW/hour with a maximum heat input of 544 MMBTU/hour. Unit is fired on natural gas or No. 6 fuel oil with a maximum sulfur content of 2.5%.

Located at Shore Drive, Oldsmar, Pinellas County

UTM: 17-336.54 E 3098.25 N

Replaces Permit No.: AO52-20186 NEDS No.: 0012 Point ID: 01

Expiration Date: September 23, 1987

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 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 case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties, therefore, caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where 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

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of this permit and submit a copy of test data to the Air Section of the Southwest District Office and the Pinellas County Department of Environmental Management within forty five days of such testing (Section 17-2.700 (2), Florida Administrative Code (F.A.C.)).

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

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

The Pinellas County Department of Environmental Management must be notified at least fifteen (15) days in advance of any compliance test performed on this source so that a representative from the agency may be available to witness the test.

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 (Section 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 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.

Copies of this report shall be provided to the Department and Pinellas County Department of Environmental Management.

4. Particulate emissions are limited to 0.1 lbs. of TSP/MMBTU heat input except as provided for in Sections 17-2.600 and 17-2.250, Florida Administrative Code.

5. Visible emissions are limited to a density less than or equal to Number 1 on the Ringlemann Chart (20 percent opacity) except as provided for in Sections 17-2.250 and 17-2.600(5), Florida Administrative Code.

6. Sulfur dioxide emissions are limited to 2.75 lbs. of SO_2/MMBTU heat input.

7. Operation and Maintenance Plan For Particulate Control, Section 17-2.650(2), Florida Administrative Code:

A. Process Parameters:

1. Heat Input: 544 MMBTU/hr.
2. Fuel: No. 6 fuel oil with a 2.5% sulfur content (natural gas when available)
3. Fuel Consumption: 87 BBL/hr.
4. Ash Content: as sampled
5. Steam Temp: 950^{o}F
6. Steam Press: 1315 psi
7. Steam Flow: 450,000 lbs/hr.
8. Stack Height: 174 ft.
9. Boiler Make: Babcock and Wilcox
10. Arrangement: Front fired

B. Inspection and Maintenance Program:

1. Conducted during major outages: boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.

2. Scheduled during non-peak load periods in Spring and Fall. The schedule is affected by forced outage requirements.

3. The following are to be continuously monitored and maintained to produce efficient fuel combustion:

a. fuel flow
b. fuel temperature
c. fuel pressure
d. air flow
e. steam flow
f. steam temperature
g. steam pressure

4. Plant operators are to monitor, adjust and record the following parameters to assure efficient plant operation at least once per day:

a. Pressures (furnace, superheat, reheat, air heaters & windbox)
b. Temperatures (superheat, reheat & fuel)
c. Flows (steam, feedwater, oil & gas)
d. Unit load

5. Fuel oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite analysis. Fuel oil is to be analyzed for the following:

a. BTU
b. API Gravity
c. Density
d. Sulfur Content

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 or Pinellas County Department of Environmental Management upon request (Subsection 17-2.650(2)(g)5, F.A.C.).

Issued this 7th day of October, 1982

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

W. K. Hennessey
District Manager

EXPIRATION DATE

September 23, 1987

WAIVER OF 90 DAY TIME LIMIT

UNDER SECTION 120.60(2), FLORIDA STATUTES

Higgins Unit 1

License (Permit, Certification) Application No. A052-20186
Applicant's Name: Florida Power Corporation

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 7th day of October 1982.

The undersigned is authorized to make this waiver on behalf of the applicant.

William S. O'Brien
Signature

W. S. O'Brien
Name of Signee

9/1/82
Date

Sworn to and subscribed before me this 1st day of September 1982.

James D. Powell
Notary Public, State of Florida
My Commission Expires March 30, 1985
Bonded Thru Troy Fain - Insurance, Inc.

JAMES D. POWELL NOTARY PUBLIC FLORIDA STATE AT LARGE

Section 120.60, Florida Statutes

(2) When an application for a license is made as required by law, the agency shall conduct the proceedings required with reasonable dispatch and with due regard to the rights and privileges of all affected parties or aggrieved persons. Within 30 days after receipt of an application for a license, the agency shall examine the application, notify the applicant of any apparent errors or omissions, and request any additional information the agency is permitted by law to require. Failure to correct an error or omission or to supply additional information shall not be grounds for denial of the license unless the agency timely notified the applicant within this 30 day period. The agency shall notify the applicant if the activity for which he seeks a license is exempt from the licensing requirement and return any tendered application fee within 30 days after receipt of the original application or within 10 days after receipt of the timely requested additional information or correction of errors or omissions. Every application for license shall be approved or denied within 90 days after receipt of the original application or receipt of the timely requested additional information or correction of errors or omissions. Any application for a license not approved or denied within the 90-day period or within 15 days after conclusion of a public hearing held on the application, whichever is latest, shall be deemed approved and, subject to the satisfactory completion of an examination, if required as a prerequisite to licensure, [2](the license) shall be issued. The Public Service Commission, when issuing a license, and any other agency, if specifically exempted by law, shall be exempt from the time limitations within this subsection. Each agency, upon issuing or denying a license, shall state with particularity the grounds or basis for the issuance or denial of same, except where issuance is a ministerial act. On denial of a license application on which there has been no hearing, the denying agency shall inform the applicant of any right to a hearing pursuant to s. 120.57.

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

Pinellas County AP
Florida Power Corporation

Mr. G. C. Moore
Florida Power Corp.
P.O. Box 14042
St. Petersburg, Fla. 33733

Dear Mr. Moore:

Enclosed is Permit Number AO52-20186, dated August 6, 1979, to operate the subject 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, (copy enclosed) 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,

for P. David Puchaty
District Manager

cc: Record Center
W. P. Stewart, P.E.

Enclosure

DER Form 17-1.122 (66)

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

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and,

(g) Such other information which the petitioner contends is material.

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

A052-2040
0012-01
Higgins #1

52-1027

2

D.P.C.
JUN 30 1975
WEST CENTRAL REGION
WINTER HAVEN

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

APPLICATION TO OPERATE/~~CONSTRUCT~~ POLLUTION SOURCES

SECTION I – GENERAL INFORMATION FOR ALL POLLUTION SOURCES

I TO BE FILLED IN BY APPLICANT

Source Type: Air Pollution
Type application: [X] Operation [ ] Temporary Operation [ ] Construction
Status Source: [ ] New [X] Existing [ ] Modification

Source Name: Higgins Unit No. 1 County: Pinellas

Source Location: Street: P. O. Box J City: Oldsmar, FL 33557
(Water Source Only) Lat: ____° ____' ____" Long: ____° ____' ____"
(Air Source Only) UTM: East 336540 North 3098250

Appl. Name and Title: W. P. Stewart, Director, Power Production
Appl. Address: P. O. Box 14042 C-4, St. Petersburg, FL 33733

II TO BE FILLED IN BY REGION (*BY BUREAU OF PERMITTING)

Control No: Region ____ County ____ Type ____ *Project ____

Type Permit	Date Rec'd	*Permit No.	*Issue Date	*Compl. Date	*Exp. Date

Source Description: ____
Control Equipment: ____

Water Permits

Receiving Body Code: ____ Surface Water Code: ____
Station No.: Influent: ____ Effluent: ____

Effluent:	Average	Design	% Reduction
Flow rate, MGD			
BOD, lbs/day			
Susp. Sol., lbs/day			
Other:			

Air Permits

Operating Time: [ ] Continuous [ ] Intermittent
Fuel: Type ____ M-BTU/hr. In Put ____
Incinerator: Capacity, tons/day ____ Type Waste ____
Mfg. & Model ____

Pollutant Emissions, lbs/day	Actual	Design	Allowable
Particulate			
Sulfur Oxides			
Other:			

Implementation: Estimated Appl. Filing Date ____
Estimated Start of Const. ____ Estimated Compliance Date ____

DESCRIPTION OF PROPOSED PROJECT

A. Describe the nature and extent of the proposed project. Refer to existing pollution control facilities, DPC permits, conditions, orders and notices, expected improvement in performance of the facilities and state whether the proposed project will result in full compliance of the source. Attach additional sheet if necessary.

N/A

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

Federally or State Financed Projects only:

Planning Complete N/A

Financing Program Complete

Indicate other local, state and/or federal agency approvals and dates

All projects:

Start of Construction

Completion of Construction

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

N/A

D. Indicate any previous DPC permits, issuance dates, and expiration dates.

DPC Permit No. A052-2040 issued 5/18/73, expires 7-1-75.

AIR POLLUTION SOURCES & CONTROL DEVICES

A. Identification of Air Contaminants

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

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

3) [X] Nitrogen Compounds
   a) [X] 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) N/A

Description	Utilization Tons/day, lbs./day, etc.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	%-Wt.	

C. Process Weight:

1) Total Process Weight Rate _____ lbs./hr. [See Sec. 17-2.04(2)]
2) Product Weight _____ lb./hr. expressed as _____
3) Normal Operating Time 24 hrs/day, if seasonal describe: N/A

D. Airborne Contaminants Discharged:

Name of Contaminant	Actual Discharge	Discharge Criteria*	Allowable Discharge*	Relate Location to Flow Diagram
Particulate	0.17 lb./10^6 BTU			
SO_2	2.7 lb/10^6 BTU			

* Refer to Chapter 17-2 Florida Administrative Code
(Discharge Criteria: Process Weight Rate, #/tonP_2O_5, #/M BTU/hr etc.)

E. Control Devices: None

Name	Eff.	Conditions of Operation, Particle Size Range, etc.	Relate to Flow Diagram

F. Fuels:

Type (Be specific)	Daily Consumption	Heat Input BTU/hr.	Relate to Flow Diagram
Oil 80%	1070 bbl.	281 x 10^6	
Gas 20%	1699 mcf.	69 x 10^6	

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

Fuel is burned in the boiler to generate steam. This steam drives the turbine which turns the generator.

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

STATEMENTS BY APPLICANT AND ENGINEER

A. Applicant

The undersigned owner or authorized representative of * Florida Power Corporation is fully aware that the statements made in this application for a renewal Operation permit 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 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.

W. P. Stewart

Signature of the Owner or Authorized Representative

W. P. Stewart, Director, Power Production

Name and Title (Please Type)

Date: June 27, 1975 Telephone No.: (813) 866-4159

* Attach a letter of authorization

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 control and discharge of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution source(s) with appropriate control facilities, when properly maintained and operated, will comply 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 installation covered in this application.

Signature W. P. Stewart

Mailing Address: Florida Power Corporation
P. O. Box 14042 C-4
St. Petersburg, FL 33733

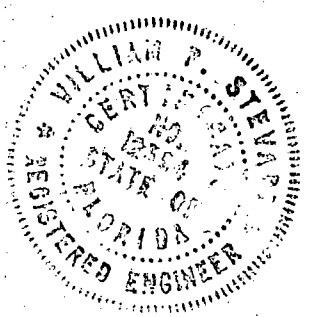
Name: W. P. Stewart
(please type)

Telephone No.: (813) 866-4159

Florida Registration Number 12594

Date: June 27, 1975

(Please affix seal)



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.

75TH YEAR

Florida Power
CORPORATION

Florida Department of Pollution Control
2562 Executive Center Circle East
Montgomery Building
Tallahassee, Florida 32301

Gentlemen:

Subject: Letter of Authorization

Please be advised that Mr. W. P. Stewart, Director, Power Production, is properly authorized to be the representative in matters relating to Applications for Permits to Operate Existing Air and Water Pollution Sources of Florida Power Corporation, as required by the Florida Department of Pollution Control.

Sincerely,

B. L. Griffin
Vice President

BLG:cb

STATE OF FLORIDA

OFFICE OF SECRETARY OF STATE

I, Bruce A. Smathers, Secretary of State of the State of Florida, do hereby certify that the records of this office indicate that FLORIDA POWER CORPORATION (the "Company"), a corporation organized under the Laws of the State of Florida on July 18, 1899, has filed instruments in this office affecting its Charter as follows:

(a) A Composite Certificate of Reincorporation, as amended through June 16, 1966 (with Appendix consisting of Items A, B and C), containing only such provisions as were in effect as of such date;

(b) On March 31, 1970, a Certificate of Amendment of the Composite Certificate of Reincorporation of the Company;

(c) On November 12, 1970, certified copy of a Resolution duly adopted by its Board of Directors on November 5, 1970, creating and establishing an 8.80% Series of Cumulative Preferred Stock;

(d) On April 2, 1971, a Certificate of Amendment of the Composite Certificate of Reincorporation of the Company;

(e) On April 4, 1972, a Certificate of Amendment of the Composite Certificate of Reincorporation of the Company;

(f) On June 8, 1972, a certified copy of a Resolution duly adopted by its Board of Directors on June 1, 1972, creating and establishing a 7.40% Series of Cumulative Preferred Stock;

(g) On December 11, 1973, a certified copy of a Resolution duly adopted by its Board of Directors on December 4, 1973, creating and establishing a 7.76% Series of Cumulative Preferred Stock;

(h) On April 1, 1974, a Certificate of Amendment of the Composite Certificate of Reincorporation of the Company; and

(i) On June 18, 1974, a certified copy of a Resolution duly adopted by its Board of Directors on June 10, 1974, creating and establishing a 10% Series of Cumulative Preferred Stock.

I do hereby further certify that (i) no Amendments to the Composite Certificate of Reincorporation (other than as mentioned above) have been filed by the Company; (ii) the Company has complied with the requirements of Chapter 28170, Laws of Florida, Acts of 1953, as amended, and has paid in full its corporation capital stock taxes thereunder; and (iii) the Charter of the Company remains in full force and effect.

GIVEN under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the 12th day of March, A.D., 1975.

Bruce A. Smathers

SECRETARY OF STATE

52-1573

RECEIVED
MAR 1 1971
DEPT. OF A.W.P.C.
WEST CENTRAL REGION
WINTER HAVEN

State of Florida
Department of Air and Water Pollution Control

Application for Permit to Operate Air Pollution Sources

Applicant
(Owner or authorized agent): G. W. Marshall, Production Superintendent
(Name and Title)

Name of Establishment: Florida Power Corporation (Higgins #1)
(Corporation, Company, Political SD, Firm, etc.)

Mailing Address: P. O. Box J, Oldsmar, Fla. 33557

Location of Pollution Source: Shore Drive, Oldsmar, Fla.
(Number and Street) (City)

$^{30}98250$ m N
$^{3}36540$ m E

Pinellas
(County)

Nature of Industrial Operation: Electric Utility

Permit Applied For Operating:

New Source	☐
Existing Source	XX
Existing Source after modification	☐
Existing Source after Expansion	☐
Existing Source After relocation, expansion or reconstruction	☐

Project Engineer:

G. W. Marshall
Name

Florida Power Corporation (Higgins #1)
Firm

P. O. Box 14042, St. Petersburg, Fla. 33733
Mailing Address

G W Marshall
Signature

6008
Florida Registration Number

For Department's Use Only Permit No. Date:

1-D

The undersigned ~~XXXXXXXX~~ authorized representative* of Florida Power Corporation is fully aware that the statements made in this form and the attached exhibits and statements constitute the application for an Operation 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.

G W Marshall

Signature of ~~XXXXXX~~ agent.

G. W. Marshall, Production Superintendent

Name and Title

Date: March 3, 1971

*Attach letter of authorization.

Project History

DAWPC CONSTRUCTION PERMIT NO. & DATE _____

DIVISION OF HEALTH SERIAL NO. & DATE _____

FLORIDA POWER CORPORATION
ST. PETERSBURG FLORIDA

February 18, 1971

Florida Department of
Air and Water Pollution Control
Suite 300, Tallahassee Bank Building
315 South Calhoun Street
Tallahassee, Florida 32301

Subject: Letter of Authorization

Gentlemen:

Please be advised that Mr. George W. Marshall, Production Superintendent, is properly authorized to be the representative in matters relating to Applications for Permits to Operate Existing Air and Water Pollution Sources of Florida Power Corporation, as required by the Florida Department of Air and Water Pollution Control.

Very truly yours,

FLORIDA POWER CORPORATION

A. J. Ormston
Vice President

AJO:Bjh

Information Regarding Pollution Sources and XXXXXXX Control Facilities

1. Actual cost of control facilities $ 14,000.

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. (Note Steam And Other Gaseous Emission Sources In Addition To Stack)

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.

X

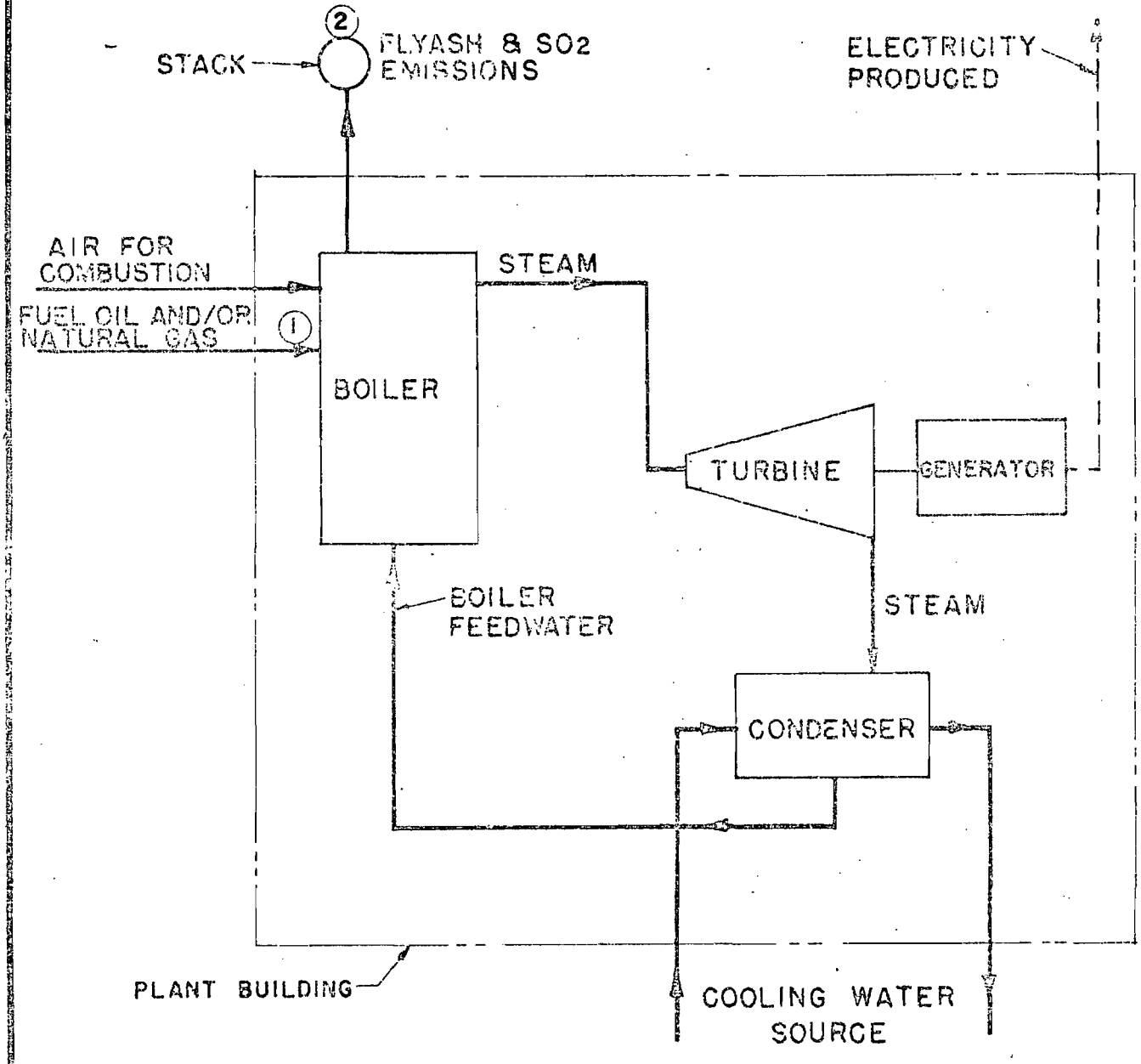
4. Submit an 8½" x 11' plot plan showing the exact location of the establishment and points of discharge in relation to the surrounding area, residences and other permanent structures and roadways. (USGS Map)

X

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	
N/A	N/A	N/A	N/A	N/A



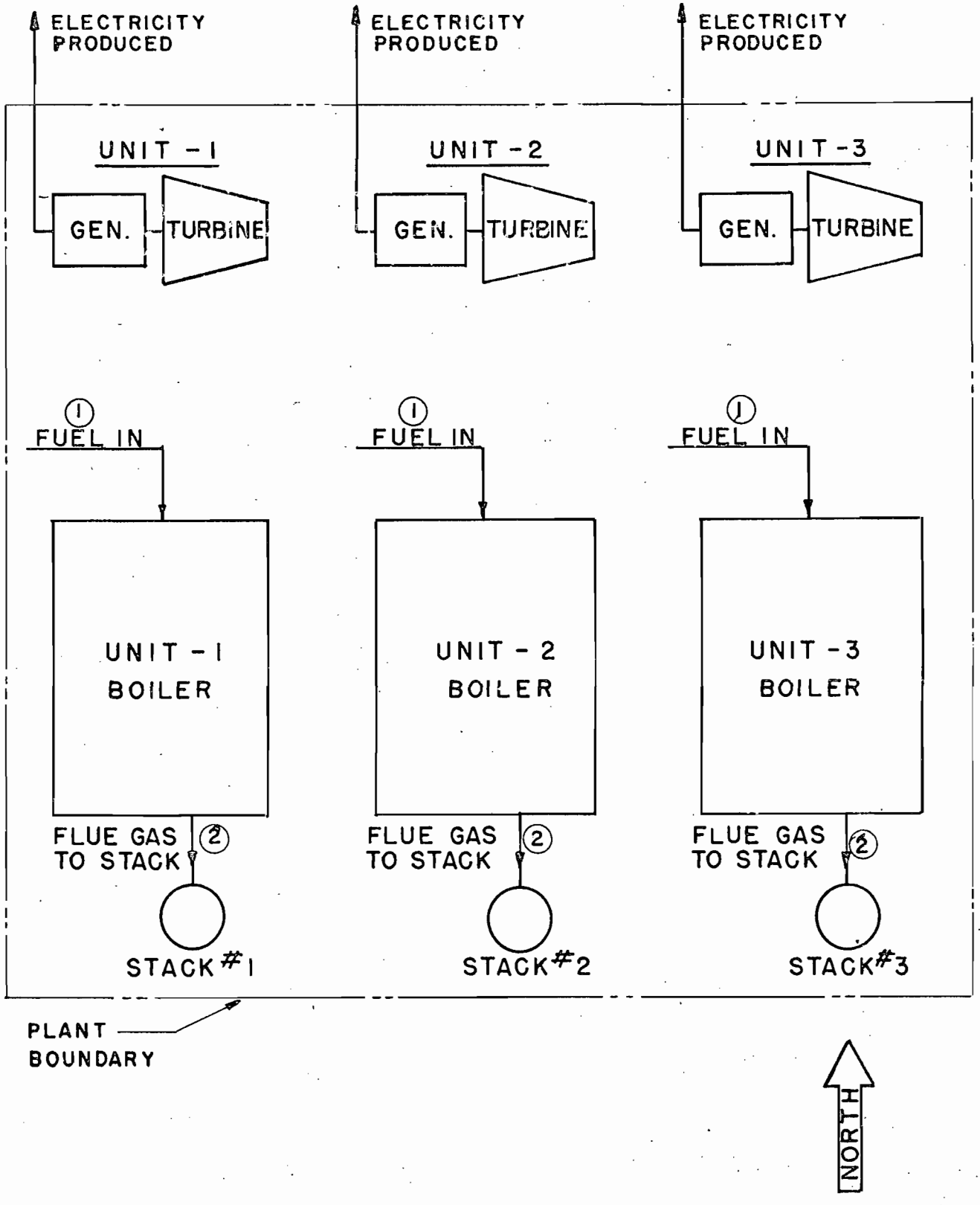
NO.	DATE	REVISION	CK.	APP.

DATE 2-4-71 SCALE NONE BY HTG CK EJ APP. BTM

AIR POLLUTION FLOW DIAGRAM

PROJECT UNIT - 1 HIGGINS PLANT

DRAWING NO. A-717-H



NO.	DATE	REVISION	BY	CK.	APP.

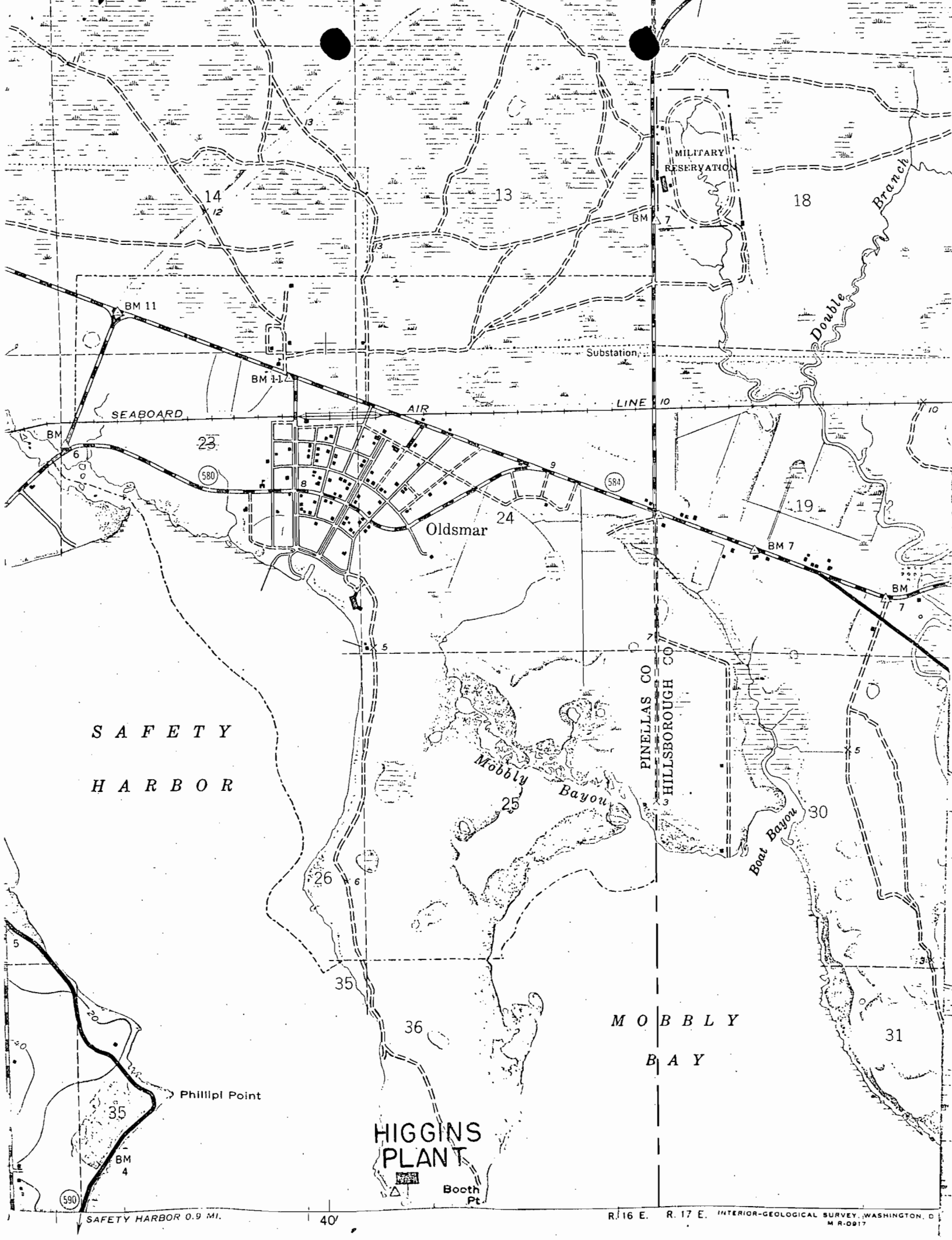
DATE 2-8-71 SCALE NONE BY HG CK. EP APP. BJM

PLANT PLOT PLAN

PROJECT HIGGINS PLANT

FLORIDA POWER CORPORATION
ST. PETERSBURG, FLORIDA

DRAWING NO. A - 113 - H


MILITARY RESERVATION
Double Branch
BM 11
BM 11-1
Substation
SEABOARD AIR LINE
BM 6
BM 7
BM 7
BM 7
Oldsmar
SAFETY HARBOR
Mobbly Bayou
PINELLAS CO
HILLSBOROUGH CO
Boat Bayou
MOBBLY BAY
Phillipi Point
HIGGINS PLANT
Booth Pt
BM 4
SAFETY HARBOR 0.9 MI.
40'
R. 16 E.
R. 17 E.
INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C.
M R-0917

B. Fuels

Type (Be Specific)	Daily Consumption	Gross Maximum Heat Output	Relate to Flow Diagram
Oil and Gas	Oil- 1,070 Bbl/Day -80% Gas- 1,699 mcf/Day -20%	6,740,000,000 Btu/Day 1,640,000,000 Btu/Day	1

C. Products

Description	Average Daily Production (Tons/Day. Lbs/Hr. etc.)
Electricity	724 MWH/Day

D. Normal operation: Hours/Day 24 Day and Week 7

If operation or process is seasonal, describe: _____

II Identification of Air Contaminants

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

Specific Compounds SO_X

III Air Pollution Control Devices

Contaminant	Control Device	Relate to Flow Diagram	Operating Efficiency	Conditions (Particle Size Range, Temp. etc.)
Fly Ash	Stack	2	N/A	300°F @ 51 ft/sec
SO_X	Stack	2	N/A	N/A

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

N/A

IV. Contaminant Balance

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

	Pounds Contaminant per Day (AVG)	
	Input	Output
List ~~XXXXXXXXXXXX~~ Fuel:		
Fuel Sulfur	8,807 Lbs/Day	
Fuel Ash	258 Lbs/Day	
List Manufactured Products:		
Electricity	N/A	N/A
List Solid Wastes: (Total Retained Ash)		30 Lbs/Day
List Liquid Wastes: N/A		
Totals	9,065 Lbs/Day	30 Lbs/Day

Airborne Wastes (Total input minus total output)

9,035 Lbs/Day

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 Emissions to Atmosphere

A. Discharge Points and Design Conditions

Discharge Point Description	Relate to Flow Diagram	Height above Ground (ft.)	Exit Cross Sect. Area (sq. ft.)	Periods of Flow Hrs./ Day	Temp. of Discharge (°F)
Stack	2	174	123	24	300

$A = .785 D^2$

$D = \sqrt{\frac{A}{.785}} = \sqrt{\frac{123}{.785}} = 12.5$ ft

B. Tabulation of Discharged Contaminants (Calculated values)

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 (F^-, SO_X, NO_X etc.) Gr/ft3 (Std. Cond.)	Other Contaminants lbs/ Day	Other Contaminants Gr/ft3 (Std.Cond)	Other Contaminants lbs/ Day
Average Conditions) Stack (2)	127,000	.035	900	SO_X .446	11,600		
	(State Std. Cond. Used)		38 #/hr		483 #/hr		
	300°F, 29.92"Hg		.108		1.38		
Peak Emission Condition and Frequency) Stack(2)	152,000	.037	N/A	SO_X .448	N/A		
(Frequency is approx. 4 hrs/day)							
Totals							

VI. Treatment and Disposal of Liquid and Solid Waste

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

   Total Retained Ash

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

   Retained Ash is approx. 10,500 Lbs/Yr.

   The Ash goes to a settling basin which is located on Plant Property.

AIR
Bill Thomas
all PA's
ff

To: Jerry
cc: Bill P.
permit file

Florida Power
CORPORATION

D.E.P.
MAR 11 1994

March 7, 1994

Richard D. Garrity, Ph.D.
Florida Department of
Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

Dear Dr. Garrity:

Re: Florida Power Corporation
A. W. Higgins Power Plant
Extended Cold Shutdown
Industrial Wastewater Permits

The purpose of this letter is to inform the Department of the change in operational status of the above referenced facility. As of January 24, 1994, the steam-electric generating portion of the A. W. Higgins Power Plant, near Oldsmar, on Old Tampa Bay, was placed into Extended Cold Shutdown (ECS).

This operational status is not a retirement of the facility but simply a discontinuation of operation for a longer than usual period of time. All equipment involved with the operation of the plant will be preserved. Therefore, all industrial wastewater operation permits for the power plant will be maintained in order to allow for the possible re-start of these units at some time in the future.

If you have any questions, please contact me at (813) 866-4387.

Sincerely,

W. Jeffrey Pardue, C.E.P., Manager
Environmental Programs

RWK

cc: Captain R. W. Harbert, U. S. Coast Guard - Tampa
Robert K. Vanderslice, P.E., FDEP - Tampa

ENVIRONMENTAL SERVICES DEPARTMENT
H2G • 3201 Thirty-fourth Street South • P.O. Box 14042 • St. Petersburg, Florida 33733 • (813) 866-5151
A Florida Progress Company

MEMORANDUM

TO: J. Harry Kerns, P.E. **DATE:** 04/21/93
District Air Engineer

FROM: David Zell
Permit Engineer

SUBJECT: Company: Florida Power Corp. - Higgins Plant
Permit Nos: AO52-216382, AO52-216383 and AO52-216384
County: Pinellas
Project: Higgins Units No. 1, No. 2, and No. 3
Permit Re-issuance
Default Date (DAY 90): Not applicable

Renewal operation permits for three existing electric utility steam generators (boilers) were issued on 01/26/93. On 02/09/93 FPC submitted a request for extension of time to file a petition for hearing. On 02/18/93 OGC granted an extension to 04/16/93. On 03/22/93 FPC submitted comments on permit language that they requested be changed. After discussions with Pinellas County DEM and FPC staff, certain revisions were agreed to on 04/15/93. In order to allow time for the revisions to be made and revised permits to be re-issued to FPC for their review, an additional extension to 05/14/93 was requested by FPC.

The changes to the permit involve removal to references or calculations of lb/MMBtu and lb/hr SO2 emission limits based on the 2.5% fuel oil sulfur content limit and an assumed heat content. Instead lb/MMbtu and lb/hr limitations will be based only on the 2.75 lb/MMBtu limit contained in the permit and Rule 17-296.405(1)(c)1.k., F.A.C. The 2.5% maximum fuel oil sulfur content limit still remains in the permit. Other changes involved corrections to specifics of the O&M plans (Specific Condition No. 15).

I recommend that these permits be re-issued as conditioned and submit them for your review and approval.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

FLORIDA POWER CORPORATION,

Petitioner,

vs.

OGC CASE NOS. 93-0317
93-0318
93-0319

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.
_____/

ORDER GRANTING SECOND REQUEST FOR EXTENSION OF TIME TO FILE PETITION FOR HEARING

This cause has come before the Florida Department of Environmental Regulation (Department) on receipt of a second request made by Petitioner Florida Power Corporation, under Florida Administrative Code rule 17-103.070, to grant an extension of time to file a petition for an administrative hearing on Application Nos. AO52-216382, AO52-216383 and AO52-216384. See Exhibit 1 attached.

Counsel for Petitioner has discussed this request with counsel for Respondent State of Florida Department of Environmental Regulation, which has no objection to it. Therefore,

IT IS ORDERED:

The request for an extension of time to file a petition for administrative proceeding is granted. Petitioner shall have until May 21, 1993, to file a petition in this matter. Filing shall be complete upon receipt by the Office of General Counsel, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DONE AND ORDERED on this 21ST day of April 1993 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Daniel H. Thompson

DANIEL H. THOMPSON
General Counsel

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

W. Jeffery Pardue, Manager
Environmental Programs
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

on this 21st day of April 1993.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

W. Douglas Beason

W. DOUGLAS BEASON
Assistant General Counsel

2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

Florida Power
CORPORATION

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 2
To Doug Beason	From Florida Power
Co. DGC	Co.
Dept.	Phone # (813) 866-4344
Fax # (904) 488-2439	Fax # (813) 866-4926

April 15, 1993

Mr. Doug Beason, Esq.
Office of General Counsel
Florida Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399-2400

RECEIVED
APR 16 1993
Dept. of Environmental Reg.
Office of General Counsel

Dear Mr. Beason:

Re: Higgins Steam Units Renewal Permits - Nos. A052-216382, -216383, -216384
Bartow Steam Units Renewal Permits - Nos. A052-216412, -216413

On January 27, 1993 Florida Power Corporation (FPC) received the referenced permits. FPC requested and obtained an extension of the time in which to file a petition for an administrative hearing up to and including April 16, 1993. Discussions with DER Southwest District personnel regarding the permit conditions have not yet been completed, so additional time is needed. Therefore, in accordance with Rule 17-103.070, FPC respectfully requests an additional extension of the time in which to file a petition for an administrative hearing, up to and including May 14, 1993. Mr. David Zell of FDER has been contacted regarding this request and has given his concurrence.

Thank you for your consideration of this request. Please contact Mr. Mike Kennedy of my staff at (813) 866-4344 if you have any questions.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Mr. David Zell, FDER
Mr. Gary Robbins, Pinellas County
Mr. Albert W. Morneault, P.E.

EXHIBIT 1

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

FLORIDA POWER CORPORATION,

Petitioner,

vs. OGC CASE NOS. 93-0317
93-0318
93-0319

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.
_____/

ORDER GRANTING REQUEST FOR EXTENSION OF TIME TO FILE PETITION FOR HEARING

This cause has come before the Florida Department of Environmental Regulation (Department) on receipt of a request made by Petitioner Florida Power Corporation, under Florida Administrative Code rule 17-103.070, to grant an extension of time to file a petition for an administrative hearing on Application Nos. AO52-216382, AO52-216383 and AO52-216384. See Exhibit 1 attached.

Counsel for Petitioner has discussed this request with counsel for Respondent State of Florida Department of Environmental Regulation, which has no objection to it. Therefore,

IT IS ORDERED:

The request for an extension of time to file a petition for administrative proceeding is granted. Petitioner shall have until April 16, 1993, to file a petition in this matter. Filing shall be complete upon receipt by the Office of General Counsel, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DONE AND ORDERED on this 17th day of February 1993 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

DANIEL H. THOMPSON
General Counsel

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

W. Jeffery Pardue, Manager
Environmental Programs
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

on this 18th day of February 1993.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

W. DOUGLAS BEASON
Assistant General Counsel

2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

Florida Power
CORPORATION

February 9, 1993

Mr. Doug Beason, Esq.
Office of General Counsel
Florida Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399-2400

Dear Mr. Beason:

Re: Higgins Steam Units Renewal Permits - Nos. A052-216382, -216383, -216384
Bartow Steam Units Renewal Permits - Nos. A052-216412, -216413

On January 27, 1993 Florida Power Corporation (FPC) received the referenced permits. Because substantial changes have been made to the permits, not all affected parties at FPC have had sufficient time to fully review them. Therefore, in accordance with Rule 17-103.070, FPC respectfully requests an extension of the time in which to file for a petition for an administrative hearing, up to and including April 16, 1993. Mr. David Zell of FDER has been contacted regarding this request and has given his concurrence.

Thank you for your consideration of this request. Please contact Mr. Mike Kennedy of my staff at (813) 866-4344 if you have any questions.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Mr. David Zell, FDER
Mr. Gary Robbins, Pinellas County
Mr. Albert W. Morneault, P.E.

Florida Power
CORPORATION

March 17, 1993

Mr. David R. Zell
Southwest District
Florida Department of Environmental Regulation
3804 Coconut Palm
Tampa, FL 33619

Dear Mr. ~~Zell~~ Dave:

Re: Higgins Units 1, 2, 3 (Permit Nos. A052-216382, -216383, -216384) Permit Renewals

On January 27, 1993 Florida Power Corporation (FPC) received the above-referenced operating permit renewals. FPC requested an extension of the time in which to file for an administrative hearing, up to and including April 16, 1993. FPC has reviewed the permits, and offers the following comments for your consideration. The comments are given by condition number and apply to all three permits.

Specific Condition 5.

Sulfur content of the No. 6 fuel oil fired in this boiler shall not exceed 2.5% sulfur by weight. (Based upon a No. 6 oil fuel heat content of 150,000 Btu/gallon, this represents a maximum sulfur dioxide emission rate of 2.62 pounds/MMBtu.) In no case shall sulfur dioxide emissions from this boiler exceed 2.75 pounds/MMBtu of heat input nor [1,434 pounds per hour for Units 1 and 3, 1,368 pounds per hour for Unit 2] at maximum heat input rate.

The sentence contained in parentheses appears to be unnecessary, because it simply describes a representative emission rate at full capacity based on an assumed heat content of the fuel. The fuel heat content may vary from the 150,000 Btu/gal. figure.

The lbs./hour limit of 1,434 is based on the AP-42 emission factor for residual oil of 157(S), where S is the sulfur content of the fuel in percent. This factor assumes a fuel sulfur to SO_2 emissions conversion efficiency of 95% and is useful for estimating actual SO_2 emissions. FPC requests that the lbs./hour limit be based on the maximum heat input capacity multiplied by the emission limit of 2.75 lbs./MMBtu. This results in an hourly emission limit of 1,507 lbs. for Units 1 and 3, and 1,438 lbs. for Unit 2.

Specific Condition 14.

.... based on the rate at which the May 1992 stack test was conducted, the maximum permitted

fuel oil sulfur content for this boiler is currently limited to 1.0 % S by weight. .... Any time the above permitted fuel oil sulfur content is exceeded by more than 10% (monthly average) a compliance test shall be performed within 30 days of initiation of the use of the higher sulfur content fuel oil and the test results shall be submitted within 45 days of testing. Acceptance of the test by the Department will constitute an amended permit at the higher sulfur content not to exceed a maximum sulfur content of 2.5%S by weight.

The pollutant for which the prescribed compliance test would be performed is unclear, but this condition is apparently using the fuel sulfur content obtained during the May 1992 particulate compliance test as a surrogate measure of regulating the particulate emissions. The fuel sulfur level is not necessarily an indicator of the boiler's particulate emissions. Therefore, a particulate compliance test should not be required if the sulfur content exceeds 1.1% but is less than the permitted limit of 2.5%. In addition, the compliance method for SO_2 emissions is fuel sampling and analysis. FPC requests that this condition be deleted from all three permits.

Specific Condition 15.A.6. (Units 1 and 3)

The representative steam pressure given for Units 1 and 3 should be corrected from 1,350 psi to 1,315 psi. This was the value given in previous permits and it is equal to that for Unit 2.

Specific Condition 15.B.4.

Plant operators are to monitor, adjust and record the following operating parameters at least once per day to assure efficient plant operation:

a. pressures (furnace, superheat, reheat, air heater and windbox)
b. temperatures (superheat, reheat, and fuel)
c. flows (steam, feedwater, fuel)
d. unit load

These are not reheat units, so the references to reheat in this condition should be removed. In addition, FPC requests that a., regarding pressures, be deleted from this condition. The pressure levels referred to in a. are not air emission-related parameters, and therefore provide little additional useful information.

Specific Condition 16.

The maximum potential sulfur dioxide emissions given in lbs./hour and tons/year are based on the AP-42 emission factor, as they were in Specific Condition 5. Again, it is FPC's opinion that the 2.75 lb./MMBtu emission limit multiplied by the maximum heat input capacity should be used to calculate maximum sulfur dioxide emissions. As discussed earlier, FPC requests that the lbs./hour limit be changed to 1,507 for Units 1 and 3, and 1,438 for Unit 2. This would then change the maximum annual SO_2 emissions to 6,601 tons/year for Units 1 and 3, and 6,298 tons/year for Unit 2.

Thank you for your consideration of FPC's comments. Feel free to contact me at (813) 866-4344 if you have any questions or would like additional information.

Sincerely,

Mike Kennedy

J. Michael Kennedy
Environmental Specialist

cc: Mr. Gary Robbins, Pinellas County
Mr. Albert W. Morneault, P.E.

Florida Power
CORPORATION

D.E.R.

FEB 10 1993

SOUTHWEST DISTRICT TAMPA

February 9, 1993

Mr. Doug Beason, Esq.
Office of General Counsel
Florida Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399-2400

Dear Mr. Beason:

Re: Higgins Steam Units Renewal Permits - Nos. A052-216382, -216383, -216384
Bartow Steam Units Renewal Permits - Nos. A052-216412, -216413

On January 27, 1993 Florida Power Corporation (FPC) received the referenced permits. Because substantial changes have been made to the permits, not all affected parties at FPC have had sufficient time to fully review them. Therefore, in accordance with Rule 17-103.070, FPC respectfully requests an extension of the time in which to file for a petition for an administrative hearing, up to and including April 16, 1993. Mr. David Zell of FDER has been contacted regarding this request and has given his concurrence.

Thank you for your consideration of this request. Please contact Mr. Mike Kennedy of my staff at (813) 866-4344 if you have any questions.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Mr. David Zell, FDER
Mr. Gary Robbins, Pinellas County
Mr. Albert W. Morneault, P.E.

Florida Power
CORPORATION

David L. Miller
Senior Vice President
Administrative Services

January 4, 1993

TO WHOM IT MAY CONCERN

Subject: Letter of Authorization

Please be advised that Patricia K. Blizzard, Director, Environmental Services Department, and Mr. W. Jeffrey Pardue, Manager of Environmental Programs, are authorized to represent Florida Power Corporation in matters relating to necessary permits and reporting documentation required from regulatory authorities in the areas of air, water, power plant site certifications and transmission line certifications, or hazardous and solid materials issues.

Sincerely,

David L. Miller

DLM:mlp

MEMORANDUM

TO: J. Harry Kerns, P.E. **DATE:** 01/20/93
District Air Engineer

FROM: David Zell DZ
Permit Engineer

SUBJECT: Company: Florida Power Corp. - Higgins Plant
Permit Nos: AO52-216382, AO52-216383 and AO52-216384
County: Pinellas
Project: Higgins Units No. 1, No. 2, and No. 3
Default Date (DAY 90): **01/27/93**

These applications for renewal of operation permits for three existing electric utility steam generators (boilers) was received from FPC on 07/16/92. The original completeness review was done by Gary Maier. Additional information was requested on 08/14/92 with a response received on 10/30/92. David Zell reviewed the additional information response and drafted the permits.

The permitted sources consists of Higgins Unit 2 (rated at 43 MW and 548 MMBtu/hr) Higgins Unit 2 (rated at 43 MW and 523 MMBtu/hr) and Higgins Unit 3 (rated at 43 MW and 548 MMBtu/hr). All three units are fired on No. 6 fuel oil with a maximum sulfur content of 2.5%. When it is available, Units 1 and 2 can also be fired on natural gas.

Particulate and Method 9 visible emission tests were conducted on all three units during May 1992. The tests showed compliance with the permit limitations.

A rough drafts of a proposed permit was received from Pinellas Co. DEM on 12/30/92 (Day 63).

Note: These permits were written based upon thorough review of the previous permits, the permit issued in 1988 for Bartow Unit No. 1, the recently drafted permits for Bartow Units 2 and 3, the draft permit submitted by Pinellas Co. and the recently issued permits for FPL Manatee. This required considerable effort and resulted in a number of revised and added conditions from the previous permit. In turn, these permits will be used as a basis for future power plant operation permits issued by the SW District.

I recommend that these permits be issued as conditioned and submit them for your review and approval.

PERMIT APPLICATION FEE/ASSIGNMENT SHEET

APPLICATION TYPE AO (Renewal) FILE/PROCESSING NO. A052 - 216382

COMPANY Florida Power Corp. COUNTY Pinellas

SOURCE DESCRIPTION/COMMENTS Higgins Unit 1 (Steam Boiler)

DATE APPL. REC'D (Day 1): 7/16/92

CHECK ATTACHED: (Y) N Not Required ( ) APPLICATION SUB TYPE CODE 1A

FEE SUBMITTED: (✓) correct ( ) incorrect - Should Be $ 2000.00
Submitted $- 2000.00
Needed/Refund $ —

FEE CHECKED BY: DBJ DATE 7/17/92

APPLICATION ASSIGNED TO: G. Maier / D. Zell DATE 7/92 / 10/30/92

PERMIT APPLICATION PROCESSING STATUS

	Completed	Initials
Date PATS Updated With Processor Name:	—	— GM
Date AC Logged By Section Secretary:	—	—
Permit Engineer Submit Finished Permit Package & Recommendations to District Air Engineer:	1/20/93	DBJ
Permit Package to District Air Administrator:	1-22-93	
Permit Package to Director of District Management:	1/25/93	
Permit Package Mailed Out:	JAN 26 1993	MQ

DATA FOLLOW UP

Issue Date Updated on PATS:	JAN 26 1993	MQ
Updated on Wang:	—	—

* Marilyn 1/20/93
Please see DZ before issuing the 3 FPC Higgins permits
Thanks, DZ

Day 90 is Wed. 4/21/93 ★

(PERMAPPL.SHT) (11/08/91)

APPLICATION TRACKING SYSTEM JAN 26 1993 07/20/92

APPL NO:216382
APPL RECVD:07/16/92 TYPE CODE:AO SUBCODE:1A LAST UPDATE:07/20/92
DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:__/__/__
DER PROCESSOR:~~AIR MAIER~~ ZELL
APPL STATUS:AC DATE:07/16/92 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:__ (SSAC/EXEMPTIONS/VARIANCE)
(Y/N) N MANUAL TRACKING DISTRICT:40 COUNTY:52
(Y/N) N OGC HEARING REQUESTED 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:FLA POWER CORP HIGGINS #1
STREET:SHORE DRIVE CITY:OLDSMAR
STATE:FL ZIP:_____ PHONE:___-___-____
APPLICATION NAME:FLORIDA POWER CORP.
STREET:SHORE DRIVE CITY:OLDSMAR
STATE:FL ZIP:_____ PHONE:___-___-____
AGENT NAME:_____
STREET:_____ CITY:_____
STATE:__ ZIP:_____ PHONE:___-___-____
FEE #1 DATE PAID:07/16/92 AMOUNT PAID:02000 RECEIPT NUMBER:00197824

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 - - - - 08/14/92 10/30/92
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 - - - - - - - - - - - - 10/30/92
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:

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

197824

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Florida Power Corp. Date 7-16-92

Address PO Box 14042 St. Petersburg Dollars $ 2000.00

Applicant Name & Address Same

Source of Revenue Fossil Fired Steam Generator #1, 2-13

Revenue Code 1032 Application Number 1052-216382; 216383
216384

R 143149

By Johnnie King

Florida Power & Light Company, P.O. Box 088801, North Palm Beach, FL 33408-8801

FPL

Done - FYI + filing

D.E.R.

JAN 14 1993

SOUTHWEST DISTRICT TALLAHASSEE

January 8, 1993

Ms. Dana Minerva, Assistant Secretary
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Ms. Minerva:

This correspondence is to certify that Ms. Elsa A. Bishop, Acting Supervisor of Air Permitting and Programs in the Environmental Affairs Department of Florida Power & Light Company, is authorized to act as an agent and representative for Florida Power & Light Company in DER Air permit actions. Correspondence from DER to FPL, including inspection reports, notices of violation, requests for information, etc., can be addressed to Ms. Bishop at the following address:

Ms. Elsa A. Bishop, Acting Supervisor
Air Permitting and Programs
Environmental Affairs Department
Florida Power & Light Company
P.O. Box 11770 U.S. Highway One, 4th Floor
North Palm Beach, Florida 33408
(407) 625-7607

Sincerely,

Nancy H. Roen
Director
Environmental Affairs

NHR:jm

cc: Mr. Ernest Frey - DER/Jacksonville
Mr. A. Alexander - DER/Orlando
Dr. Richard Garrity - DER/Tampa
Mr. Philip Edwards - DER/Ft. Myers
Ms. Mary E. S. Williams - DER/ West Palm Beach

BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPT. OF ENVIRONMENTAL MGMT.
AIR QUALITY DIVISION
300 S. GARDEN AVE.
CLEARWATER, FL 34616

COMMISSIONERS

GEORGE GREER - CHAIRMAN
JOHN CHESNUT, JR. - VICE CHAIRMAN
CHARLES E. RAINEY
BARBARA SHEEN TODD
BRUCE TYNDALL

December 18, 1992

Mr. David Zell
Department of Environmental Regulation
3804 Coconut Palm Drive
Tampa, Fla. 33619-8318

RE: Florida Power Corporation, Permit No. AO52-216382; Higgins Fossil Fuel Steam Generator Unit No. 1.

Mr. Zell:

This office has reviewed the APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S), and the additional information letter, for the above mentioned facility. The application is deemed complete. A model draft permit has been attached for your review, with recommended minimum conditions, if DER determines a permit should be issued. Emission tables for Units 1-3 are also attached for inclusion in their permits.

If you have any questions contact this office at Suncom 570-4422.

Sincerely,

Gary Robbins, Environmental Program Manager
Air Quality Division

cc: PF, RF

AQC.250

APPLICANT:
Florida Power Corporation
Post Office Box 14042
St. Petersburg

PERMIT/CERTIFICATION
No. AO52-216382
County: Pinellas
Exp. Date 9/16/92
Project: Steam Generator
Higgins Unit No. 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 a fossil fuel steam generator (designated as Higgins Unit No. 1) rated at 43 MW/hour with a maximum heat input of 548 MMBTU/hour. Unit is fired on No. 6 fuel oil with a maximum sulfur content of 2.5%. Maximum fuel oil usage is 87 BBL/hour. When available, unit is fired on natural gas at a rate of $0.5(10^6)$ ft^3/hour

Location: Shore Drive, Oldsmar

UTM 17-336.54 E 3098.25 N NEDS NO: 0012 POINT ID 01

Replaces Permit No.: AO52-137124

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.

2. Particulate emissions from this boiler, during normal operation, shall not exceed 0.10 pounds/MMBtu, except as provided for in Section 17-210.700, F.A.C. Based on the Btu rating of this boiler, particulates emissions shall not exceed 54.8 pounds/hour and 240.02 tons/year.
[Rule 17-296.405(2)(a), F.A.C. and OGC File NO. 86-1581]

3. Particulate emissions from this boiler, during boiler cleaning (soot blowing) shall not exceed 0.3 pounds/MMBtu, except as provided for in Section 17-210.700, F.A.C.
[Rule 17-296.405(2)(a), F.A.C. and OGC File NO. 86-1581]

4. Visible emissions from this boiler, during normal operation, is 40% opacity, except as provided for in Section 17-210.700, F.A.C.
[Rule 17-296.405(2)(a), F.A.C. and OGC File NO. 86-1581]

5. Visible emissions from this boiler, during boiler cleaning (soot blowing) and load changes, is 60% opacity, provided the duration of such excess emissions shall not exceed 3 hours in any 24 hour period, and providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emission shall be minimized.
[Rule 17-210.700, F.A.C.]

6. Sulfur dioxide emissions are limited to 2.75 pounds/MMBTU heat input.

7. Test the boiler for visible emissions, particulates, and sulfur dioxide* at intervals of 12 months, within 30 days, from the date of 5/15/87 (the facility was granted reduction in the frequency of testing to annual for this source by the State on December 11, 1986). Submit a copy of test data to the Air sections of the Southwest District of the Department of Environmental Regulation and Pinellas County Environmental Management within 45 days of such testing, Chapter 17-2.297.340, Florida Administrative Code (F.A.C.).

** Fuel analysis may be submitted for required sulfur dioxide emission test (Specific Condition No. 8).

8. Compliance with the emission limitations of Specific Conditions No. 2, 3, 4, 5, and 6 shall be determined by DER Method 9 as contained in Section 17-2.297.340, F.A.C., EPA Method 17[a] or EPA Method 5 as contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.297.340, F.A.C.. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.297.340, F.A.C. and 40 CFR 60, Appendix A. Sulfur content shall be verified by submittal of monthly composite fuel analyses reports on a quarterly basis (within 30 days after the end of each calendar quarter) to the Air Sections of the Department of Environmental Regulation and Pinellas County Environmental Management. These records must be maintained on site for a minimum of two years.

9. Testing of emissions must be conducted within 90-100% of the permitted rates as stated in Condition No. X (Process Parameters). A compliance test submitted at operating levels less than 90% of permitted capacities will automatically constitute an amended permit at the lesser rate until another test (showing compliance) at the permitted rate, as stated above, is submitted. Failure to submit the input rates or operation at conditions during testing which do not reflect actual operating conditions may invalidate the data [Section 403.161(1)(c), Florida Statutes].

10. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department and the Pinellas County Department of Environmental Management. A written report shall be submitted quarterly to this office and the Pinellas County Department of Environmental Management stating the cause, period of noncompliance, and steps taken for corrective action and prevention of reoccurrence.

11. Operation and Maintenance Plan For Particulate Control, Section 17-2.650(2), Florida Statutes:

A. Process Parameters:

1.	Heat Input:	548 MMBTU/hour
2.	Fuel:	Number 6 fuel oil with a 2.5%* sulfur content (natural gas when available)
3.	Fuel Consumption:	87 BBL/hour of Number 6 fuel oil $0.5(10^6)$ ft^3/hour of natural gas
4.	Ash Content:	as sampled
5.	Steam Temperature:	950° F
6.	Steam Pressure:	1315 psi
7.	Steam Flow:	450,000 pounds/hour
8.	Stack Height:	174 feet
9.	Boiler Make:	Babcock and Wilcox
10.	Arrangement:	Front fired

* Based on the last compliance test, conducted on 5/5-6/92, the facility is limited to 1%, or less, sulfur content until the source is retested at a higher sulfur content.

B. Inspection and Maintenance Program:

1. Conducted during major outages: boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.

2. Scheduled during non-peak load periods in Spring and Fall. The schedule is affected by forced outage requirements.

3. The following are to be continuously monitored and maintained to produced efficient fuel combustion:

a. fuel flow
b. fuel temperature
c. fuel pressure
d. air flow
e. steam flow
f. steam temperature
g. steam pressure

4. Plant operators are to monitor, adjust and record the following parameters to assure efficient plant operation at least once per day:
   a. Pressures (furnace, superheat, reheat, air heaters and windbox)
   b. Temperatures (superheat, reheat and fuel)
   c. Flows (steam, feedwater, oil and gas)
   d. Unit load

5. Fuel oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite analysis. Fuel oil is analyzed for the following:
   a. BTU b. API Gravity
   c. Density d. Sulfur Content

C. Records:

Records of inspection, maintenance, and performance parameter shall be retained for a minimum of two years and shall be made available to the Department or Pinellas County Department of Environmental Management upon request as per Subsection 17-2.650(2)(g)5, F.A.C..

12. Based on the original permit application, received by the Department on 3/1/71, the following are the maximum potential emission rates from this source upon which this permit is issued:

	lb./hour	Tons/year
Particulates	54.8	240.0
SO_2	1434.2	6281.8
CO	20.0	87.6
NO_x	383.7	1680.5
VOC	2.9	12.2

11. Submit for this facility, each calendar year, on or before March 1, and emission report for the preceding calendar year containing the following information as per Subsection 403.061(13), F.S.

A. Annual amount of materials and/or fuels utilized.
B. Annual emissions for particulates, CO, SO_2, NO_x, and hydrocarbons based on fuel use, operating hours, and fuel analysis. Until further notice by the Department of Environmental Management, the facility shall calculate particulates by multiplying the stack test results by the hours of operation. Other annual emissions shall be determined by multiplying the fuel use times the following emissions factors:

	No. 2 Fuel Oil lb./10^3 gallons	Natural Gas lb./10^6 ft^3
CO	5	5
SO_2	150S	0.6
NO_x	105	550
VOC	0.76	1.4

S denotes sulfur content, % by weight
(Provide calculation sheet(s) to document calculations)

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

A copy of this report shall be submitted to the Air Sections of the Southwest District Office and Pinellas County Department of Environmental Management, Air Quality Division.

12. Three applications to renew this operating permit shall be submitted to the Southwest District of the Department of Environmental Regulation and one copy to the Pinellas County Department of Environmental Management, Air Quality Division 60 days prior to the expiration date of this permit pursuant [Rule 17-4.090, F.A.C. and Pinellas County Ordinance 89-70, as amended, Subpart 2.210]

Issued this ____day of _____
19____

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

_____

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

NAME: Florida Power - Higgins Plant, Unit No. 1
Permit: AO52-216382

Electric Utility Boilers

Emission factors for oil combustion AP-42 Table 1.3-1
Emission factors for natural gas combustion AP-42 Table 1.4-1
Particulates for oil based on 0.1 lb/MMBtu

Fuel Usage

	No. 6 Fuel Oil	Natural Gas
BBL/hour	87	NA
Gallons/hour	3654	NA
MMcf/hour	NA	0.5
SO2 %	2.5	NA
MMBtu Conten	0.15	1050
MMBtu/hour	548	525
Hours/year	8760	8760

Emissions Table Fuel Oil

	lb/hour	Tons/year
Particulate	54.81	240.07
SO2	1434.20	6281.77
CO	18.27	80.02
NOx*	383.67	1680.47
VOC	2.78	12.16

* Tangentially fired boilers use 42 lb factor, vertical fired use 105 lb factor

Emissions Table Natural Gas

	lb/hour	Tons/year
Particulate	2.50	10.95
SO2	0.30	1.31
CO	20.00	87.60
NOx*	275.00	1204.50
VOC	0.70	3.07

* Tangentially fired boilers use 275 lb factor, vertical fired use 550 lb factor

NAME: Florida Power - Higgins Plant, Unit No. 2
Permit: AO52-216383

Electric Utility Boilers

Emission factors for oil combustion AP-42 Table 1.3-1
Emission factors for natural gas combustion AP-42 Table 1.4-1
Particulates for oil based on 0.1 lb/MMBtu

Fuel Usage

	No. 6 Fuel Oil	Natural Gas
BBL/hour	83	NA
Gallons/hour	3486	NA
MMcf/hour	NA	0.49
SO2 %	2.5	NA
MMBtu Conten	0.15	1050
MMBtu/hour	523	515
Hours/year	8760	8760

Emissions Table Fuel Oil

	lb/hour	Tons/year
Particulate	52.29	229.03
SO2	1368.26	5992.96
CO	17.43	76.34
NOx*	366.03	1603.21
VOC	2.65	11.60

* Tangentially fired boilers use 42 lb factor, vertical fired use 105 lb factor

Emissions Table Natural Gas

	lb/hour	Tons/year
Particulate	2.45	10.73
SO2	0.29	1.29
CO	19.60	85.85
NOx*	269.50	1180.41
VOC	0.69	3.00

* Tangentially fired boilers use 275 lb factor, vertical fired use 550 lb factor

NAME: Florida Power - Higgins Plant, Unit No. 3
Permit: AO52-216384

Electric Utility Boilers

Emission factors for oil combustion AP-42 Table 1.3-1
Emission factors for natural gas combustion AP-42 Table 1.4-1
Particulates for oil based on 0.1 lb/MMBtu

Fuel Usage

	No. 6 Fuel Oil	Natural Gas
BBL/hour	87	NA
Gallons/hour	3654	NA
MMcf/hour	NA	0
SO2 %	2.5	NA
MMBtu Conten	0.15	1050
MMBtu/hour	548	0
Hours/year	8760	8760

Emissions Table Fuel Oil

	lb/hour	Tons/year
Particulate	54.81	240.07
SO2	1434.20	6281.77
CO	18.27	80.02
NOx*	383.67	1680.47
VOC	2.78	12.16

* Tangentially fired boilers use 42 lb factor, vertical fired use 105 lb factor

Emissions Table Natural Gas

	lb/hour	Tons/year
Particulate	0.00	0.00
SO2	0.00	0.00
CO	0.00	0.00
NOx*	0.00	0.00
VOC	0.00	0.00

* Tangentially fired boilers use 275 lb factor, vertical fired use 550 lb factor

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

FLORIDA POWER

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.000
STACK HEIGHT (M)	=	53.04
STK INSIDE DIAM (M)	=	3.81
STK EXIT VELOCITY (M/S)	=	8.23
STK GAS EXIT TEMP (K)	=	427.60
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	.00
MIN HORIZ BLDG DIM (M)	=	.00
MAX HORIZ BLDG DIM (M)	=	.00

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	2.270	1041.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

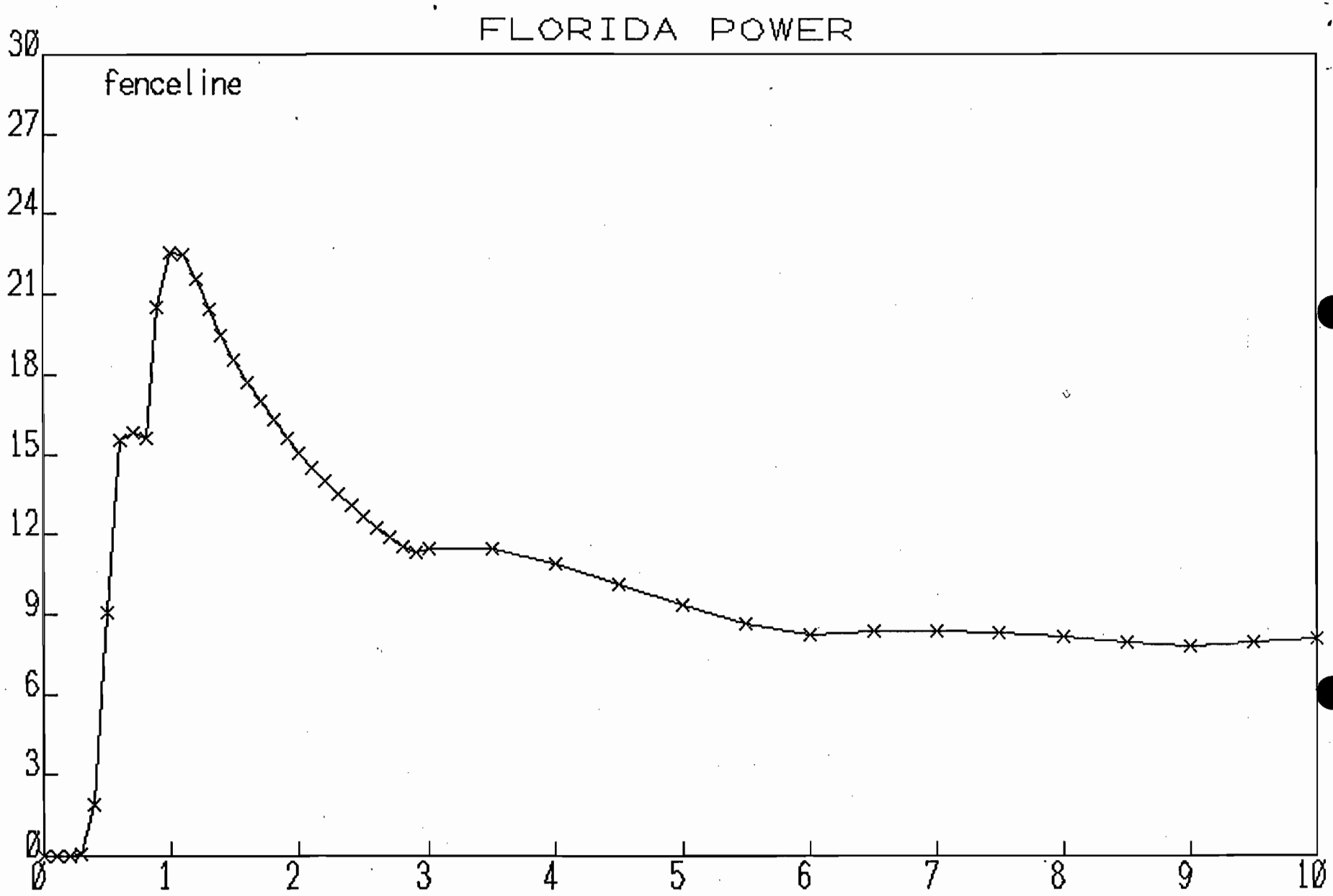
BUOY. FLUX = 92.19 M**4/S**3; MOM. FLUX = 168.41 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES **

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	
100.	.1569E-06	5	1.0	1.8	5000.0	163.6	25.6	25.1	NO
200.	.4054E-03	5	1.0	1.8	5000.0	163.6	33.6	32.2	NO
300.	.4444E-02	1	3.0	3.4	960.0	226.3	76.8	54.8	NO
400.	.1921	1	3.0	3.4	960.0	226.3	98.5	78.5	NO
500.	.9043	1	3.0	3.4	960.0	226.3	119.4	111.5	NO
600.	1.551	1	3.0	3.4	960.0	226.3	139.8	160.0	NO
700.	1.582	1	3.0	3.4	960.0	226.3	159.8	218.7	NO
800.	1.559	1	1.0	1.1	573.9	572.9	226.8	319.6	NO
900.	2.053	1	1.0	1.1	573.9	572.9	241.3	392.3	NO
1000.	2.256	1	1.0	1.1	573.9	572.9	256.2	477.5	NO
1100.	2.248	1	1.0	1.1	573.9	572.9	271.3	574.8	NO
1200.	2.154	1	1.0	1.1	573.9	572.9	286.6	683.9	NO
1300.	2.048	1	1.0	1.1	573.9	572.9	302.0	804.7	NO
1400.	1.948	1	1.0	1.1	573.9	572.9	317.5	937.0	NO



Maximum concentration 2.270E+000 micrograms/cubic meter at 1.041 km

@ 1 gram/second

1500.	1.857	1	1.0	1.1	573.9	572.9	333.1	1080.9	NO
1600.	1.774	1	1.0	1.1	573.9	572.9	348.7	1236.3	NO
1700.	1.697	1	1.0	1.1	573.9	572.9	364.4	1403.2	NO
1800.	1.627	1	1.0	1.1	573.9	572.9	380.1	1581.8	NO
1900.	1.563	1	1.0	1.1	573.9	572.9	395.7	1772.0	NO
2000.	1.504	1	1.0	1.1	573.9	572.9	411.4	1973.8	NO
2100.	1.448	1	1.0	1.1	573.9	572.9	427.0	2187.4	NO
2200.	1.397	1	1.0	1.1	573.9	572.9	442.6	2412.7	NO
2300.	1.350	1	1.0	1.1	573.9	572.9	458.2	2649.9	NO
2400.	1.306	1	1.0	1.1	573.9	572.9	473.7	2898.9	NO
2500.	1.264	1	1.0	1.1	573.9	572.9	489.2	3159.9	NO
2600.	1.225	1	1.0	1.1	573.9	572.9	504.7	3432.8	NO
2700.	1.189	1	1.0	1.1	573.9	572.9	520.2	3717.8	NO
2800.	1.155	1	1.0	1.1	573.9	572.9	535.5	4014.8	NO
2900.	1.130	2	1.0	1.1	573.9	572.9	424.0	381.6	NO
3000.	1.143	2	1.0	1.1	573.9	572.9	435.3	393.9	NO
3500.	1.147	2	1.0	1.1	573.9	572.9	491.8	456.9	NO
4000.	1.091	2	1.0	1.1	573.9	572.9	547.8	521.8	NO
4500.	1.014	2	1.0	1.1	573.9	572.9	603.4	588.3	NO
5000.	.9364	2	1.0	1.1	573.9	572.9	658.4	656.0	NO
5500.	.8668	2	1.0	1.1	573.9	572.9	713.0	724.8	NO
6000.	.8191	3	1.0	1.2	548.5	547.5	538.8	345.1	NO
6500.	.8341	3	1.0	1.2	548.5	547.5	576.2	367.0	NO
7000.	.8360	3	1.0	1.2	548.5	547.5	613.3	389.1	NO
7500.	.8283	3	1.0	1.2	548.5	547.5	650.3	411.1	NO
8000.	.8135	3	1.0	1.2	548.5	547.5	687.0	433.3	NO
8500.	.7939	3	1.0	1.2	548.5	547.5	723.6	455.4	NO
9000.	.7778	5	1.0	1.8	5000.0	163.6	371.8	81.4	NO
9500.	.7941	5	1.0	1.8	5000.0	163.6	390.0	83.3	NO
10000.	.8072	5	1.0	1.8	5000.0	163.6	408.1	85.1	NO
15000.	.8061	5	1.0	1.8	5000.0	163.6	584.2	100.6	NO
20000.	.7373	5	1.0	1.8	5000.0	163.6	753.0	113.8	NO
25000.	.6507	5	1.0	1.8	5000.0	163.6	916.2	123.0	NO
30000.	.5786	5	1.0	1.8	5000.0	163.6	1075.0	131.2	NO
40000.	.4692	5	1.0	1.8	5000.0	163.6	1382.1	145.3	NO
50000.	.3911	5	1.0	1.8	5000.0	163.6	1678.0	154.8	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

1041.	2.270	1	1.0	1.1	573.9	572.9	262.2	515.0	NO

DIST = DISTANCE FROM THE SOURCE
CONC = MAXIMUM GROUND LEVEL CONCENTRATION
STAB = ATMOSPHERIC STABILITY CLASS (1=A, 2=B, 3=C, 4=D, 5=E, 6=F)
U10M = WIND SPEED AT THE 10-M LEVEL
USTK = WIND SPEED AT STACK HEIGHT
MIX HT = MIXING HEIGHT
PLUME HT= PLUME CENTERLINE HEIGHT
SIGMA Y = LATERAL DISPERSION PARAMETER
SIGMA Z = VERTICAL DISPERSION PARAMETER
DWASH = BUILDING DOWNWASH:
DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** USER SPECIFIED AVERAGING TIMES ***
****

ESTIMATED MAXIMUM CONCENTRATION FOR 8 HR AVERAGING TIME = 1.589(þ .454)
ESTIMATED MAXIMUM CONCENTRATION FOR 24 HR AVERAGING TIME = .908(þ .454)

TOXIC EMISSIONS FROM ELECTRIC UTILITIES

SIC_DESC	POC_DESC	SCC_CODE	SCC_DESC1	SCC_DESC3	SCC_DESC4	EFACTOR	RPC_DESC	RSC_DESC
Electric Services	Mercury	1-01-006-04	EXTCOMB BOILER	NATURAL GAS	TAN FIRED BOILERS	2.27 lb/10E12 Btu	Natural gas combustion - utility	Tangential-fired boiler
Electric Services	Mercury	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	>100MMBTU/HR EXTF	2.272 lb/10E12 Btu	Natural gas combustion - utility	Wall-fired boiler
Electric Services	Mercury	1-01-006-04	EXTCOMB BOILER	NATURAL GAS	TAN FIRED BOILERS	11.363 lb/10E12 Btu	Natural gas combustion - utility	Tangential-fired boiler
Electric Services	Mercury	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	>100MMBTU/HR EXTF	11.363 lb/10E12 Btu	Natural gas combustion - utility	Wall-fired boiler
Electric Services	Sulfuric acid	1-01-004				8.5 x % sulfur in fuel ng/J	Oil combustion, utility	Oil-fired utility boiler
Electric Services	Sulfuric acid	1-01-004				16.9 x % sulfur in fuel ng/J	Oil combustion, utility	Oil-fired utility boiler
Electric services	Selenium	1-01-004				4.638 lb/10E12 Btu	Oil combustion, utility	Tangential-fired, residual oil
Electric services	Selenium	1-01-004				23.42 lb/10E12 Btu	Oil combustion, utility	Tangential-fired, residual oil
Electric services	Selenium	1-01-004				4.638 lb/10E12 Btu	Oil combustion, utility	Wall furnace, residual oil
Electric services	Selenium	1-01-004				23.42 lb/10E12 Btu	Oil combustion, utility	Wall furnace, residual oil
Electric services	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1-02				Not detectable	Oil and coal combustion	Stack - particulate
Electric services	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1				Not detectable	Oil combustion	Boiler flue gas
Electric services	2,3,7,8-Tetrachlorodibenzofuran	1				Not detectable	Oil combustion	Flue gas
Electric services	Polychlorinated dibenzo-p-dioxins, total	1-02				1.36 x 10E-4 lb/ton	Oil and coal combustion	Stack - particulate
Electric services	Ammonia	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	>100MMBTU/HR EXTF	3.2 lbs/10E6 cubic feet gas burned	Natural gas combustion	Utility boiler

CHEMICAL	NO THREAT LEVELS (ug/m3)		
	8hr	24hr	ANNUAL
Mercury	0.5	0.12	0.3
Sulfuric acid			
Selenium	2	0.48	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	47	11.28	
2,3,7,8-Tetrachlorodibenzofuran			
Polychlorinated dibenzo-p-dioxins, total			
Ammonia	170	40.8	100

REF: XATEF DATABASE

08-11-92
10:01:40

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

FLORIDA POWER

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.000
STACK HEIGHT (M)	=	53.04
STK INSIDE DIAM (M)	=	3.81
STK EXIT VELOCITY (M/S)	=	8.23
STK GAS EXIT TEMP (K)	=	427.60
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	.00
MIN HORIZ BLDG DIM (M)	=	.00
MAX HORIZ BLDG DIM (M)	=	.00

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	2.270	1041.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

BUOY. FLUX = 92.19 M**4/S**3; MOM. FLUX = 168.41 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES **

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	
100.	.1569E-06	5	1.0	1.8	5000.0	163.6	25.6	25.1	NO
200.	.4054E-03	5	1.0	1.8	5000.0	163.6	33.6	32.2	NO
300.	.4444E-02	1	3.0	3.4	960.0	226.3	76.8	54.8	NO
400.	.1921	1	3.0	3.4	960.0	226.3	98.5	78.5	NO
500.	.9043	1	3.0	3.4	960.0	226.3	119.4	111.5	NO
600.	1.551	1	3.0	3.4	960.0	226.3	139.8	160.0	NO
700.	1.582	1	3.0	3.4	960.0	226.3	159.8	218.7	NO
800.	1.559	1	1.0	1.1	573.9	572.9	226.8	319.6	NO
900.	2.053	1	1.0	1.1	573.9	572.9	241.3	392.3	NO
1000.	2.256	1	1.0	1.1	573.9	572.9	256.2	477.5	NO
1100.	2.248	1	1.0	1.1	573.9	572.9	271.3	574.8	NO
1200.	2.154	1	1.0	1.1	573.9	572.9	286.6	683.9	NO
1300.	2.048	1	1.0	1.1	573.9	572.9	302.0	804.7	NO
1400.	1.948	1	1.0	1.1	573.9	572.9	317.5	937.0	NO

1500.	1.857	1	1.0	1.1	573.9	572.9	333.1	1080.9	NO
1600.	1.774	1	1.0	1.1	573.9	572.9	348.7	1236.3	NO
1700.	1.697	1	1.0	1.1	573.9	572.9	364.4	1403.2	NO
1800.	1.627	1	1.0	1.1	573.9	572.9	380.1	1581.8	NO
1900.	1.563	1	1.0	1.1	573.9	572.9	395.7	1772.0	NO
2000.	1.504	1	1.0	1.1	573.9	572.9	411.4	1973.8	NO
2100.	1.448	1	1.0	1.1	573.9	572.9	427.0	2187.4	NO
2200.	1.397	1	1.0	1.1	573.9	572.9	442.6	2412.7	NO
2300.	1.350	1	1.0	1.1	573.9	572.9	458.2	2649.9	NO
2400.	1.306	1	1.0	1.1	573.9	572.9	473.7	2898.9	NO
2500.	1.264	1	1.0	1.1	573.9	572.9	489.2	3159.9	NO
2600.	1.225	1	1.0	1.1	573.9	572.9	504.7	3432.8	NO
2700.	1.189	1	1.0	1.1	573.9	572.9	520.2	3717.8	NO
2800.	1.155	1	1.0	1.1	573.9	572.9	535.5	4014.8	NO
2900.	1.130	2	1.0	1.1	573.9	572.9	424.0	381.6	NO
3000.	1.143	2	1.0	1.1	573.9	572.9	435.3	393.9	NO
3500.	1.147	2	1.0	1.1	573.9	572.9	491.8	456.9	NO
4000.	1.091	2	1.0	1.1	573.9	572.9	547.8	521.8	NO
4500.	1.014	2	1.0	1.1	573.9	572.9	603.4	588.3	NO
5000.	.9364	2	1.0	1.1	573.9	572.9	658.4	656.0	NO
5500.	.8668	2	1.0	1.1	573.9	572.9	713.0	724.8	NO
6000.	.8191	3	1.0	1.2	548.5	547.5	538.8	345.1	NO
6500.	.8341	3	1.0	1.2	548.5	547.5	576.2	367.0	NO
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7500.	.8283	3	1.0	1.2	548.5	547.5	650.3	411.1	NO
8000.	.8135	3	1.0	1.2	548.5	547.5	687.0	433.3	NO
8500.	.7939	3	1.0	1.2	548.5	547.5	723.6	455.4	NO
9000.	.7778	5	1.0	1.8	5000.0	163.6	371.8	81.4	NO
9500.	.7941	5	1.0	1.8	5000.0	163.6	390.0	83.3	NO
10000.	.8072	5	1.0	1.8	5000.0	163.6	408.1	85.1	NO
15000.	.8061	5	1.0	1.8	5000.0	163.6	584.2	100.6	NO
20000.	.7373	5	1.0	1.8	5000.0	163.6	753.0	113.8	NO
25000.	.6507	5	1.0	1.8	5000.0	163.6	916.2	123.0	NO
30000.	.5786	5	1.0	1.8	5000.0	163.6	1075.0	131.2	NO
40000.	.4692	5	1.0	1.8	5000.0	163.6	1382.1	145.3	NO
50000.	.3911	5	1.0	1.8	5000.0	163.6	1678.0	154.8	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

1041.	2.270	1	1.0	1.1	573.9	572.9	262.2	515.0	NO

DIST = DISTANCE FROM THE SOURCE
CONC = MAXIMUM GROUND LEVEL CONCENTRATION
STAB = ATMOSPHERIC STABILITY CLASS (1=A, 2=B, 3=C, 4=D, 5=E, 6=F)
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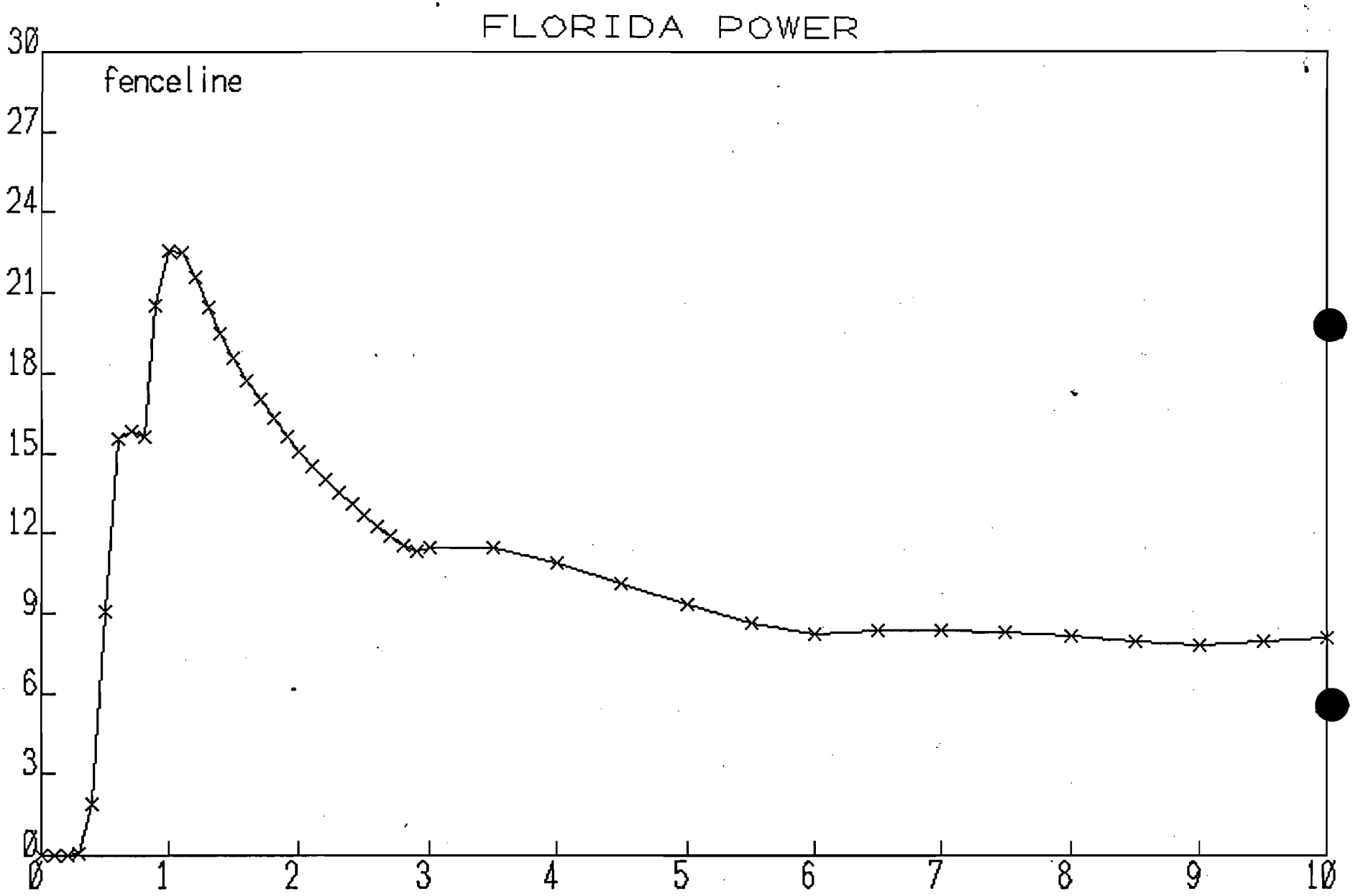
USTK = WIND SPEED AT STACK HEIGHT
MIX HT = MIXING HEIGHT
PLUME HT= PLUME CENTERLINE HEIGHT
SIGMA Y = LATERAL DISPERSION PARAMETER
SIGMA Z = VERTICAL DISPERSION PARAMETER
DWASH = BUILDING DOWNWASH:
DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** USER SPECIFIED AVERAGING TIMES ***
****

ESTIMATED MAXIMUM CONCENTRATION FOR 8 HR AVERAGING TIME = 1.589(þ .454)
ESTIMATED MAXIMUM CONCENTRATION FOR 24 HR AVERAGING TIME = .908(þ .454)



Maximum concentration 2.270E+000 micrograms/cubic meter at 1.041 km

@ 1 gram/second

TOXIC EMISSIONS FROM ELECTRIC UTILITIES

SIC_DESC	POC_DESC	SCC_CODE	SCC_DESC1	SCC_DESC3	SCC_DESC4	EFACTOR	RPC_DESC	RSC_DESC
Electric Services	Mercury	1-01-006-04	EXTCOMB BOILER	NATURAL GAS	TAN FIRED BOILERS	2.27 lb/10E12 Btu	Natural gas combustion - utility	Tangential-fired boiler
Electric Services	Mercury	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	> 100MMBTU/HR EXTF	2.272 lb/10E12 Btu	Natural gas combustion - utility	Wall-fired boiler
Electric Services	Mercury	1-01-006-04	EXTCOMB BOILER	NATURAL GAS	TAN FIRED BOILERS	11.363 lb/10E12 Btu	Natural gas combustion - utility	Tangential-fired boiler
Electric Services	Mercury	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	> 100MMBTU/HR EXTF	11.363 lb/10E12 Btu	Natural gas combustion - utility	Wall-fired boiler
Electric Services	Sulfuric acid	1-01-004				8.5 x % sulfur in fuel ng/J	Oil combustion, utility	Oil-fired utility boiler
Electric Services	Sulfuric acid	1-01-004				16.9 x % sulfur in fuel ng/J	Oil combustion, utility	Oil-fired utility boiler
Electric services	Selenium	1-01-004				4.638 lb/10E12 Btu	Oil combustion, utility	Tangential-fired, residual oil
Electric services	Selenium	1-01-004				23.42 lb/10E12 Btu	Oil combustion, utility	Tangential-fired, residual oil
Electric services	Selenium	1-01-004				4.638 lb/10E12 Btu	Oil combustion, utility	Wall furnace, residual oil
Electric services	Selenium	1-01-004				23.42 lb/10E12 Btu	Oil combustion, utility	Wall furnace, residual oil
Electric services	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1-02				Not detectable	Oil and coal combustion	Stack - particulate
Electric services	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1				Not detectable	Oil combustion	Boiler flue gas
Electric services	2,3,7,8-Tetrachlorodibenzofuran	1				Not detectable	Oil combustion	Flue gas
Electric services	Polychlorinated dibenzo-p-dioxins, total	1-02				1.36 x 10E-4 lb/ton	Oil and coal combustion	Stack - particulate
Electric services	Ammonia	1-01-006-01	EXTCOMB BOILER	NATURAL GAS	> 100MMBTU/HR EXTF	3.2 lbs/10E6 cubic feet gas burned	Natural gas combustion	Utility boiler

CHEMICAL	NO THREAT LEVELS (ug/m3)		
	8hr	24hr	ANNUAL
Mercury	0.5	0.12	0.3
Sulfuric acid			
Selenium	2	0.48	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	47	11.28	
2,3,7,8-Tetrachlorodibenzofuran			
Polychlorinated dibenzo-p-dioxins, total			
Ammonia	170	40.8	100

REF: XATEF DATABASE

Florida Power
CORPORATION

October 29, 1992

Mr. J. Harry Kerns, P.E.
District Air Engineer
Southwest District
Florida Department of Environmental Regulation
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Dear Mr. Kerns:

Re: Higgins Units 1, 2, 3 (Permit Nos. A052-216382, -216383, -216384) and
Bartow Units 2, 3 (Permit Nos. A052-216412, -216413) Renewal Applications

On August 17, 1992 Florida Power Corporation (FPC) received your letter dated August 14, 1992 requesting that additional information be submitted for the above-referenced permit renewal applications. FPC's responses are provided below in order as presented in your letter. Where appropriate, the Higgins and Bartow units are discussed separately.

1. *All air pollution permit applications for sources at major facilities must be signed and sealed by a professional engineer registered to practice in Florida.*

   The application form for each unit is being re-submitted with a certification form signed and sealed by Mr. Albert W. Morneault, P.E. attached to each form. These are enclosed as Attchment 1 to this letter.

2. *FPC is requesting increases in the heat input rate to the boilers. For each boiler, has there been any physical change, change in the method of operation of, or addition to the boiler? The original applications were based on a fuel heat content of 148,790 Btu/gallon. Please justify why this needs to be changed.*

   As discussed in the renewal application transmittal letters, FPC has not modified the units and is not requesting a change in the fuel feed rate. The revised heat input rates are the product of the maximum allowable fuel usage rates and the corrected heating value of the fuel (150,000 Btu/gal.). The intent is only to correct a minor calculation error. Please refer to Attachment 2 for fuel oil data for both plants.

3. *For each boiler, please submit a copy of the strip chart recordings for fuel flow, air flow, and stack O_2 during the most recent particulate matter compliance test. If no strip chart recordings are made at a particular boiler, then FPC may substitute other types of records*

of the requested operating parameters for that particular boiler; and,

4. *For each boiler, please submit a copy of the strip chart recordings for fuel flow, air flow and stack O_2 for the seven consecutive day period beginning exactly 30 days after the most recent particulate matter compliance test. If no strip chart recordings are made at a particular boiler, then FPC may substitute other types of records of the requested operating parameters for that particular boiler.*

The requested data are contained in Attachments 3 and 4 for the Bartow and Higgins plants, respectively. Strip chart recordings were not available in all cases. Data from the plants' computerized data acquisition program and from FPC's Unit Performance Improvement Program (UPIP) were used where conventional strip charts were unavailable. The following table indicates the form of the data for each plant.

		Oxygen		Air Flow		Fuel Flow	
Bartow	Test Dates	T1	T2	T1	T2	T1	T2
Unit 2	5/28-29/92	Graph	Graph	Graph	Graph	Graph	Graph
Unit 3	4/28-29/92	Graph	UPIP	Graph	UPIP	Graph	UPIP
Higgins							
Unit 1	5/6-7/92	UPIP	UPIP	Chart	Chart	Chart	Chart
Unit 2	5/7-8/92	UPIP	UPIP	Chart	Chart	Chart	Chart
Unit 3	5/21-22/92	UPIP	UPIP	Chart	Chart	Chart	Chart

T1 = time period of compliance testing
T2 = seven day time period approximately 30 days after testing
Chart = strip chart
Graph = data printed in graphical form by plant computerized data acquisition system
UPIP = Unit Performance Improvement Program data

5. *Regarding the Higgins plant, on November 7, 1989, in response to a warning letter from Pinellas County for high VE readings, FPC planned on constructing a fuel oil additive system by January 1990 and a TV monitoring system for the stacks. FT Baschem 1103, a water-based magnesium hydroxide was to be added to the fuel oil in an attempt to decrease visible emissions. Were these systems ever installed?*

The TV monitoring system was installed and is in use. Regarding the fuel oil additive, FPC instead began burning a lower sulfur (1%) fuel oil in early 1990. This fuel also resulted in lower opacity, alleviating the problem and eliminating the need for the fuel additive.

Finally, the Title V permit fees may be based on the annual heat input for each fuel type and the emission limit for that fuel type. FPC requests that the sulfur dioxide emission limitations in the permits for both Bartow and Higgins be stated as allowable limits for "liquid fuel", as provided in DER 17-2.600(5)(a)3. This distinction should also be made for the particulate matter emission limits. This will clarify the basis for the limits and will help avoid overpayment of fees in the event that a cleaner fuel such as natural gas is burned in these boilers.

FPC appreciates your patience in awaiting this response to your request. Please contact Mr. Scott Osbourn at (813)866-5158 or Mr. Mike Kennedy at (813)866-4344 if you have any questions.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Mr. Gary Maier
Mr. Gary Robbins, Pinellas County w/attach.
Mr. Albert W. Morneault, P.E.

ATTACHMENT 1

PROFESSIONAL ENGINEER CERTIFICATIONS

Florida Department of Environmental Regulation
Twin Towers Office Bldg • 2600 Blair Stone Road • Tallahassee Florida 32399-2400

DER Form #
Form Title
Effective Date
DER Application No.
Effective DER

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: Higgins Unit 1 Renewal of DER Permit No. A052-137124

Company Name: Florida Power Corporation County: Pinellas

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):

Fossil Fired Steam Generator Number 1

Source Location: Street: Shore Drive City: Oldsmar

UTM: East 17-336.54 North 3098.25

Latitude: 28° 00' 08"N. Longitude: 82°39' 47"W.

NEDS NO: 0012 Point ID: 01

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. Compliance test performed on May 5 - 6, 1992

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.

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794
904-436-8300

Northeast District
3426 Bills Rd.
Jacksonville, Florida 32207
904-798-4200

Central District
3319 Maguire Blvd. Suite 232
Orlando, Florida 32803-3767
407-894-7555

Southwest District
4520 Oak Fair Blvd
Tampa, Florida 33610-7347
813-623-5561

South District
2269 Bay St.
Fort Myers, Florida 33901-2896
813-332-2567

Southeast District
*900 S. Congress Ave., Suite A
West Palm Beach, Florida 33406
407-964-3668

8. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type	Contaminant %Wt	Utilization Rate lbs/hr

B. Product Weight (lbs/hr): _____

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr**	Maximum Heat Input (MMBTU/hr)
Number 6 Fuel Oil (2.5%S)		87 BBL	548
Natural Gas	(when available) 0.5		548

D. Normal Equipment Operating Time: hrs/day _____; days/wk _____; wks/yr _____;

hrs/yr (power plants only) 8760; if seasonal, describe _____

_____

_____

The undersigned owner or authorized representative*** of Florida Power Corporation 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

W. J. Pardue

Signature, Owner or Authorized Representative (Notarization is mandatory)

W. J. Pardue, Mgr. - Environ. Pgrms.

Typed Name and Title

P.O. Box 14042

Address

St.Petersburg FL 33733

City State Zip

7-15-92

Date

813 866-4387

Telephone No.

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

OFFICIAL NOTARY SEAL
MARYJANE R BLAIN
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. CC184159
MY COMMISSION EXP. JUNE 3,1994

W. J. Pardue personally appeared before me this 15th day of July, 1992.

M. J. R. Blain

OPERATION PERMIT RENEWAL
Professional Engineer Certification

This certification must be attached to the renewal application(required by Rule 17-4.050(3), FAC) for:

Company Name: FLORIDA POWER CORPORATION

Source Name: HIGGINS UNIT 1

Source Permit No.: AO 52-216382 (Old No. 137124)

Source ID: NEDS NO. 0012 POINT ID: 01

County: PINELLAS

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 judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with applicable Statutes of the State of Florida.

Albert W. Morneault
Name

Affix Seal

Florida Power Corporation
Company Name

3201 - 34th Street South
Street Address

Signed J. Albert Morneault

St. Petersburg, FL 33733
City, State, and Zip Code

Florida Registration No. 14054

Date: 6/24/92

Telephone No. 813/866-5162

Taken From DER Form 17-1.202(1)

g:\user\amorneau\emtest\higu1cert.frm

ATTACHMENT 2

BARTOW AND HIGGINS PLANTS

FUEL OIL DATA

FUEL OIL TREND STATISTICS

BARTOW PLANT FACILITIES

VARIABLE	YEAR	MEAN	MIN	MAX	STD. DEV.
BTU/LB	**1990**	18,278.75	18,234.40	18,347.33	28.05
	1991	18,241.89	18,193.14	18,300.02	35.63
	1992	18,214.71	18,190.71	18,267.44	21.32
	1985-1992	18,259.72	18,171.73	18,389.81	48.94
DENSITY	**1990**	8.23	8.13	8.29	0.037
	1991	8.29	8.22	8.32	0.029
	1992	8.30	8.28	8.31	0.009
	1985-1992	8.26	8.13	8.36	0.042

ATTACHMENT 4

HIGGINS PLANT

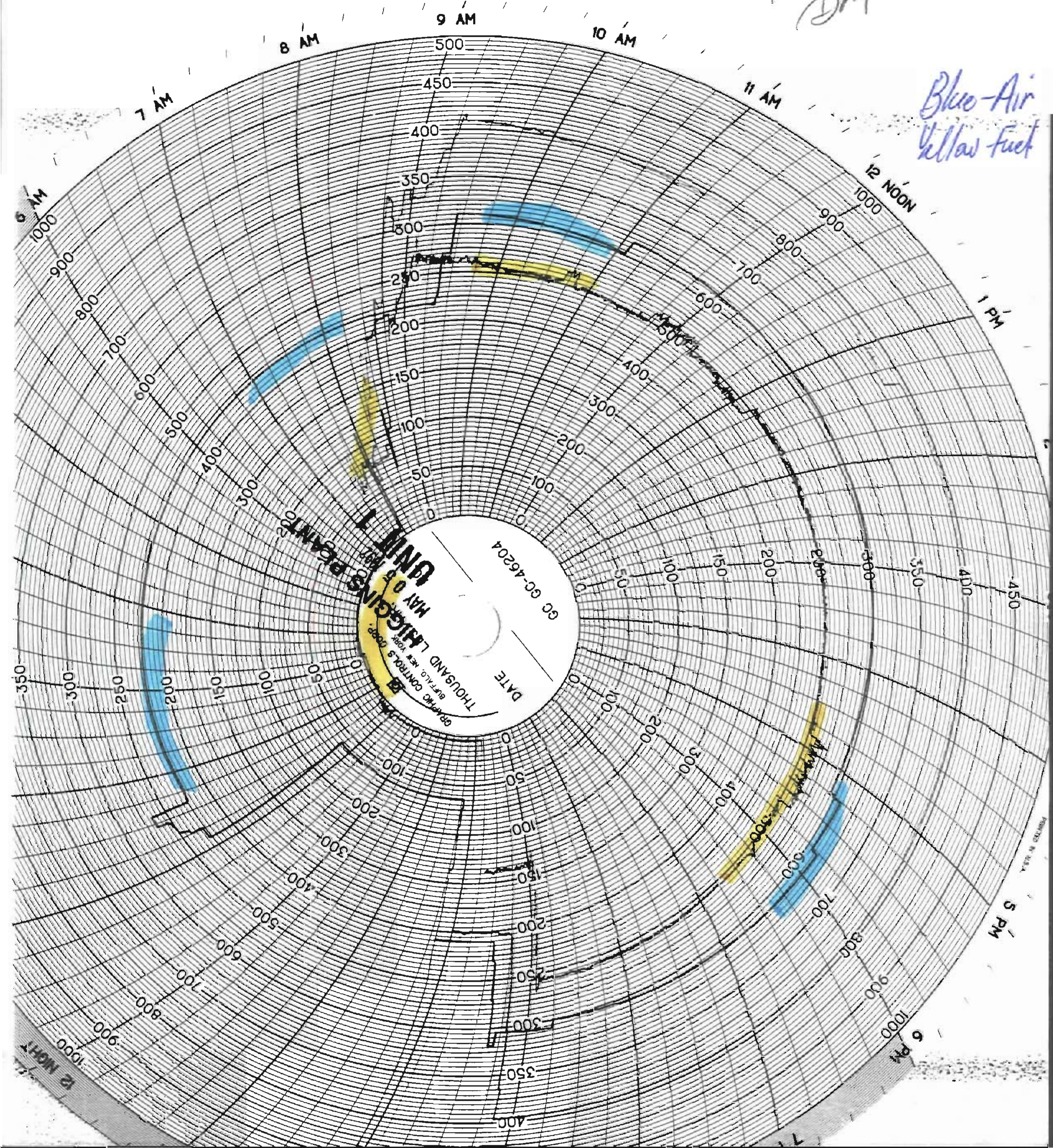
FUEL FLOW, AIR FLOW, STACK O_2 DATA

AIR

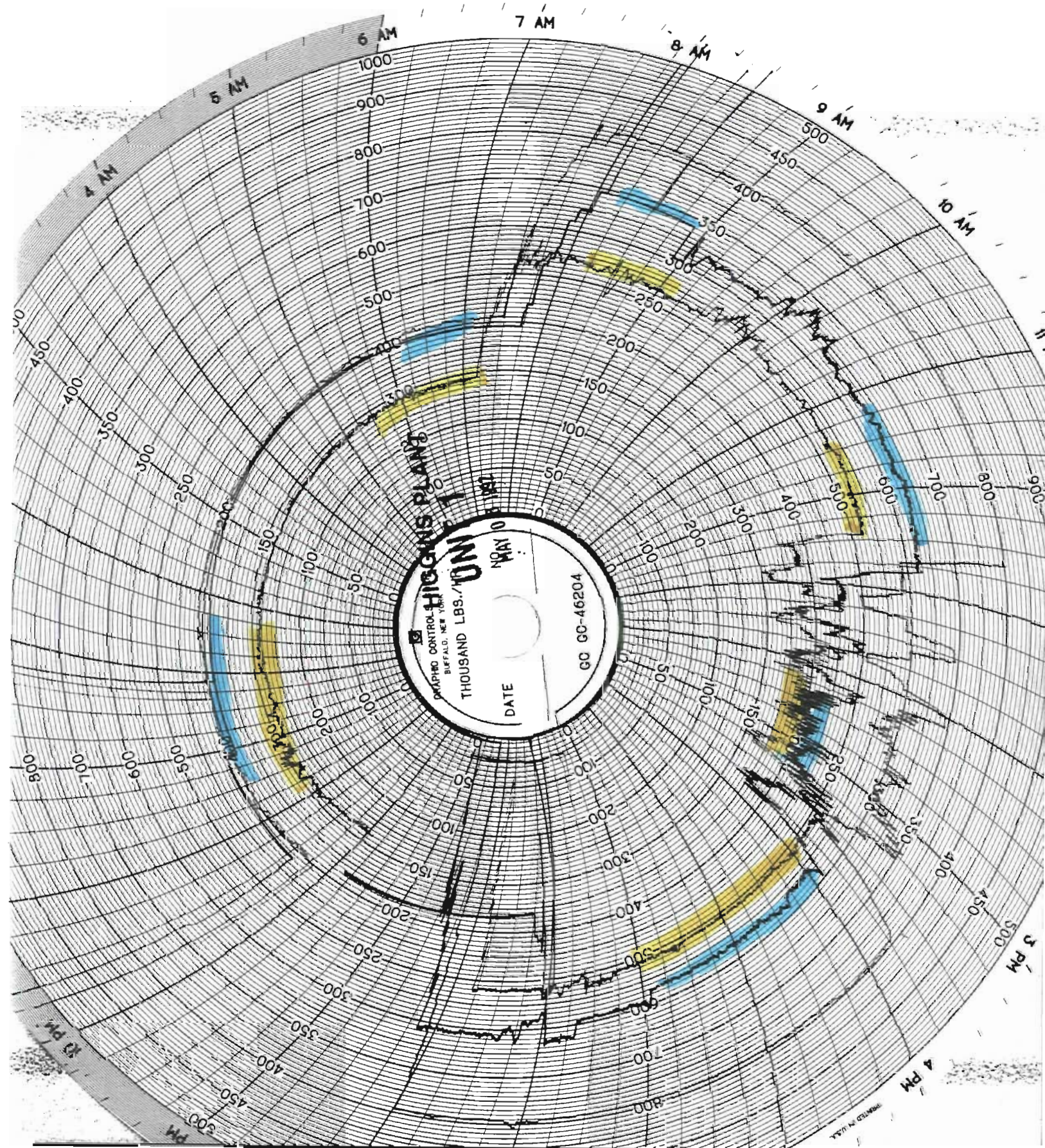
Fuel

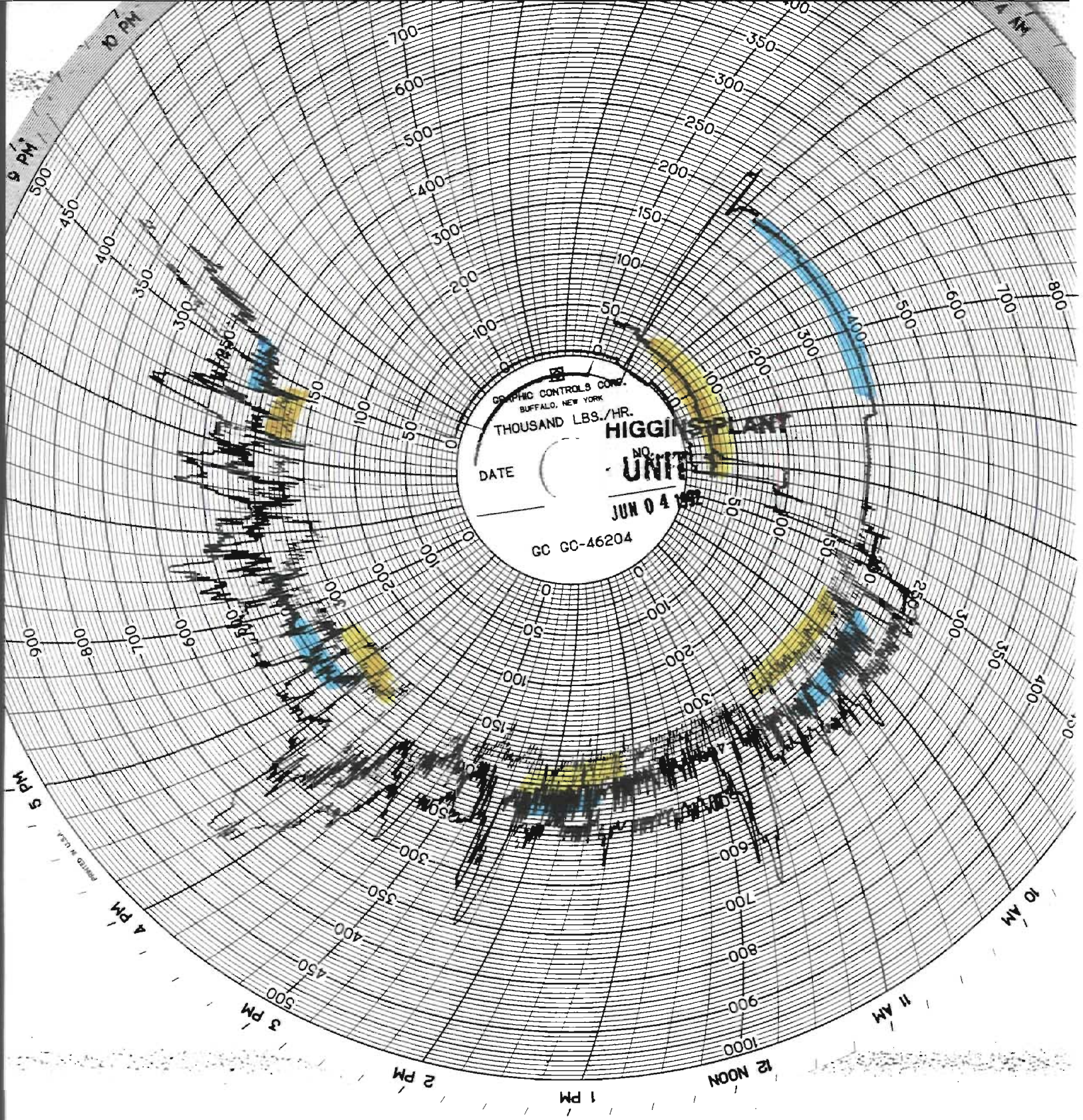
Test Day 1992

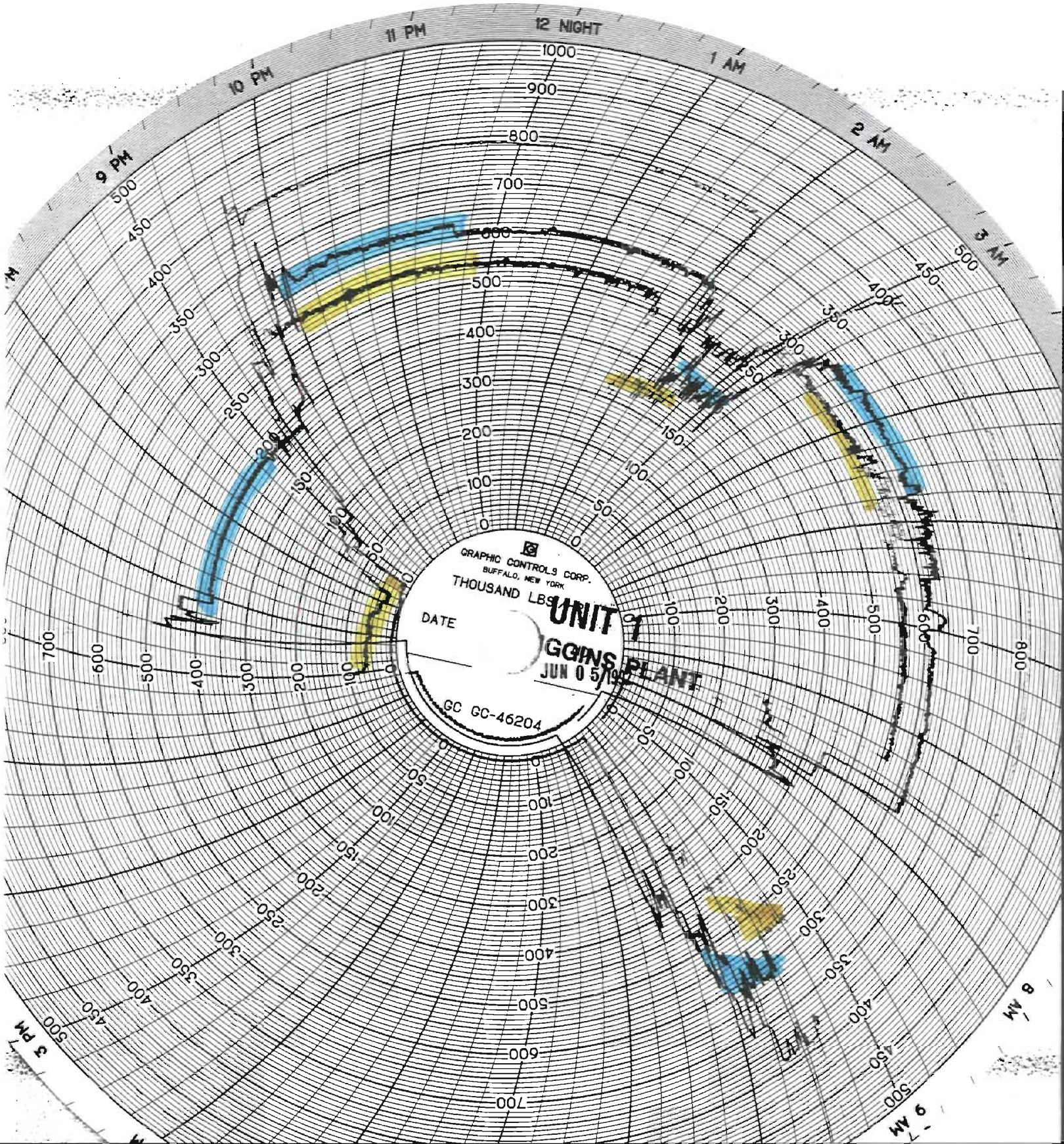
Blue-Air
Yellow Fuel

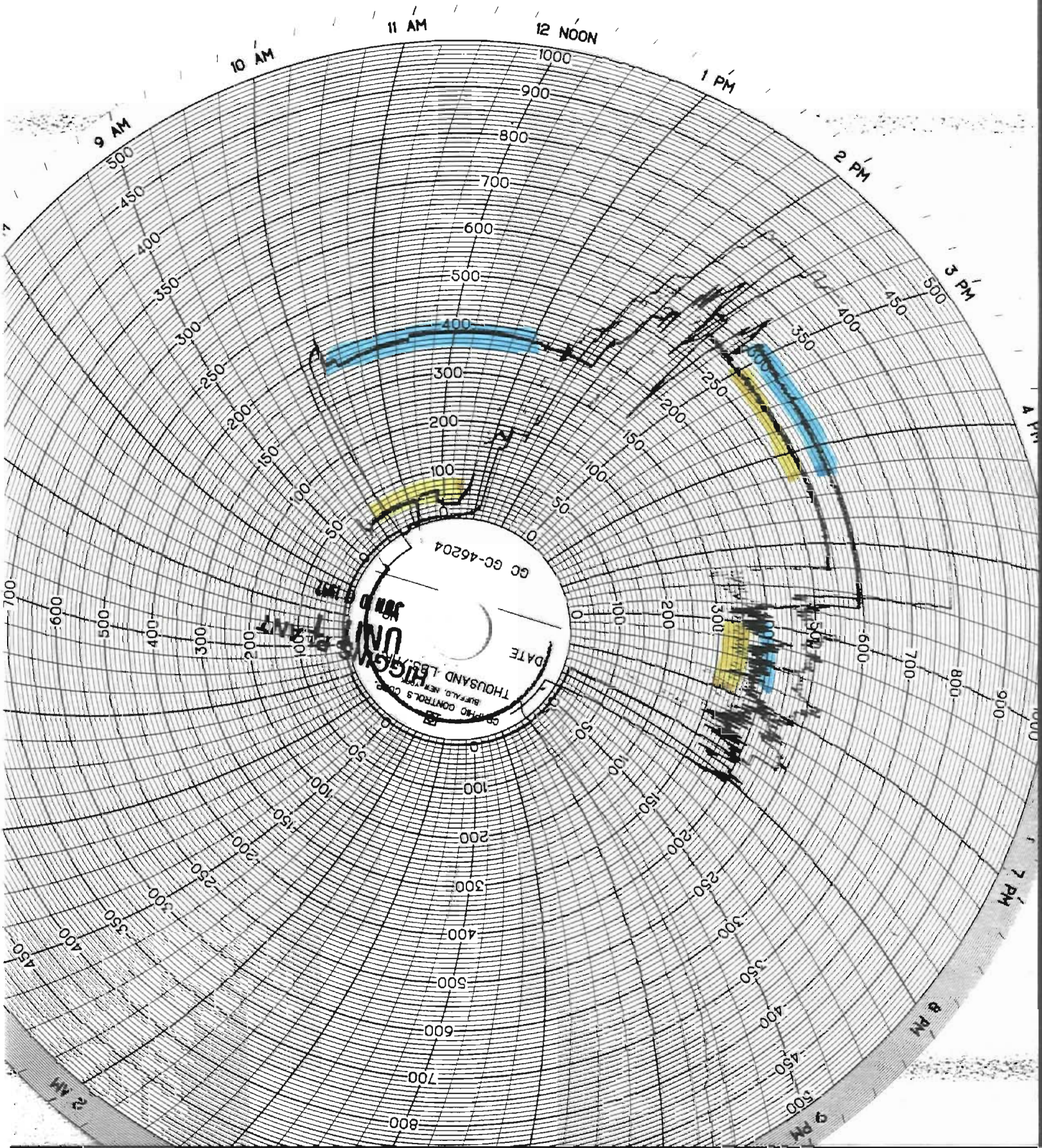


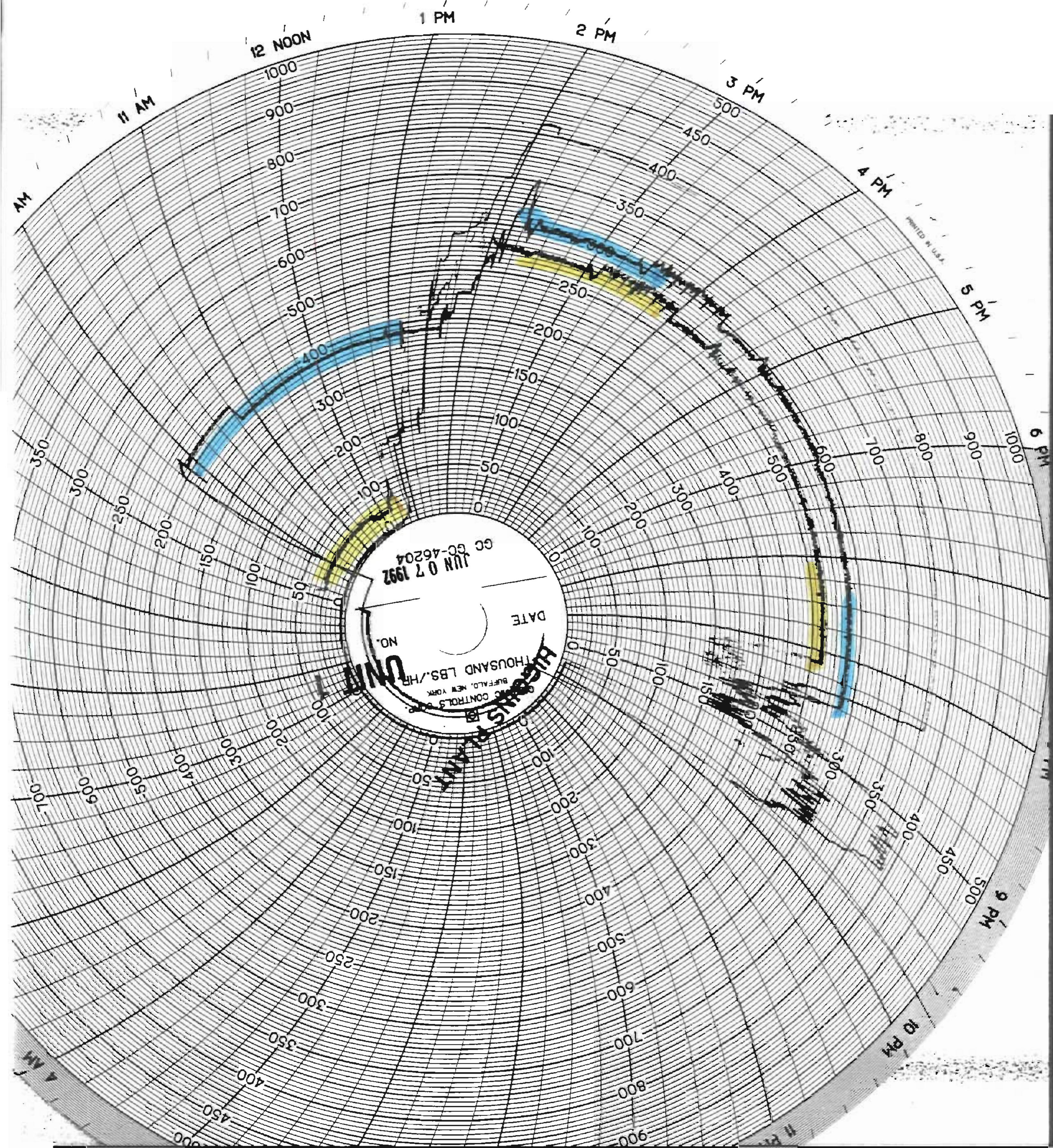
Test Day

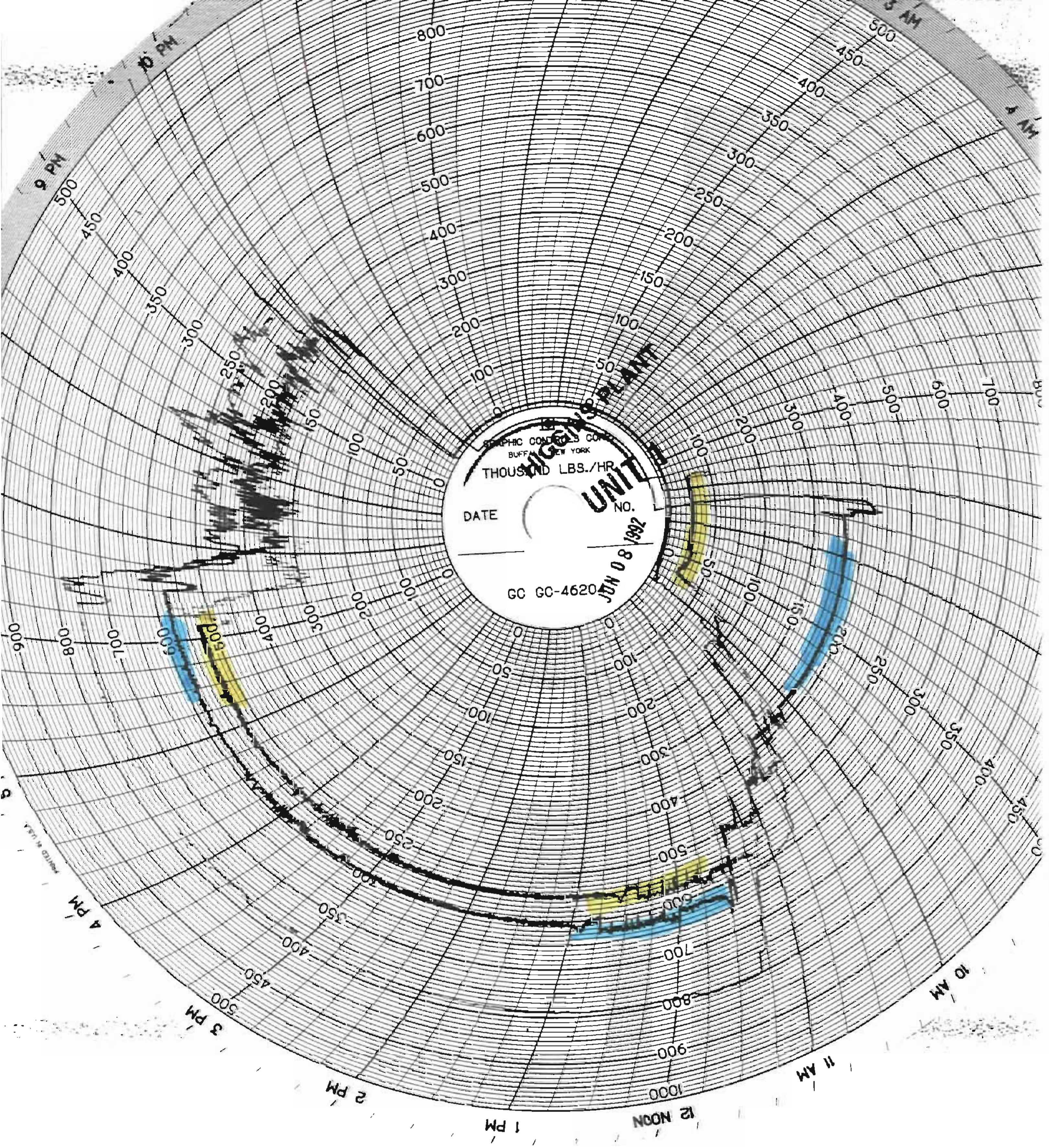

4 AM
5 AM
6 AM
7 AM
8 AM
9 AM
10 AM
3 PM
4 PM
HIGGINS PLANT
THOUSAND LBS./HOUR
DATE
MAY
GO GC-46204


GRAPHIC CONTROLS CORP.
BUFFALO, NEW YORK
THOUSAND LBS./HR.
HIGGINS PLANT
DATE
NO.
UNIT
JUN 0 4
GC GC-46204
12 NOON
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
9 PM
10 AM
11 AM

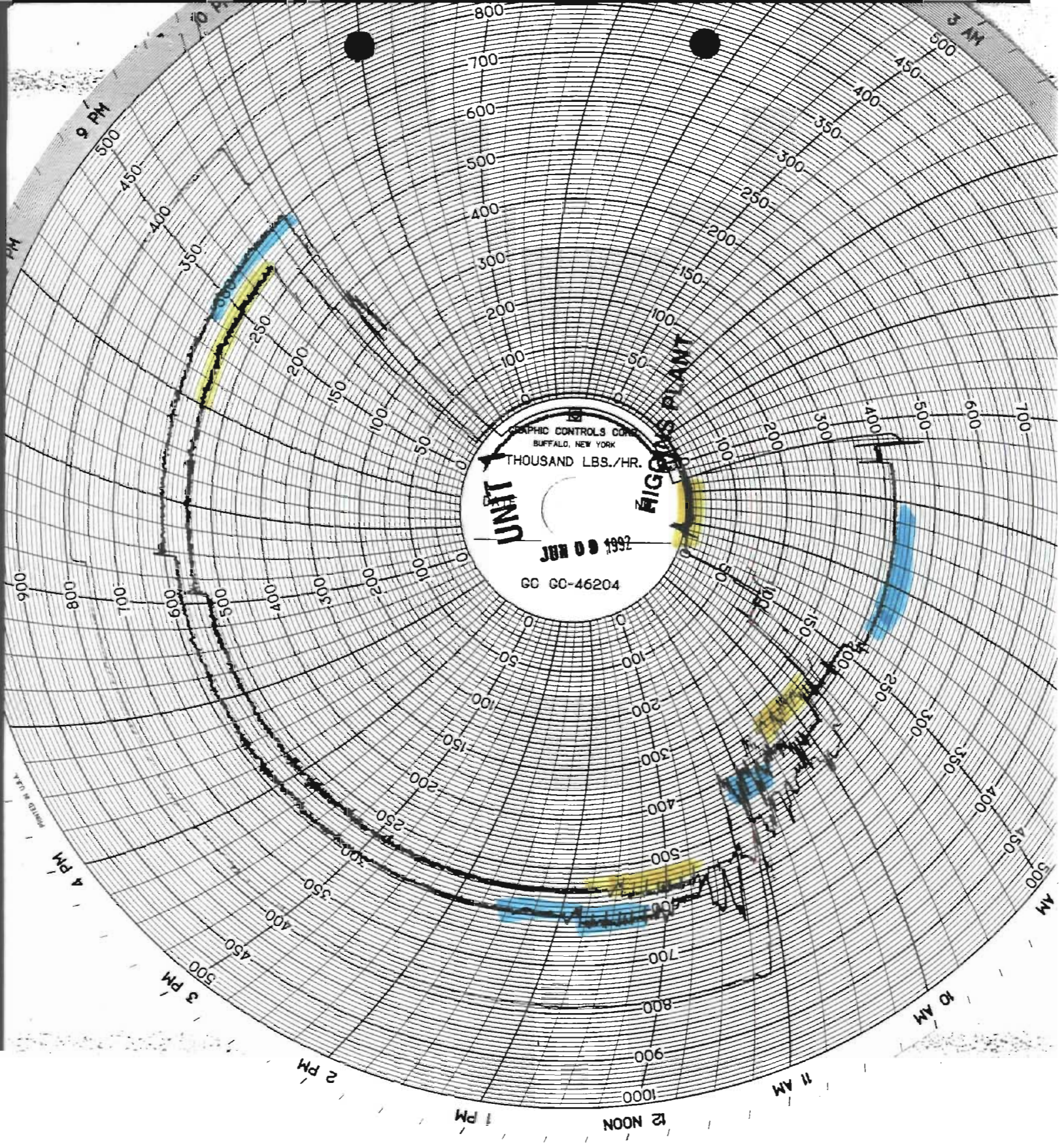

12 NIGHT
1 AM
2 AM
3 AM
8 AM
9 AM
3 PM
9 PM
10 PM
11 PM
GRAPHIC CONTROLS CORP.
BUFFALO, NEW YORK
THOUSAND LBS
DATE
UNIT 1
GGINS PLANT
JUN 0 5/19
GC GC-46204


9 AM
10 AM
11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM
7 PM
8 PM
9 PM
2 AM
THOUSAND LBS./HR.
DATE
GC GC-46204


11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
9 PM
10 PM
4 AM
THOUSAND LBS./HR
BUFFALO, NEW YORK
GC GC-46204
JUN 0 7 1992
DATE
NO.
UNIT 1
HIGGINS PLANT
PRINTED IN U.S.A.



GRAPHIC CONTROLS CORP.
BUFFALO NEW YORK
THOUSAND LBS./HR.
DATE
NO.
GC GC-4620
HIGGINS PLANT
UNIT
JUN 08 1992
9 PM
10 PM
3 AM
4 AM
10 AM
11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM


GRAPHIC CONTROLS CORP.
BUFFALO, NEW YORK
THOUSAND LBS./HR.
UNIT
RIGGS PLANT
JUN 09 1992
GC GC-46204
12 NOON
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
7 PM
8 PM
9 PM
10 PM
11 PM
12 MIDNIGHT
1 AM
2 AM
3 AM
4 AM
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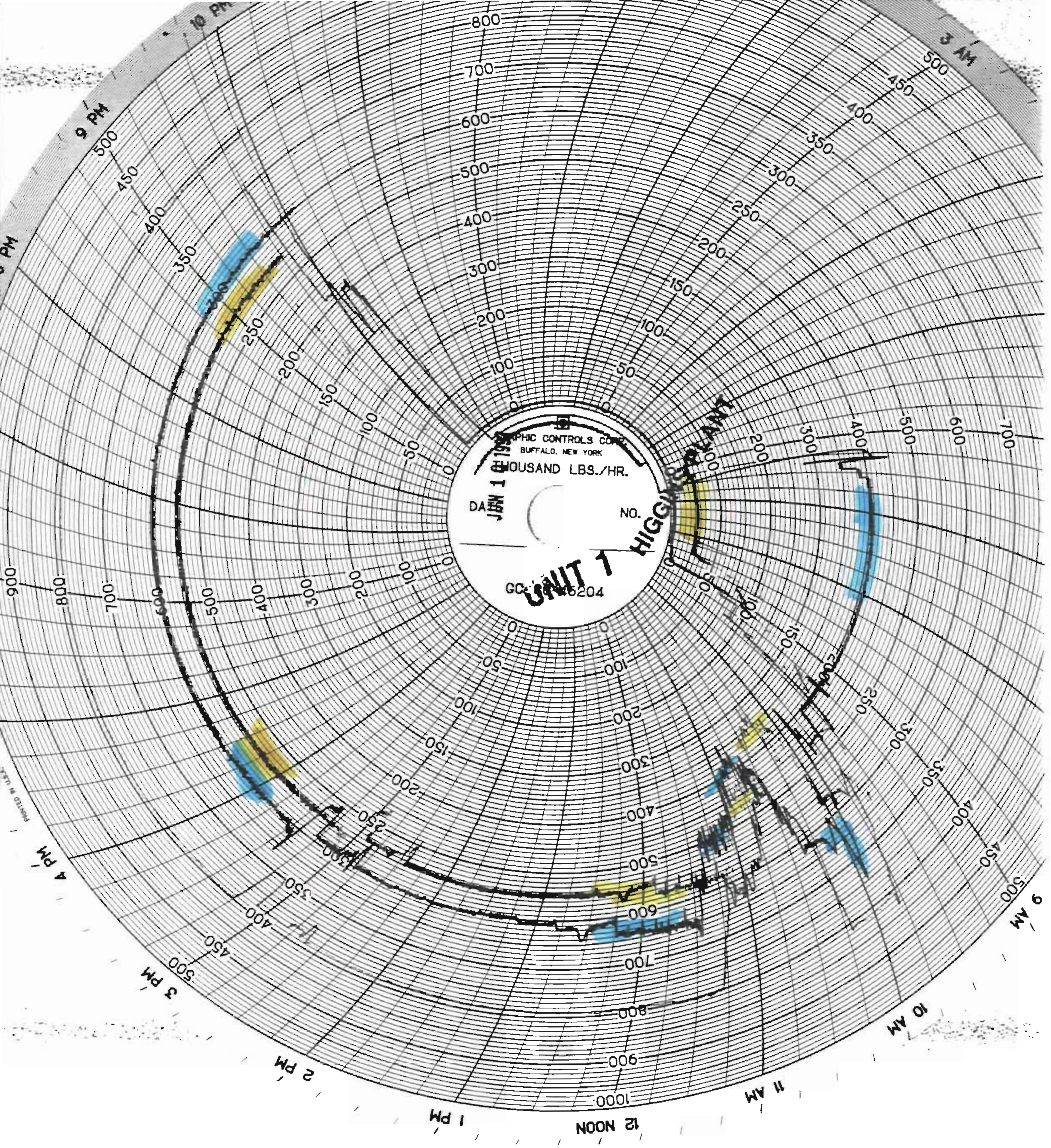
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM


BUFFALO, NEW YORK
THOUSAND LBS./HR.
NO.
UNIT 1
PLANT
9 PM
10 PM
3 AM
9 AM
10 AM
11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
05/06/1992
00:00:07

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
05 23:44	20.463	1271.3	6.7605	938.13	1.7553	76.514	
05 22:45	20.119	1268.7	6.2961	957.07	1.7591	76.878	
05 21:46	20.031	1267.5	7.1183	948.65	1.7469	76.801	
05 20:46	19.952	1267.0	7.1089	947.66	1.7638	77.182	
05 19:47	40.800	1270.6	4.1777	950.73	2.3893	77.716	
05 18:48	40.726	1270.3	3.8456	949.30	2.4372	78.480	
05 17:48	40.544	1271.0	3.7713	946.82	2.4269	78.605	
05 16:49	40.475	1272.3	3.6176	927.92	2.4015	78.303	
05 15:50	40.259	1259.0	3.6432	937.96	2.3630	78.114	
05 14:50	40.293	1259.9	3.4434	933.97	2.3442	77.905	
05 13:51	40.298	1260.0	3.3939	934.30	2.2625	76.923	
05 12:52	40.470	1261.4	3.4409	934.35	2.2616	75.919	
05 11:52	39.575	1261.4	3.4059	930.37	2.1733	75.493	
05 10:53	39.993	1261.6	3.8447	953.17	2.1160	74.677	
05 09:54	40.332	1267.7	3.7525	951.30	2.0822	73.967	
05 08:54	40.568	1271.3	3.3939	937.21	2.1113	73.754	
05 07:55	32.532	1282.1	1.9296	876.64	1.8972	73.722	
05 06:56	5.3950	1247.2	11.931	617.33	1.3026	73.617	
05 05:56	-0.009	1265.1	11.930	593.72	9.7827	73.664	
05 04:57	-0.009	1085.7	11.930	568.95	11.572	74.718	
05 03:58	-0.009	826.33	11.928	536.20	11.571	74.638	
05 02:58	-0.009	607.75	11.928	506.00	11.571	74.766	
05 01:59	-0.004	392.58	11.930	458.41	11.571	74.794	
05 01:00	-0.009	171.10	11.931	379.33	11.571	74.857	
05 00:01	-0.009	11.270	11.932	289.45	11.571	74.777	

UPIP2A_D Printed on 05/06/1992 at 00:00:12

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
05/07/1992
00:00:08

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
06 23:44	-0.009	724.89	11.941	597.04	11.571	77.931	
06 22:45	-0.004	790.47	11.939	638.33	11.571	77.989	
06 21:46	-0.004	867.14	11.940	689.06	11.572	77.844	
06 20:46	-0.004	926.57	11.939	752.87	11.572	78.917	
06 19:47	-0.004	1105.0	11.938	827.14	11.572	80.241	
06 18:48	31.686	1273.7	4.1666	940.30	2.3527	80.411	
06 17:48	40.657	1269.6	3.5570	935.72	2.6748	80.167	
06 16:49	40.308	1270.3	3.2479	936.41	2.6335	79.961	
06 15:50	40.239	1271.1	2.9644	922.17	2.6053	79.623	
06 14:50	40.539	1271.1	2.5905	927.62	2.5912	79.632	
06 13:51	32.404	1274.7	3.3734	937.52	2.2296	error	
06 12:52	31.534	1276.2	3.4127	936.72	2.1695	78.131	
06 11:52	25.814	1272.7	5.5054	951.97	1.8530	75.978	
06 10:53	41.459	1272.1	3.3726	949.01	2.3160	75.285	
06 09:54	41.754	1271.6	3.4964	949.70	2.2897	74.884	
06 08:54	41.724	1271.8	3.4084	951.28	2.2691	74.531	
06 07:55	42.054	1272.7	3.3162	948.88	2.2860	74.466	
06 06:56	42.098	1274.0	3.1198	942.88	2.2860	74.379	
06 05:56	21.014	1271.0	6.8015	949.35	1.6943	74.418	
06 04:57	21.240	1270.1	6.9117	950.34	1.7102	74.944	
06 03:58	20.577	1270.3	7.0585	949.02	1.7065	75.361	
06 02:58	20.449	1270.3	6.9176	943.89	1.7243	75.746	
06 01:59	20.670	1271.8	6.8041	942.87	1.7394	75.967	
06 01:00	20.424	1270.8	6.8502	943.68	1.7384	76.209	
06 00:01	20.439	1271.1	6.7289	939.41	1.7431	76.530	

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/05/1992
00:00:10

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
04 23:44	-0.009	1084.6	11.967	761.59	11.572	82.279	0.0239
04 22:45	-0.004	1141.5	11.962	843.33	11.572	82.293	43.750
04 21:46	33.285	1268.2	4.5662	934.32	2.0803	82.603	67.836
04 20:46	25.603	1272.0	6.3823	942.97	1.9385	82.496	55.619
04 19:47	21.083	1268.9	7.3642	938.73	1.8427	82.444	52.870
04 18:48	24.398	1268.7	6.4608	938.36	1.9178	82.768	57.819
04 17:48	26.719	1273.2	6.2687	938.14	1.9854	82.933	58.524
04 16:49	23.936	1267.5	6.6179	937.27	1.9169	82.985	54.006
04 15:50	34.922	1277.1	5.0136	953.70	2.1470	83.103	72.809
04 14:50	24.280	1275.7	6.9450	938.11	1.9084	82.542	53.300
04 13:51	25.991	1268.9	6.1065	946.41	1.8915	81.661	62.612
04 12:52	24.540	1274.2	6.7050	942.94	1.8436	81.084	53.862
04 11:52	24.319	1273.2	6.5070	932.26	1.8267	80.560	55.273
04 10:53	24.206	1274.9	7.1542	944.96	1.8276	80.339	55.046
04 09:54	24.757	1279.3	6.7827	944.62	1.8558	79.956	62.923
04 08:54	25.426	1287.0	7.1644	937.46	1.8596	79.719	59.110
04 07:55	-0.009	1163.2	11.944	615.20	1.3853	79.525	56.767
04 06:56	-0.009	1161.7	11.945	616.56	11.573	79.603	132.14
04 05:56	-0.009	886.44	11.948	560.72	11.572	81.925	127.98
04 04:57	-0.009	545.59	11.949	499.25	11.572	81.545	129.68
04 03:58	-0.009	231.38	11.951	409.06	11.571	81.380	130.34
04 02:58	-0.009	98.360	11.955	342.80	11.572	81.246	0.0239
04 01:59	-0.009	106.38	11.956	347.80	11.572	81.143	0.0119
04 01:00	-0.009	115.60	11.957	353.24	11.572	81.117	0.0119
04 00:01	-0.009	125.51	11.961	358.73	11.572	81.038	0.0119

UPIP2A_J Printed on 06/05/1992 at 00:00:17

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/06/1992
00:00:11

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
05 23:44	-0.009	950.99	11.971	631.51	11.572	83.748	0.0119
05 22:45	-0.009	1037.2	11.972	681.34	11.572	83.834	0.0119
05 21:46	-0.009	1140.5	11.971	746.44	11.572	84.242	0.0119
05 20:46	-0.009	1196.2	11.970	831.08	11.572	84.565	23.978
05 19:47	21.722	1268.2	7.2267	949.43	1.9667	84.628	50.455
05 18:48	41.719	1271.1	3.4998	946.82	2.4719	84.710	81.403
05 17:48	41.793	1272.3	3.2889	947.74	2.4729	84.754	84.870
05 16:49	41.655	1271.3	2.9994	957.97	2.4428	84.681	85.085
05 15:50	41.960	1273.0	3.4648	951.37	2.4391	84.181	84.248
05 14:50	31.372	1268.4	4.9385	950.01	2.1038	83.522	69.557
05 13:51	38.419	1277.3	4.0633	954.11	2.2447	82.845	74.853
05 12:52	40.327	1273.2	3.6654	952.70	2.2484	82.218	81.523
05 11:52	40.263	1274.2	3.7389	945.91	2.2146	81.588	79.658
05 10:53	40.706	1275.1	3.6381	951.43	2.1902	81.058	84.535
05 09:54	40.588	1278.0	3.5604	946.68	2.1573	80.359	85.455
05 08:54	5.7737	1239.4	11.955	679.06	1.5196	80.122	33.816
05 07:55	-0.004	1175.8	11.954	611.25	11.571	80.487	70.143
05 06:56	-0.004	812.50	11.959	544.52	11.573	80.567	65.278
05 05:56	-0.009	624.14	11.964	509.46	11.572	81.201	27.780
05 04:57	-0.009	690.06	11.967	529.70	11.572	82.553	11.403
05 03:58	-0.009	762.29	11.967	555.37	11.572	82.479	10.064
05 02:58	-0.009	822.57	11.968	588.68	11.572	82.399	0.0239
05 01:59	-0.009	893.27	11.968	627.62	11.572	82.352	0.0239
05 01:00	-0.009	971.31	11.968	676.71	11.572	82.272	0.0239
05 00:01	-0.009	1056.1	11.968	740.63	11.572	82.274	0.0239

UPIP2A_K Printed on 06/06/1992 at 00:00:17

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/07/1992
00:00:11

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
06 23:44	-0.009	888.14	11.966	613.89	11.572	84.547	0.0239
06 22:45	-0.004	979.50	11.968	658.63	11.573	84.367	0.0239
06 21:46	-0.004	1148.0	11.968	715.66	11.572	85.026	0.0239
06 20:46	-0.004	1168.3	11.966	791.89	11.572	85.398	0.0239
06 19:47	-0.004	1246.2	11.963	866.07	11.571	85.940	55.368
06 18:48	24.354	1270.4	5.9972	941.02	2.1160	86.332	50.348
06 17:48	25.342	1270.4	5.9887	943.08	2.1517	86.583	49.153
06 16:49	40.249	1272.8	3.4921	945.52	2.5602	86.487	74.398
06 15:50	40.278	1273.7	3.2667	939.85	2.5330	85.826	71.302
06 14:50	40.627	1274.9	3.3367	940.20	2.5020	85.108	73.072
06 13:51	41.399	1286.3	3.9173	955.58	2.5020	84.301	79.610
06 12:52	0.0000	1175.2	11.959	617.22	2.6297	83.674	126.51
06 11:52	-0.009	1004.4	11.959	585.69	11.572	82.604	124.06
06 10:53	-0.009	657.78	11.956	511.21	11.571	82.081	119.41
06 09:54	-0.009	389.00	11.957	449.52	11.572	81.657	118.11
06 08:54	-0.009	414.27	11.958	456.11	11.572	81.239	24.373
06 07:55	-0.004	451.33	11.960	464.53	11.573	81.128	23.751
06 06:56	-0.014	491.63	11.961	473.51	11.572	81.245	24.241
06 05:56	-0.009	537.05	11.962	483.54	11.571	81.526	22.950
06 04:57	-0.009	588.96	11.964	495.29	11.572	81.969	10.806
06 03:58	-0.009	650.44	11.966	510.52	11.572	82.163	0.0239
06 02:58	-0.009	705.77	11.967	527.61	11.572	82.507	10.017
06 01:59	-0.009	778.51	11.968	550.89	11.572	83.154	9.4911
06 01:00	-0.009	882.85	11.969	583.89	11.572	83.374	9.0727
06 00:01	-0.009	928.27	11.971	619.86	11.572	83.732	0.0239

UPIP2A_L Printed on 06/07/1992 at 00:00:18

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/08/1992
00:00:11

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
07 23:44	-0.009	1137.1	11.974	736.57	11.572	86.253	15.001
07 22:45	-0.009	1220.2	11.973	817.06	11.572	87.114	22.962
07 21:46	20.257	1266.9	7.0295	928.55	2.1094	87.393	39.673
07 20:46	21.206	1265.1	6.8997	941.99	2.1320	87.774	42.267
07 19:47	38.552	1269.8	3.9028	948.99	2.5997	87.743	68.553
07 18:48	38.640	1269.9	3.7645	947.13	2.6213	87.958	64.895
07 17:48	39.000	1270.4	3.7909	954.16	2.5800	87.498	70.597
07 16:49	39.324	1269.2	3.6774	950.66	2.4935	86.164	70.215
07 15:50	39.378	1269.6	3.3316	948.33	2.4503	85.360	72.534
07 14:50	39.811	1273.2	3.4340	944.54	2.4513	84.856	72.964
07 13:51	28.760	1236.6	5.0785	921.19	2.1780	84.561	62.409
07 12:52	0.0000	1176.0	11.958	619.61	3.8948	83.933	98.413
07 11:52	-0.009	1018.4	11.956	592.38	11.572	83.572	98.329
07 10:53	-0.009	693.30	11.951	523.58	11.572	83.059	96.226
07 09:54	-0.009	387.46	11.953	453.30	11.572	82.884	96.214
07 08:54	-0.009	376.87	11.955	447.70	11.572	82.627	42.303
07 07:55	-0.009	413.76	11.956	456.55	11.572	82.780	41.466
07 06:56	-0.009	455.94	11.958	465.99	11.572	83.164	0.0119
07 05:56	-0.009	497.26	11.961	475.28	11.572	83.139	0.0119
07 04:57	-0.009	543.71	11.961	486.45	11.572	83.208	0.0119
07 03:58	-0.014	598.36	11.962	500.85	11.572	83.412	0.0119
07 02:58	-0.009	652.66	11.965	517.56	11.572	83.503	0.0119
07 01:59	-0.009	717.21	11.965	539.30	11.572	83.858	0.0119
07 01:00	-0.009	793.88	11.967	567.92	11.571	84.656	0.0119
07 00:01	-0.009	865.09	11.966	603.30	11.571	84.696	0.0119

UPIP2A_M Printed on 06/08/1992 at 00:00:18

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/09/1992
00:00:10

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
08 23:44	-0.009	1072.2	11.968	739.75	11.572	86.274	22.651
08 22:45	-0.009	1151.4	11.963	822.92	11.572	86.370	26.142
08 21:46	9.9836	1210.3	11.910	935.10	1.8812	86.744	24.731
08 20:46	23.916	1271.8	6.3046	947.66	2.1977	87.447	45.280
08 19:47	24.152	1270.1	6.2756	947.26	2.2315	87.898	45.817
08 18:48	21.137	1264.6	7.0158	936.15	2.1742	87.880	39.542
08 17:48	38.734	1269.8	3.7286	951.18	2.6138	87.681	65.493
08 16:49	39.044	1270.8	3.6253	950.45	2.5668	86.728	69.234
08 15:50	39.413	1273.0	3.8003	952.25	2.5142	85.875	67.071
08 14:50	39.944	1272.5	3.6074	953.13	2.4945	85.359	68.099
08 13:51	40.096	1273.0	3.6799	952.88	2.4729	84.968	68.744
08 12:52	40.465	1274.9	3.6629	955.79	2.4419	84.190	73.992
08 11:52	40.573	1275.2	3.6108	960.65	2.4222	83.788	75.092
08 10:53	29.778	1265.8	4.8266	954.47	2.1620	83.495	58.847
08 09:54	0.0147	1245.0	11.957	641.13	1.5891	83.255	105.74
08 08:54	-0.009	1006.8	11.959	582.42	11.572	83.374	110.83
08 07:55	-0.009	805.66	11.961	531.21	11.573	83.453	106.18
08 06:56	-0.009	559.76	11.964	492.36	11.572	83.720	43.690
08 05:56	-0.009	628.92	11.968	508.37	11.573	84.089	10.650
08 04:57	-0.009	692.28	11.969	526.11	11.572	84.584	13.065
08 03:58	-0.009	770.32	11.970	549.09	11.572	84.912	12.395
08 02:58	-0.009	835.55	11.972	579.62	11.572	85.108	12.180
08 01:59	-0.009	918.03	11.973	615.49	11.573	85.490	11.224
08 01:00	-0.009	1014.6	11.974	659.78	11.572	85.791	13.113
08 00:01	-0.009	1113.7	11.974	717.81	11.572	86.139	14.284

UPIP2A_N Printed on 06/09/1992 at 00:00:18

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/10/1992
00:00:07

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
09 23:44	-0.004	1195.6	11.974	759.98	11.573	86.998	22.699
09 22:45	-0.004	1272.8	11.970	850.01	11.573	87.181	31.103
09 21:46	27.791	1272.5	4.8053	937.71	2.2954	87.344	47.802
09 20:46	40.554	1269.9	3.4255	953.29	2.6861	87.659	70.203
09 19:47	40.436	1270.3	3.4127	953.25	2.6908	87.780	70.860
09 18:48	40.377	1270.1	3.6355	954.70	2.6908	87.917	68.481
09 17:48	39.019	1270.3	3.6415	954.08	2.6372	87.813	70.478
09 16:49	39.226	1271.3	3.5706	951.92	2.6241	87.627	70.920
09 15:50	39.477	1271.6	3.6731	953.21	2.5414	86.411	67.465
09 14:50	39.845	1273.2	3.7534	954.09	2.5142	85.691	70.920
09 13:51	40.101	1273.3	3.6552	953.26	2.4832	85.087	70.525
09 12:52	40.185	1275.1	3.4947	953.82	2.4522	84.567	74.135
09 11:52	39.988	1273.9	3.3504	940.16	2.4522	84.651	71.553
09 10:53	25.406	1275.6	6.0194	945.79	2.0531	84.231	46.666
09 09:54	24.309	1280.0	6.0647	932.03	2.0155	83.725	48.913
09 08:54	4.0573	1200.8	11.956	621.98	1.5365	84.035	63.820
09 07:55	-0.009	1111.8	11.956	587.26	11.573	84.092	65.373
09 06:56	-0.014	846.14	11.958	540.97	11.573	84.958	63.736
09 05:56	-0.009	582.13	11.963	503.31	11.572	84.997	58.524
09 04:57	-0.009	669.22	11.966	523.19	11.572	85.086	13.077
09 03:58	-0.009	733.09	11.967	545.47	11.572	85.159	20.022
09 02:58	-0.009	800.37	11.968	577.06	11.572	85.342	19.364
09 01:59	-0.009	879.09	11.968	614.25	11.572	85.614	23.548
09 01:00	-0.009	968.40	11.969	660.45	11.572	85.846	20.416
09 00:01	-0.009	1050.7	11.968	720.19	11.572	86.064	23.668

UPIP2A_O Printed on 06/10/1992 at 00:00:14

FLORIDA POWER CORPORATION
HIGGINS PLANT - UNIT 1
UNIT PERFORMANCE IMPROVEMENT PROGRAM (UPIP)

HIG1
06/11/1992
00:00:06

DAY/TIME	UGMW	UMSP	EXO2	UMST	UCBP	UCWT	FRAT
10 23:44	0.0000	1277.4	11.962	927.58	11.569	88.339	0.0239
10 22:45	35.822	1269.8	3.6492	938.32	2.5837	88.628	64.011
10 21:46	40.175	1270.6	3.2897	948.74	2.7875	89.186	73.311
10 20:46	40.150	1269.6	3.3888	950.02	2.8204	89.551	71.410
10 19:47	40.057	1269.8	3.3060	949.60	2.8467	89.848	69.796
10 18:48	40.067	1269.4	3.3265	950.05	2.8307	89.852	73.382
10 17:48	40.111	1269.2	3.3726	948.68	2.8025	89.543	72.821
10 16:49	40.190	1269.6	3.3999	948.64	2.7744	89.062	73.370
10 15:50	40.278	1269.8	3.2368	950.08	2.7114	88.280	73.825
10 14:50	39.737	1270.1	3.6543	951.72	2.6823	88.086	70.992
10 13:51	40.131	1269.8	3.5228	955.23	2.6391	87.377	71.494
10 12:52	40.145	1271.1	3.3691	955.69	2.6081	86.891	75.068
10 11:52	40.091	1275.2	3.7448	953.30	2.5593	86.449	75.725
10 10:53	30.649	1274.2	4.7097	949.15	2.2681	85.795	58.309
10 09:54	40.977	1279.0	3.0899	956.18	2.5621	85.424	77.004
10 08:54	4.4065	1172.4	11.959	641.81	1.6022	85.396	56.349
10 07:55	-0.009	1080.0	11.961	612.14	11.572	85.473	52.739
10 06:56	-0.009	846.82	11.963	564.77	11.572	85.790	50.288
10 05:56	-0.009	656.76	11.968	515.88	11.572	85.955	46.355
10 04:57	-0.009	739.41	11.970	535.21	11.572	86.272	21.576
10 03:58	-0.004	819.15	11.973	558.60	11.573	86.671	22.604
10 02:58	-0.009	893.61	11.974	590.91	11.572	86.887	20.811
10 01:59	-0.009	989.41	11.974	628.57	11.572	87.078	20.416
10 01:00	-0.004	1075.8	11.974	676.65	11.572	87.109	20.093
10 00:01	-0.009	1167.8	11.974	739.55	11.572	86.943	22.149

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

Mr. W. Jeffrey Pardue
Manager, Environmental Programs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, FL 33733

October 20, 1992

Re: DER File AO52-216382, Higgins Unit 1.
DER File AO52-216383, Higgins Unit 2.
DER File AO52-216384, Higgins Unit 3.
DER File AO52-216412, Bartow Unit 2.
DER File AO52-216413, Bartow Unit 3.

Dear Mr. Pardue:

Our letter dated August 14, 1992, notified you that additional information is required in order to process the above referenced permit applications. When additional information is required, all processing of the application is suspended. Pursuant to Section 120.60, Florida Statutes, the Department may deny a permit application if the applicant, after receiving timely notice, fails to correct errors, omission, or supply additional information within a reasonable period of time.

It has been 67 days since you were notified of the need for additional information. The Department has not received a response. Therefore, by November 10, 1992, please advise us whether,

(A) you wish to withdraw your application,
(B) you need additional time to submit the required additional information (please provide the date that the Department will receive it), or
(C) you have questions about our request and wish to discuss it with us.

If we do not receive one of the responses listed above or the required additional information by November 10, 1992, then the Department will initiate procedures to deny your permits.

Your cooperation regarding these matters will be appreciated.

Sincerely,

J. Harry Kerns

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

copy to: Mr. Gary Robbins - Pinellas County D.E.M.

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

August 14, 1992

Mr. W. Jeffrey Pardue
Manager, Environmental Programs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, FL 33733

Re: DER File AO52-216382, Higgins Unit 1.
DER File AO52-216383, Higgins Unit 2.
DER File AO52-216384, Higgins Unit 3.
DER File AO52-216412, Bartow Unit 2.
DER File AO52-216413, Bartow Unit 3.

Dear Mr. Pardue:

Thank you for submitting the five operating permit renewal applications referenced above. The Department has determined that additional information is required in order to process all of the applications. Pursuant to Rules 17-4.050(3), 17-4.055, 17-4.070(1), 17-4.070(2), 17-4.070(3), and 17-2.600(5), F.A.C., the Department requests submittal of the following additional information.

(1) All air pollution permit applications for sources at major facilities must be signed and sealed by a professional engineer registered to practice in Florida. For your convenience, a blank P.E. certification form is attached. Please re-submit all five applications with a completed P.E. certification form attached to each.

(2) FPC is requesting increases in the heat input rate to the boilers. For each boiler, has there been any physical change, change in the method of operation of, or addition to the boiler? The original applications were based on a fuel heat content of 148,790 Btu/gallon. Please justify why this needs to be changed.

(3) For each boiler, please submit a copy of the strip chart recordings for fuel flow, air flow, and stack O_2 during the most recent particulate matter compliance test. If no strip chart recordings are made at a particular boiler, then FPC may substitute other types of records of the requested operating parameters for that particular boiler.

(4) For each boiler, please submit a copy of the strip chart recordings for fuel flow, air flow, and stack O_2 for the seven consecutive day period beginning exactly 30 days after the most recent particulate matter compliance test. If no strip chart recordings are made at a particular boiler, then FPC may substitute other types of records of the requested operating parameters for that particular boiler.

(5) Regarding the Higgins plant, on November 7, 1989, in response to a warning letter from Pinellas County for high VE readings, FPC planned on constructing a fuel oil additive system by January 1990 and a TV monitoring system for the stacks. FT Baschem 1103, a water based magnesium hydroxide was to be added to the fuel oil in an attempt to decrease visible emissions. Were these systems ever installed? If so:

(A) Please provide MSD sheets for the fuel additive.
(B) What chemicals are likely to be produced from the combustion of the fuel additive?
(C) What is the maximum amount of fuel additive used in any one hour?
(D) Is the TV monitoring system still in use?

NOTICE!

Pursuant to Section 120.60, F.S., the Department suspends the processing of your applications until receipt of the requested additional information. If you have any questions, please call Mr. Gary Robbins (Pinellas County Dept. of Environmental Management) at (813) 462-4422, or Mr. Gary Maier (FDER) at (813) 620-6100, ext 408. Please send one copy of your response directly to Mr. Robbins.

Sincerely,

J. Harry Kerns

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

copy to: Mr. Gary Robbins - Pinellas County

PROFESSIONAL ENGINEER CERTIFICATION

Re: Florida Power Corporation
Unit: _____
Air Operating Permit
Renewal of DER Permit No. _____

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 requested, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

Name (Please Type)_____

Company (Please Type)_____

Mailing Address_____

_____

Florida Registration No._____

Today's Date:_____

Telephone No._____

Don't forget to affix P.E. Seal.

BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPT. OF ENVIRONMENTAL MGMT.
AIR QUALITY DIVISION
300 S. GARDEN AVE.
CLEARWATER, FL 34616

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BRUCE TYNDALL

August 11, 1992

Mr. Gary Maier
Department of Environmental Regulation
4520 Oak Fair Blvd.
Tampa, Fla. 33610-7347

RE: Florida Power Corporation: Renewal Applications
Higgins Fossil Fuel Steam Generator Unit No. 1 - Permit No. 216812
Higgins Fossil Fuel Steam Generator Unit No. 2 - Permit No. 216813
Higgins Fossil Fuel Steam Generator Unit No. 3 - Permit No. 216814

Mr. Maier:

This office has reviewed the APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S) and the permit files for the above mentioned facility. Florida Power was granted a reduction in the frequency of testing from quarterly to semi-annual on December 7, 1982, and then was granted a reduction in the frequency of testing from semi-annual to annual on December 11, 1986. There are several items which need to be addressed prior to renewing these permits:

1. The renewal application must be sealed by and PE, registered in Florida.

2. The facility is requesting that the BTU/hr ratings of the boilers be changed to match the permitted fuel oil use per hour times 150,000 BTU/gallon heat content for fuel oil. What has changed at the facility which would warrant this change? Our records indicate that these were the original ratings requested by Florida Power, with a fuel heat content of 148,790 BTU/hour.

3. On November 7, [redacted]89, in response to a warning l[redacted]er from Pinellas County for high VE readings, Florida Power planned on constructing a fuel oil additive system by January 1990 and a TV monitoring system for the stacks. FT Baschem 1103, a water based magnesium hydroxide was to be added to the fuel oil in an attempt to decrease visible emissions. Were these systems ever installed? If so:

   A. Provide MSD sheets for the fuel additive.
   B. What chemicals are likely to be produced from the combustion of the fuel additive?
   C. What is the maximum amount of fuel additive used in any one hour?
   D. Is the TV monitoring system still in use?

4. The current permits for Florida Power, Higgins, allows for annual testing with a 40% opacity limit. Rule 17-2.600(5)(a)1., F.A.C., allows for a 20% opacity unless the facility elects to test quarterly. Since the facility petitioned and received permission to test annually, what is DER's position regarding the appropriate VE standard. Please send a copy of the DER orders, which granted the reduction in frequency of particulate testing, to annual testing.

If you have any questions contact this office at Suncom 570-4422.

Sincerely,

Gary Robbins, Environmental Program Manager
Air Quality Division

cc: RF, PF

AQC.180

AIR

TOXICS

SCREENING

FOR:

FLORIDA POWER CORP.- HIGGINS

BY:

MATT McCANN

ON:

AUGUST 12, 1992

PINELLAS COUNTY
ENVIRONMENTAL MANAGEMENT
AIR QUALITY

AIR TOXICS MODEL RESULTS AND NTL COMPARISON (ug/m3)

CHEMICAL NAME	PASS	MAX 1hr	MAX 1hr	MAX GROUND LEVEL CONC.			NO THREAT LEVELS		
	YES/NO	@1G/S	ACTUAL	8 HR	24 HR	ANNUAL	8 HR	24 HR	ANNUAL
Mercury	YES	2.270	0.053	0.037	0.021	0.005	0.50	0.12	0.30
Sulfuric acid	YES								
Selenium	YES	2.270	0.053	0.037	0.021		2.00	0.48	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	YES						47.00	11.28	
2,3,7,8-Tetrachlorodibenzofuran	YES								
Ammonia	YES	2.270	1.373	0.961	0.549	0.137	170.00	40.80	100.00

AIR TOXICS EMISSION RATE CALCULATIONS (ug/m3)

CHEMICAL NAME	EFACTOR		FUEL USE		FUEL	UNITS	DESC 1	EMISSION RATE	
	lb/10E6Btu	lb/10E6ft3	MMBtu/hr	MM ft3/hr	TYPE	#		LB/HR	G/S
Mercury	0.00011363	NA	544	NA	Nat. Gas	3	BOILER	0.185	0.023
Sulfuric acid			544	NA	Oil	3	BOILER		
Selenium	0.00011363	NA	544	NA	Oil	3	BOILER	0.185	0.023
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	544	NA	Oil	3	BOILER		
2,3,7,8-Tetrachlorodibenzofuran	ND	ND	544	NA	Oil	3	BOILER		
Ammonia	NA	3.2	NA	0.5	Nat. Gas	3	BOILER	4.800	0.605

STACK PARAMETERS

VELOCITY		TEMPERATURE		DIAMETER		HEIGHT	
FPS	M/S	F	K	INCHS	METERS	FT.	METERS
27.0	8.2	310.0	427.6	150.0	3.8	174.0	53.0

BUILDING DIMENSIONS

	FEET	METERS
MIN. HORIZONTAL		0
MAX. HORIZONTAL		0
HEIGHT		0

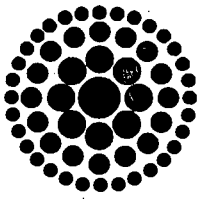
THIS FACILITY HAS BEEN REVIEWED FOR AIR TOXICS EMISSIONS AND HAS PASSED .

DISPERSION MODELING USING TSCREEN VERSION 1.1

NTL VALUES

by

FLORIDA AIR TOXICS GUIDELINES



Florida Power
CORPORATION

July 14, 1992

Dr. Richard Garrity
Florida Department of Environmental Regulation
Southwest District
4520 Oak Fair Blvd.
Tampa, Florida 33610-7347

Dear Dr. Garrity:

Re: Renewal of Air Operating Permits For Higgins Plant Steam and Peaking Units
Permit Nos. AO52-137124, -137125, -137126, -137554, -137555, -137556, & -137557

Florida Power Corporation (FPC) is in receipt of a letter from the Pinellas County Air Quality Division, dated May 27, 1992, providing notification that the above-referenced permits are due to expire on September 16, 1992. The renewals requested include all permitted sources at the Higgins Plant site-- three steam units and four peaking units.

Enclosed are permit renewal applications (three copies of each) for peaking units P1 through P4 and steam units 1 through 3. As reflected in the attached applications, FPC requests the following changes:

- Correct the Unit 1 heat input rate. The value should be changed from 544 MMBTU/hr to 548 MMBTU/hr.
- Correct the Unit 2 heat input rate. The value should be changed from 500 MMBTU/hr to 523 MMBTU/hr.
- Correct the Unit 3 heat input rate. The value should be changed from 512 MMBTU/hr to 548 MMBTU/hr.
- The Unit 2 annual test date should be changed from July 21, 1986 to May 5, 1992.

- The Unit 3 annual test date should be changed from July 30, 1986 to May 7, 1992.

The corrected heat input rates are simply a product of the maximum allowable fuel usage rates (87 bbl/hr, 83 bbl/hr and 87 bbl/hr for units 1, 2 and 3, respectively) and the heating value of the fuel (150,000 BTU/gal or 6.3 MMBTU/bbl). FPC has not modified the units and is not requesting a change in the fuel feed rate; the intent is to correct an error in calculation. The reason for the change in the annual test dates is to allow a more even distribution of testing the units within our system. Since peaking units P1 through P4 are substantially similar, FPC requests that the peaking unit air permits be combined and issued as one. Similarly, FPC requests that the steam unit permits also be combined. Accordingly, two checks for $2,000 each are enclosed to cover the respective processing fees.

If you should have any questions or require clarification of the above, please do not hesitate to contact me at (813) 866-5158.

Sincerely,

Scott H. Osbourn
Sr. Environmental Engineer

Enclosure

cc: Gary Robbins, Pinellas County

VT

BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 34616

COMMISSIONERS

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May 30, 1989

Mr. R. E. Parnelle, P.E.
Florida Power Corporation
3201 34th Street South
St. Petersburg, Florida 33733

RE: Annual Source Stack Testing Procedures

Mr. Parnelle:

This letter serves to provide final clarification regarding the EPA Method 17 testing procedures used by Florida Power Corporation during the performance of annual compliance tests at the Bartow and Higgins plants in Pinellas County. During recent discussions with Mr. Al Morneault of your staff, Pinellas County Air Quality (PCAQD) staff indicated its concerns regarding Florida Power's practice of alternate sampling of outlet ducts during compliance tests, instead of simultaneous sampling, at facilities where the sampling ports are located on two individual ducts (A and B), which each then discharge into a common stack (Affected sources: Higgins 1,2 & 3 and Bartow 1 & 2 units). This technique of alternate sampling is not correct.

Through recent discussions with the State of Florida Department of Environmental Regulation (DER), it has been determined that the correct method of conducting EPA Method 17 at these type facilities requires simultaneous testing of both ducts. All future tests must be conducted in this manner.

Further practice of alternate duct testing for the purpose of conducting Annual Compliance Tests at the affected facilities must first be approved by DER through a formal request for a Alternate Procedure (ASP) approval, pursuant to Subsection 17-2.700(3), Florida Administrative Code.

As there may be additional planning and scheduling obstacles to surmount, PCAQD and DER may approve of a reasonable time delay for the performance of the annual compliance test at the Higgins Unit 1 Boiler, realizing the short time period remaining before the scheduled test date at that source.

If you have any questions regarding this letter, or need more information, please contact our office at 530-6522.

Sincerely,

Gary Robbins

Gary Robbins, Environmental Engineer
Air Quality Division

GR/0870E

cc: Mr. John Brown, DER, Tallahassee
Mr. Viet Ta, DER, Tampa
Mr. A.W. Morneault, Florida Power Corp.
RF,GR
PF: Higgins 1,2,3 and Bartow 1 & 2

Bill T.

Florida Power
CORPORATION

Call Gary
George - Please handle
JK

D.E.R.
APR 24 1989
SOUTHWEST DISTRICT
TAMPA

April 19, 1989

Dr. Richard D. Garrity
Manager, Southwest District
Florida Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

Dear Dr. Garrity:

Subject: Special Conditions
Air Operating Permit, AO-52-137124
Higgins Unit 1

In regards to the above permit, Florida Power Corporation requests a change to the annual test date of 7/29/86 in Specific Condition No. 1 to an annual test date of 5/15/89.

The reason for this change is to allow a more even distribution of testing the units within our system.

Should you have any questions, feel free to contact me at (813)866-4544 or Mr. A. W. Morneault of my staff at (813)866-5162.

Sincerely,

Eustice Parnelle

R. E. Parnelle, P.E.
Supervisor, Air Programs

REP/AWM/bm

cc: Mr. Gary Robbins, Pinellas Co.

D.E.R.
APR 21 1989
SOUTH WEST DISTRICT
TAMPA

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of: Petition for Reduction in Semiannual Particulate Emissions Compliance Testing, Higgins Unit No. 1; Florida Power Corporation Petitioner.	)	OGC File No. 86-1580

ORDER

On February 18, 1986, the Petitioner, Florida Power Corporation, filed a Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1. for the following fossil fuel steam generating unit:

Higgins Unit No.1

Pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1., and by Order dated November 7, 1982, Petitioner has conducted semiannual particulate emission compliance tests. Florida Administrative Code Rule 17-2.600(5)(b)1. provides that the Department may reduce the frequency of particulate testing upon a demonstration that the particulate standard of 0.1 pound per million Btu heat input has been regularly met. The petition and supporting documentation submitted by Petitioner indicate that, since May 12, 1982, Petitioner has regularly met the particulate standard. It is therefore,

ORDERED that the Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing in GRANTED. Petitioner may immediately commence testing on an annual basis. Test results from the first regularly scheduled compliance test conducted in FY 87 (October 1, 1986 - September 30, 1987), provided the results of that test meet the particulate standard and the 40% opacity standard, shall be accepted as results from the first annual test. Failure of Higgins Unit No.1 to meet

either the particulate standard or the 40% opacity standard in the future shall constitute grounds for revocation of this authorization.

Persons whose substantial interests are affected by the above proposed agency action have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on the proposed action. The Petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication 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.

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 proposed agency action. Persons whose substantial interests will be affected by any decision of the Department have the right to intervene in the proceeding. A petition for the intervention must be filed pursuant to Model Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the Hearing Officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no Hearing Officer has been assigned, the petition is to filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitues a

waiver of any right such person has to an administrative determination (hearing) under Section 120.57, Florida Statutes.

DONE AND ORDERED this 11th day of Dec, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL
Secretary

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400
Telephone (904)488-9730

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

C. Hutchinson
Clerk

12-12-86
Date

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing ORDER has been furnished by United States Mail to J.A. Hancock, Vice President, Fossil Operations, Florida Power Corporation, Post Office Box 14042, St. Petersburg, Florida 33733; on this 12 day of December, 1986, in Tallahassee, Florida.

E. Gary Early
Assistant General Counsel

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400
Telephone (904)488-9730

TO: File 12/2/87

THROUGH: Bill Thomas 12/2/87

FROM: C. S. Lee

DATE: November 25, 1987

Subject: Amendment of permits
AO52-137121, AO52-137123, AO52-137124
AO52-137125, AO52-137126, AO52-137556

Attached is an amendment letter which was requested by Florida Power Corporation. All referenced permits are changed accordingly.

CSL/sl

Florida Power
CORPORATION

October 16, 1987

D. E. R.

OCT 19 1987

SOUTH WEST DISTRICT
TAMPA

Dr. R.D. Garrity
District Manager
Southwest District
4520 Oak Fair Blvd.
Tampa, FL 33610-7347

ATTN: Mr. Jim McDonald

RE: Comments for Permits

A052-137121	Bartow Unit 2
A052-137123	Bartow Unit 3
A052-137124	Higgins Unit 1
A052-137125	Higgins Unit 2
A052-137126	Higgins Unit 3
A052-137556	Higgins Peaking Unit 2

A review of the above cited permits has been made and the following comments made:

I. For all the above cited permits except A052-137556.
Page 6 of 9, special condition 2:
Add the following to the existing statement, "except as provided for in Section 17-2.250, FAC".

II. For permit No. A052-137124, 137125 and 137126
Page 8 of 9: Special Condition 7 B 5:
Change the last part of first sentence to read: "and a monthly sample taken for analysis". in lieu of daily samples.
The reason for this change is that the Higgins Units run only on an as needed basis, not daily.

III. For permit No. A052-1375126
Page 7 of 9; special condition 7 A:

1. Heat Input: Should be 512 MMBTU/hour
3. Fuel Consumption: Should be 87 BBL/hour

IV. For permit No. A052-137556
Page 6 of 7, special condition 5:
Peaking Unit #4 should read "2".

The above changes have been discussed with Mr. Jim McDonald of your office and he concurred with these changes.

Should further discussion be necessary on these changes, feel free to contact me at (813)866-5162.

Sincerely,

A. W Morneault

A.W. Morneault
Environmental Operations

AWM:bm

TO: File

THRU: W.C. Thomas

FROM: J.W. Estler 9/24/87

DATE: September 16, 1987

SUBJECT: Pinellas County - AP
Florida Power Corporation
AO52-137124, 25, and 26.

Attached are the operating permit renewals for Florida Power Corporation's Higgins Plants Units 1, 2, and 3. These power plants are in compliance with the emissions limitations contained in Chapter 17-2 based on the results of the latest stack test. Each unit is subject to a forty percent opacity and an annual testing requirements by order issued pursuant to Section 17-2.600(5)(b)1., F.A.C.

PCDEM has provided us with their recommendations and draft permits on August 28, 1987. According to my telephone conversation with Gary Robbins on September 14, 1987, the county will complete APIS for this facility.

Based on my review of the file and the comments from PCDEM, I recommend this permit be issued as conditioned.

PERMIT APPLICATION STATUS SHEET

COMPANY: Florida Power Corporation

PROCESSOR: Joe PERMIT NO. A052-137124

DATE RECEIVED: 7/20/87 P.E. SEAL & SIGN: Y/N C

CHECK: Y/N

	DATE TASK COMPLETED	INITIALS
DATE REC'D BY SECTION:		
LOGGING BY SEC'Y	7-27-87	
Permitting Eng'r submit finished permit package & recommendations to supervisor.		
Permit Package to Dist. Engr.	9/24/87	
Permit Package to Dist. Mgr.	10/1/87	
Permit Package Mailed out:		

DATA FOLLOW-UP

Issue Date Updated on PATS:	10-1-87	JM
Updated on WANG:		

(01-08-87)

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

COMMISSIONERS

GEORGE GREER, CHAIRMAN
JOHN CHESNUT, JR. VICE-CHAIRMAN
CHARLES E. RAINEY
BARBARA SHEEN TODD
BRUCE TYNDALL

D. E. R.

AUG 1 0 1987

SOUTH WEST DISTRICT
TAMPA

August 4, 1987

Mr. Jim Estler
Department of Environmental Regulation
4520 Oak Fair Blvd.
Tampa, Fla. 33610-7347

RE: Florida Power Corporation, Permit# AO52-137124 (Replaces Permit# AO52-56652); Higgins Fossil Fuel Steam Generator Unit# 1.

Mr. Estler:

This office has reviewed the APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S) and the permit files for the above mentioned facility. Florida Power was granted a reduction in the frequency of testing from quarterly to semi-annual on December 7, 1982, and then was granted a reduction in the frequency of testing from semi-annual to annual on December 11, 1986. Pinellas County was not supplied a copy of the petition for reduction in testing and therefore was unable to provide comments. The renewal application is deemed complete. Pinellas County recommends that an operating permit for the fossil fuel steam generator be issued. The recommended permit conditions are attached.

Sincerely,

Gary Robbins, Environmental Engineer
Air Quality Division

GR/0290E

APPLICANT:
Mr. J. A. Hancock
Vice President, Fossil Operations
Florida Power Corporation
Post Office Box 14042
St. Petersburg

PERMIT/CERTIFICATION
No. AO52-137124
County: Pinellas
Project: Steam Generator
Higgins Unit# 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 a fossil fuel steam generator (designated as Higgins Unit# 1) rated at 43 MW/hour with a maximum heat input of 544 MMBTU/hour. Unit is fired on No. 6 fuel oil with a maximum sulfur content of 2.5%. Maximum fuel oil usage is 87 BBL/hour. When available, unit is fired on natural gas at a rate of $0.5(10^6)$ ft^3/hour

Located at Shore Drive, Oldsmar, Pinellas County: Florida

UTM 17-336.54 E 3098.25 N

Replaces Permit No.: AO52-56652 NEDS No.: 0012 Point ID: 01

Expiration Date: Five years from issue date

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 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 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 form 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 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 acknowledgment 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: Higgins Unit# 1, Permit# AO52-17121:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of 7/13/87 (the facility was granted reduction in the frequency of testing to annual for this source by the State on December 11, 1986). Submit a copy of test data to the Air sections of the Southwest District of the Department of Environmental Regulation and Pinellas County Environmental Management within 45 days of such testing, Chapter 17-2.700 (2), Florida Administrative Code (F.A.C.).

(X) Particulates*	(X) Sulfur Oxides**
( ) Fluorides	( ) Nitrogen Oxides
(X) Opacity	( ) Hydrocarbons
	( ) Total Reduces Sulfur

* Annual Compliance test shall be conducted with steam generator being fired with number 6 fuel oil.

** Fuel analysis may be submitted for required sulfur dioxide emission test (Refer to permit condition number 5).

2. The visible emission limitation for this boiler is 40% opacity as set forth in Subsection 17-2.600 (5)(b)1, F.A.C..

3. Sulfur dioxide emissions are limited to 2.75 pounds/MMBTU heat input.

4. Particulate emissions are limited to 0.10 pounds/MMBTU heat input except as provided for in Sections 17-2.600 and 17-2.250, F.A.C..

5. Compliance with the emission limitations of Specific Conditions# 1, 2, 3 and 4 shall be determined as follows:

Pollutant	Test Method
Visible Emissions: (Steady state and soot blowing)	DER Method 9
Particulate: (Steady state and soot blowing)	EPA Method 17[a] or EPA Method 5
Sulfur Oxides:	Fuel analysis[b]

a. Method 17 may be used only if the stack temperature is less than 375° F.

b. Sulfur content shall be verified by submittal of monthly composite fuel analyses reports on a quarterly basis (within 30 days after the end of each calendar quarter) to the Air Sections of the Department of Environmental Regulation and Pinellas County Environmental Management.

as contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C.. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

6. Testing of emissions must be conducted within ±10% of the permitted rates as stated in Condition# 8 (Process Parameters). A compliance test submitted at operating levels less than 90% of permitted capacities will automatically constitute an amended permit at the lesser rate until another test (showing compliance) at the permitted rate, as stated above, is submitted. Failure to submit the input rates or operation at conditions during testing which do not reflect actual operating conditions may invalidate the data [Section 403.161(1)(c), Florida Statutes].

7. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department and the Pinellas County Department of Environmental Management. A written report shall be submitted quarterly to this office and the Pinellas County Department of Environmental Management stating the cause, period of noncompliance, and steps taken for corrective action and prevention of reoccurrence.

8. Operation and Maintenance Plan For Particulate Control, Section 17-2.650(2), Florida Statutes:

A. Process Parameters:

1.	Heat Input:	544 MMBTU/hour
2.	Fuel:	Number 6 fuel oil with a 2.5% sulfur content (natural gas when available)
3.	Fuel Consumption:	87 BBL/hour of Number 6 fuel oil $0.5(10^6)$ ft^3/hour of natural gas
4.	Ash Content:	as sampled
5.	Steam Temperature:	950° F
6.	Steam Pressure:	1315 psi
7.	Steam Flow:	450,000 pounds/hour
8.	Stack Height:	174 feet
9.	Boiler Make:	Babcock and Wilcox
10.	Arrangement:	Front fired

B. Inspection and Maintenance Program:

1. Conducted during major outages: boilers, controls, auxiliaries, burners and duct work are to be inspected and repaired as necessary. All parts are to be inspected, cleaned and replaced as necessary.

2. Scheduled during non-peak load periods in Spring and Fall. The schedule is affected by forced outage requirements.

3. The following are to be continuously monitored and maintained to produced efficient fuel combustion:

   a. fuel flow
   b. fuel temperature
   c. fuel pressure
   d. air flow
   e. steam flow
   f. steam temperature
   g. steam pressure

4. Plant operators are to monitor, adjust and record the following parameters to assure efficient plant operation at least once per day:

   a. Pressures (furnace, superheat, reheat, air heaters and windbox)
   b. Temperatures (superheat, reheat and fuel)
   c. Flows (steam, feedwater, oil and gas)
   d. Unit load

5. Fuel oil quality is to be monitored prior to delivery and a daily sample taken for a monthly composite analysis. Fuel oil is analyzed for the following:

   a. BTU
   b. API Gravity
   c. Density
   d. Sulfur Content

C. Records:

Records of inspection, maintenance, and performance parameter shall be retained for a minimum of two years and shall be made available to the Department or Pinellas County Department of Environmental Management upon request as per Subsection 17-2.650(2)(g)5, F.A.C..

9. The Pinellas County Department of Environmental Management shall be notified in writing 10 days prior to compliance testing.

10. Submit for this facility, each calendar year, on or before March 1, and 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 Air Sections of the Southwest District Office and Pinellas County Department of Environmental Management, Air Quality Division.

11. Three applications to renew this operating permit shall be submitted to the Southwest District of the Department of Environmental Regulation and one copy to the Pinellas County Department of Environmental Management, Air Quality Division sixty (60) days prior to the expiration date of this permit.

APPLICATION TRACKING SYSTEM 07/23/87

APPL NO:137124
APPL RECVD:07/20/87 TYPE CODE:AO SUBCODE:08 LAST UPDATE:07/22/87
DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:__/__/__
DER PROCESSOR:RICHARDSON Esther Tue
APPL STATUS:AC DATE:07/20/87 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:__ (SSAC/EXEMPTIONS/VARIANCE)
(Y/N) N MANUAL TRACKING DISTRICT:40 COUNTY:52
(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:FLA POWER CORP HIGGINS #1
STREET:SHORE DRIVE CITY:OLDSMAR
STATE:FL ZIP:_____ PHONE:___-___-____
APPLICATION NAME:FLA POWER CORP
STREET:P O BOX 14042 CITY:ST PETERSBU
STATE:FL ZIP:33733 PHONE:813-866-4524
AGENT NAME:_____
STREET:_____ CITY:_____
STATE:__ ZIP:_____ PHONE:___-___-____
FEE #1 DATE PAID:07/20/87 AMOUNT PAID:00500 RECEIPT NUMBER:00113723

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:

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 113723

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Florida Power Corp. Date 7/20/87

Address P.O. Box 14042, St. Pete. 33733 Dollars $ 500.00

Applicant Name & Address same

Source of Revenue Higgins Unit 1

Revenue Code 001032 Application Number A052-137124

Ck 935699 By Donna Harris

FACILITY ID: 40PNL520012

update 2 Page

FACILITY INFORMATION RECORD

***** FACILITY INFORMATION *****

STATUS: A = ACTIVE DATE OF PERMANENT SHUTDOWN: .. / .. / .. # OF SRC: 007
OWNER: FLORIDA POWER OWNER CODE: U = UTILITY
NAME/LOC: HIGGINS SHORE BLVD ZIP CODE: 33733
CITY: OLDSMAR CITY CODE: 3205 MAJOR FAC: Y (Y OR N)
TYPE: 01 = STEAM ELECTRIC PLANT TABLE 500-1: . (Y OR N)
UTM ZONE: 17 EAST: 336 . 5 (KM) NORTH: 3098 . 4 (KM)
LATITUDE: 28 : 00 : 02 LONGITUDE: 82 : 39 : 46
CDS: 1 = A1A VOC: . = ... FINAL COMPLIANCE DATE: ../../..
COMMENT: .....

***** OWNER/AUTHORIZED REPRESENTATIVE INFORMATION *****

NAME: J. A. HANCOCK (LAST NAME FIRST)
ORG/FIRM: .....
ADDRESS: BOX 14042 CITY: ST PETERSBERG
STATE: FL ZIP CODE: 33733 - .... PHONE: (813) 866 - 4542
CONTACT: ..... PHONE: (...) ... - ....

FACILITY SOURCE ID: 40PNL52001201

SOURCE INFORMATION RECORD

***** CONSTRUCTION PERMIT/PPS INFORMATION *****

PERMIT #: .... - ..... PPS #: .... FEE PAID: ..... (PERMIT ONLY)
DATE ISSUED: .. / .. / .. DATE EXPIRES: .. / .. / ..
APP COMPLETE: .. / .. / ..

before update

***** OPERATION PERMIT INFORMATION *****

PERMIT #: A052 - -56652 FEE PAID: ..... AOR REQUIRED: . (Y OR N)
DATE ISSUED: 10 / 07 / 82 DATE EXPIRES: 09 / 23 / 87

***** SOURCE DESCRIPTION/TRACKING INFORMATION *****

DESCRIPTION: HIGGINS #1 BOILER #6 FUEL
STATUS: A = ACTIVE # OF SCC: 003 # OF POLLUTANT: 006 MAJOR SRC: Y (Y OR N)
INITIAL CONSTRUCTION DATE: .. / .. / .. TYPE: .. = ...
SIC: 4911 = ELECTRIC GENERATION/DISTRIBUTION
NSPS: ... NESHAP: ... 111D: ... PSD: ... NAA/NSR: ... RACT: ...
COMMENT: ALSO 1077 GAL./HR #6 OIL & 37GAL/HR #2 OIL USED
.....
START UP DATE: .. / .. / .. SHUT DOWN DATE: .. / .. / ..

SOURCE SCHEDULE/RATE RECORD

***** OPERATING SCHEDULE INFORMATION *****

TYPICAL OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR)
TYPICAL % OPERATING BY SEASON: 11 (DJF) 18 (MAM) 53 (JJA) 18 (SON)
PERMITTED OPERATING SCHEDULE: .. (HR/DAY) . (DAY/WK) .. (WK/YR) .... (HR/YR)
AOR YR: 86 OPERATING SCHEDULE: 12 (HR/DAY) 7 (DAY/WK) 17 (WK/YR) 1428 (HR/YR)

***** OPERATING RATE INFORMATION *****

MAX PROCESS RATE: ..... UNITS: OTHER
MAX PRODUCTION RATE: ..... UNITS: OTHER

SOURCE EMISSION POINT RECORD

***** EMISSION POINT INFORMATION *****

EMISSION POINT TYPE: . = ...
STACK HEIGHT: 174 (FT) EXIT DIA: 12 . 5 (FT) EXIT TEMP: 0312 (F)
ACTUAL VOLUME FLOW RATE: 0204000 (ACFM) DRY STANDARD FLOW RATE: ..... (DSCFM)
EXIT VEL: 0027 (FT/SEC) NONSTK EMIS HT: 0000 (FT) BLDG HT: .... WD: .... (FT)
POINT UTM: EAST: ... . .. (KM) NORTH: .... (KM) GEP STK HT: ... (FT)
COMMENT: .....

***** CONTROL EQUIPMENT INFORMATION *****

CONTROL A: .....
CONTROL B: .....
CAPITAL COST: A $ ..... B $ ..... TOTAL OPER COST $ ..... AOR YR: 86

FACILITY SOURCE ID: 40PNL52001201

SOURCE SCC RECORD

SCC #: 1-01-006-01 = BOILER ELE GEN NAT GAS > 100 MMBTU/HR EXC/TNG
UNITS: MCFB = MIL CUFT BURN MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0000341
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: 00965
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: 00965
COMMENTS: NATURAL GAS FIRED IN STEAM UNIT (HIGGINS #1)

SOURCE SCC RECORD

SCC #: 1-01-005-01 = BOILER ELE GEN DIST OIL #1 & #2
UNITS: KGALB = 1000 GAL BR MAX HOURLY RATE: .... ANNUAL LIMIT: 0000030
ESTIMATE ANNUAL RATE: ******* %S: 0 . 18 %ASH: .. . . MMBTU: 00130
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: 0 . 18 %ASH: .. . . MMBTU: 00130
COMMENTS: DISTILLATE #2 OIL BURNED IN STEAM UNIT (HIGGINS #1)

SOURCE SCC RECORD

SCC #: 1-01-004-01 = BOILER ELE GEN RES OIL #6 NORMAL FIRING
UNITS: KGALB = 1000 GAL BR MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0001583
ESTIMATE ANNUAL RATE: ..... %S: 2 . 00 %ASH: .. . . MMBTU: 00149
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: 2 . 00 %ASH: .. . . MMBTU: 00149
COMMENTS: RESIDUAL #6 OIL BURNED IN STEAM UNIT (HIGGINS #1)

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: VOC = NONMETHANE VOLATILE ORGANIC COMPOUNDS % EFF: .. . .
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 99999 . 9900 (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: 000001 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000001 . 0000 (TON/YR) AOR CODE: . AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) 999999 . 0000 (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N)
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. / ..
COMMENT: .....

FACILITY SOURCE ID: 40PNL52001201

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******

POLLUTANT ID: SO2 = SULFUR DIOXIDE % EFF: .. . .
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****

POTENTIAL EMISSION: 00428 . 3100 (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: 00026 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 00026 . 0000 (TON/YR) AOR CODE: . AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) 00338 . 0000 (TON/YR)
ALLOWABLE EMISSION: ....(LB/HR) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N)
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: 01 / 20 / 85
COMMENT: 17-2.04-6E

SOURCE TEST RECORD

CURRENT TEST DATE: 01 / 30 / 84 NEXT TEST DATE: 01 / 20 / 85
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000436 UNITS: OTHER
POLLUTANT ID: SO2 = SULFUR DIOXIDE TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 01200 . 000000 TEST ACT EMIS: 01118 . 000000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 610
.....
.....

SOURCE TEST RECORD

CURRENT TEST DATE: 02 / 11 / 80 NEXT TEST DATE: 01 / 20 / 85
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000445 UNITS: OTHER
POLLUTANT ID: SO2 = SULFUR DIOXIDE TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 01223 . 750000 TEST ACT EMIS: 01010 . 150000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 05 6 E
.....
.....

FACILITY SOURCE ID: 40PNL52001201

SOURCE TEST RECORD

CURRENT TEST DATE: 02 / 11 / 80 NEXT TEST DATE: 01 / 20 / 85
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000445 UNITS: OTHER
POLLUTANT ID: SO2 = SULFUR DIOXIDE TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00044 . 500000 TEST ACT EMIS: 01010 . 150000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 05 6 E
.....
.....

SOURCE TEST RECORD

CURRENT TEST DATE: 04 / 20 / 76 NEXT TEST DATE: 01 / 20 / 85
TEAM NAME: .....
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: ..... UNITS: OTHER
POLLUTANT ID: SO2 = SULFUR DIOXIDE TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: .... TEST ACT EMIS: 00013 . 440000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: .....
.....
.....

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: PM = PARTICULATE MATTER % EFF: .. . .
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00011 . 5200 (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: 000007 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000007 . 0000 (TON/YR) AOR CODE: . AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) 000123 . 0000 (TON/YR)
ALLOWABLE EMISSION: ....(LB/HR) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N)
TEST FREQUENCY: 1 = ANNUALLY FREQUENCY BASE DATE: .. / .. / ..
COMMENT: 17-2.04-6E

FACILITY SOURCE ID: 40PNL52001201

SOURCE TEST RECORD

CURRENT TEST DATE: 01 / 23 / 86 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000005 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00045 . 000000 TEST ACT EMIS: 00019 . 450000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 17-2.04-6E
.....
.....

SOURCE TEST RECORD

CURRENT TEST DATE: 07 / 16 / 85 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000437 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00043 . 650000 TEST ACT EMIS: 00021 . 500000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 17-2.04-6E
.....
.....

SOURCE TEST RECORD

CURRENT TEST DATE: 01 / 08 / 85 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000526 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00052 . 600000 TEST ACT EMIS: 00021 . 710000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 17-2.04-6E
.....
.....

FACILITY SOURCE ID: 40PNL52001201

SOURCE TEST RECORD

CURRENT TEST DATE: 07 / 25 / 84 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000459 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00045 . 940000 TEST ACT EMIS: 00027 . 930000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 2.600

SOURCE TEST RECORD

CURRENT TEST DATE: 01 / 20 / 84 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000436 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00043 . 660000 TEST ACT EMIS: 00024 . 850000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 610

SOURCE TEST RECORD

CURRENT TEST DATE: 04 / 08 / 80 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000488 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00000 . 100000 TEST ACT EMIS: 00000 . 080000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 05 6 E

FACILITY SOURCE ID: 40PNL52001201

SOURCE TEST RECORD

CURRENT TEST DATE: 02 / 11 / 80 NEXT TEST DATE: .. / .. / ..
TEAM NAME: 3
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0000445 UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: 00044 . 500000 TEST ACT EMIS: 00036 . 040000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: 05 6 E
.....
.....

SOURCE TEST RECORD

CURRENT TEST DATE: 04 / 20 / 76 NEXT TEST DATE: .. / .. / ..
TEAM NAME: .....
MAX PROCESS RATE: ..... ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: ..... UNITS: OTHER
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: .... UNITS: .....
TEST ALLOW EMIS: .... TEST ACT EMIS: 00041 . 360000
UNITS: LB/HR
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: .....
.....
.....

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: NOX = NITROGEN OXIDES % EFF: .. . .
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00248 . 2300 (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: 000147 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000147 . 0000 (TON/YR) AOR CODE: . AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) .... (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N)
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. / ..
COMMENT: 000000000000

FACILITY SOURCE ID: 40PNL52001201

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******

POLLUTANT ID: CO = CARBON MONOXIDE % EFF: .. . .
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****

POTENTIAL EMISSION: 99999 . 9900 (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: 000011 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000011 . 0000 (TON/YR) AOR CODE: . AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) 999999 . 0000 (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N)
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. / ..
COMMENT: .....

SOURCE VE/TEST RECORDS

***** VE INFORMATION *****

POLLUTANT ID: VE = VISIBLE EMISSIONS
ALLOW % OPACITY: NORMAL: ... EXCEPT: ... TIME: ... (MIN)
REG CODE: ..... = ... CEM ? . (Y OR N)
TEST FREQ: 1 = ANNUALLY FREQ BASE DATE: .. / .. / ..

***** TEST INFORMATION *****

CURRENT TEST DATE: 01 / 24 / 86 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: 3
TEST LENGTH: 060 (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: 019 EXCEPT: ... TIME: ... (MIN)
COMMENTS: .....
.....
.....

***** TEST INFORMATION *****

CURRENT TEST DATE: 01 / 08 / 85 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: 3
TEST LENGTH: 060 (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: 015 EXCEPT: ... TIME: ... (MIN)
COMMENTS: .....
.....
.....

***** TEST INFORMATION *****

CURRENT TEST DATE: 07 / 25 / 84 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: 3
TEST LENGTH: 060 (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: 030 EXCEPT: ... TIME: ... (MIN)
COMMENTS: 2.600
.....
.....

FACILITY SOURCE ID: 40PNL52001201

***** TEST INFORMATION *****
CURRENT TEST DATE: 01 / 20 / 84 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: 3
TEST LENGTH: 060 (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: 025 EXCEPT: ... TIME: ... (MIN)
COMMENTS: 610
.....
.....

***** TEST INFORMATION *****
CURRENT TEST DATE: 06 / 09 / 83 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: 3
TEST LENGTH: 060 (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: 010 EXCEPT: ... TIME: ... (MIN)
COMMENTS: 610
.....
.....

***** TEST INFORMATION *****
CURRENT TEST DATE: 03 / 08 / 78 NEXT TEST DATE: .. / .. / ..
OBSERVER NAME: .....
TEST LENGTH: ... (MIN) TEST PASS ? . (Y OR N)
TEST % OPACITY: NORMAL: ... EXCEPT: ... TIME: ... (MIN)
COMMENTS: .....
.....
.....

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED
MAR 4 1987
AIR QUALITY DIV.

In the Matter of: Petition for Reduction in Semiannual Particulate Emissions Compliance Testing, Higgins Unit No. 1; Florida Power Corporation Petitioner.	)	OGC File No. 86-1580

ORDER

On February 18, 1986, the Petitioner, Florida Power Corporation, filed a Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1. for the following fossil fuel steam generating unit:

Higgins Unit No.1

Pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1., and by Order dated November 7, 1982, Petitioner has conducted semiannual particulate emission compliance tests. Florida Administrative Code Rule 17-2.600(5)(b)1. provides that the Department may reduce the frequency of particulate testing upon a demonstration that the particulate standard of 0.1 pound per million Btu heat input has been regularly met. The petition and supporting documentation submitted by Petitioner indicate that, since May 12, 1982, Petitioner has regularly met the particulate standard. It is therefore,

ORDERED that the Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing in GRANTED. Petitioner may immediately commence testing on an annual basis. Test results from the first regularly scheduled compliance test conducted in FY 87 (October 1, 1986 - September 30, 1987), provided the results of that test meet the particulate standard and the 40% opacity standard, shall be accepted as results from the first annual test. Failure of Higgins Unit No.1 to meet

either the particulate standard or the 40% opacity standard in the future shall constitute grounds for revocation of this authorization.

Persons whose substantial interests are affected by the above proposed agency action have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on the proposed action. The Petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication 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.

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 proposed agency action. Persons whose substantial interests will be affected by any decision of the Department have the right to intervene in the proceeding. A petition for the intervention must be filed pursuant to Model Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the Hearing Officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no Hearing Officer has been assigned, the petition is to filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitues a

waiver of any right such person has to an administrative determination (hearing) under Section 120.57, Florida Statutes.

DONE AND ORDERED this 11th day of Dec, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL
Secretary

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400
Telephone (904)488-9730

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

C. Hutchinson — Clerk
12-15-86 — Date

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing ORDER has been furnished by United States Mail to J.A. Hancock, Vice President, Fossil Operations, Florida Power Corporation, Post Office Box 14042, St. Petersburg, Florida 33733; on this 12 day of December, 1986, in Tallahassee, Florida.

E. Gary Early
Assistant General Counsel

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400
Telephone (904)486-9730

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of: OGC File No.: 82-0513

FLORIDA POWER CORPORATION,
Higgins Units 1, 2 and 3,
Pinellas County,

Petitioner.
_____/

ORDER GRANTING PETITION FOR REDUCED
FREQUENCY OF PARTICULATE TESTING

On April 2, 1982, the Petitioner, FLORIDA POWER CORPORATION, filed a Petition for Reduction in Quarterly Particulate Emissions Compliance Testing pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1 for the following fossil fuel steam generating unit:

Higgins Unit 1

Higgins Unit 2

Higgins Unit 3

I have reviewed the petitions and supporting documents and conclude that the Petitioner has demonstrated that the particulate emissions standard applicable to these sources under Florida Administrative Code Rule 17-2.600(5)(b)2 has been regularly complied with for more than two years. Therefore, pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1, IT IS ORDERED that the above referenced petitions are GRANTED with the following conditions:

1. The generating units listed above shall be required to conduct two compliance tests for steady state particulate emissions in each calendar year. One compliance test shall be conducted during the first six months of the calendar year. The remaining compliance test shall be conducted during the second six months of the calendar year and at least sixty (60) days after the first test was conducted.

2. The subject generating units shall not exceed visible emissions of forty (40) percent opacity, except as provided in Florida Administrative Code Rule 17-2.250.

3. Should the petitioner subsequently elect to test for compliance with the steady-state particulate emissions standard

on an annual basis as provided in Florida Administrative Code Rule 17-2.600(5)(b)1, the provisions of this Order shall automatically become null and void.

4. This order supercedes all conflicting conditions relating to particulate emissions compliance testing contained in the operating permits issued by the Department for the above listed generating units.

The Petitioner may request a hearing in accordance with Section 120.57, Florida Statutes, and Florida Administrative Code Chapters 17-1 and 28-5. The request for hearing must be filed (received) in the Office of General Counsel of the Department, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of receipt of this Order. Failure to file a request for hearing within this time shall constitute a waiver of Petitioner's right to request a hearing under Section 120.57, Florida Statutes.

DONE and ORDERED this 2 day of December, 1982, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL
Secretary

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301
904/488-4805

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 (9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk — Date 12/6/82

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR

UNIT NUMBER: 1 REMARKS: REGULAR TEST

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	07-29-86	07-29-86	07-29-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	29.98	29.98	29.98	
STACK PRESSURE (IN HG)	29.99	29.99	29.99	
STACK TEMPERATURE (F)	320.0	316.0	325.0	320.3
METER TEMPERATURE (F)	104.0	111.0	119.0	
CONDENSATE COLLECTED (ML)	68.1	74.1	75.1	
PARTICULATES COLLECTED (GM)	0.04180	0.02690	0.05130	
AVG SQRT DELTA P, PITOT (IN H2O)	0.537	0.541	0.581	
AVG DELTA H, ORIFICE (IN H2O)	0.716	0.723	0.740	
NOZZLE DIAMETER (IN)	0.2460	0.2460	0.2460	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	46.65	46.65	46.65	
MOLECULAR WT., DRY (LB/LB-MOLE)	29.69	29.28	29.25	
MOLECULAR WT., WET (LB/LB-MOLE)	28.60	28.15	28.12	
VOLUME DRY GAS SAMPLE (ACF)	33.225	33.928	34.728	
VOLUME DRY GAS SAMPLE (SCFD)	31.219	31.488	31.785	
% H2O CALCULATED	9.3	10.0	10.0	9.8
% OXYGEN	7.0	7.1	7.0	7.0
% CARBON DIOXIDE	10.2	9.2	9.2	
% EXCESS AIR	47.8	48.8	47.8	
AVG STACK GAS VELOCITY (FT/S)	36.78	37.23	40.23	38.08
ACTUAL GAS FLOW RATE (ACFMD)	93352.	93802.	101341.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	63340.	63973.	68322.	
% ISOKINETIC	96.78	96.65	91.35	
PARTICULATE CONC. (LB/SCFD)	2.95E-06	1.88E-06	3.55E-06	
PARTICULATE EMISSION RATE (LB/HR)	22.42	14.45	29.15	
EMISSION RATE/MM BTU (LB/MM BTU)	0.041	0.026	0.049	0.039

Florida Power
CORPORATION

D. E. R.

MAR 1 4 1986

SOUTH WEST DISTRICT
TAMPA

February 26, 1986

Mr. Peter A. Hessling
Division of Air Quality
16100 Fairchild Drive
Building V 101
Clearwater, FL 33520

Subject: Higgins Unit 1 - Permit A052-56652
Higgins Unit 2 - Permit A052-56653
Higgins Unit 3 - Permit A052-56654

Dear Mr. Hessling:

The Florida Power Corporation hereby submits the enclosed report on particulate emissions testing of Units No. 1, 2, and 3 at the Higgins Plant in Oldsmar, Florida.

I certify that all of the data submitted is correct to the best of my knowledge.

Should you have any questions concerning this information, please call me at (813) 866-4281.

Sincerely,

D. A. Shantz
Supervisor
Environmental Services

Watkins(Hig/Ltr)D51

cc: D. Williams w/encl.
J. W. Campbell w/encl.
T. L. Brouette
Readers

File: Environ 5-1

I HAVE REVIEWED THIS REPORT AND (DOES) DOES NOT INDICATE ...

-9-86 B. ...
Summary Review

A REPORT
ON PARTICULATE EMISSIONS
AT
THE FLORIDA POWER CORPORATION'S
HIGGINS PLANT
OLDSMAR, PINELLAS COUNTY, FLORIDA

UNITS 1, 2, AND 3

JANUARY 23-29, 1986

PREPARED BY:

FLORIDA POWER CORPORATION
POWER PRODUCTION DEPARTMENT
ENVIRONMENTAL SERVICES SECTION

1.0 INTRODUCTION

On January 23-29, 1986, the environmental testing group of Florida Power Corporation conducted particulate emissions tests on Units 1, 2 and 3 at the company's Higgins Plant, located at Oldsmar, Pinellas County. Three non-sootblowing tests were done on Unit 2. Three non-sootblowing tests and three sootblowing tests were done on Units 1 and 3.

All three units were tested using U.S. Environmental Agency (EPA) Method 17.

The personnel involved in the test program are listed in Appendix F.

2.0 SUMMARY

Units 1, 2 and 3 were found to be in compliance with the emission limiting standard of 0.1 pound of particulate matter per million Btu's ($lb/10^6$ Btu) of heat input. The results of these tests were:

Unit 1	0.043 $lbs/10^6$ Btu
Unit 2	0.055 $lbs/10^6$ Btu
Unit 3	0.051 $lbs/10^6$ Btu

Units 1 and 3 were also tested during sootblowing operation and found to be in compliance with the emission limiting standard of 0.3 pounds of particulate per million Btu's ($lb/10^6$ Btu). The results of these tests were:

Unit 1	0.087 $lb/10^6$ Btu
Unit 3	0.154 $lb/10^6$ Btu

Emission and stack gas parameters are summarized in Table 1, and detailed emission data are presented in Appendix A. Field data sheets are in Appendix B, and the results of visible emissions observations are included in Appendix C.

3.0 PROCESS DESCRIPTION

The three units at the Higgins Plant were firing No. 6 fuel oil at the time of the tests. Net generation during the test periods was:

Unit 1	39.1	MW Non-Sootblowing
	39.0	MW Sootblowing
Unit 2	38.1	MW Non-Sootblowing
Unit 3	38.8	MW Non-Sootblowing
	39.2	MW Sootblowing

On all three units, flue gas is conveyed through two ducts to the stack. Test ports are located in the ducts on the seventh floor for Units 1 and 2. The test ports for Unit 3 are located in the ducts on the sixth floor. A drawing of each unit is included on page 9.

4.2 SAMPLE RECOVERY AND ANALYSIS

Once the sampling train cooled sufficiently to allow safe handling, the filter holder and probe nozzle were inspected. All external particulate matter near the tip of the nozzle was carefully wiped off and a cap was placed over the end of the nozzle to prevent the loss or gain of particulate matter.

Before the sampling components were moved to the cleanup site, the filter holder was disconnected from the probe, and all umbilical line connections to the impinger train were removed. The umbilical line between the probe and the first impinger was drained back into the first impinger prior to the line being disconnected. The impinger inlets and outlets were then capped and the sampling gear was moved to the recovery area.

The liquid catch of each impinger was determined gravimetrically to within $\pm$0.5 gram and the results recorded on a field data sheet.

The filter was carefully removed from the filter holder and placed in a pyrex petri dish. Any particulate matter and/or filter fibres found to be adhering to the filter holder gaskets were also transferred to the petri plate. The contents of the petri dish were then dried for at least three hours at the average stack temperature or 105°C, whichever was less, and desiccated for two hours prior to weighing to the nearest 0.0001 gram.

All particulate matter and/or any condensate from the probe nozzle, fitting, and front half of the filter holder was removed by washing those components with acetone and brushing all sample exposed surfaces with a nylon bristle brush. The surfaces were brushed until the acetone rinse showed no visible particles, after which a final rinse was made. The brush, itself, was then rinsed to remove any adhering particulate matter. All washings were placed in a tared 250 ml beaker and the contents of the beaker were evaporated to dryness at a temperature less than the boiling point of acetone. The beaker was subsequently weighed to the nearest 0.0001 gram.

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR

UNIT NUMBER: 1 REMARKS: NON-SOOTBLOWING

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	01-23-86	01-23-86	01-24-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.17	30.17	30.16	
STACK PRESSURE (IN HG)	30.20	30.20	30.19	
STACK TEMPERATURE (F)	281.0	282.0	281.0	281.3
METER TEMPERATURE (F)	98.0	107.0	98.0	
CONDENSATE COLLECTED (ML)	46.6	62.6	61.6	
PARTICULATES COLLECTED (GM)	0.02420	0.03420	0.04690	
AVG SQRT DELTA P, PITOT (IN H2O)	0.585	0.585	0.564	
AVG DELTA H, ORIFICE (IN H2O)	0.892	0.901	0.859	
NOZZLE DIAMETER (IN)	0.2460	0.2470	0.2460	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	46.65	46.65	46.65	
MOLECULAR WT., DRY (LB/LB-MOLE)	28.98	28.98	28.98	
MOLECULAR WT., WET (LB/LB-MOLE)	28.33	28.13	28.14	
VOLUME DRY GAS SAMPLE (ACF)	36.335	36.961	36.550	
VOLUME DRY GAS SAMPLE (SCFD)	34.749	34.787	34.932	
HEAT INPUT (MM BTU/HR)	450.9	450.9	445.8	
% H2O CALCULATED	5.9	7.8	7.7	7.1
% OXYGEN	9.2	9.2	9.2	9.2
% CARBON DIOXIDE	7.0	7.0	7.0	
% EXCESS AIR	73.9	73.9	73.9	
AVG STACK GAS VELOCITY (FT/S)	39.12	39.28	39.13	39.18
ACTUAL GAS FLOW RATE (ACFMD)	102990.	101357.	101141.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	74072.	72800.	72719.	
% ISOKINETIC	92.11	93.07	94.32	
PARTICULATE CONC. (LB/SCFD)	1.53E-06	2.17E-06	2.96E-06	
PARTICULATE EMISSION RATE (LB/HR)	13.63	18.92	25.81	
EMISSION RATE/MM BTU (LB/MM BTU)	0.030	0.042	0.058	0.043

SAMPLE CALCULATION

PLANT NAME: HIGGINS LOCATION: OLDSMAR

UNIT NUMBER: 1 REMARKS: NON-SOOTBLOWING

RUN NUMBER: 1

DATA INPUT

AS	- STACK AREA (SQ FT)	46.65
CO	- % CARBON MONOXIDE	0.0
CO2	- % CARBON DIOXIDE	7.0
D	- # OF DUCTS	2.
DELTA H	- AVG DELTA H, ORIFICE (IN H2O)	0.892
FF	- F FACTOR (CU FT/BTU)	9220.
HTRT	- HEAT RATE (BTU/KWH)	11473.
LOAD	- LOAD (KW)	39300.
N2	- % NITROGEN	82.0
O2	- % OXYGEN	9.2
PB	- BAROMETRIC PRESSURE (IN HG)	30.17
PDIF	- SQRT DELTA P AVG, PITOT (IN H2O)	0.585
PM	- METER PRESSURE (IN HG)	30.24
PS	- STACK PRESSURE (IN HG)	30.20
RAD	- NOZZLE RADIUS (IN)	0.1230
TIME	- TIME OF RUN (MIN)	72.0
TM	- METER TEMPERATURE (DEG F)	98.0
TS	- STACK TEMPERATURE (DEG F)	281.0
VL	- VOLUME OF LIQUID COLLECTED (GM)	46.5
VM	- VOLUME OF GAS METERED (CU FT)	36.335

VOLUME WATER VAPOR @ STD. COND. (SCF)

VSTD = .04715*VL 2.2

VOLUME DRY GAS METERED @ STD. COND. (SCFD)

VMSTD = (VM*528*PM*Y)/(29.92*TM) 34.749

% H2O (%)

H2O = (VSTD*100)/(VSTD+VMSTD) 5.9

% EXCESS AIR (%)

EA = (O2-(.5*CO))*100/((.264*N2)-O2+(.5*CO)) 73.9

UNIT NUMBER: 1
RUN NUMBER: 1

MOLECULAR WEIGHT, DRY (LB/LB-MOLE)

DMW = (CO2*.44)+(O2*.32)+((CO+N2)*.28) 28.98

MOLECULAR WEIGHT, WET (LB/LB-MOLE)

WMW = DMW*(1-(H2O/100))+(.18*H2O) 28.33

AVG STACK GAS VELOCITY (FT/S)

VS = 85.48*(.84)*PDIF*SQRT(TS/(PS*WMW)) 39.12

ACTUAL GAS FLOW RATE, DRY (ACFHD)

FSTAK = VS*AS*3600*(1-(H2O/100)) 6179382.

VOLUMETRIC GAS FLOW RATE @ STD. COND. (SCFHD)

FSTD = FSTAK*(528/TS)*(PS/29.92) 4444324.

% ISOKINETIC (%)

PI = (TS*100*((.00267*VLML)+(VMSTD/17.647)))/
(TIME*VS*PS*3.14159*((RAD/12)**2)*60) 92.11

PARTICULATE CONCENTRATION (LB/SCFD)

CSTD = WT/(VMSTD*454) 1.53E-06

PARTICULATE EMISSION RATE (LB/HR)

TOT = FSTD*CSTD*D 13.63

HEAT INPUT (MM BTU/HR)

BTU = HTRT*LOAD/(10**6) 450.9

EMISSION RATE - STATE METHOD (LB/MM BTU)

PARS = TOT/BTU 0.030

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR

UNIT NUMBER: 1 REMARKS: SOOTBLOWING

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	01-23-86	01-24-86	01-24-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.17	30.16	30.16	
STACK PRESSURE (IN HG)	30.20	30.18	30.18	
STACK TEMPERATURE (F)	288.0	285.0	282.0	285.0
METER TEMPERATURE (F)	109.0	107.0	107.0	
CONDENSATE COLLECTED (ML)	74.6	71.6	59.6	
PARTICULATES COLLECTED (GM)	0.06130	0.10350	0.04980	
AVG SQRT DELTA P, PITOT (IN H2O)	0.581	0.577	0.571	
AVG DELTA H, ORIFICE (IN H2O)	0.908	0.874	0.865	
NOZZLE DIAMETER (IN)	0.2460	0.2470	0.2470	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	46.65	46.65	46.65	
MOLECULAR WT., DRY (LB/LB-MOLE)	28.98	28.98	28.98	
MOLECULAR WT., WET (LB/LB-MOLE)	27.98	28.00	28.15	
VOLUME DRY GAS SAMPLE (ACF)	37.358	36.631	36.395	
VOLUME DRY GAS SAMPLE (SCFD)	35.037	34.453	34.231	
HEAT INPUT (MM BTU/HR)	450.9	445.8	445.8	
% H2O CALCULATED	9.1	8.9	7.6	8.5
% OXYGEN	9.2	9.2	9.2	9.2
% CARBON DIOXIDE	7.0	7.0	7.0	
% EXCESS AIR	73.9	73.9	73.9	
AVG STACK GAS VELOCITY (FT/S)	39.21	38.87	38.30	38.80
ACTUAL GAS FLOW RATE (ACFMD)	99759.	99101.	99085.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	71077.	70846.	71121.	
% ISOKINETIC	96.79	94.72	93.75	
PARTICULATE CONC. (LB/SCFD)	3.85E-06	6.62E-06	3.20E-06	
PARTICULATE EMISSION RATE (LB/HR)	32.87	56.25	27.35	
EMISSION RATE/MM BTU (LB/MM BTU)	0.073	0.126	0.061	0.087

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR, FL

UNIT NUMBER: 2 REMARKS: REG

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	01-29-86	01-29-86	01-29-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.20	30.20	30.20	
STACK PRESSURE (IN HG)	30.23	30.23	30.23	
STACK TEMPERATURE (F)	276.0	278.0	281.0	278.3
METER TEMPERATURE (F)	91.0	109.0	113.0	
CONDENSATE COLLECTED (ML)	52.1	42.6	51.1	
PARTICULATES COLLECTED (GM)	0.02350	0.04550	0.05290	
AVG SQRT DELTA P, PITOT (IN H2O)	0.520	0.522	0.506	
AVG DELTA H, ORIFICE (IN H2O)	0.702	0.727	0.688	
NOZZLE DIAMETER (IN)	0.2468	0.2468	0.2468	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	46.65	46.65	46.65	
MOLECULAR WT., DRY (LB/LB-MOLE)	29.50	29.50	29.50	
MOLECULAR WT., WET (LB/LB-MOLE)	28.67	28.81	28.66	
VOLUME DRY GAS SAMPLE (ACF)	32.558	33.850	32.950	
VOLUME DRY GAS SAMPLE (SCFD)	31.543	31.757	30.697	
% H2O CALCULATED	7.2	5.9	7.3	6.8
% OXYGEN	10.8	10.8	10.8	10.8
% CARBON DIOXIDE	7.0	7.0	7.0	
% EXCESS AIR	99.6	99.6	99.6	
AVG STACK GAS VELOCITY (FT/S)	34.38	34.49	33.59	34.15
ACTUAL GAS FLOW RATE (ACFMD)	89280.	90800.	87180.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	64712.	65636.	62764.	
% ISOKINETIC	95.09	94.39	95.41	
PARTICULATE CONC. (LB/SCFD)	1.64E-06	3.16E-06	3.80E-06	
PARTICULATE EMISSION RATE (LB/HR)	12.74	24.86	28.59	
EMISSION RATE/MM BTU (LB/MM BTU)	0.031	0.060	0.072	0.055

SAMPLE CALCULATION

PLANT NAME: HIGGINS LOCATION: OLDSMAR, FL

UNIT NUMBER: 2 REMARKS: REG

RUN NUMBER: 1

DATA INPUT

AS	- STACK AREA (SQ FT)	46.65
CO	- % CARBON MONOXIDE	0.0
CO2	- % CARBON DIOXIDE	7.0
D	- # OF DUCTS	2.
DELTA H	- AVG DELTA H, ORIFICE (IN H2O)	0.702
FF	- F FACTOR (CU FT/BTU)	9220.
N2	- % NITROGEN	82.0
O2	- % OXYGEN	10.8
PB	- BAROMETRIC PRESSURE (IN HG)	30.20
PDIF	- SQRT DELTA P AVG, PITOT (IN H2O)	0.520
PM	- METER PRESSURE (IN HG)	30.25
PS	- STACK PRESSURE (IN HG)	30.23
RAD	- NOZZLE RADIUS (IN)	0.1234
TIME	- TIME OF RUN (MIN)	72.0
TM	- METER TEMPERATURE (DEG F)	91.0
TS	- STACK TEMPERATURE (DEG F)	276.0
VL	- VOLUME OF LIQUID COLLECTED (GM)	52.0
VM	- VOLUME OF GAS METERED (CU FT)	32.558

VOLUME WATER VAPOR @ STD. COND. (SCF)

VSTD = .04715*VL 2.5

VOLUME DRY GAS METERED @ STD. COND. (SCFD)

VMSTD = (VM*528*PM*Y)/(29.92*TM) 31.543

% H2O (%)

H2O = (VSTD*100)/(VSTD+VMSTD) 7.2

% EXCESS AIR (%)

EA = (O2-(.5*CO))*100/((.264*N2)-O2+(.5*CO)) 99.6

UNIT NUMBER: 2
RUN NUMBER: 1

MOLECULAR WEIGHT, DRY (LB/LB-MOLE)

DMW = (CO2*.44)+(O2*.32)+((CO+N2)*.28) 29.50

MOLECULAR WEIGHT, WET (LB/LB-MOLE)

WMW = DMW*(1-(H2O/100))+(.18*H2O) 28.67

AVG STACK GAS VELOCITY (FT/S)

VS = 85.48*(.84)*PDIF*SQRT(TS/(PS*WMW)) 34.38

ACTUAL GAS FLOW RATE, DRY (ACFHD)

FSTAK = VS*AS*3600*(1-(H2O/100)) 5356776.

VOLUMETRIC GAS FLOW RATE @ STD. COND. (SCFHD)

FSTD = FSTAK*(528/TS)*(PS/29.92) 3882719.

% ISOKINETIC (%)

PI = (TS*100*((.00267*VLML)+(VMSTD/17.647)))/
(TIME*VS*PS*3.14159*((RAD/12)**2)*60) 95.09

PARTICULATE CONCENTRATION (LB/SCFD)

CSTD = WT/(VMSTD*454) 1.64E-06

PARTICULATE EMISSION RATE (LB/HR)

TOT = FSTD*CSTD*D 12.74

EMISSION RATE - F FACTOR METHOD (LB/MM BTU)

PARF = CSTD*FF*(20.9/(20.9-O2)) 0.031

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR, FL

UNIT NUMBER: 3 REMARKS: REG

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	01-27-86	01-27-86	01-28-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	29.90	29.90	30.24	
STACK PRESSURE (IN HG)	29.91	29.91	30.25	
STACK TEMPERATURE (F)	272.0	274.0	264.0	270.0
METER TEMPERATURE (F)	95.0	103.0	90.0	
CONDENSATE COLLECTED (ML)	87.7	60.6	80.1	
PARTICULATES COLLECTED (GM)	0.05470	0.04260	0.04950	
AVG SQRT DELTA P, PITOT (IN H2O)	0.444	0.406	0.446	
AVG DELTA H, ORIFICE (IN H2O)	1.218	0.993	1.184	
NOZZLE DIAMETER (IN)	0.2990	0.2990	0.2990	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	45.93	45.93	45.93	
MOLECULAR WT., DRY (LB/LB-MOLE)	29.34	29.34	29.34	
MOLECULAR WT., WET (LB/LB-MOLE)	28.30	28.52	28.38	
VOLUME DRY GAS SAMPLE (ACF)	42.735	39.006	41.754	
VOLUME DRY GAS SAMPLE (SCFD)	40.751	36.642	40.633	
% H2O CALCULATED	9.2	7.2	8.5	8.3
% OXYGEN	10.6	10.6	10.6	10.6
% CARBON DIOXIDE	6.8	6.8	6.8	
% EXCESS AIR	95.9	95.9	95.9	
AVG STACK GAS VELOCITY (FT/S)	29.65	27.03	29.38	28.69
ACTUAL GAS FLOW RATE (ACFMD)	74205.	69117.	74077.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	53507.	49702.	54619.	
% ISOKINETIC	99.67	96.48	97.36	
PARTICULATE CONC. (LB/SCFD)	2.96E-06	2.56E-06	2.68E-06	
PARTICULATE EMISSION RATE (LB/HR)	18.98	15.27	17.59	
EMISSION RATE/MM BTU (LB/MM BTU)	0.055	0.048	0.050	0.051

338 MMBTU/H

SAMPLE CALCULATION

PLANT NAME: HIGGINS LOCATION: OLDSMAR, FL

UNIT NUMBER: 3 REMARKS: REG

RUN NUMBER: 1

DATA INPUT

AS	- STACK AREA (SQ FT)	45.93
CO	- % CARBON MONOXIDE	0.0
CO2	- % CARBON DIOXIDE	6.8
D	- # OF DUCTS	2.
DELTA H	- AVG DELTA H, ORIFICE (IN H2O)	1.218
FF	- F FACTOR (CU FT/BTU)	9220.
N2	- % NITROGEN	82.0
O2	- % OXYGEN	10.6
PB	- BAROMETRIC PRESSURE (IN HG)	29.90
PDIF	- SQRT DELTA P AVG, PITOT (IN H2O)	0.444
PM	- METER PRESSURE (IN HG)	29.99
PS	- STACK PRESSURE (IN HG)	29.91
RAD	- NOZZLE RADIUS (IN)	0.1495
TIME	- TIME OF RUN (MIN)	72.0
TM	- METER TEMPERATURE (DEG F)	95.0
TS	- STACK TEMPERATURE (DEG F)	272.0
VL	- VOLUME OF LIQUID COLLECTED (GM)	87.5
VM	- VOLUME OF GAS METERED (CU FT)	42.735

VOLUME WATER VAPOR @ STD. COND. (SCF)

VSTD = .04715*VL 4.1

VOLUME DRY GAS METERED @ STD. COND. (SCFD)

VMSTD = (VM*528*PM*Y)/(29.92*TM) 40.751

% H2O (%)

H2O = (VSTD*100)/(VSTD+VMSTD) 9.2

% EXCESS AIR (%)

EA = (O2-(.5*CO))*100/((.264*N2)-O2+(.5*CO)) 95.9

UNIT NUMBER: 3
RUN NUMBER: 1

MOLECULAR WEIGHT, DRY (LB/LB-MOLE)

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DMW = (CO2*.44)+(O2*.32)+((CO+N2)*.28)                    29.34
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MOLECULAR WEIGHT, WET (LB/LB-MOLE)

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WMW = DMW*(1-(H2O/100))+(.18*H2O)                         28.30
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AVG STACK GAS VELOCITY (FT/S)

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VS = 85.48*(.84)*PDIF*SQRT(TS/(PS*WMW))                   29.65
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ACTUAL GAS FLOW RATE, DRY (ACFHD)

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FSTAK = VS*AS*3600*(1-(H2O/100))                        4452325.
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VOLUMETRIC GAS FLOW RATE @ STD. COND. (SCFHD)

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FSTD = FSTAK*(528/TS)*(PS/29.92)                        3210440.
```

% ISOKINETIC (%)

```
PI = (TS*100*((.00267*VLML)+(VMSTD/17.647)))/
     (TIME*VS*PS*3.14159*((RAD/12)**2)*60)                99.67
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PARTICULATE CONCENTRATION (LB/SCFD)

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CSTD = WT/(VMSTD*454)                                   2.96E-06
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PARTICULATE EMISSION RATE (LB/HR)

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TOT = FSTD*CSTD*D                                         18.98
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EMISSION RATE - F FACTOR METHOD (LB/MM BTU)

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PARF = CSTD*FF*(20.9/(20.9-O2))                           0.055
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FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR

UNIT NUMBER: 3 REMARKS: SOOTBLOWING

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	01-27-86	01-28-86	01-28-86	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	29.17	30.24	30.24	
STACK PRESSURE (IN HG)	29.18	30.25	30.25	
STACK TEMPERATURE (F)	276.0	265.0	268.0	269.7
METER TEMPERATURE (F)	107.0	110.0	115.0	
CONDENSATE COLLECTED (ML)	82.6	64.6	85.7	
PARTICULATES COLLECTED (GM)	0.08260	0.20770	0.13850	
AVG SQRT DELTA P, PITOT (IN H2O)	0.448	0.421	0.415	
AVG DELTA H, ORIFICE (IN H2O)	1.216	1.069	1.047	
NOZZLE DIAMETER (IN)	0.2990	0.2990	0.2990	
PITOT TUBE COEFFICIENT	0.84	0.84	0.84	
STACK AREA (SQ FT)	45.93	45.93	45.93	
MOLECULAR WT., DRY (LB/LB-MOLE)	29.34	29.34	29.34	
MOLECULAR WT., WET (LB/LB-MOLE)	28.32	28.51	28.24	
VOLUME DRY GAS SAMPLE (ACF)	43.104	40.919	40.324	
VOLUME DRY GAS SAMPLE (SCFD)	39.254	38.411	37.523	
% H2O CALCULATED	9.0	7.3	9.7	8.7
% OXYGEN	10.6	10.6	10.6	10.6
% CARBON DIOXIDE	6.8	6.8	6.8	
% EXCESS AIR	95.9	95.9	95.9	
AVG STACK GAS VELOCITY (FT/S)	30.36	27.73	27.53	28.54
ACTUAL GAS FLOW RATE (ACFMD)	76133.	70808.	68515.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	53266.	52136.	50240.	
% ISOKINETIC	96.44	96.41	97.74	
PARTICULATE CONC. (LB/SCFD)	4.63E-06	1.19E-05	8.13E-06	
PARTICULATE EMISSION RATE (LB/HR)	29.63	74.52	49.01	
EMISSION RATE/MM BTU (LB/MM BTU)	0.087	0.223	0.152	0.154

HIGGINS UNIT 1

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices
And To Other Than The Addressee

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

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

RECEIVED
APR 18 1986
DIVISION OF
ENVIRONMENTAL PERMITTING

TO: Bill Thomas

THRU: Bill Buzick

FROM: W. E. Starnes

DATE: April 17, 1986

SUBJ: Florida Power Corporation - Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing

Please consider the enclosed semiannual testing reduction petition by the Florida Power Corporation for nine sources. We need to do two things.

1. Determine if we need more information. We need an answer as soon as possible.

2. Determine if the Department should issue the order to allow annual testing according to 17-2.600(5)(b)1. and what conditions, if any, should be included in the Department's order to the company. Please let me know within three weeks.

Thank you for your assistance.

cc: Clair Fancy
John Brown
Ed Huck

D. E. R.

APR 22 1986

SOUTH WEST DISTRICT
TAMPA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

March 5, 1986

Mr. D. A. Shantz
Supervisor, Environmental
Services
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Shantz:

This is to acknowledge receipt of Florida Power Corporation's "petition for reduction in frequency of particulate emission compliance testing" which accompanied your February 18 letter.

Your request to reduce the frequency of particulate testing at nine of your company's generating units from semiannually to annually has been forwarded to the department's Bureau of Air Quality Management for review. Should the department need any additional information to process your request, you will be notified by the bureau within the next 30 days. For information on the status of your request, call Walter E. Starnes, Administrator, Rules Office, Bureau of Air Quality Management, (904) 488-1344.

Sincerely,

Victoria J. Tschinkel
Secretary

VJT/ps

cc: Walter Starnes

Steve Smallwood

March 5, 1986

Mr. D. A. Shantz
Supervisor, Environmental
Services
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Shantz:

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Sincerely,

/s/ Victoria J. Tschinkel

Victoria J. Tschinkel
Secretary

VJT/ps

cc: Walter Starnes

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

	Initial	Date
1. TO: (NAME, OFFICE, LOCATION) Vicki Tschinkel		
2.		
3.		
4. Office of the Secretary		

RECEIVED
MAR 3 1986

REMARKS:

INFORMATION

- Review & Return
- Review & File
- Initial & Forward

DISPOSITION

- Review & Respond
- Prepare Response
- For My Signature
- For Your Signature
- Let's Discuss
- Set Up Meeting
- Investigate & Report
- Initial & Forward
- Distribute
- Concurrence
- For Processing
- Initial & Return

FROM: Steve Smallwood

DATE

PHONE

BQM/SEC/02-72
DRAFTED BY: Steve Smallwood
TYPED BY: Judy Rogers

Mr. D. A. Shantz
Supervisor, Environmental
Services
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Shantz:

This is to acknowledge receipt of Florida Power Corporation's "petition for reduction in frequency of particulate emission compliance testing" which accompanied your February 18 letter. Your request to reduce the frequency of particulate testing ~~of~~ at nine of your company's generating units from semiannually to annually has been forwarded to the department's Bureau of Air Quality Management.

Should the department need any additional information in order to process your request, you will be so notified by the bureau within the next 30 days. For information on the status of your request, contact Walter E. Starnes, Administrator, Rules Office, Bureau of Air Quality Management, (904) 488-1344.

Sincerely,

Victoria J. Tschinkel
Secretary

VJT:jr

cc: Walter Starnes

DEPARTMENT ● ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO: 02-72

ACTION DUE DATE: 02-27-8

		INITIAL	DATE
1.	TO: (NAME, OFFICE, LOCATION) Steve Smallwood		2/24
2.			
3.			
4.			

REMARKS:

DER
FEB 20 1986
BAQM

(VT)

INFORMATION:	DISPOSITION
REVIEW & RETURN	REVIEW & RESPOND
REVIEW & FILE	PREPARE RESPONSE
INITIAL & FORWARD	FOR MY SIGNATURE
	FOR YOUR SIGNATURE
	LET'S DISCUSS
	SET UP MEETING
	INVESTIGATE & REPT
	INITIAL & FORWARD
	DISTRIBUTE
	CONCURRENCE
	FOR PROCESSING
	INITIAL & RETURN

FROM: Ronnie

DATE: 2/20

PHONE

Florida Power
CORPORATION

February 18, 1986

Ms. Victoria J. Tschinkel
Secretary, Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Ms. Tschinkel:

Florida Power Corporation is herewith forwarding a "Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing." The petition specifically requests that the frequency of testing at nine of the Company's generating units be reduced from semiannually to annually.

If you have any questions or require additional information, please contact me at (813) 866-4281.

Sincerely,

D. A. Shantz
Supervisor, Environmental Services

Enclosure

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of: Petition for Reduction in the Frequency of Particulate Emissions Compliance Testing; Florida Power Corporation, Petitioner.	D. E. R. APR 2 2 1986 SOUTH WEST DISTRICT TAMPA

PETITION FOR REDUCTION IN THE FREQUENCY OF PARTICULATE EMISSIONS COMPLIANCE TESTING

Pursuant to and in accordance with Chapter 17-103 and Section 17-2.600(5)(b)1, Florida Administrative Code, Florida Power Corporation ("Petitioner"), by and through the undersigned J. A. Hancock, Vice President, Fossil Operations, hereby petitions the Secretary of the Florida Department of Environmental Regulation ("the Department") for a reduction in the frequency of particulate emissions compliance testing for several of its fossil fuel-fired generating units. As grounds therefor, Petitioner states:

1. Petitioner is an investor owned utility that provides electric power to its customers. The name and address of Petitioner are:

J. A. Hancock
Vice President, Fossil Operations
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

2. Petitioner owns and operates the following generating units:

Anclote Unit 1	Crystal River Unit 1	Higgins Unit 3
Anclote Unit 2	Higgins Unit 1	Turner Unit 3
Bartow Unit 3	Higgins Unit 2	Turner Unit 4

3. On August 22, 1979, the Florida Environmental Regulation Commission adopted an amendment to the emission limiting standard for visible emissions from large existing fossil fuel steam generators specified in Section 17-2.05(6), Table II.E.(1)(b), Florida Administrative Code.

The rule was filed with the Secretary of State on September 6, 1979 and became effective on September 26, 1979. This rule was subsequently recodified and now appears as Section 17-2.600(5)(b)1., Florida Administrative Code. It reads in pertinent part as follows:

> 1. Visible emissions - Visible emissions with a density of Number 1 of the Ringelmann Chart (20 percent opacity) except that a shade as dark as Number 2 of the Ringelmann Chart (40 percent opacity) shall be permissible for no more than 2 minutes in any hour. Sources governed by this visible emission limit shall test for particulate emission compliance annually and as otherwise required by Section 17-2.700. . .
>
> * * *
>
> Sources which elect to test for particulate emission compliance quarterly shall be allowed visible emissions with a density of Number 2 of the Ringelmann Chart (40 percent opacity). The results of such tests shall be submitted to the Department. Upon demonstration that the particulate standard has been regularly complied with, the Secretary, upon petition by the applicant, may reduce the frequency of particulate testing to no less than once annually.

4. Petitioner elected to conduct quarterly particulate emission compliance tests at the existing generating units specified in paragraph 2 above. Quarterly particulate emission testing was initiated for the listed units in January 1980. Quarterly testing continued at the listed generating units until November 7, 1982, at which time the Department, in response to Petitioner, issued an "Order Granting Petition for Reduced Frequency of Particulate Testing," allowing the listed units to be tested on a semiannual basis.

5. The results of the semiannual tests conducted since November 1982 demonstrate that the applicable steady-state particulate emission limiting standard (0.1 pounds per million Btu heat input, Section 17-2.600(5)(b)2., Florida Administrative Code) has been regularly complied with. The date of submission of the reports on semiannual tests, and the particulate emission rate for each test, are indicated in Exhibit "A" hereto. It is therefore clear that Petitioner has fulfilled the regulatory requirements for a reduction in the frequency of particulate emissions compliance testing.

6. In view of the compliance record of the listed generating units, a reduction of testing frequency from semiannually to annually, would be appropriate. Petitioner therefore requests such a testing frequency reduction at the units listed in paragraph 2 above. Petitioner estimates that a reduction to annual testing at the listed generating units would result in minimum savings of approximately $657,000 per year, in testing-related and fuel substitution costs.

7. The Secretary of the Department is clearly authorized by Section 17-2.600(5)(b)1., Florida Administrative Code, to reduce the frequency of particulate emissions compliance testing under the circumstances set forth above. The considerable economic savings that would result provide a compelling reason for the grant of relief sought by Petitioner.

REQUEST FOR RELIEF

8. WHEREFORE, Petitioner respectfully requests the following relief:

(a) That the Secretary issue an order reducing the frequency of required steady-state particulate emissions compliance testing to once annually at Petitioner's generating units listed in paragraph 2 above. The annual testing schedule would become effective during the second half of calendar year 1986;

(b) That the order issued by the Secretary make clear that the units qualify for the continued applicability of the 40 percent opacity steady-state visible emission limit;

(c) That the order issued by the Secretary state that it supercedes any conflicting conditions relating to frequency of particulate emissions compliance testing that may be contained in Department operation permits for the specified generating units;

(d) That the Secretary grant such other relief as may be appropriate.

Respectfully submitted,

M. Y. Webb FOR J. A. HANCOCK

J. A. Hancock
Vice President, Fossil Operations
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

DATED this day of February, 1986.

EXHIBIT A

PLANT EMISSION DATA

Test Date	Emission Rate (LBS/10^6 Btu)	% Opacity
ANCLOTE 1		
02/19/82	0.088	35.0
05/25/82	0.098	35.0
09/30/82	0.075	40.0
01/13/83	0.087	37.0
11/17/83	0.073	39.0
06/25/84	0.084	38.0
10/09/84	0.091	35.0
06/28/85	0.034	32.0
10/03/85	0.073	30.0
ANCLOTE 2		
03/02/82	0.096	31.0
08/04/82	0.082	35.0
08/12/82	0.080	40.0
06/02/83	0.075	40.0
02/01/84	0.090	38.0
04/18/84	0.076	35.0
12/11/84	0.087	40.0
04/15/85	0.043	20.0
07/09/85	0.020	26.0
BARTOW 3		
01/26/82	0.083	19.0
07/26/82	0.075	28.0
10/08/82	0.078	21.0
11/29/82	0.089	28.0
03/24/83	0.078	25.0
10/05/83	0.045	21.0
03/06/84	0.069	30.0
11/06/84	0.072	25.0
03/14/85	0.070	30.0
CRYSTAL RIVER 1		
02/25/82	0.059	5.0
06/22/82	0.069	8.0
09/28/82	0.035	
11/30/82	0.057	
06/06/83	0.048	16.0
12/06/83	0.023	
06/11/84	0.063	9.0
10/16/84	0.028	5.0

EXHIBIT A (Continued)

Test Date	Emission Rate (LBS/10^6 Btu)	% Opacity
TURNER 4		
03/30/82	0.091	23.0
06/08/82	0.077	20.0
08/31/82	0.052	11.0
05/10/83	0.062	23.0
08/03/83	0.072	32.0
02/08/84	0.094	23.0
10/23/84	0.067	10.0
01/30/85	0.059	18.0
08/06/85	0.051	25.0

Air Dan

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN
JOHN CHESNUT, JR., VICE-CHAIRMAN
GABRIEL CAZARES
CHARLES E. RAINEY
BRUCE TYNDALL

November 6, 1984

Mr. Richard D. Garrity, Ph.D.
Southwest District Manager
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Dear Mr. Garrity:

The Pinellas County Division of Air Quality Engineering/Enforcement Sections activities for the month of October 1984 are summarized as follows:

Citizen Complaints

Fifty-three (53) complaints were received in October.

29 *	-	Odor	Case file City of Largo Sludge Dryer-A052-30168. *(Two of these complaints were attributed to Pinellas County Dog Control - Entered in their case file - A052-58737).
6	-	Odor	Closed/Resolved
5	-	Dust/Sandblasting	Case file initiated; "Sparks Crane Serv."; evaluation/recommendation pending.
4	-	Smoke	Closed/Resolved
4	-	Auto Spray Painting	Closed/Resolved
1	-	Cement Dust	Fugitive Emissions from CPC (Clw. Plt.) A052- 48812 Closed/Resolved
1	-	Cement Dust	Fugitive Emissions from concrete plants in the mid-County area - Closed/Resolved
1	-	Particulate Fallout	Unknown origion - Closed
1	-	Odor/VOC's	Case file ITD Industries
1	-	Water in gasoline	Referred to EPA and Fla. Dept. of Agriculture

Compliance Inspections

A. The following sources inspected in October are considered to be in full compliance:

1.	Acre Iron & Metal	Permit A052-24499
2.	A.T. Moorefield Paving, Inc.	Permit A052-19880 - Stack test observed-report received & accepted.
3.	Davis Beatty, Inc.	Permit A052-84924.
4.	Palms of Pasadena Hospital	Permit A052-59239.
5.	Hercules of Florida	Permit A052-51885.

B. The following sources are considered to be in non-compliance or otherwise noted:

1.	Cement Specialties, Inc.	Permit A052-54628. Compliance status "unknown". Change of ownership and temporary shutdown
2.	Paschen Contractors, Inc.	Permit AC52-70437. Administrative non-compliance for failure to obtain operating permits after completion of construction V.E.'s show facility is functionally in compliance.
3.	Hetro Concrete Co.	Non-Permitted source in administrative non-compliance. It is reported that an application has been submitted to DER.
4.	City of Clearwater	Non-Permitted source in administrative and functional non-compliance.

General

1. Reviewed stack test reports for The West Company A052-56965 and Florida Power Corp. Bartow #2 (A052-56650) and Higgins Units #1,2,3 (A052-56652, 56653, and 56654). Tests accepted.

2. Peter Hessling, Environmental Engineer attended the STAPPA/ALAPCO "Air Toxics Workshop" 10/10 thru 10/12/84 at Washington D.C.

3. Final comment was given regarding the draft DCCO for ITD Industries. Copies sent to DER/OGG/and ITD.

4. Permit review comments were rendered to DER in work discussion meetings with District staff for the following sources:

a) City of Largo	Application for modification is considered incomplete. Additional information requested.
b) Stauffer Chemical Co.	Application for renewal of A052-60251 is considered incompleted. Additional information requested as this source is tied into the SIP for Pinellas Countys SO_2 NAA.
c) Silor Optical	Renewal application for A052-55875. Recommended renewal with significant changes in specific conditions. This is a major non-RACT VOC source.

5. A copy of the updated CDS report, sent to R. Vail, BAQM, for October is enclosed for District records.

If there are any questions regarding this report or if additional information is needed please contact our office at Suncom 570-6522.

Sincerely,

Joyce M. Gibbs, Chief
Division of Air Quality

JMG/wn
Enclosures

MA
file

Florida Power
CORPORATION

January 20, 1984

Mr. W. K. Hennessey
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Hennessey:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1	Crystal River No. 1
Anclote No. 2	Crystal River No. 2
Bartow No. 1	Higgins No. 1
Bartow No. 2	Higgins No. 2
Bartow No. 3	Higgins No. 3

Should there be any questions concerning these data, please contact me at (813) 866-4281.

Sincerely,

FLORIDA POWER CORPORATION

D. A. Shantz
Supervisor
Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: F. E. Denby
D. I. Flynn
G. L. Macey
T. L. Brouette w/attach.
Readers w/attach.

File: ENVIRON 5-1/attach.

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
October 1983								
Fuel Oil (BBL)	286231	170444	0	45235	89042	584	3957	5917
Gas (MCF)	0	0	66975*	0	214038	0	22590	0
% Sulfur(1)	2.2	2.2	-	2.3	2.3	2.3	2.3	2.3
November 1983								
Fuel Oil	206126	90235	0	8677	26494	3251	0	1721
Gas	0	0	0*	0	623481	4618	0	0
% Sulfur	1.9	1.9	-	2.1	2.1	2.2	-	2.2
December 1983								
Fuel Oil	129691	89737	508	49170	63111	5526	4636	4284
Gas	0	0	3925*	0	578981	3933	13441	0
% Sulfur	2.3	2.3	2.4	2.4	2.4	2.2	2.2	2.2

(1) In fuel oil

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
October 1983		
Coal (Tons)	39625	115611
% Sulfur	1.4	1.4
November 1983		
Coal (Tons)	65835	108183
% Sulfur	1.5	1.5
December 1983		
Coal (Tons)	82972	99311
% Sulfur	1.4	1.4

Shantz(QtrRpt)D12

* Coal-oil mixture, barrels

PLANT 0012 FLA POWER SHORE DR OLDSMAR 3355/ UTILITY FILE STATUS NEW ADD
POWER PLANT
SAINT PETERSBURG FL.
W P STEWART AQCR=052 SIC=4911
BOX 14042 C 4 LAT=28:20:30N LON=82:18:17W
ST PETE . 33733 UTM ZONE 17 336.5KM E. 3098.2KM N.

POINT 01 CONST PATS# OPER PATS# A052-20186
ISS= / / EXP= / / ISS=08/06/79 EXP=07/16/84
HIGGENS #1 BOILER #6 FUEL
SOURCE= IPP=91 ECAP=? COMM.PNTS. -
STACK HT= 174FT DIAM=12.5FT TEMP= 300F FLOW= 250000CFM PLUME= 0F
BOILER CAP= 517MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=79 RAW MATERIAL= 517 OTHER
PRODUCT 0 OTHER FUEL 517 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE 24HRS/DAY 7DAYS/WK 52WKS/YR
AOR FOR 07/01/79 24HRS/DAY 7DAYS/WK 52WKS/YR

COMPLIANCE NEDS=1 ORC= UPDATE / SCHED. / UPDATED / /
PERMIT= YOR=78 INSPECTED 08/03/78 NEXT DUE 10/01/79

/

SCC'S

1-01-004-01 YOR= SOURCE=B RATE= 30395 MAX= 3.470
FUEL CONT SO2=2.30% ASH= 0.1% 149MBTU FYOR= CONFID=2

1-01-006-01 YOR= SOURCE=B RATE= 618 MAX= 0.362
FUEL CONT SO2= .00% ASH= 0.0% 965MBTU FYOR= CONFID=2

POLLUTANTS MONITORED

TSP 11101 NORM= 54.70 EST/METH= 96/1 MAX.ALW= 123 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 04/20/76 AGENCY= REG= COMPLIANCE=
EMITTED= 41.36 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
VE 11204 NORM= . EST/METH= / MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/76 TEST/FREQ=
TESTED 03/08/78 AGENCY= REG= COMPLIANCE=
EMITTED= . ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
SO2 42401 NORM= 44.22 EST/METH= 3197/2 MAX.ALW= 3381 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 04/20/76 AGENCY= REG= COMPLIANCE=
EMITTED= 43.44 ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#000000056652 COE# DER PROCESSOR:RICHARDSON DER OFFICE:TPA
FILE NAME:FLA POWER CORP HIGGINS #1DATE FIRST REC: 06/10/82 APPLICATION TYPE:AO
APPL NAME:FLA POWER CORP HIGGINS #1 APPL PHONE:(813)866-5151 PROJECT COUNTY:52
ADDR:P O BOX 14042 CITY:ST PETERSBURG ST:FLZIP:33733
AGNT NAME: AGNT PHONE:( ) -
ADDR: CITY: ST: ZIP:

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: 06/10/82 COMMENTS NEC:Y DATE REQ: / / DATE REC: / /
LETTER OF INTENT NEC:N DATE WHEN INTENT ISSUED: / / WAIVER DATE:10/07/82

HEARING REQUEST DATES: / / / / / /
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N
*** RECORD HAS BEEN SUCCESSFULLY UPDATED *** 10/07/82 15:49:15
FEE PD DATE#1:06/10/82 $0020 RECEIPT#00062411 REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:IS DATE:10/07/82
REMARKS:RENEWAL OF AO52-20186, BOILER
PROGRAM #1

APIS01X 9999999999

DER

COMPLIANCE VERIFICATION INSPECTION

FLORIDA POWER CORPORATION
HIGGINS PLANT
STEAM BOILER NO. 1
PINELLAS COUNTY
NEDS NUMBER: 052-0012-01
PERMIT NUMBER: A052-56652
DATES OF INSPECTION: DECEMBER 6 & 7, 1982

The Higgins Plant of the Florida Power Corporation is located in Booth Point at the end of Shore Drive in Oldsmar, Florida.

Plant contact persons were Mr. Stephen L. Stanbrough, Operations Superintendent, Mr. Robert A. Wile, Chief Operator, Shift 4; and Mr. Fred J. Selbach, Senior Operator. Stack test team members were Mr. Todd Brouette, Mr. Philip Watkins and Mr. Kenneth E. Roy. Ramon Solis of Pinellas County Division of Air Quality, D.E.M., performed the inspection and witnessed the three runs of the soot blowing compliance test for 1982.

A meeting was held with plant operations' personnel and the company's testing team in which soot blowing procedures were explained and the testing strategy outlined.

When the boiler is operating continuously with fuel oil No. 6, soot blowing procedures take place every twelve hours, at noon time and at midnight. When fired by natural gas, soot blowing is activated once a week on Tuesdays.

Due to low seasonal demand for electric power, the generators at the Higgins Plant have not been operating continuously. Most of the time the boilers have been fired by natural gas because it is less expensive than oil and it has been available.

For the soot blowing test of December 6, 1982, the Operations Superintendent furnished an account of the duration of oil firings from November 1, 1982 to date, as well as of the last soot blowing procedure implemented, as follows:

OIL FIRINGS FOR UNIT NO. 1, HIGGINS PLANT

DATE	PERIOD	TIME
12/6/82	From 6:02 to testing time (10:54)	4 hr. 52 min.
12/3/82	" 14:10 to 15:00	1 hr. 50 min.
12/2/82	" 05:18 " 09:35	4 hr. 17 min.
12/1/82	" 05:17 " 08:50	3 hr. 33 min.

11/30/82 SOOT BLOWING DURING GAS FIRING

DATE	PERIOD			TIME
11/29/82	From 17:45	to	18:23	38 min.
11/13/82	" 06:05	"	11:35	5 hr. 30 min.
11/6/82	" 03:20	"11/7/82	11:37	8 hr. 17 min.
11/4/82	" 11:15	"	12:25	1 hr. 10 min.
11/3/82	" 10:18	"	12:10	1 hr. 52 min.
11/2/82	" 07:00	"	11:30	4 hr. 30 min.
11/1/82	" 13:42	"	22:35	8 hr. 53 min.

The soot blowing sequence and the location of the blowers were explained and visited with the guidance of Mr. Robert A. Wile, Chief Operator, Shift 4 and Mr. Fred J. Selbach, Senior Operator.

A complete soot blowing sequence takes a little under 1.5 hours. Each individual stage "K" takes from 8 to 10 minutes in an automatic sequence as follows:

SOOT BLOWING SEQUENCE

IK - 1
IK - 2 Superheater
IK - 3

IK - 5A
IK - 6A Primary Superheater

IK - 5 & 6 North Side of Economizer

IK - 7 Economizer S

Group 1 (Four blowers) E/W Sides of Economizer

Straight Lines - 1
Straight Lines - 2 Air Heater Blowers

On the basis of the available information, the stack test team supervisor decided to test duct A during the first run of the test without changing to duct B as during the normal testing procedure. Only the superheater and the economizer were soot blown during the first run of the stack test, IK-1 through IK-7. The first run was performed from 10:54 to 11:17 in December 6, 1982.

The second run was performed on the same day as run No. 1 and it took place from 14:30 to 16:22. The stack test team supervisor, Mr. Todd Broutte explained that they had received verbal approval from Mr. Steve Smallwood, Chief, Bureau of Air Quality, D.E.R., to perform several soot blowing test runs during the same day, without waiting to test according to the normal soot blowing cycle at each particular plant. During the second run of the stack test, the air heaters, straight-lines-1, straight-line-2 and the group 1 of the economizer were soot blown, while testing in both duct A and duct B.

The third run was performed on December 7, 1982. The soot blowing sequence for that run included blowing the IK-1, IK-2, Ik-3 and IK-5A while testing on duct "B", (East side); and IK-6A, IK-6, IK-5, IK-7 and Group 1 for duct "A" (West side). The steam generator No. 1 was fired by oil during approximately 16 hours prior to being soot blown for the third run of the stack test.

Sample recovery was completed during the three test runs without loss of particulate matter.

During the inspections, for test runs number 1 and 2, the boiler was stabilized at a production rate of 355,000 lbs/hr of steam with an output of 40.0 MW, an auxiliary load of 2.2 MW and a net load of 37.8 MW. During the third run, the unit was stabilized at a production rate of 370,000 lbs/hr of steam with an output of 41.0 MW, an auxiliary load of 2.1 MW and a net load of 38.9 MW.

A visible emissions test was performed concurrently with the soot blowing test for the super heater and the economizer during the third run of the stack test. Average opacity during the worst six minutes of operation was 44%.

Pending acceptable results from the stack test, the unit No. 1 of the Higgins steam generating plant is considered to be in compliance with Chapters 17-2 and 17-4, Florida Administrative Code.

RS/jh

EPA TR 101

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: FLORIDA POWER CORP. HIGGINS PLANT
SOURCE ID NUMBER: A052-56652
OBSERVATION DATE: 12/7/82
ADDRESS: BOILER NO. 1 SHORE DRIVE
OBSERVER'S NAME (PRINT): RAMON SOLIS
OLDSMAR
ORGANIZATION: PINELLAS COUNTY DIVISION OF AIR QUALITY
STATE: FLORIDA
ZIP:
PHONE: 866-4509
CERTIFIED BY: FTA/DER
DATE: 9/16/82

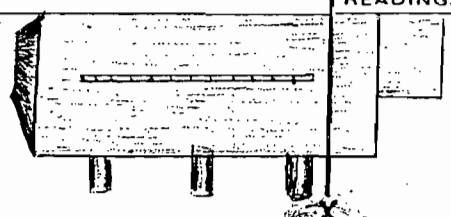
PROCESS: STEAM GENERATOR NO. 1
OPERATING MODE: FULL LOAD CONTINUOUS
CONTROL EQUIPMENT: NONE
OPERATING MODE: N/A
DESCRIBE EMISSION POINT: STEEL SMOKE STACK
EMISSION POINT HEIGHT ABOVE GROUND LEVEL: 174
EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 175
DISTANCE TO EMISSION POINT: 300
DIRECTION TO EMISSION POINT: 20°
DESCRIBE EMISSIONS: DARK GRAY SMOKE
COLOR OF EMISSIONS: GRAY
CONTINUOUS [X] FUGITIVE [ ] INTERMITTENT [ ]
WATER VAPOR PRESENT: NO [X] YES [ ]
IF YES, IS PLUME: ATTACHED [ ] N/A DETACHED [ ]
AT WHAT POINT WAS OPACITY DETERMINED: 15' W OF STACK
DESCRIBE BACKGROUND: SKY
COLOR OF BACKGROUND: WHITE / GRAYISH BLUE
SKY CONDITIONS: OVERCAST
WIND SPEED: 15 MPH
WIND DIRECTION: NE
AMBIENT TEMPERATURE: 70°F
RELATIVE HUMIDITY: 90%
COMMENTS: CONCURRENT WITH SOOT BLOWING TEST FOR SUPERHEATER AND ECONOMIZER

START TIME: 9:43
STOP TIME: 10:13

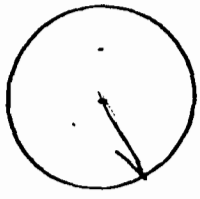
	0	15	30	45		0	15	30	45
1	40	40	40	40	31				
2	40	35	35	35	32				
3	40	45	45	45	33				
4	45	45	45	45	34				
5	40	45	45	45	35				
6	50	45	45	45	36				
7	50	50	50	50	37				
8	45	50	45	45	38				
9	45	45	40	45	39				
10	45	45	40	40	40				
11	30	30	30	30	41				
12	30	30	30	30	42				
13	25	25	20	20	43				
14	25	25	20	20	44				
15	30	40	40	40	45				
16	40	40	45	45	46				
17	45	45	45	45	47				
18	45	45	40	40	48				
19	45	40	40	45	49				
20	45	40	45	45	50				
21	50	50	50	50	51				
22	45	45	40	30	52				
23	30	30	25	25	53				
24	30	25	25	25	54				
25	25	45	45	45	55				
26	30	20	20	20	56				
27	15	15	15	15	57				
28	15	15	15	20	58				
29	20	15	15	20	59				
30	20	20	20	20	60				

AVERAGE OPACITY WORST SIX MIN: 44%
NUMBER OF READINGS ABOVE: 60 % WERE 0
RANGE OF OPACITY READINGS: FROM 15 TO 50

SOURCE LAYOUT SKETCH



DRAW NORTH ARROW



OBSERVER'S SIGNATURE: Ramon Solis
DATE: 12/7/82
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS.
SIGNATURE
VERIFIED BY
TITLE
DATE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORPORATION Date 12/6/82

Plant Address SHORE DRIVE, OLDSMAR FLORIDA

Source to be Tested BOILER NO: 1 Permit No. AO52-56652

Plant Contact STEPHEN L. STANBROUGH OPERATIONS PLANT SUPERINTENDENT

Observers RAMON SOLIS Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY, DEM

Reviewed Pretest Meeting Notes, Etc? RUN #1

Comments: SOOT BLOWING TEST SUPERHEATER/ECONOMIZER WILL TEST ONLY DUCT A (IK-1, THROUGH IK-7)

Test Team Company Name FLORIDA POWER CORP Phone 866-4481

Test Team Company Address 3201 - 34th St. S. St. Petersburg FL.

Supervisor's Name TODD BROUETTE (PROBE)

Other Members PHILIP WATKINS (METER BOX)

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 46.65 SQ. FT EACH DUCT (2)

Material of Construction STEEL Leaks NO

Internal Appearance N/A

Nipple? YES 6 (A) 6 (B) Length 8" Flush With Inside Wall? YES

Table 1. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? NO Of what N/A

Opacity Reading of Plume NO

Drawing of Sampling Location:

GENERAL INFORMATION

Type fuel used OIL NO. 6 Rate APPROX. 69.7 bbl/hr

Production Rate (Input) 355,000 LBS/HR OF STEAM TPH

Production Rate (Output) GROSS 40.0 MW TPH

AUX. 2.2

NET 37.8 MW

GENERAL/SAMPLING SYSTEM

Type Sampling Method EPA METHOD 17

Modifications? NONE

Sampling Train Schematic Drawing:

Pump Type CARBON VANE Pitot tube type? S

Connected to MANOMETER DRAFT GAUGE Range 0-10"

Probe Liner Material STAINLESS STEEL Heated Entire Length? NO

IN-STACK FILTER Orifice Meter Connected To: MANOMETER

Range 0-10 INCHES

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand RESEARCH APPLIANCE CORP Sample Box Brand N/A

Box #3

Calibration Date Of Equiptment: Dry Gas Meter 9/7/82

Pitot Tube 9/7/82 Magnehelic N/A

Thermometers THERMOCOUPLES 9/7/82 Number of Sampling Points/

Traverse From Fed. Reg. 6 PORTS (A) 3 STOPS/PORT Number Points to be

used 18 Sampling Time Per Point 4 MIN

Total Sampling Time Minutes 72

SAMPLING TRAIN ASSEMBLY

Filter Media Type FIBER GLASS Impingers Clean? NO

Meter Box Leveled? YES Orifice Manometer Zeroed? YES

Probe Hot Along Entire Length? N/A Filter

Compartment Temperature. N/A Impingers iced down? YES

60°F

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=* — (0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=* — (0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=* — (0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.* 100 °F Estimated Value of Ps/Pm* 1

Estimated Moisture Content 10 % How Estimated? PREVIOUS TEST

C Factor* 1.0 Estimated Stack Temp.* 300 °F Desired Nozzle Dia.* 1/4"

Leak Check Performed Before Sampling YES 0.@ 15 IN Hg

Table 4 OBSERVATION CHECKLIST

FINAL DRY GAS METER 587.939
INITIAL DRY GAS METER - 552.885
35.054

SAMPLING

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point? YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? NO

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at Completion of Run? YES D Per (1) Min. at 8 In. Hg.

If Orsat Analysis is Done, Was it: From Stack N/A From integrated Bag N/A Nozzle Dia. OXIGEN ANALYZER

OXIGEN
1 7.0
6.8
7.1
.2 7.0
6.6
7.0
.3 7.2
7.2
6.6
-4- 6.8
6.8
7.0
.5 - 7.0
7.0
7.2
A6 - 7.2
7.0
7.2

START 10:54 EXHAUST DUCT A (START SOOT BLOWING)

Volume Metered 35.054 ACF First Δp Readings 0.20 0.24

0.26	0.26	0.26	0.30	0.24	0.30	0.30	0.24	0.30	0.32
0.24	0.26	0.28 (11:55)	0.20 (12:11)	0.24 "	0.26 " (11:17)				

START SOOT BLOWING AGAIN (RESET)

SAMPLE RECOVERY

Brushes Clean? YES Brush Length as Long as Probe Length? YES

Acetone Grade REAGENT Filter & Probe Handled OK? YES

Impingers Handled OK? _____ Description of Collected Particulate BLACK PARTICULATE HEAVY Silica Gel All Pink? NO

Run 1 ✓ Run 2 ____ Run 3 ____ Jars Labeled OK? YES

Jars Tightly Sealed? NO Probe, Impingers, Filter Holder, Etc. Readied for Next Run Properly? YES

General Comments on Entire Sampling Project:

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? YES Did He Do So? Philip Watkins

Observer's Name RAMON SOLIS Title ENV. SPEC II

Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY, DEM Signature Ramon Solis

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORP Date 12/6/82

Plant Address SHORE DRIVE, OLDSMAR, FLORIDA

Source to be Tested UNIT #1 Permit No. AO52-56652

Plant Contact STEPHEN L. STANBROUGH

Observers RAMON SOLIS Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY

Reviewed Pretest Meeting Notes, Etc?

Comments: SOOT BLOWING TEST. RUN #2. AIR HEATER, STRAIGHT LINES 1 AND 2 SOOT BLOWING. APPROX. 20 MIN

Test Team Company Name FLORIDA POWER CORP Phone 866-4481

Test Team Company Address 3201-34th St. S., St. Petersburg, FL.

Supervisor's Name TODD BROUETTE

Other Members PHILIP WATKINS

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 46.65 SQ FT. EACH OF 2

Material of Construction STEEL Leaks No

Internal Appearance N/A

Nipple? YES 6 (A) Length 8" Flush With Inside Wall? YES

Table 1. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? NO Of what N/A

Opacity Reading of Plume No

Drawing of Sampling Location:

GENERAL INFORMATION

Type fuel used OIL NO. 6 Rate 69.7 bbl/hr

Production Rate (Input) 355,000 lbs/hr steam TPH

Production Rate (Output) GROSS LOAD 40.0 TPH

AUX. LOAD 2.2

NET 37.8

GENERAL/SAMPLING SYSTEM

Type Sampling Method EPA METHOD 17

Modifications? NONE

Sampling Train Schematic Drawing:

Pump Type CARBON VANE Pitot tube type? S

Connected to MANOMETER DRAFT GAUGE Range 0-10"

Probe Liner Material STAINLESS STEEL Heated Entire Length? NO

IN STACK FILTER Orifice Meter Connected To: MANOMETER

Range 16"

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand BOX NO 3 BOX NO. 2 Sample Box Brand N/A

Calibration Date Of Equiptment: Dry Gas Meter TELEDYNE 9/20/82 BOX NO. 3 - 9/7/82

Pitot Tube 9/7/82 Magnehelic N/A

Thermometers THERMOCOUPLES 9/7/82 Number of Sampling Points/

Traverse From Fed. Reg. 6 PORTS (A) 3 STOPS/PORT 6 PORTS (B) Number Points to be

used 36 Sampling Time Per Point 2 MIN

Total Sampling Time Minutes 72

SAMPLING TRAIN ASSEMBLY

Filter Media Type FIBERGLASS Impingers Clean? NO

Meter Box Leveled? YES Orifice Manometer Zeroed? YES

Probe Hot Along Entire Length? N/A Filter

Compartment Temperature. N/A Impingers iced down? YES

58° F

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=* — (0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=* — (0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=* — (0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.* 100 °F Estimated Value of Ps/Pm* 1

Estimated Moisture Content 10 % How Estimated? PREVIOUS TEST

C Factor* 1.0 Estimated Stack Temp.* 300 °F Desired Nozzle Dia.* 1/4"

Leak Check Performed Before Sampling YES 0 @ 15" Hg

B # 3 591.095 588.381 2.714

B # 2 583.514 555.592 27.972

SAMPLING INITIAL DRY GAS

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point? YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? NO

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at Completion of Run? YES 0 Per (1) Min. at 5 In. Hg.

If Orsat Analysis is Done, Was it: From Stack NO From integrated Bag N/A Nozzle Dia. N/A ONLY OXIGEN ANALYZER (TELEDYNE

Volume Metered 30.686 ACF First Δp Readings

A(2) Box No 2 2:55 PM	0.18	0.22	0.22 / 3:01:40	0.22 / 3:02:40	0.22	0.24 / 3:08:40	0.18 / 3:09:40	0.22	0.22 / 3:15:40	0.18 / 3:17:40	0.20	0.24 / 3:22:40
	0.16 / 3:33:30	0.18	0.20 / 3:28:40	B(1) 0.20 / 3:40:20	0.22	0.22 / 3:46	0.24 / 3:46	0.22	0.24 / 3:53	0.18 / 3:53:45	0.16	0.18
	0.16 / 4:02	0.15	0.16 / 4:09	0.16 / 4:09	0.15	0.16 / 4:16	0.16 / 4:16	0.14	0.16 / 4:22 END			

B # 3 A(1) 2:30 0.20 0.24 0.20 / 3:22:40

O_2 SAMPLE RECOVERY

A1 8.0
A2 8.1
A3 8.2
A4 8.2
A5 8.2
A6

Brushes Clean? YES Brush Length as Long as Probe Length? YES

Acetone Grade REAGENT Filter & Probe Handled OK? YES

Impingers Handled OK? YES Description of Collected Particulate HEAVY BLACK/BROWN Silica Gel All Pink? NO

B1 - 7.4
B2 8.0
B3 - 7.9
B4 7.6
B5 7.6
B6 7.4

Run 1 ____ Run 2 ✓ Run 3 ____ Jars Labeled OK? YES

Jars Tightly Sealed? NO Probe, Impingers, Filter Holder, Etc. Readied for Next Run Properly? YES

General Comments on Entire Sampling Project:

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? YES Did He Do So? Yes - J. Burnette, FPC 12-6-82

Observer's Name RAMON SOLIS Title ENV. SPEC. II

Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY, DEM Signature Ramon Solis

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORPORATION Date 12/7/82

Plant Address SHORE DRIVE OLDSMAR

Source to be Tested UNIT NO 1. (STEAM) Permit No. AO52-56652

Plant Contact TODD BROUETTE

Observers RAMON SOLIS Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY, DEM

Reviewed Pretest Meeting Notes, Etc? SOOT BLOWING TEST

Comments: IK-1, IK-2, IK-3, IK-5A ON DUCT. RUN # 3
IK-6A, IK-6 AND 5, IK-7 (PRIMARY SUPERHEATER/ECONOMIZER)

Test Team Company Name FLORIDA POWER CORP Phone 866-4481

Test Team Company Address 3201-34th St. S. St. Petersburg, FL

Supervisor's Name TODD BROUETTE

Other Members KEN ROY (PROBE)
PHILIP WATKINS (METER BOX)

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 46.65 SQ. FT EACH

Material of Construction STEEL Leaks NO

Internal Appearance N/A

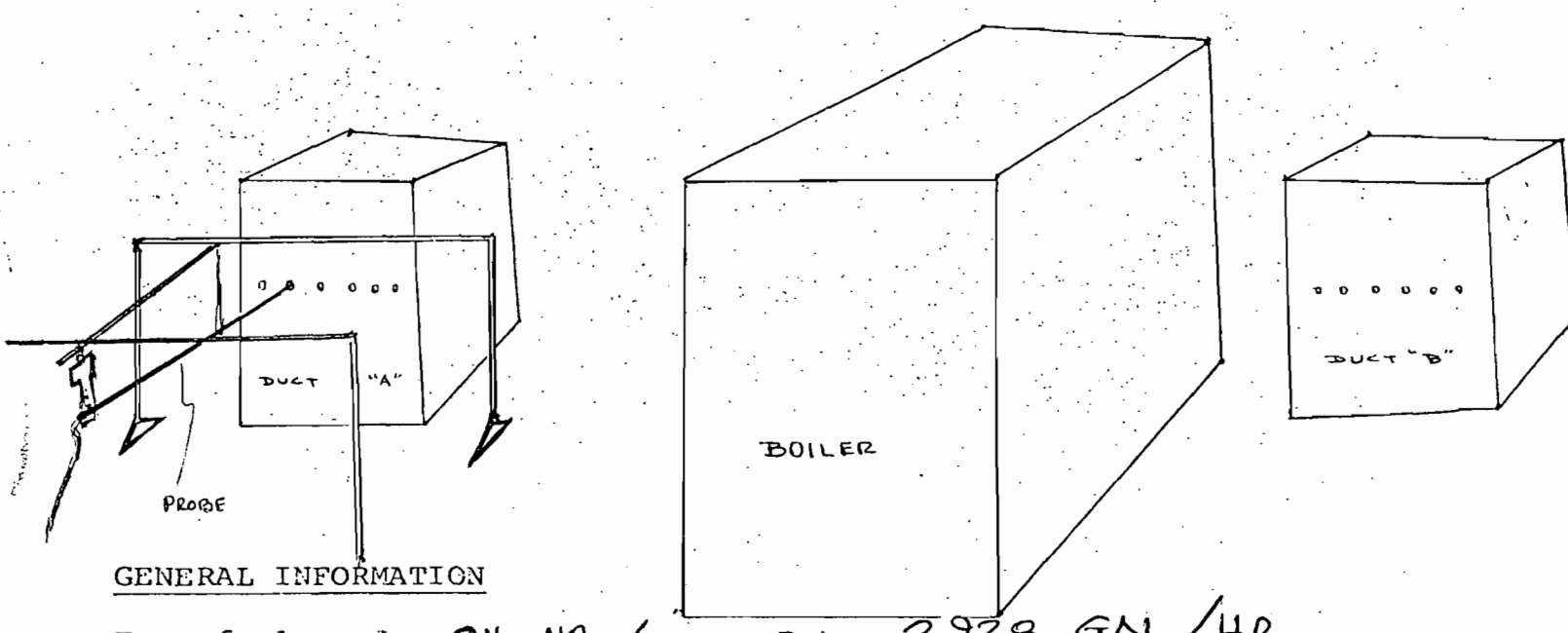
Nipple? YES 6A 6B Length 8" Flush With Inside Wall? YES

GENERAL/SAMPLING SITE (continued)

Photos taken? NO Of what N/A

Opacity Reading of Plume YES 44% WORST 6 MIN

Drawing of Sampling Location:



GENERAL INFORMATION

Type fuel used OIL NO. 6 Rate 2928 GAL/HR

Production Rate (Input) 370,000 LBS/HR STEAM TPH

Production Rate (Output) GROSS LOAD 41.0 MW TPH

AUX. LOAD 2.1

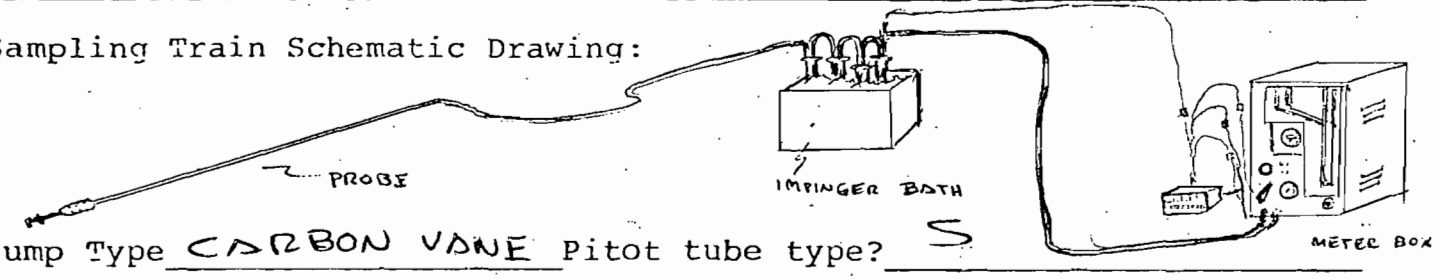
38.9 MW

GENERAL/SAMPLING SYSTEM

Type Sampling Method EPA NO. 17

Modifications? NONE

Sampling Train Schematic Drawing:



Pump Type CARBON VANE Pitot tube type? S

Connected to MANOMETER DRAFT GAUGE Range 0' - 10"

Probe Liner Material STAINLESS STEEL Heated Entire Length? NO

IN-STACK FILTER Orifice Meter Connected To: MANOMETER

Range 10"

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand RESEARCH APPLIANCE CO. Sample Box Brand N/A
BOX NO. 2

Calibration Date Of Equiptment: Dry Gas Meter _____
Pitot Tube 9/7/82 Magnehelic N/A
Thermometers THERMOCOUPLES 9/7/82 Number of Sampling Points/
Traverse From Fed. Reg. 6 PORTS A / 6 PORTS B 3 STOPS/PORT Number Points to be
used 36 Sampling Time Per Point 2 MIN
Total Sampling Time Minutes 72

SAMPLING TRAIN ASSEMBLY

Filter Media Type FIBERGLASS Impingers Clean? NO
Meter Box Leveled? YES Orifice Manometer Zeroed? YES
Probe Hot Along Entire Length? NO Filter
Compartment Temperature. N/A Impingers iced down? YES
57° (B)
52 (A)

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=* — (0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=* — (0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=* — (0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.* 100 °F Estimated Value of Ps/Pm* 1
Estimated Moisture Content 10 % How Estimated? PREVIOUS TEST
C Factor* 0.95 Estimated Stack Temp.* 300°F Desired Nozzle Dia.* 1/4
Leak Check Performed Before Sampling YES @ 15" Hg

SAMPLING

INITIAL DRY GAS 660.074 / 620.959 / 39.115

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point?
YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? NO

Is Data Recorded in a Permanent Manner? YES

O2 Are Data Sheets Complete? YES Is Leak Test Performed at

9.8 Completion of Run? YES 0 Per (1) Min. at 6 In. Hg.

2 7.4 If Orsat Analysis is Done, Was it: From Stack NO From integrated

3 7.4

Bag NO Nozzle Dia. USE OF TELEDYNE OXIGEN ANALYZER

4 7.6

5 7.4 Volume Metered 39.115 ACF First Δp Readings B) 0.34 0.38

6 7.4 0.40 / 0.34 0.40 0.40 / 0.34 0.38 0.38 / 0.32 0.38 0.40 / 0.30

0.34 0.36 / 0.30 0.30 0.28 / A) 9:24:30 0.20 0.24 0.28 / 0.22 0.28 0.34 /

SAMPLE RECOVERY 0.28 0.32 0.32 / 0.24 0.28 0.32 / 0.26 0.30 0.30 /

11 7.4 0.20 0.26 0.28 /

12 7.4 Brushes Clean? YES Brush Length as Long as Probe Length? YES

13 7.0 Acetone Grade REAGENT Filter & Probe Handled OK? YES

14 7.0 Impingers Handled OK? YES Description of Collected Particulate

15 7.4 BLACK AND DARK BROWN PARTICULATE Silica Gel All Pink? NO

16 7.6 Run 1 ____ Run 2 ____ Run 3 ✓ Jars Labeled OK? YES

Jars Tightly Sealed? NO Probe, Impingers, Filter Holder, Etc.

Readied for Next Run Properly? YES

General Comments on Entire Sampling Project:

Was the Test Team Supervisor Given the Opportunity to Read Over

This Checklist? YES Did He Do So? Phil Watkins

Observer's Name RAMON SOLIS Title ENV. SPEC II

Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY, DEM Signature Ramon Solis

Air

Florida Power
CORPORATION

D.E.R.
DEC 9 1982
SOUTHWEST DISTRICT
TAMPA

November 24, 1982

Mr. W. K. Hennessey
District Manager
Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610-0544

Subject: Opacity Testing Higgins P-1 - A052-58633
Higgins P-2 - A052-58634
Higgins P-3 - A052-58635
Higgins P-4 - A052-58636

Dear Mr. Hennessey:

Florida Power requests that the requirement to conduct annual visible emission tests on the subject units be eliminated. Through September of this year, the total operating time for each unit is as follows:

Higgins P-1 - 14.4 hours
Higgins P-2 - 21.5 hours
Higgins P-3 - 16.4 hours
Higgins P-4 - 15.8 hours

These units operate only during unplanned emergency situations and a significant portion of that operation is on natural gas. It involves considerable cost for our customers to bring them on-line just to conduct a visible emission test. We are unable to determine any corresponding benefit to the environment.

These units have always been in compliance with visible emission standards and will continue in compliance for the useful life of the gas turbines. Your timely consideration of this request would be greatly appreciated.

Should you have any questions concerning this matter, please advise.

Very truly yours,

Dennis A. Shantz, Supervisor
Environmental Services

Shantz(T05)C1-2

cc: R. E. Parnelle
J. Alberdi
F. Denby
T. L. Brouette
Reader's File

Florida Power
CORPORATION

October 15, 1982

Mr. W. K. Hennessey
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Hennessey:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1	Crystal River No. 1
Anclote No. 2	Crystal River No. 2
Bartow No. 1	Higgins No. 1
Bartow No. 2	Higgins No. 2
Bartow No. 3	Higgins No. 3

Should there be any questions concerning these data, please contact me at (813) 866-4281.

Sincerely,

FLORIDA POWER CORPORATION

D. A. Shantz
Supervisor
Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: F. E. Denby
D. I. Flynn
G. L. Macey
F. E. Martin
T. L. Brouette w/attach.
Readers w/attach.

File: ENVIRON 5-1/attach.

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
July 1982								
Fuel Oil (BBL)	303,395	348,264	5,153	94,963	161,041	15,702	15,315	16,415
Gas (MCF)	0	0	0	0	24,029	55,160	31,482	0
% Sulfur	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.4
August 1982								
Fuel Oil	320,718	355,153	1,520	64,949	123,499	31	6,176	19,926
Gas	0	0	0	0	106,435	25,924	91,036	0
% Sulfur	2.2	2.2	2.4	2.4	2.4	2.4	2.4	2.4
September 1982								
Fuel Oil	281,854	283,476	723	85,473	107,809	3,285	4,040	9,986
Gas	0	0	0	0	271,694	11,558	41,682	0
% Sulfur	2.2	2.2	2.5	2.5	2.5	2.4	2.4	2.4

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
July 1982		
Coal (Tons)	93,140	102,986
% Sulfur	2.1	2.1
August 1982		
Coal (Tons)	89,428	125,825
% Sulfur	1.8	1.8
September 1982		
Coal (Tons)	91,752	123,692
% Sulfur	1.6	1.6

Shantz(QtrRpt)D-12

ADDENDUM TO QUARTERLY FUEL USE REPORT

Bartow Unit 1 - Coal Oil Mixture
Burned to Date - 1982

MONTH	BARRELS
May	19,529
June	56,812
July	34,505
August	59,510
September	69,775

Brouette(F06)C6-2

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: W. K. Hennessey

THROUGH: Bill Thomas 10-6-82

FROM: Jim Estler

DATE: September 22, 1982

SUBJECT: Pinellas County - AP
Bartow 2 & 3
Higgins 1, 2 and 3

Attached are five permits which modify existing operating permits to comply with the particulate RACT requirements of Chapter 17-2, F.A.C. The new requirements include an operation and maintenance plan for each unit.

Comments from Pinellas County Department of Environmental Management were received on July 19, 1982 and incorporate into the permits.

Recommend these permits be issued as conditioned (the 90-Day Waiver expires October 7, 1982).

JE/scm

Note: I'll do the AP 1.5 II Form later.

Dan
File: Pinellas G-AP
WO

Florida Power
CORPORATION

SOUTHWEST DISTRICT
TAMPA

September 2, 1982

Mr. W. K. Hennessey
Florida Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Subject: Ambient SO_2 Monitoring
Bartow Plant
Higgins Plant

Dear Mr. Hennessey:

Florida Power Corporation submits the attached Ambient SO_2 data. Should you have questions concerning these data, please contact me at (813) 866-4281.

Very truly yours,

FLORIDA POWER CORPORATION

D. A. Shantz, Supervisor
Chemical and Environmental Services

Attachment

cc: T. L. Brouette w/attach.

File: ENVIRON 5-1-2

Shantz(SO2)D12

--- FLORIDA POWER CORPORATION

ENVIRONMENTAL AND FUEL OIL
LABORATORY

SEP 8 1982

SOUTHWEST DISTRICT
TEL: 795-4811
MICROWAVE: 228-1141

REPORT NO. 524

DATE: 8/16/82

PLANT: Higgins

SAMPLE DESCRIPTIONS:

Date Collected: From: 4/5/82 to 6/28/82
Monitoring Station(s): H-1

ANALYSIS: AMBIENT SO_2 SAMPLING PROGRAM

			SO_2		
Lab Number	Site	Date	$\mu g/m^3$	ppm	Reason for Voiding
A-2661	H-1	4/5/82		VOID	DATA INCOMPLETE
A-2662	H-1	4/11/82		VOID	BUBBLER SOLUTION <35ml
A-2663	H-1	4/17/82		MDL	
A-2664	H-1	4/23/82		MDL	
A-2665	H-1	4/29/82		MDL	
A-2666	H-1	5/05/82		MDL	
A-2667	H-1	5/11/82		MDL	
A-2668	H-1	5/17/82		MDL	
A-2669	H-1	5/23/82		MDL	
A-2670	H-1	5/29/82		MDL	
A-2671	H-1	6/04/82		MDL	
A-2672	H-1	6/10/82		VOID	DATA INCOMPLETE
A-2673	H-1	6/16/82		MDL	
A-2674	H-1	6/22/82		MDL	
A-2675	H-1	6/28/82		MDL	

MDL: Below Minimum Detection Limit

J. A. Witherow
Laboratory Supervisor

Florida Power
CORPORATION

D.E.R.
SEP 2 1982
SOUTHWEST DISTRICT
TAMPA

September 1, 1982

Mr. Jim Estler
Florida Department of Environmental Regulation
Southwest District
7601 Highway 301 North
Tampa, Florida 33610

Subject: Extension of Permit Application Review Time

Dear Mr. Estler:

Enclosed are executed forms for the waiver of the 90 day time limit for the RACT Permit Revisions to the existing air operating permits for Bartow Units 2 and 3 and Higgins Units 1, 2, and 3. A 30-day extension to October 7, 1982, is provided.

Sincerely,

Rusty Wooten

T. H. Wooten

THW/gr

Enclosure

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

COMMISSIONERS

CHARLES E. RAINEY, CHAIRMAN
BARBARA SHEEN TODD, VICE-CHAIRMAN
GABRIEL CAZARES
JOHN CHESNUT, JR.
BRUCE TYNDALL

July 15, 1982

D.E.R.

JUL 19 1982

SOUTHWEST DISTRICT
TAMPA

Mr. Dan Williams, P.E.
Florida Department of Environmental Regulation
Southwest District Office
7601 Highway 301 North
Tampa, Florida 33610

Re: Florida Power Corporation - RACT O & M Plan Permit Revisions

Dear Dan:

This office has carefully reviewed the correspondence submitted by T. H. Wooten of FPC for RACT based permit revisions for the Bartow and Higgins Plants. The data appears to satisfy the requirements of Ch 17-2.650(2)(d)(g). The data closely agrees with actual parameters recorded during source compliance tests on record. Therefore it is recommended that the permit provisions for the RACT based O & M plan for these units incorporate the data supplied by FPC. Inspection and Maintenance schedules should include continuously monitored steam flow, temperature, and pressure, excess air (recorded), fuel oil feed rates and pressures and other parameters which may effect source performance. Appropriate records should be maintained and readily available for inspection during normal compliance verification inspections by agency personnel.

Your providing this correspondence for our review and comment is appreciated. Should you have any questions or feel the need for further discussion on this matter, please contact our office at SUNCOM 570-6522.

Sincerely,

Joyce M. Gibbs, Chief
Division of Air Quality

PAH/jh

Fel: Pinellas G: AP

Florida Power
CORPORATION

July 15, 1982

Mr. W. K. Hennessey
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Hennessey:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1	Crystal River No. 1
Anclote No. 2	Crystal River No. 2
Bartow No. 1	Higgins No. 1
Bartow No. 2	Higgins No. 2
Bartow No. 3	Higgins No. 3

Should there be any questions concerning these data, please contact me at (813) 866-4281.

Sincerely,

FLORIDA POWER CORPORATION

D. A. Shantz
Supervisor
Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: F. E. Denby
D. I. Flynn
G. L. Macey
F. E. Martin
T. L. Brouette w/attach.
Readers w/attach.

File: ENVIRON 5-1/attach.

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
April 1982								
Fuel Oil (BBL)	288207	10944	0	71431	137859	18998	18783	18805
Gas (MCF)	0	0	0	0	65209	9276	2924	0
% Sulfur	2.5	2.5	0	2.4	2.4	2.5	2.5	2.5
May 1982								
Fuel Oil	191276	266970	15695	76860	102389	17786	16060	23881
Gas	0	0	0	0	40983	20255	48341	0
% Sulfur	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5
June 1982								
Fuel Oil	274286	292938	0	97301	79748	23171	27962	16460
Gas	0	0	0	0	20696	42408	41237	0
% Sulfur	2.4	2.4	0	2.3	2.3	2.3	2.3	2.3

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
April 1982		
Coal (Tons)	98767	6624
% Sulfur	1.98	1.98
May 1982		
Coal (Tons)	103198	17601
% Sulfur	1.94	1.94
June 1982		
Coal (Tons)	97940	83549
% Sulfur	1.88	1.88

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

COMMISSIONERS

CHARLES E. RAINEY, CHAIRMAN
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GABRIEL CAZARES
JOHN CHESNUT, JR.
BRUCE TYNDALL

July 15, 1982

D.E.R.
JUL 19 1982
SOUTHWEST DISTRICT
TAMPA

Mr. Dan Williams, P.E.
Florida Department of Environmental Regulation
Southwest District Office
7601 Highway 301 North
Tampa, Florida 33610

Re: Florida Power Corporation - RACT O & M Plan Permit Revisions

Dear Dan:

This office has carefully reviewed the correspondence submitted by T. H. Wooten of FPC for RACT based permit revisions for the Bartow and Higgins Plants. The data appears to satisfy the requirements of Ch 17-2.650(2)(d)(g). The data closely agrees with actual parameters recorded during source compliance tests on record. Therefore it is recommended that the permit provisions for the RACT based O & M plan for these units incorporate the data supplied by FPC. Inspection and Maintenance schedules should include continuously monitored steam flow, temperature, and pressure, excess air (recorded), fuel oil feed rates and pressures and other parameters which may effect source performance. Appropriate records should be maintained and readily available for inspection during normal compliance verification inspections by agency personnel.

Your providing this correspondence for our review and comment is appreciated. Should you have any questions or feel the need for further discussion on this matter, please contact our office at SUNCOM 570-6522.

Sincerely,

Joyce M. Gibbs, Chief
Division of Air Quality

PAH/jh

COMPANY NAME Florida Power Corporation Processor JWE

File Number AO52-56652

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Pinellas

Date Recieved 6/10/82

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

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	6/14/82	RKT
5	Review by Sec. head and transfer to permitting Engineer	6-21-82	DW
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	10-7-82	DW
90	Final Issuance/denial		

*If needed, If not indicate by N/A

Florida Power
CORPORATION

D.E.R.
JUN 10 1982
SOUTHWEST DISTRICT
TAMPA

June 7, 1982

Dan Williams
Southwest District
Florida Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610-9544

Subject: Bartow & Higgins Plants
RACT Permit Revisions

Dear Mr. Williams:

In accordance with Ms. Hall's letter of April 26, 1982, and telephone conversations with you, we are applying for revised operating permits for Bartow Units 2 and 3 and Higgins Units 1, 2, and 3 as required by Ch 17-2.650(2)(f)2. Attached is the data you requested and as required under Ch 17-2.650(2)(d) & (g) and filing fees for each of the above units.

Please note that these units already meet RACT for particulates by complying with the emissions limits required in Ch 17-2.650(2)(c)2 which is 0.10 lbs/million BTU heat input.

If you have any questions concerning this information, please contact me at (813) 866-5528.

Sincerely,

Reesty Wooten

T. H. Wooten

THW/gr

cc: D. A. Shantz

Attachments

SOURCE EMISSIONS AND STACK DATA – FACILITIES SUBJECT TO 17-2.13 F.A.C.

Company Name: Florida Power Corporation

Facility Name: Higgins Plant

Name and Address of Authorized Representative: Mr. G. C. Moore P.O. Box 14042, St. Petersburg, FL 33733

Facility UTM Coordinates: 336.5 km E 3098.3 km N Distance to NAA (BAQM Use Only): _____ km

Source Description	Permit Number	Maximum Process or Dry Standard Volumetric Flow Rate (units)	Emission Limit Per 17-2.13 (lb/hr)	Current Allowable Emission Rate (lb/hr)	Maximum Actual Emission Rate (lb/hr)	Stack Height (m)	Stack Exit Diameter (m)	Stack Exit Temperature (K)	Actual Volumetric Flow Rate (m^3/s)	Permitted Operating Schedule (hr/dy, dy/wk, wk/yr)	(BAQM Use Only) Buoyancy Flux (m^4/s^3)	(BAQM Use Only) 24-Hour Impact ($\mu g/m^3$)
Higgins #1	A052-20186	544 (10^6 BTU / Hr)	54	54		52.9	3.8	424	90	24 , 7 , 52		
Higgins #2	A052-6207	519 (10^6 BTU / HR)	52	52		52.9	3.8	427.4	102	24 , 7 , 52		
Higgins #2	A052-6593	544 (10^6 BTU / Hr)	54	54		52.9	3.8	424	70	24 , 7 , 52		
		( )								, ,		
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		( )								, ,		

HIGGINS POWER PLANT - BOILERS 1-3

OPERATION AND MAINTENANCE PLAN

Introduction

The Higgins Power Plant is owned and operated by Florida Power Corporation. The plant is located at the southern tip of Oldsmar on Tampa Bay. The plant consists of three boilers and three turbine generator units.

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

Boiler	Service Date	Manufacturer	Type
1	1951	Babcock and Wilcox	Front Fired
2	1953	Babcock and Wilcox	Front Fired
3	1954	Combustion Engineering	Tangential Fired

The boilers exhaust gases through three stacks at an elevation of 174 feet.

Process System Performance Parameters

Boilers 1-3 burn 2.5 sulfur No. 6 fuel oil. Fuel oil quality is monitored prior to delivery and a daily sample is taken for a monthly composite analysis. The design fuel consumption, steam flow rates, operating temperatures and pressures are listed below.

Boiler	Fuel Consumption	Steam Flow	Temperature	Operating Pressure
1	87 BBLS/HR	450,000 LBS/HR	950°F	1315 PSI
2	83 BBLS/HR	450,000 LBS/HR	950°F	1315 PSI
3	87 BBLS/HR	450,000 LBS/HR	950°F	1315 PSI

Actual fuel input to the boilers is calculated from daily fuel tank drawdown. Steam flow, temperature and pressure are continuously monitored and recorded to assure efficient boiler operation. Fuel flow, temperature and pressure, and air flow are continuously monitored and maintained at levels to produce efficient fuel combustion.

Maintenance Inspection

All generating units of the Florida Power Corporation are regularly scheduled for periodic maintenance. The schedule for planned maintenance outages is affected by system load and forced outage requirements. Normally, planned outages are scheduled during non-peak load periods in 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 cleaning, burner tip replacement and maintenance of optimum flame pattern to achieve efficient combustion.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

BOB GRAHA
GOVERN

VICTORIA J. TSCHINK
SECRETA

WILLIAM K. HENNESS
DISTRICT MANAG

April 23, 1982

Mr. Dennis A. Shantz
Supervisor, Environmental Services
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Fla. 33733

RE: Anclote Unit 2
Higgins Unit 1, 2, & 3

Dear Mr. Shantz:

In response to your March 29, 1982 letter, please be advised it is acceptable to the Department for Florida Power Corporation to have missed the 1st quarter 1982 compliance tests on the above refererenced units providing the tests are made up the next quarter. This means two tests are required for these units during the 2nd quarter of 1982. If the tests are not made up the following quarter the Department will assume Florida Power has gone back to annual testing and must comply with the opacity standard associated with annual testing. Please notify our office of Florida Power's decision on quarterly or annual testing.

Also, please be advised the annual compliance test performed under sootblowing conditions cannot be substituted for a quarterly non-sootblowing compliance test. In one quarter during the year, both a sootblowing and a non-sootblowing test must be performed.

Additional information on this subject is forthcoming from our Tallahassee office shortly but in view of the fact the 2nd quarter is almost one-third over, I felt it is necessary for this office to respond to your request now.

Your cooperation is appreciated. If you have any questions, please don't hesitate to contact our office.

Sincerely,

Dan A. Williams

Dan A. Williams, P.E.
District Engineer
Air Programs

DAW/rkt

cc: Steve Smallwood
Martha Hall

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

D.E.R.

FEB 18 1982

SOUTHWEST DISTRICT
TAMPA

ANNUAL OPERATIONS REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 1981 prior to March 1st of the following year.

I. GENERAL INFORMATION:

1. Source Name: Florida Power Corporation (Higgins #1)
2. Permit Number: A052-20186
3. Source Address: P.O. Box J
   0012-01 Oldsmar, FL 33557
4. Description of Source: Steam Unit

II. OPERATING SCHEDULE: 24 hrs/day 7 day/wk 52 wks/yr
Operated 5013.2 hours in 1981

III. RAW MATERIAL INPUT PROCESS WEIGHT:

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

Product Output (tons/yr - cubic feet/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).

62.165 10^6 Cu. Ft. Natural Gas	9,580.07	10^3 gallons No. 6 Oil,	2.20 %S
10^3 gallons Propane	5.17	10^3 gallons No. 2 Oil,	0.26 %S
tons Coal		10^6 gallons No. Oil,	%S
tons Carbonaceous		tons Refuse	

Other (Specify type and units)

V. EMISSION LEVEL (tons/yr):

A.

49.35	Particulates		Carbon Monoxide
524.71	Nitrogen Oxide		Total Reduced Sulfur
	Hydrocarbon		Flouride
1747.42	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 emissions testing results.

VI. CERTIFICATION:

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

G. C. Moore

Signature of Owner or Authorized Representative

G. C. Moore
Vice President, Power Production

February 20, 1982

DER Form PERM 12-15 (Jan78)
Roy(EmRpt)D48

Florida, File. Dam

BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

December 14, 1981

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

Dear Mr. Hennessey:

The Enforcement Section's activities for the month of November 1981 are summarized as follows:

Citizen Complaints

Thirty-eight complaints were received in November.

29 - Odor	1 - Allergy
2 - Dust	1 - Bee pollen
4 - Smoke	1 - Prevention of burning of plastic records

The major source of odor complaints continues to be the Sunshine Excavating (Gorby) landfill - 14 complaints. Five odor complaints were also traced to the City of Largo Sludge Dryer system (Permit A052-30168). Case files are being developed for both of these sources.

Facility Inspections

A. The following facilities inspected in November are considered to be in full compliance. (Reports are attached).

1. Florida Power Corporation - Higgins Plant, Units 1 and 3-
   Permits A052-20186 and A052-6593

2. Acre Iron & Metal - Permit A052-26499

3. Pinellas Concrete Products (Tarpon Springs Plant)
   Permits A052-24823, A052-24825, A052-24826

4. Clearwater Concrete Industries
   Permits A052-15818, -15819, -15820, -15821 and -15824

Facility Inspections (continued)

5. Concrete Services, Inc. (Clearwater Plant)
Permits A052-18308 and A052-18309

B. The following facility was listed as non-compliance in the September monthly report.

1. Stauffer Chemical Company - The following points have been inspected or current test results have been received. These points are now considered to be in compliance.

a. Permit A052-4513 - Stack test observed on November 5, 1981, results were received on November 16, 1981 and were acceptable.

b. Permit A052-4512 - Stack test observation attempted November 14, 1981 - test scrubbed due to control device malfunction and unacceptable stack parameters. Rescheduled and tested on November 21, 1981. Test results not received as of December 7, 1981. Compliance pending.

C. The following facility was inspected and found to be in non-compliance.

1. Hercules of Florida - cement tile manufacturer located on Hercules Avenue, Clearwater. Operating a 60,000 lb. capacity cement silo and 100,000 lb. sand silo with no valid air operations permits and no control device. Notice of violation and requirement to obtain a permit to operate an air pollution source issued December 8, 1981.

D. The following source submitted an application for a permit to modify/construct:

1. Stauffer Chemical Company - modification to permit A052-20247. Application was reviewed and recommendation for approval/issuance was forwarded to the D.E.R., Southwest District office on November 17, 1981.

E. The following source was inspected to determine compliance with VOC RACT rules. Based on estimated annual emissions, it is considered to be exempt from the current regulations.

1. St. Pete Printing Company, Inc.
118 18 Street South
St. Petersburg, Florida

General Comments

We request again a letter from your office advising us as to DER's position on two VOC sources inspected in October. These sources are Aircraft Porous Media and Silor Optical; the reports were included in the October monthly report. DER permits may be required for these facilities.

Sincerely,

Joyce M. Gibbs, Chief
Division of Air Quality

JMG/jh
Enclosures

DER

STACK TEST OBSERVATION REPORT

FLORIDA POWER CORPORATION-HIGGINS PLANT-UNIT NO. 1
PINELLAS COUNTY
NEDS NUMBER: 052-0012-01
PERMIT NUMBER: A052-20186
DATE OF INSPECTION: NOVEMBER 10, 1981

The Higgins Plant of the Florida Power Corporation is located in Booth Point at the end of Shore Drive in Oldsmar Florida. The plant has three steam generating units, (two of them manufactured by Babcock & Wilcox Company and Unit No. 3 by Combustion Engineering Company), and four peaking units manufactured by Worthy Generating Company.

The purpose of the inspection was to witness run No. 2 of the stack test being conducted to satisfy the testing requirements for the fourth quarter of 1981. At the time of the inspection only the three steam generators were in operation.

The test was conducted by the Florida Power Corporation Testing Team. Mr. Phil Watkins operated the meter box and Mr. Ken Roy handled the probe. Plant contact was Mr. Dwight Pickett, Manager. The inspection was performed by Ramon Solis of Pinellas County Division of Air Quality, D.E.M.

At the time of the inspection, unit number one was stabilized at a steam flow rate of 360,000 lb/hr, and was producing a gross load (production rate) of 40.0 megawatts/hr. The auxiliary load was 2.2 MW/hr and the net load was 37.8 MW/hr.

The test team followed proper procedures during the test and sample recovery. An opacity reading of the plume for unit No. 1 prior to the stack test showed a 15% reading.

Pending acceptable results of the stack test, this unit number 1 is considered to be in compliance with Chapters 17-2 and 17-4, Florida Administrative Code.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORPORATION Date 11/10/81

Plant Address SHORE DRIVE, OLDSMAR, FLORIDA

Source to be Tested UNIT NO. 1. HIGGINS PLANT Permit No. A052-20186

Plant Contact TODD BROUETTE / DWIGHT PICKETT

Observers RAMON SOLIS Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY D.E.M.

Reviewed Pretest Meeting Notes, Etc?

Comments:

Test Team Company Name FLORIDA POWER CORP Phone 866-4481

Test Team Company Address 3201 34th St. South ST PETERSBURG, FL. 33733

Supervisor's Name TODD BROUETTE

Other Members PHIL WATKINS METER BOX

KEN ROY PROBE

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions DUCT A = 46.65 sq. ft DUCT B = 46.65 sq. ft

Material of Construction STEEL Leaks NO

Internal Appearance N/A

Nipple? YES 6(A) 6(B) Length 8" Flush With Inside Wall? YES

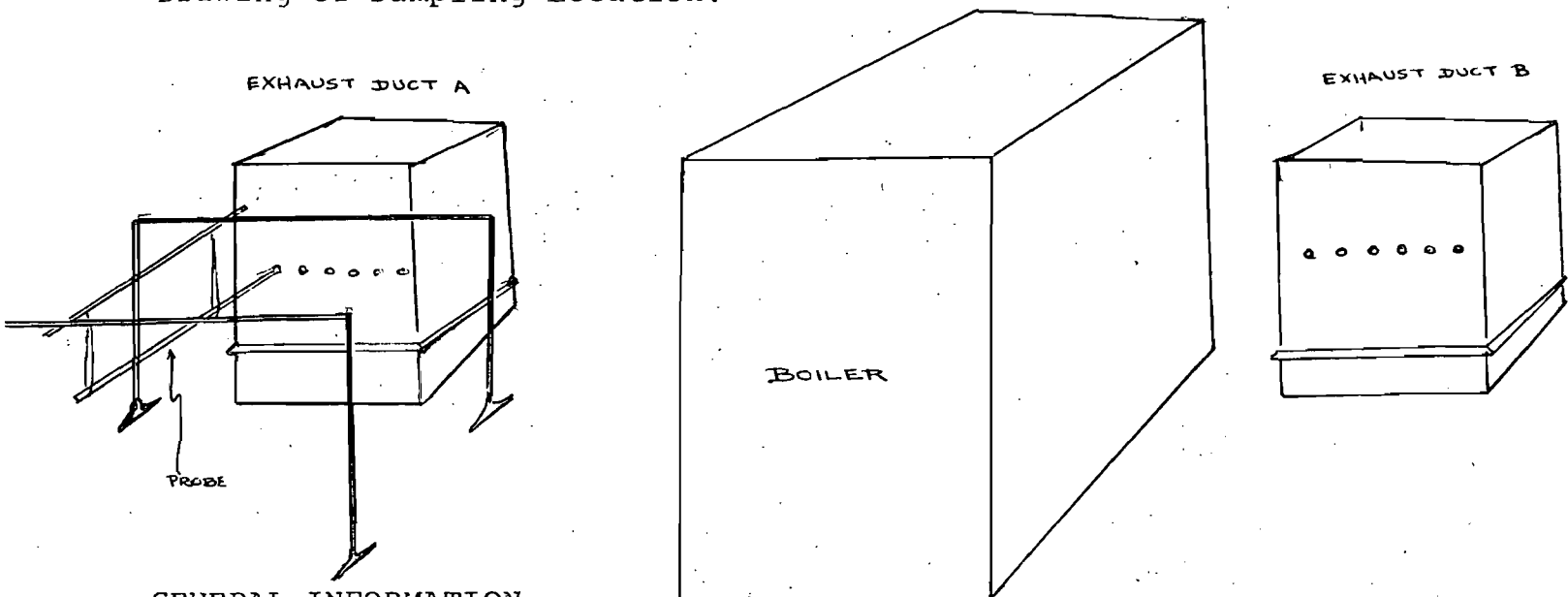
Table 1. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? NO Of what N/A

Opacity Reading of Plume 15%

Drawing of Sampling Location:



GENERAL INFORMATION

Type fuel used OIL NO. 6 2.5% S, NATURAL GAS 1% ADDITIVE Rate

Production Rate (Input) 360,000 lb/hr TPH STEAM FLOW

Production Rate (Output) 40.0 MW/hr TPH GROSS LOAD

2.2 MW/hr AUXILIARY LOAD

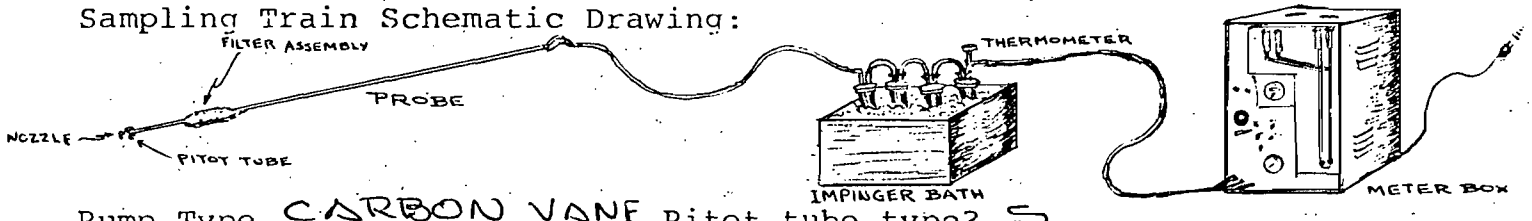
37.8 MW/hr NET LOAD

GENERAL/SAMPLING SYSTEM

Type Sampling Method EPA METHOD No. 17

Modifications? NONE

Sampling Train Schematic Drawing:



Pump Type CARBON VANE Pitot tube type? S

Connected to MANOMETER DRAFT GAUGE Range 10"

Probe Liner Material STAINLESS STEEL Heated Entire Length? N/A

Orifice Meter Connected To: MANOMETER

Range 0-10"

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand RESEARCH APPLIANCE CO. Sample Box Brand N/A

Calibration Date Of Equiptment: Dry Gas Meter 8/27/81

Pitot Tube 7/7/81 Magnehelic

Thermometers 7/7/81 Number of Sampling Points/

Traverse From Fed. Reg. 6 PORTS(A) 3 POINTS/PORT 6 PORTS(B) 3 POINTS/PORT Number Points to be used 36 Sampling Time Per Point 2 MIN

Total Sampling Time Minutes 72 MIN

SAMPLING TRAIN ASSEMBLY

Filter Media Type FIBERGLASS Impingers Clean?

Meter Box Leveled? YES Orifice Manometer Zeroed? YES

Probe Hot Along Entire Length? No Filter Compartment Temperature. N/A Impingers iced down? YES A). 58°F

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=* — (0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=* — (0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=* — (0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.* 90 °F Estimated Value of Ps/Pm* 1

Estimated Moisture Content 10 % How Estimated? PREVIOUS TEST

C Factor* .94 Estimated Stack Temp.* 310 °F Desired Nozzle Dia.* 1/4 inch

Leak Check Performed Before Sampling YES 0CFM at 15 in

Table 4. OBSERVATION CHECKLIST

FINAL DRY GAS METER 405.500
INITIAL DRY GAS METER 369.305
36.195

SAMPLING

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point?
YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? N/A

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at Completion of Run? YES 0 CFM Per (1) Min. at 6 In. Hg.

If Orsat Analysis is Done, Was it: From Stack — From integrated Bag — Nozzle Dia. 1/4 Inch

Volume Metered 36.195 ACF First Δp Readings A) .20 .22 INCHES IN H_2O

.22 / .24 .24 .26 / .24 .26 .30 / .26 .28 .30 / .26
.26 .32 / .24 .28 .32 (387.445) / B) .20 .20 .26 / .22 .26 .28 /
SAMPLE RECOVERY .22 .26 .28 / .22 .26 .30 / .22 .24 .30 /
.22 .24 .30 /

Brushes Clean? YES Brush Length as Long as Probe Length? NO.

Acetone Grade WATER Filter & Probe Handled OK? YES

Impingers Handled OK? YES Description of Collected Particulate LIGHT GRAY Silica Gel All Pink? NO

Run 1 ___ Run 2 ✓ Run 3 ___ Jars Labeled OK? YES (NUMBERED)

Jars Tightly Sealed? NO Probe, Impingers, Filter Holder, Etc. Readied for Next Run Properly? YES

General Comments on Entire Sampling Project:
PROPER PROCEDURE

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? Yes Did He Do So? Yes D.E. Lox Philip Watkins

Observer's Name RAMON SOLIS Title ENV. SPEC II

Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY Signature Ramon Solis

Table 5. SAMPLE RECOVERY CHECKLIST

DER

COMPLIANCE VERIFICATION INSPECTION

FLORIDA POWER CORPORATION - HIGGINS PLANT - UNIT NO. 1
PINELLAS COUNTY
NEDS NUMBER: 052-0012-01
PERMIT NUMBER: A052-20186
DATE OF INSPECTION: OCTOBER 8, 1981

The Higgins Plant of the Florida Power Corporation is located in Booth Point, at the end of Shore Drive in Oldsmar, Florida.

The inspected source is a Babcock & Wilcox Company steam generator, unit number 1. At the time of inspection, the steam generator was stabilized at an input production rate of 390,000 lb/hr (steam flow), and was producing a gross load (production rate) of 40.5 MW of electricity. From it, 2.1 MW were being utilized to run peripheric equipment (auxiliary load). The net load produced was 38.4 MW. At the same time the unit No. 2 was stabilized at a steam flow rate of 220,000 lb/hr and was producing 22.5 MW of electricity, from which 2.1 was the auxiliary load. Net load for unit No. 2 was 20.4 MW. The unit No. 3 had a steam flow of 170,000 lb/hr and its gross load (output) was 15.5 MW. Auxiliary load was 0.8 MW and the net load was 14.7 MW.

The boiler of unit number 1 is fired with fuel oil No. 6 which has 2.26% of sulfur. It was being used at a rate of 70 bbl/hr and produced a heat input of 436 million BTU/hr.

During this annual inspection, the first run of the unit No. 1 stack test was witnessed. The test was conducted by the Florida Power Corporation Testing Team. Plant contact was Mr. Todd Brouette, Test Team Supervisor. The compliance inspection was performed by Ramon Solis of Pinellas County Division of Air Quality, D.E.M. Mr. Phil Watkins and Mr. Ken Roy performed the stack test. Mr. James Carmadella, a student intern currently with the Division of Air Quality, and Mr. Raul LaCosta from the Florida Power and Light Company also witnessed the test.

The test team followed proper procedures while sampling. In regard to the sample recovery, the test team supervisor was directed to use a porcelain or glass dish to deposit the collected particulate instead of a white sheet of paper. Use of more appropriate brushes were also recommended to clean out the probe.

A visible emissions test was performed for Unit No. 1. An average opacity of 25% was observed during the worst six minutes.

Unit No. 1 is rated at 42 MW and 488 x 10^6 BTU per hour. Sampling was performed at 96% of that rate.

Pending acceptable results of the stack test, this plant is considered to be in compliance with Chapters 17-2 and 17-4, Florida Administrative Code.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORPORATION Date 10/8/81

Plant Address SHORE DRIVE, OLDSMAR, FLORIDA

Source to be Tested UNIT NO. 1. HIGGINS PLANT, Permit No. A052-2018

Plant Contact (Representative

Observers 1. RAMON SOLIS Affiliation PINELLAS COUNTY DIVISION OF AIR QUALITY

2. JAMES CARMADELLA STUDENT INTERN. DIVISION OF AIR QUALITY

RAUL LA COSTA FLORIDA POWER & LIGHT

Reviewed Pretest Meeting Notes, Etc?

Comments:

Test Team Company Name FLORIDA POWER CORP Phone 866-4509

Test Team Company Address 3201 34th St. South. St. Petersburg FL. 33733

Supervisor's Name TODD BROUETTE

Other Members (1) PHIL WATKINS Duty METER BOX

(2) KEN ROY " PROBE

(3) "

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 46.65 sq. ft (A) 46.65 sq. ft (B)

Material of Construction STEEL Leaks NO

Internal Appearance N/A

Nipple? YES 6B 6A Length 8" Flush With Inside Wall? YES

Barometric pressure 29.96

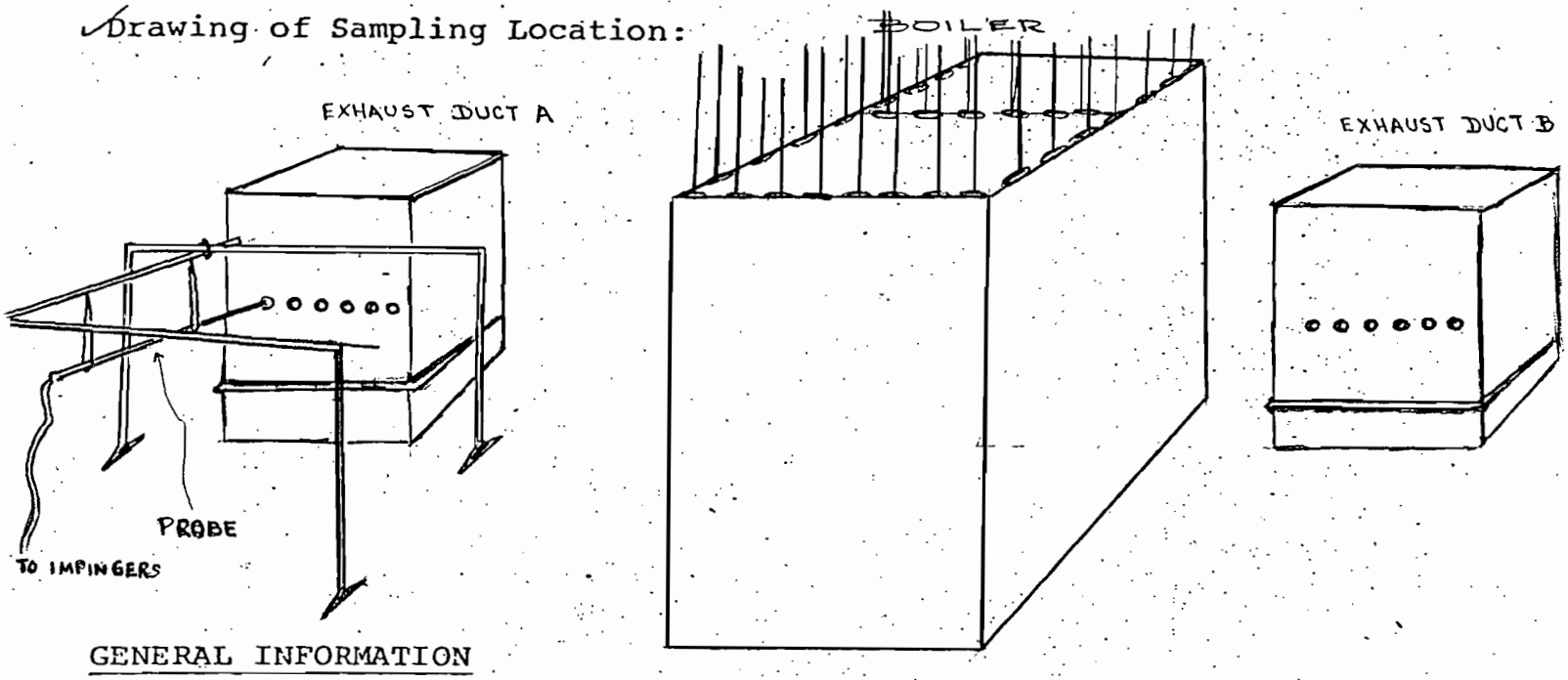
Table 1. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? _____ Of what _____

Opacity Reading of Plume YES - AVG OF WORST 6 MIN = 25%

✓Drawing of Sampling Location:



GENERAL INFORMATION

✓Type fuel used OIL NO.6 2.3%S ✓Rate 70 bbl/hr

✓Production Rate (Input) 390,000 lb/hr STEAM FLOW HEAT INPUT = 436 MILLION BTU/

✓Production Rate (Output) 40.5 MW TPH

2.1 MW AUXILIARY LOAD

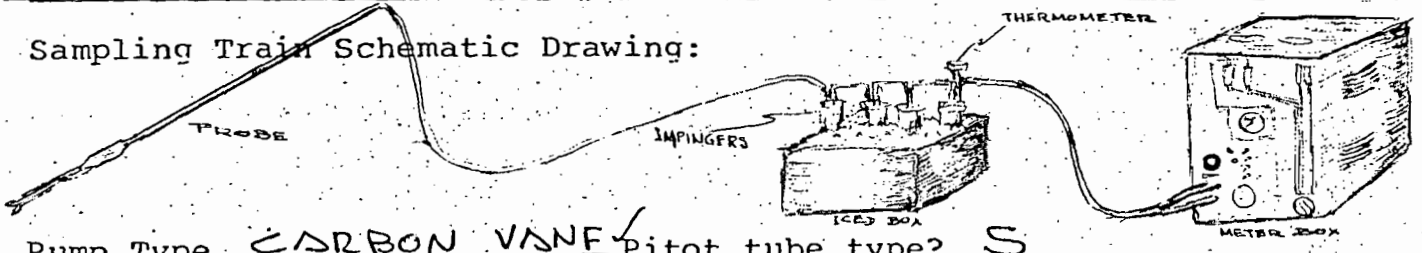
38.4 NET LOAD

GENERAL/SAMPLING SYSTEM

✓Type Sampling Method EPA No. 17

✓Modifications? NONE

Sampling Train Schematic Drawing:



Pump Type CARBON VANE ✓Pitot tube type? S

Connected to MANOMETER DRAFT GAUGE Range 10"

Probe Liner Material STAINLESS STEEL Heated Entire Length? NO

USE OF IN-STACK FILTER Orifice Meter Connected To: MANOMETER

Range 0 - 10"

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand RESEARCH APPLIANCE CO Sample Box Brand N/A
BOX No. 2

Calibration Date Of Equiptment: Dry Gas Meter 8/27/81
Pitot Tube 7/7/81 Magnehelic N/A
Thermometers 7/7/81 Number of Sampling Points
Traverse From Fed. Reg. 6 PORTS (A) 3 POINTS/PORT 6 PORTS (B) 3 POINTS/PORT Number Points to be used 36 Sampling Time Per Point 2 MIN
Total Sampling Time Minutes 72

SAMPLING TRAIN ASSEMBLY

Filter Media Type FIBER GLASS Impingers Clean? WASHED EVERY 3 MON
Meter Box Leveled? YES Orifice Manometer Zeroed? YES
Probe Hot Along Entire Length? N/A Filter Compartment Temperature. N/A Impingers iced down? YES

(B) START 70°F
AVG (B) 58°F
(A) START - 68°F
AVG (A) - 60°F

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, & H_2O=10%, Ps/Pm=1.00, C=*.95 (0.95)
IF C=0.95, TS=200°F, DN (NOZZLE Ø)=0.375, ΔpREFERENCE=*.118 (0.118)
Align Δp= 1.0 with ΔH=10; (FIX) @ Δp=0.01, ΔH=*.1 (0.1) ✓

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.*97 °F Estimated Value of Ps/Pm* 1
Estimated Moisture Content 10 % How Estimated? PREVIOUS TEST
C Factor*.86 Estimated Stack Temp.* 302°F (A) 3/4 °F (B) Desired Nozzle Dia.* 1/4"
Leak Check Performed Before Sampling YES 0 CFM @ 15"
Ambient temp 95°F.

STACK TEMP. (B): 311°F (PORT 1) Table 4, OBSERVATION CHECKLIST
313°F (PORT 2) 314.6°F 157°C (PORT 3), 157°C (4), 157°C (5)

INITIAL DRY GAS METER 564.929
FINAL DRY GAS METER 598.646
VOLUME METERED 33.717

SAMPLING O_2 = 6.5% (PORT 5) B
O_2 6.5 (PORT 1) A
O_2 = 6.6 (PORT A3), O_2 = 6.5 (A4), O_2 = 6.4 (A6)

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point?
YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? N/A

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at Completion of Run? YES 0 CF @ 6 Inches Per (1) Min. at 6 In. Hg.

If Orsat Analysis is Done, Was it: From Stack ✓ From integrated Bag ____ Nozzle Dia. 1/4"

Volume Metered 33.717 ACF First Δp Readings B 564.929 .22 .26 .2[illegible]

567.[illegible]

.24 .26 570.878 .28 / .20 .24 573.728 .26 / .18 .22 576.497 .24 / .20 .20 579.[illegible] .24

.18 .18 .24 // 581.862 .1A .16 .20 584.[illegible] .22 / .18 .20 587.[illegible] .26 / .20 .20

590.046 .26 / .18 .24 592.972 .26 / .20 .26 595.872 .26 / .18 .24 .26 / 598.646

SAMPLE RECOVERY

Brushes Clean? YES Brush Length as Long as Probe Length? NO WENT BOTH WAYS TO CLEAN OUT NOZZLE

Acetone Grade WATER Filter & Probe Handled OK? YES

Impingers Handled OK? YES Description of Collected Particulate DARK GRAY PARTICULATE Silica Gel All Pink? NO

Run 1 ✓ Run 2 ____ Run 3 ____ Jars Labeled OK? NO LABELS NEEDED

Jars Tightly Sealed? NO. SAMPLE IN OVEN IMMEDIATELY Probe, Impingers, Filter Holder, Etc. Readied for Next Run Properly? WEIGH IMPINGERS AGAIN. PUT WEIGHED FILTER. WILL USE THE SAME IMPINGERS AND SILICA GEL

General Comments on Entire Sampling Project:
Recommended to use porcelain or glass dish to collect particulate and a more flexible brush to clean out the probe's nozzle

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? YES Did He Do So? Yes Todd Brunette FPC

Observer's Name RAMON SOLIS. Title ENV. SPEC II

Affiliation PINELLAS COUNTY DIV. OF AIR QUALITY D.E.M. Signature Ramon Solis

Liquid collected 58 g

STACK TEMPERATURE

A1 (150°C 302°F), A2 (150°C), A3 (150°C), A4 (151°C 304°F), A5 (150°C 302°F)

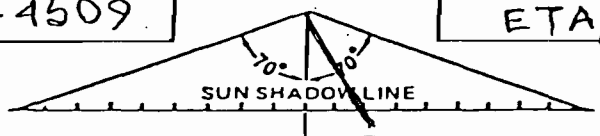
Table 5. SAMPLE RECOVERY CHECKLIST

BEST AVAILABLE COPY

EPA TR 101

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: FLORIDA POWER HIGGINS PLANT UNIT No. 1	SOURCE ID NUMBER: A052-20186	OBSERVATION DATE: 10/8/8
ADDRESS: SHORE DRIVE	OBSERVER'S NAME (PRINT): RAMON SOLIS	
OLDSMAR, FL	ORGANIZATION: PINELLAS COUNTY DIVISION OF AIR QUALITY DEM	
STATE: FL / ZIP: / PHONE: 866-4509	CERTIFIED BY: ETA/DER	
	DATE: 9/24/8	



PROCESS: STEAM BOILER GENERATOR	OPERATING MODE: PARTIAL LOAD 96%
CONTROL EQUIPMENT: LOW SULFUR FUEL OIL, NO CONTROLS	OPERATING MODE:
DESCRIBE EMISSION POINT: SMOKE STACK WITH DIAMETER OF 12.5 ft.	
EMISSION POINT HEIGHT ABOVE GROUND LEVEL: 174'	EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 174'
DISTANCE TO EMISSION POINT: 350'	DIRECTION TO EMISSION POINT: N-NE
DESCRIBE EMISSIONS: LIGHT GRAY CONTINUOUS PLUME	
COLOR OF EMISSIONS: LIGHT GRAY	CONTINUOUS ☒ FUGITIVE ☐ INTERMITTENT ☐
WATER VAPOR PRESENT: NO ☒ YES ☐	IF YES, IS PLUME: ATTACHED ☐ DETACHED ☐
AT WHAT POINT WAS OPACITY DETERMINED: 15 ft above stack	
DESCRIBE BACKGROUND: BLUE SKY	
COLOR OF BACKGROUND: SKY	SKY CONDITIONS: HAZY 30% c.c.
WIND SPEED: 3-5 MPH	WIND DIRECTION: NW
AMBIENT TEMPERATURE: 85°	RELATIVE HUMIDITY: 75%
COMMENTS:	

START TIME 12:10 — STOP TIME 12:40

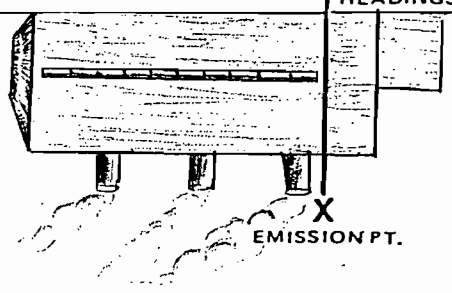
	0	15	30	45		0	15	30	45
1	25	25	25	20	31				
2	25	25	25	30	32				
3	25	20	20	20	33				
4	20	25	25	25	34				
5	25	25	25	25	35				
6	25	25	25	25	36				
7	25	25	25	25	37				
8	20	20	25	25	38				
9	20	20	20	20	39				
10	20	20	20	20	40				
11	20	20	20	20	41				
12	20	20	20	20	42				
13	20	25	25	25	43				
14	25	25	20	20	44				
15	25	25	25	25	45				
25 16	25	25	25	25	46				
17	25	25	25	25	47				
18	25	25	25	25	48				
19	25	25	25	25	49				
20	25	25	25	25	50				
21	25	25	25	25	51				
22	25	25	25	25	52				
23	25	25	25	25	53				
24	25	25	25	25	54				
25	25	25	25	25	55				
26	25	25	25	25	56				
27	25	25	25	25	57				
28	25	25	25	25	58				
29	25	25	25	25	59				
30	25	25	25	25	60				

AVERAGE OPACITY: WORST 6 MIN 25%

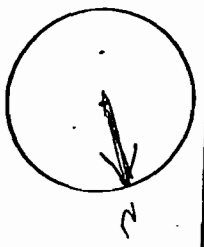
NUMBER OF READINGS ABOVE: 40 % WERE 0

RANGE OF OPACITY READINGS: FROM 20 TO 30 %

SOURCE LAYOUT SKETCH



DRAW NORTH ARROW



OBSERVER'S SIGNATURE: Ramon Solis — DATE: 10/8/81

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS.

SIGNATURE

VERIFIED BY — TITLE — DATE

--- FLORIDA POWER CORPORATION ---

ENVIRONMENTAL AND FUEL OIL
LABORATORY

TEL: 795-4811
MICROWAVE: 228-1141

20/8C

REPORT NO. 322

DATE: 9/17/81

PLANT: Higgins

ANALYSIS: Ambient SO_2 Sampling Program

SAMPLE DESCRIPTIONS:

Date Collected: From 4/4/81 to 6/27/81
Monitoring Station(s): H-1

Lab Number	Site	Date	SO_2 $\mu g/m^3$	SO_2 ppm	Reason for Voiding
A-2011	H-1	04/04/81	VOID		Inadequate Vacuum
A-2012	H-1	04/10/81	VOID		Data Incomplete
A-2013	H-1	04/16/81	MDL		
A-2014	H-1	04/22/81	MDL		
A-2015	H-1	04/28/81	VOID		Inadequate Vacuum
A-2016	H-1	05/04/81	MDL		
A-2017	H-1	05/10/81	VOID		Data Incomplete
A-2018	H-1	05/16/81	VOID		Inadequate Vacuum
A-2019	H-1	05/22/81	VOID		Inadequate Vacuum
A-2020	H-1	05/28/81	MDL		
A-2021	H-1	06/03/81	VOID		Holding Temp. >15°C
A-2022	H-1	06/09/81	MDL		
	H-1	06/15/81	VOID		Bubbler Missing
A-2023	H-1	06/21/81	MDL		
A-2024	H-1	06/27/81	MDL		

MDL: Below minimum Detection Limit

LabRptsDisk

J. Q. Smith
Environmental Chemist

--- FLORIDA POWER CORPORATION

ENVIRONMENTAL AND FUEL OIL
LABORATORY

TEL: 795-4811
MICROWAVE: 228-1141

REPORT NO. 230

DATE: 7/15/81

PLANT: Higgins

ANALYSIS: Ambient SO_2 Sampling Program

SAMPLE DESCRIPTIONS:

Date Collected: From 1/4/81 to 3/29/81
Monitoring Station(s): H-1

Lab Number	Site	Date	SO_2 $\mu g/m^3$	SO_2 ppm	Reason for Voiding
A-1802	H-1	01/04/81		MDL	
A-1803	H-1	01/10/81		VOID	Data Incomplete
A-1804	H-1	01/16/81		MDL	
A-1805	H-1	01/22/81		MDL	
A-1806	H-1	01/28/81		MDL	
A-1807	H-1	02/03/81		VOID	Data Incomplete
A-1808	H-1	02/09/81		MDL	
A-1809	H-1	02/15/81		MDL	
A-1810	H-1	02/21/81		MDL	
A-1811	H-1	02/27/81		VOID	Data Incomplete
A-1812	H-1	03/05/81		VOID	Data Incomplete
A-1813	H-1	03/11/81		MDL	
A-1814	H-1	03/17/81		VOID	Data Incomplete
A-1815	H-1	03/23/81		MDL	
A-1816	H-1	03/29/81		MDL	

MDL: Below minimum Detection Limit

LabRptsDisk

J. Q. Smith
Environmental Chemist

PLANT 0012 FLA POWER SHORE DR OLDSMAR 33557 UTILITY FILE STATUS SENT
POWER PLANT
SAINT PETERSBURG FL.
W P STEWART AQCR=052 SIC=4911
BOX 14042 C 4 LAT=28:20:30N LON=82:18:17W
ST PETE . 33733 UTM ZONE 17 336.5KM E. 3098.2KM N.

POINT 01 CONST PATS# OPER PATS# A052-20186
ISS= / / EXP= / / ISS=08/06/79 EXP=07/16/84
HIGGENS #1 BOILER #6 FUEL
SOURCE= IPP=91 ECAP=? COMM.PNTS. -
STACK HT= 174FT DIAM=12.5FT TEMP= 300F FLOW= 250000CFM PLUME= 0FT
BOILER CAP= 517MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=79 RAW MATERIAL= 517 OTHER
PRODUCT 0 OTHER FUEL 517 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE 24HRS/DAY 7DAYS/WK 52WKS/YR
AOR FOR 07/01/79 24HRS/DAY 7DAYS/WK 52WKS/YR

COMPLIANCE NEDS=1 ORC= UPDATE / SCHED. / UPDATED / /
PERMIT= YOR=78 INSPECTED 08/03/78 NEXT DUE 10/01/79

/

SCC'S

1-01-004-01 YOR= SOURCE=B RATE= 30395 MAX= 3.470
FUEL CONT SO2=2.30% ASH= 0.1% 149MBTU FYOR= CONFID=2

1-01-006-01 YOR= SOURCE=B RATE= 618 MAX= 0.362
FUEL CONT SO2= .00% ASH= 0.0% 965MBTU FYOR= CONFID=2

POLLUTANTS MONITORED

TSP 11101 NORM= 51.70 EST/METH= 96/1 MAX.ALW= 123 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 04/08/80 AGENCY=3 REG=05 6 E COMPLIANCE=1
EMITTED= 0.08 ALLOWED= 0.10LBS/HR OP-RATE= 488 MBTU/B
VE 11204 NORM= . EST/METH= / MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/76 TEST/FREQ=
TESTED 03/08/78 AGENCY= REG= COMPLIANCE=
EMITTED= . ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
SO2 42401 NORM= 14.22 EST/METH= 3197/2 MAX.ALW= 3381 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 02/11/80 AGENCY=3 REG=05 6 E COMPLIANCE=1
EMITTED= 1010.15 ALLOWED= 1223.75LBS/HR OP-RATE= 445 MBTU/B

PLANT 0012 FLA POWER SHORE DR OLDSMAR 33557 UTILITY FILE STATUS SENT
POWER PLANT
SAINT PETERSBURG FL.
W P STEWART AQCR=052 SIC=4911
BOX 14042 C 4 LAT=28:20:30N LON=82:18:17W
ST PETE 33733 UTM ZONE 17 336.5KM E. 3098.2KM N

POINT 01 CONST PATS# OPER PATS# A052-20186
ISS= / / EXP= / / ISS=08/06/79 EXP=07/16/84
HIGGENS #1 BOILER #6 FUEL
SOURCE= IPP=91 ECAP=? COMM.PNTS. -
STACK HT= 174FT DIAM=12.5FT TEMP= 300F FLOW= 250000CFM PLUME= 0
BOILER CAP= 517MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=79 RAW MATERIAL= 517 OTHER
PRODUCT 0 OTHER FUEL 517 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE 24HRS/DAY 7DAYS/WK 52WKS/YR
AOR FOR 07/01/79 24HRS/DAY 7DAYS/WK 52WKS/YR

COMPLIANCE NEDS=1 ORC= UPDATE / SCHED. / UPDATED / /
PERMIT= YOR=78 INSPECTED 08/03/78 NEXT DUE 10/01/79

/

SCC'S

1-01-004-01 YOR= SOURCE=B RATE= 30395 MAX= 3.470
FUEL CONT SO2=2.30% ASH= 0.1% 149MBTU FYOR= CONFID=2

1-01-006-01 YOR= SOURCE=B RATE= 618 MAX= 0.362
FUEL CONT SO2= .00% ASH= 0.0% 965MBTU FYOR= CONFID=2

POLLUTANTS MONITORED

TSP 11101 NORM= 51.70 EST/METH= 96/1 MAX.ALW= 123 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 02/11/80 AGENCY=3 REG=05 6 E COMPLIANCE=1
EMITTED= 36.04 ALLOWED= 44.50LBS/HR OP-RATE= 445 MBTU/B
VE 11204 NORM= . EST/METH= / MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/76 TEST/FREQ=
TESTED 03/08/78 AGENCY= REG= COMPLIANCE=
EMITTED= . ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
SO2 42401 NORM= 14.22 EST/METH= 3197/2 MAX.ALW= 3384 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 04/20/77 TEST/FREQ=1
TESTED 02/11/80 AGENCY=3 REG=05 6 E COMPLIANCE=1
EMITTED= 1010.15 ALLOWED= 1223.75LBS/HR OP-RATE= 445 MBTU/B

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FPC. Higgins Date 2/11/80

Plant Address Oldsmar - Pinellas Co

Source to be Tested Unit 1 Permit No. A052-0012-01 A052-20186

Plant Contact Todd Brouillo

Observers Brankell Affiliation DER

McRae DER

Reviewed Pretest Meeting Notes, Etc?

Comments: Observed VE's on all units - none exceeded 40% opacity.

Test Team Company Name FPC Phone

Test Team Company Address

Supervisor's Name Ken Roy

Other Members Phil Mattens

(* Compliance Insp conducted on 10/1/79 for this Fiscal (79-80) year by Bob Barlow)

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions

Material of Construction steel Leaks

Internal Appearance

Nipple? 4" Length 4" Flush With Inside Wall?

Table 4. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? _____ Of what _____

Opacity Reading of Plume _____

Drawing of Sampling Location:

Note: This power unit (#1) plus units 2 and 3 are now testing quarterly per requirements of variance on burning (high sulfur content fuel. VE's were all below 40% opacity. DSB

GENERAL INFORMATION #6 oil to 2.5% sulfur

Type fuel used _____ Rate _____

Production Rate (Input) _____ TPH _____

Production Rate (Output) 44.5 MWH TPH _____

capacity - 45 MW H

GENERAL/SAMPLING SYSTEM

Type Sampling Method EPA Method 5

_____ Modifications? In-Stack filter

Sampling Train Schematic Drawing:

Pump Type C Vane Pitot tube type? S

Connected to Incline Mon Range 0-10"

Probe Liner Material — Heated Entire Length? N/A

_____ Orifice Meter Connected To: Inc Mon

Range 0-10"

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand STAKSAMPLR Sample Box Brand _____

Calibration Date Of Equiptment: Dry Gas Meter _____

_____ Pitot Tube _____ Magnehelic _____

Thermometers _____ Number of Sampling Points/

Traverse From Fed. Reg. 36 Number Points to be

used 18/duct - 2 ducts Sampling Time Per Point 2

Total Sampling Time Minutes 72 minutes

SAMPLING TRAIN ASSEMBLY

Filter Media Type glass Impingers Clean? Yes

Meter Box Leveled? _____ Orifice Manometer Zeroed? _____

_____ Probe Hot Along Entire Length? N/A Filter

Compartment Temperature. N/A Impingers iced down? _____

Yes 60°F

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=*____(0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=*____(0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=*____(0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.*____ °F Estimated Value of Ps/Pm*_____

Estimated Moisture Content ____% How Estimated? _____

C Factor*____Estimated Stack Temp.*____°F Desired Nozzle Dia.*_____

Leak Check Performed Before Sampling _____

Table 4. OBSERVATION CHECKLIST

SAMPLING

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point?

YES

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? YES

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at

Completion of Run? 0.0 Per (1) Min. at ___ In. Hg.

If Orsat Analysis is Done, Was it: From Stack ___ From integrated

Bag ___ Nozzle Dia. 1/4"

Volume Metered ___ ACF First Δp Readings .26

.34 .34 .28 .30 .32 .26 .28 .30 .25 .26, .28

SAMPLE RECOVERY

Brushes Clean? ___ Brush Length as Long as Probe Length? ___

Acetone Grade ___ Filter & Probe Handled OK? ___

Impingers Handled OK? ___ Description of Collected Particulate

___ Silica Gel All Pink? ___

Run 1 ___ Run 2 ___ Run 3 ___ Jars Labeled OK? ___

Jars Tightly Sealed? ___ Probe, Impingers, Filter Holder, Etc.

Readied for Next Run Properly? ___

General Comments on Entire Sampling Project:

Was the Test Team Supervisor Given the Opportunity to Read Over

This Checklist? ___ Did He Do So? ___

Observer's Name BRAMLETT Title QCS

Affiliation DEQ Signature D.S. Bramlett

Table 5. SAMPLE RECOVERY CHECKLIST

OTHER RULE CHANGES SUGGESTED:

Section 17-4.248(2)(c), Florida Administrative Code:

For the purposes of this section, "receiving waters" shall mean all waters of the state ~~significantly-affected-by-the-discharge~~.

Section 17-4.248(3)(a), Florida Administrative Code:

Existing Systems:

1. Unless exempted by this section, existing discharges of stormwater shall be subject to the licensing requirements of the Department where the Department determines, based upon water quality analyses, that the discharge is causing, has caused, or may reasonably be expected to cause violations of water quality standards in waters of the state. The Department shall give notice of the need to obtain a license to the owner of, or person responsible for, the point(s) of discharge into waters of the state. Such notice shall give a reasonable time for the filing of the required license application.

Section 17-4.248(3)(a), Florida Administrative Code:

Delete:

2. ~~In-a-designated-section-208-planning-area,-the-Department shall-not-require-additional-licenses-before-June-1,-1979 for-existing-stormwater-discharges,-except-as-provided-in paragraphs-(3)(b)-and-(5)(b),-(c),-and-(d)-of-this-section.~~

Attachment A

COMPLIANCE VERIFICATION INSPECTION

FLORIDA POWER CORPORATION (Bartow Plant)
PINELLAS COUNTY
NEDS NO: 0011-01 through 0011-08
PERMIT NO: A052-6206
DATE OF INSPECTION: January 24, 1980

Florida Power Corporation Bartow Plant is located on Weedon Island in St. Petersburg, Florida. This plant was inspected on January 24, 1980 by Robert Barker of D.E.R. Plant contact was Todd Broulette, Environmental Engineer.

Bartow Plant consists of three (3) steam generating units and four (4) gas turbine-driven electric generating units:

Bartow Unit #1	(93.4 MW)	) These three units fuel burned
Bartow Unit #2	(120.0 MW)	) in boiler to produce steam to
Bartow Unit #3	(235 MW)	) turn turbine to produce electricity.

The above three units are fueled with #6 fuel oil (2.5% ^{S} oil or less.)

PEAKING UNITS

Bartow P-1	(41.6 MW)	gas turbine fueled with #2 oil.
Bartow P-2	(40.7 MW)	" " "
Bartow P-3	(42.5 MW)	" " "
Bartow P-4	(41.7 MW)	" " "

Bartow Plant Units #1, #2, #3 (small boilers - less than 250 MW are not currently subject to a numerical emission limiting standard. Instead Section 17-2.05(6) Table II, E.(2) Florida Administrative Code requires that such plants "apply BACT per 17-2.03" to control emissions of particulates and sulfur dioxide. (See: Permitting requirements for oil burning boilers when Sulfur content of fuel is changed date November 29, 1979).
Present emission standards are: Particulates 0.1#/hr.x 10^6 BTU's heat input - (SO_2) 2.75#/hr.x 10^6 BTU's heat input - 40% opacity if units are tested quaterly for particulates.

Stack test results:

Bartow #1 (Tests on 2/1/80 and 2/4/80)
Particulate 0.088#/hr.x10^6 BTU State Method
Particulate 0.070#/hr.x10^6 BTU "F" Factor Method
SO_2 2.29#/hr.x10^6 BTU (fuel analysis) 2.5% S oil
Opacity 15.8%

Bartow #2 (Tests on 1/24/80, 1/25/80, 1/30/80
Particulate 0.057#/hr.x10^6 BTU State Method
Particulate 0.051#/hr.x10^6 BTU "F" Factor Method
SO_2 2.29#/hr.x10^6 BTU (fuel analysis) 2.5% S oil
Opacity 13.3%

Bartow #3 (Tests on 1/28/80 and 1/29/80)
Particulate 0.085#/hr.x 10^6 BTU State Method
Particulate 0.079#/hr.x 10^6 BTU "F" Factor Method
SO_2 2.29#/hr.x 10^6 BTU (fuel analysis) 2.5% S oil
Opacity 20.8%

Visible emission tests are required annually for Bartow P-1, P-2, P-3, P-4 peaking units (20% opacity or less)

BARTOW PEAKING UNITS

Bartow P-1	Visible Emission Test	8/13/79	(In Compliance)
Bartow P-2	" "	8/13/79	(In Compliance)
Bartow P-3	" "	8/13/79	(In Compliance)
Bartow P-4	" "	8/13/79	(In Compliance)

PERMITS:

Bartow #1	(93.4 MW)	A052-6206	Expires 2/28/83	(#6 oil)
Bartow #2	(120 MW)	A052-23168	Expires 10/23/84	(#6 oil)
Bartow #3	(235 MW)	A052-6280	Expires 6/22/83	(#6 oil)
Bartow P-1)		A052-22551	Expires 9/11/84	
Bartow P-2)	Peaking	A052-22553	Expires 9/11/84	
Bartow P-3)	Units	A052-22554	Expires 9/11/84	
Bartow P-4)		A052-22555	Expires 9/11/84	

Florida Power Bartow Plant (all units) are in compliance with Chapter 17-2 and 17-4 F.A.C.

RB/clc

Split up & fol: Pinellas G - AP

FPC
HIGGINS
GEN

I HAVE REVIEWED THIS REPORT AND IT (DOES / DOES NOT) INDICATE COMPLIANCE WITH THE PERMIT FOR THIS SOURCE.
DATE 11/13 BY Robert P. Barker

Florida Power
CORPORATION

D.E.R.
NOV 2 1979
SOUTHWEST DISTRICT
TAMPA

October 29, 1979

Mr. David Puchaty, Manager
Southwest District FDER
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Puchaty:

The Florida Power Corporation submits the following environmental compliance test data on the three steam units at the Higgins plant in Oldsmar, Florida. All tests were conducted in accordance with procedures specified by the Department of Environmental Regulation. The particulate value is an average of the three required tests and the SO_2 number was calculated assuming 100% conversion of the fuel sulfur as determined from the attached analysis. The total BTUs fired per hour was calculated by multiplying the unit net heat rate (BTU/Kwh) and net load. The test results are:

Higgins #1 (AO 52-2040)

Particulate - 0.051 lb/10^6 BTU - State Method
0.052 lb/10^6 BTU - "F"-factor Method
SO_2 - 1.91 lb/10^6 BTU
Opacity - 15%
BTUs - 4.787 x 10^8 @ 39.4 MW

Higgins #2 (AO 52-2041)

Particulate - 0.067 lb/10^6 BTU - State Method
0.066 lb/10^6 BTU - "F"-factor Method
SO_2 - 1.91 lb/10^6 BTU
Opacity - 15%
BTUs - 4.811 x 10^8 @ 42.0 MW

Higgins #3 (AO 52-2042)

Particulate - 0.067 lb/10^6 BTU - State Method
0.060 lb/10^6 BTU - "F"-factor Method
SO_2 - 1.91 lb/10^6 BTU
Opacity - 15%
BTUs - 4.237 x 10^8 @ 38.4 MW

Attached are copies of the field data sheets, visible emissions report, fuel oil analysis, computer printouts for each test and equipment calibration data.

Should you have any questions concerning this information, please call me at 866-4281.

Sincerely,

D. A. Shantz
Supervisor
Chemical and Environmental Services

DASemhM03
D3

Attachments

DER

PLANT: HIGGINS TEST DATE : 10-1-79
UNIT: 1 TEST NO: 1-79

LOAD: 38.9

TEST CONDITION:
%O2: 5.50 ,%CO2: 12.5 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.98 LBM/LBM-MOLE

AVG STACK VELOCITY= 30.99 FT/SEC

CONCENTRATION @ STP= .4201946E-05 LBS/SCF

CONCENTRATION @ STP= .2943556E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 100.92

PARTICULATE MATTER=.053 LBS/10**6 BTU @STP "F" Factor Method
.051 LBS/10^6 BTU State method

% H2O @ STP= 11.34

% EXCESS AIR= 34.06

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROGENOUS
NITROUS OXIDE=.0 LBS/10**6 BTU @ STP

COMPLIANCE VERIFICATION INSPECTION

Florida Power Corporation - Higgins #1 Unit
Pinellas County
Neds No: 3600-052-0012-01
Permit No: AO52-20186
Date of Inspection: October 1, 1979

FPC - Higgins Unit 1 is located on Shore Drive in Oldsmar, FL. This unit was inspected on October 1, 1979 by Bob Barker of DER. Plant contact was Dwight Pickett, Plant Manager.

Unit 1 is rated at 42MW, 488 x 10^6 BTU's. This boiler unit is fired by No. 6 fuel oil and natural gas when available. Fuel is burned in the boiler producing steam that drives the turbine to turn the generator to produce electricity.

Pollutants from the stack are particulates, SO_2 and NO_x . This unit generally is operated on a 24-hour, 7-day, 52-week schedule. SO_2 emissions are calculated from fuel analysis reports. FPC submits quarterly fuel reports as well as emissions reports to the DER. FPC has its own stack test team that samples the unit for particulate emissions as well as VE readings.

This unit was sampled for particulate emissions on October 1, 1979 by the FPC team using Method "17". Robert Barker of DER was on hand to observe testing. Permit AO52-20186 expires 2/28/83.

This unit is in compliance pending test results. Test booklet will be submitted by FPC to this Department for review and approval.

RB/klm

cc: Dan Williams

Higgins #1

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

FIELD OBSERVATION CHECKLIST

GENERAL/ADMINISTRATION

Plant Name FLORIDA POWER CORP. Date 10/1/79

Plant Address OLDSMAR FLA. (PINELLAS)

Source to be Tested UNIT # 1 Permit No. #A052-20186

Plant Contact MR. D.V. PICKETT

Observers ROBERT BARKER Affiliation DER

Reviewed Pretest Meeting Notes, Etc?

Comments:

Test Team Company Name FLORIDA POWER CORPORATION Phone

Test Team Company Address ST. PETE, FLA.

Supervisor's Name TODD BRUELETTE

Other Members PHIL WADKINS
KEN ROY

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 2 DUCTS "A" & "B"

Material of Construction Steel Leaks

Internal Appearance

Nipple? Yes Length 4 1/2 Flush With Inside Wall? Yes

Table 4. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken?_____ Of what_____

Opacity Reading of Plume_____

Drawing of Sampling Location:

GENERAL INFORMATION

Type fuel used O/L Rate_____

Production Rate (Input)_____ TPH_____

Production Rate (Output) 40 MW TPH_____

GENERAL/SAMPLING SYSTEM

Type Sampling Method CPA Method "17"

Modifications? INSTACK Filter

Sampling Train Schematic Drawing:

Pump Type CARBON VANE Pitot tube type? "S"

Connected to DRAFT Gauge Range 10" H2O

Probe Liner Material glass Heated Entire Length? ~

Orifice Meter Connected To: Draft gauge

Range 10" H2O

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand _____ Sample Box Brand _____

_____

Calibration Date Of Equiptment: Dry Gas Meter _____

_____ Pitot Tube _____ Magnehelic _____

Thermometers _____ Number of Sampling Points/

Traverse From Fed. Reg. _____ Number Points to be

used 2 DUCTS 6 ports/DUCT Sampling Time Per Point 2 MIN.

Total Sampling Time Minutes _____

3 POINTS/PORT

SAMPLING TRAIN ASSEMBLY

Filter Media Type IN STACK FILTER RECTANGULAR Impingers Clean? yes

Meter Box Leveled? yes Orifice Manometer Zeroed? yes

_____ Probe Hot Along Entire Length? _____ Filter

Compartment Temperature. _____ Impingers iced down? yes

_____

NOMOGRAPH CHECK:

IF H=1.80, TM=100°F, % H_2O=10%, Ps/Pm=1.00, C=*____(0.95)

IF C=0.95, TS=200°F, DN=0.375, ΔpREFERENCE=*____(0.118)

AlignΔp= 1.0 with ΔH=10; @ Δp=0.01, ΔH=*____(0.1)

FOR NOMOGRAPH SET-UP:

Estimated Meter Temp.*____ °F Estimated Value of Ps/Pm*____

Estimated Moisture Content ____% How Estimated? _____

C Factor*____ Estimated Stack Temp.*____°F Desired Nozzle Dia.*_____

Leak Check Performed Before Sampling _____

Table 4. OBSERVATION CHECKLIST

SAMPLING

Are Probe & Pitot Tube Kept Parallel To Stack Wall At Each Point?

yes

Is Nozzle Sealed When Probe Is In Stack When Pump Is Turned Off? yes

Is Data Recorded in a Permanent Manner? yes

Are Data Sheets Complete? yes Is Leak Test Performed at Completion of Run? yes 0.0 Per (1) Min. at 6" In. Hg.

If Orsat Analysis is Done, Was it: From Stack ____ From integrated Bag ____ Nozzle Dia. 1/4 11

Volume Metered 30.37 ACF First Δp Readings 0.55 0.45 0.45 0.45 0.37 .55 ____ / ____

6 ports / DUCT

SAMPLE RECOVERY

Brushes Clean? yes Brush Length as Long as Probe Length? Yes

Acetone Grade ____ Filter & Probe Handled OK? yes

Impingers Handled OK? yes Description of Collected Particulate Dark Yellowish TAN Silica Gel All Pink? ____

Run 1 ✓ Run 2 ____ Run 3 ____ Jars Labeled OK? ____

Jars Tightly Sealed? ____ Probe, Impingers, Filter Holder, Etc. Readied for Next Run Properly? ____

General Comments on Entire Sampling Project:

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? ____ Did He Do So? ____

Observer's Name ____ Title ____

Affiliation ____ Signature ____

Table 5. SAMPLE RECOVERY CHECKLIST

FUEL REPORT

	ANCLOTE	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
July 1978							
Fuel Oil (BBL)	461814	111374	50039	191151	8968	39633	50276
Gas (MCF)	0	0	496876	0	159535	0	0
% Sulfur	1.0	2.5	2.5	2.5	2.5	2.5	2.5
August 1978							
Fuel Oil	491191	122736	69833	209471	17272	38553	48053
Gas	0	0	383251	0	117106	0	0
% Sulfur	1.0	2.3	2.3	2.3	2.3	2.3	2.3
September 1978							
Fuel Oil	476794	126590	67908	220199	11077	35258	49370
Gas	0	0	289171	0	142174	4941	0
% Sulfur	1.0	2.3	2.3	2.3	2.3	2.3	2.3

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#00000020186 COE# DER PROCESSOR:BROWN DER OFFICE:TPA
FILE NAME:G.C. MOORE DATE FIRST REC: 05/17/79 APPLICATION TYPE:AO
APPL NAME:FLORIDA POWER CORP. APPL PHONE:(813)866-4140 PROJECT COUNTY:52
ADDR:P.O. BOX 14042 CITY:ST. PETERSBURG ST:FLZIP:33733
AGNT NAME:W.P. STEWART AGNT PHONE:(813)866-4159
ADDR:P.O. BOX 14042 CITY:ST. PETERSBURG ST:FLZIP:33733

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: 05/17/79 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 *** 08/08/79 08:38:59
FEE PD DATE#1:05/17/79 $0020 RECEIPT#00031136 REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:IS DATE:08/06/79
REMARKS:HIGGINS PLANT, BOILER #1, GAS & OIL FIRED

Florida Power Corp.

WAB

File Number PDS2-20186

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Pinellas

Date Recieved 5/17/79

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

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	5/17/79	RKT
5	Review by Sec. head and transfer to permitting Engineer		
28	Completeness Review	6-15-79	DW
	request additiona info *		
	information received *		
	Public Notice Published * (for Air Construction only)	NA	
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	7-16-79	
83	Permit Package to Dist. Engr.		
85	Permit Package to Dist. Manager		
90	Final Issuance/denial		

*If needed, If not indicate by N/A

additional info available in file.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

No 31136

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Florida Power Corp. Date 5-17-79

Address P.O. Box 14042, St. Petersburg Dollars $ 20.00

Applicant Name & Address same as above

Source of Revenue Higgins Plant, Boiler #1

Revenue Code 0101 Application Number A052-20186

By Florelle Barron

323362

Florida Power
CORPORATION

D.E.R.
MAY 17 1979
SOUTHWEST DISTRICT
TAMPA

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

SUBJECT: Higgins Power Plant Unit #1
Operating Permit Renewal

Dear Mr. Puchaty:

Enclosed is the application for renewal of the Air Operating Permit, Higgins Power Plant, Unit #1. Also enclosed is the appropriate application fee.

If you have any questions, please contact me at 813/866-5528.

Very truly yours,

Rusty Wooten

Rusty Wooten
Environmental Operation & Licensing Administrator

THW/kd

Attachments

cc Mr. R. E. Parnelle, Jr., w/Attachments

United States Environmental Protection [illegible] Agency

Region 4
345 Courtland Street NE
Atlanta GA 30308

Alabama, Georgia, Florida, Mississippi[illegible]h Carolina, South Caro[illegible]ennessee, Kentucky

EPA

MAR 8 1979

REF: 4E-AE

DER
MAR 13 1979
SOUTHWEST DISTRICT
TAMPA

Mr. P. David Puchaty
District Manager
Florida Department of Environmental
Regulation
Southwest District Office
7601 Highway 301 N.
Tampa, Florida 33610

Dear Mr. Puchaty:

Please find enclosed copies of the field inspection reports of investigations conducted by EPA and DER personnel during the week beginning October 30, 1978. The name and locations of the facilities inspected are as follows:

1. Florida Power Corp. - Anclote Plant, Tarpon Springs

2. Florida Power Corp. - Higgins Plant, Oldsmar

These copies are for your information and use as necessary. If you should have any questions with regard to these reports, please feel free to contact me at 404/881-4253.

Sincerely yours,

Denise W. Pack
Environmental Specialist
Air Enforcement Branch
Enforcement Division

Enclosures

FIELD INSPECTION REPORT

I. Introduction

A. Facility: Florida Power Corporation (FPC) Higgins Plant

B. Location: Oldsmar, Florida (non attainment area for SO_2)

C. Neds No: 10-3600-00012

D. Date: October 31, 1978

E. Investigators: Wayne Aronson (USEPA)
Denise W. Pack (USEPA)
Wayne Martin (Pinellas City - Air Pollution Control)

F. Persons Contacted: Dwight Picket - Assistant Plant Manager

G. Purpose: To make an on site quality assurance inspection of the air emission points in order to determine the compliance status of the facility.

II. Executive Summary

A. Summary of Findings

This facility has three boilers and four peaking units. At the time of inspection the peaking units and boiler #1 were not in operation. Boiler #3 was operating in compliance and boiler #2 was operating marginally out of compliance with applicable visible emission limiting regulations.

B. Complying Points

1. Boiler #3 in compliance with applicable particulate visible emission limiting regulations.

C. Violating Points

1. Boiler #2 exceeded 20% limit by 1% opacity and in violation of applicable visible emission regulations.

D. Compliance Status Indeterminable

1. At the time of the inspection, boiler #1 was not operating - compliance with applicable emission limiting rules could not be determined.

E. Visible Evaluation

Three sets of visible emission readings were taken of boiler #2 stack and two were taken of boiler #3 stack. The opacity readings for boiler #2 stack have been labeled A, B and C and the averages were 18, 21 and 15%, respectively. The opacity readings for boiler #3 stack have been labeled A and B and the averages were 14 and 15%, respectively.

F. Photographs

35 mm photographs were taken of both stacks and are in the source file.

III. Findings

A. Plant Description

The is an oil-fired steam plant engaged in the generation of electricity for sales distribution to commercial and residential customers. There are three identical boilers at the FPC - Higgins Plant with a total rated capacity of 120 MW power. An additional 70 MW of electricity is provided by peaking units.

Boilers 1 and 2 and peaking units have the capability of burning Natural Gas and/or fuel oil. Boiler #3 burns #6 fuel oil. The generation of SO_2 and SO_3 emissions in all units are controlled by the use of low sulfur fuel and excess SO_2. There are no additional control devices installed on the boilers at this facility.

B. Emission Point Characterization

1. Boilers 1, 2, and 3

Boilers 1, 2, and 3 have identical rated generating capabilities of 42 megawatts each. Boilers 1 and 2 were manufactured by Babcock and Wilcox. Boiler No. 3 was manufactured by Combustion Engineer. All three boilers are rated for steam temperature of 950 degrees fahrenheit.

Boilers 1 and 2 are equipped with 6 burners each and are capable of burning natural gas and/or No. 6 residual fuel. #3 is equipped with 8 spectus burners and burns only No. 6 residual fuel.

At the time of the inspection, boiler #1 was not operating Boiler #2 and 3 were operating at the following parameters:

2. Summary of Operating Parameters of Boiler 2 & 3

*See attachment #1

Attachment #1

Boiler No.	M. W.	10^3 3/hr steam	excess O_2	Super Heat Temp.	10^3 #/hr Air flow
2	26	260	1%	900°F	340
3	26	240	.4%	950°F	370

3. Peaking Units 1, 2,3,and 4

Peaking Units 1, 2, 3, and 4 have rated capacities of 30 MW, 30 MW, 40 MW and 40 MW of power respectively. All of the units were manufactured by Worthy Generating and have the capability of being fired with either natural gas or #2 distillate oil. At the time of inspection none of the peaking units were operating.

4. Summary of Emissions Data for Boilers 1, 2, & 3

The result from the companies most recent particulate and SO_2 test are as follows:

Particulate

Boiler No.	load x 10^8 BTU	Actual #/10^6	Allowable #/10^6 BTU
1	4.98	.091	.10
2	4.68	.069	.10
3	4.88	.084	.10

SO_2

Boiler No.	load x 10^8 BTU	Actual #/10^6 BTU	Allowable #/10^6 BTU
1	4.98	2.71	2.75
2	4.68	2.71	2.75
3	4.88	2.71	2.75

The test results, submitted January 18, 1978, indicate that Boilers 1, 2, and 3 are operating in compliance with the applicable particulate and SO_2 emission limiting regulations.

C. In - stack monitors

This company has no in stack continuous particulate and SO_2 monitors.

IV Background

A. History of Enforcement Action

No enforcement action has been taken against this facility by this agency.

B. State Compliance Determination

According to State files and as reported in the September 1978 quarterly report this source is in compliance with applicable Florida Regulations.

Prepared by Teresa H. Lack

Date Feb 6, 1979

Reviewed by Jesse Barineau

Date 2/14/79

RECORD OF VISUAL DETERMINATION OF OPACITY

Page 1 of 1

I.D. # [redacted] Facility POWER PLANT Certification Date 9/78

Company FLORIDA POWER CORP Control Device NONE Obs Affiliation EPA

Location HIGGINS PLANT Hrs Observation 2:00 PM Pt of Emissions BOILERS 2 & 3

Test Number 1 Observer WJA Hgt of Discharge Pt

Date 10/31/78

	Initial	Final
Clock Time	2:54PM	
Observer Location Distance to Discharge	300 ft	
Direction from Discharge	S	
Height of Observation Point	GROUND	
Background Description	SKY	
Weather Conditions Wind Direction	WEST	
Wind Speed	8-10 MPH	
Ambient Temperature	80°F	
Sky Conditions (clear, overcast % clouds, etc.)	PARTLY CLOUDY	
Plume Description Color	WHITE	
Distance Visible		
Other Information		

Summary of Average Opacity

Set Number	Time Start	Time End	Opacity Sum	Opacity Average
A(2)	3:03	3:09	410	17.83
B(2)	3:09	3:15	510	21.29
A(1)	3:07	3:13	350	14.58

Readings ranged from ____ to ____ % opacity

The source was/was not in compliance with ____ at the time of evaluation

X ____ Observer's signature

UNIT #2

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:54	0	30	30	25	30		
	1	25	25	25	25		
	2	25	25	—	—	CLOUDS	
3:03	3	25	20	20	25		
	4	20	20	15	20		
	5	20	20	15	20	T	
	6	20	15	10	15	T	
	7	15	15	15	15	SUN BEHIND CLOUDS	
	8	10	10	15	15	L	
	9	15	15	15	15	L	
	10	20	20	25	25		
	11	25	25	25	25		
	12	25	25	25	25		
	13	20	25	20	20	T	
	14	20	20	20	20	SUN BEHIND CLOUDS L	
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						

UNIT #3

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:54	00	25	25	25	25		
	01	20	20	20	20		
	02	20	20	—	—	CLOUDS	
3:03	03	20	20	20	15		
	04	15	15	—	—	CLOUDS	
3:07	05	10	10	10	10	L	
	06	10	10	10	10	SUN BEHIND CLOUDS	
	07	10	10	10	10	L	
	08	10	15	20	20		
	09	20	20	20	25		
	10	20	20	20	20		
	11	20	20	20	20		
	42	20	—	—	—	CLOUDS	
	43						
	44						
	45						
	46						
	47						
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	59						

RECORD OF VISUAL DETERMINATION OF OPACITY

I.D. = [redacted]
Facility Power plant
Certification Date 9-78
Company FLORIDA POWER
Control Device —
Obs Affiliation [redacted] Pinellas Co
Location OLDSMAR FL.
Hrs Observation 3:00pm
Pt of Emissions Boilers 2 & 3
Test Number 1
Observer Wayne R. Martin
Hgt of Discharge Pt —
Date 10-31-78

	Initial	Final
Clock Time	2:55 pm	
Observer Location Distance to Discharge	300 ft	
Direction from Discharge	S	
Height of Observation Point	Ground	
Background Description	Sky	
Weather Conditions Wind Direction	West	
Wind Speed	8-10 m.p.H	
Ambient Temperature	80° F	
Sky Conditions (clear, overcast % clouds, etc.)	Partly Cloudy	
Plume Description Color	White	
Distance Visible		
Other Information		

Summary of Average Opacity

Set Number	Time Start	Time End	Opacity Sum	Opacity Average
#2	3:05	3:11	635	26.4
#3	3:05	3:11	365	15.2

Readings ranged from ____ to ____ % opacity

The source was/was not in compliance with ____ at the time of evaluation

X Wayne R. Martin
Observer's signature

Unit #2

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:55	0	25	30	30	30		
	1	25	30	30	25		
	2	30	25	—	—	clouds	
	3						
3:05	1	25	20	20	20		
	6 2	25	30	25	25		
	7 3	25	25	25	25	2a	
	8 4	25	25	25	25		
	9 5	30	30	25	25		
	10 6	30	35	35	35		
	7	35	35	30	30		
	8	25	25	20	25		
3:13	9	25	30	20	20		
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						

Unit #3

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:55	30	15	20	20	25		
	31	15	20	20	15		
	32	20	15	—	—	clouds	
	33						
3:05	34 1	20	15	15	15		
	35 2	15	20	15	15		
	36 3	15	15	15	15	3a	
	37 4	15	15	15	15		
	38 5	15	20	10	10		
	38 6	15	25	20	25		
	40 7	25	25	25	20		
	41 8	20	15	15	20		
3:13	42 9	15	15	15	10		
	43						
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: FEB 27 1979

SUBJECT: Recommended EPA Action for Florida Power Corporation - Higgins Plant.

FROM: Denise W. Pack
Environmental Specialist

TO: Jesse Baskerville, Chief
Southern Compliance Section

SUMMARY

This facility has three boilers (1, 2, and 3) and four peaking units. At the time of the inspection, the peaking units and boiler #1 were not in operation. Boiler #3 was operating in compliance and boiler #2 was operating marginally out of compliance with Florida visible emission limiting rule, Chapter 17-2.04(1).

ACTION

Chapter 17-2.04(1) allows visible emission opacities up to 20%. Boiler #2 exceeded that 20% allowable opacity by 1%. At the present time no enforcement action is recommended. However a re-inspection of this facility should be scheduled in the near future.

BACKGROUND

See attach inspection report.

Attachment

file: Pinellas Co-AP

Florida Power
CORPORATION

D.E.R.
JAN 10 1979
SOUTHWEST DISTRICT
TAMPA

January 5, 1979

Mr. David Puchaty, Manager
Southwest District FDER
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Puchaty:

Attached are the visible emission evaluation tests performed on our Higgins Gas Turbine Units 1, 2, 3 and 4.

Should you require any further information, please call me at (813) 866-4281.

Sincerely,

FLORIDA POWER CORPORATION

D.A. Shantz

DAS/emhF04
(1/5D4)

Attachment

PLANT: HIGGINS
UNIT: 1

TEST DATE : 10-4-78
TEST NO: 1-78

LOAD: 41

TEST CONDITION:
%02: 5.60 ,%C02: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.30 LBM/LBM-MOLE

AVG STACK VELOCITY= 32.90 FT/SEC

CONCENTRATION @ STP= .4338849E-05 LBS/SCF

CONCENTRATION @ STP= .3039459E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 102.55

PARTICULATE MATTER=.055 LBS/10**6 BTU @STP

% H20 @ STP= 10.67

% EXCESS AIR= 34.33

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP

File
Higgins Plant
make folder

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

December 6, 1978

Mr. R. E. Parnelle
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Re: Higgins Power Plant Coal/Oil Mixture

Dear Mr. Parnelle:

A review of Florida Power's request to burn 1400 barrels of coal/oil mixture at the Higgins Power Plant has been made. It is our understanding that the coal will be mixed with approximately 60,000 barrels of #6 fuel oil before being fed to the three (3) units and that the particulate emissions are estimated to be 0.081 lbs/MBTU.

In the interest of fuel conservation and the apparent compliance with emission standards, we approve the disposal method of the coal as described in your letter of November 28, 1978. We suggest that visible emission tests be made prior to and during the coal burning.

If we can be of further service please do not hesitate to call.

Sincerely,

J. Harry Kerns

J. Harry Kerns, P.E.
District Engineer

JHK:lt

Bill 12-4
Prepare response for Kern's signature.

D.E.R.
NOV 30 1978
SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

November 28, 1978

File coal/oil F.P.C.

Mr. Harry Kern
Florida Department of Environmental Regulation
7601 - Highway 301 North
Tampa, Florida 33610

Subject: Higgins Power Plant
Coal/Oil Mixture

Dear Mr. Kern:

Florida Power Corporation requests permission to burn 1400 barrels of coal/oil mixture at Higgins Power Plant near Oldsmar. The mixture is 15% coal by weight with the coal having a sulfur content of 2.2%. The coal/oil mixture would be mixed with approximately 60,000 barrels of #6 fuel oil in a fuel tank before being burned.

The coal/oil mixture is presently in a barge at our Crystal River Plant and will be moved to Higgins Plant by tug. (Crystal River Plant is not capable of burning the mixture as one unit is burning coal and the other unit is out of commission being converted to coal). This 1400 barrel quantity is the remains of a project whereby coal/oil mixtures as high as 50% coal were successfully burned in a Crystal River unit.

I have attached an analysis which would indicate that the particulate emission rate from the 1400 barrels of coal/oil mixture mixed with 60,000 barrels of #6 fuel oil would be 0.081 lbs/MBTU which is less than the standard of 0.1 lb/MBTU.

We don 't anticipate any problems with the burn and probably won't be able to detect any differences between this and regular #6 fuel oil.

Should you have any questions please let me know otherwise a prompt approval of our request would be appreciated as we want to burn the coal/oil mixture as soon as possible.

Very Truly Yours,

Eustice Parnelle

R. E. Parnelle
Manager
Environmental Operations

REP/bb

Attachment
cc: Dr. S. K. Nayak, DER TLH

ELECTRIC FUELS CORPORATION

INTER-OFFICE CORRESPONDENCE

Electric Fuels
(Office - Location)

Subject: Dilution and Burning of Leftover Coal/Oil Mixture from Crystal River.

Date: November 21, 1978

To: Mr. R. E. Parnelle

Attention Of:

As per your request of November 15, I am enclosing data and calculations which show the effect of adding the contents of the coal/oil slurry barge from Crystal River to the 80,000 barrel #6 oil tank at Higgins Plant. The contents of this barge consists of 1,400 barrels of coal/oil mixture with 15% coal by weight (located in the two center compartments) and 3200 barrels of #6 oil pumped from the oil tanks at Crystal River as part of coal conversion (contained in the two fore and two aft compartments). This material would be mixed in the Higgins 80,000 barrel oil tank with at least 60,000 barrels of #6 oil. The injection of this oil into the Higgins oil tank would be accomplished as follows.

1. The two center compartments containing coal/oil mixture will be heated and agitated by means of a recirculating pump mounted on the barge. Before and after samples at graduated depths will be taken and analyzed to determine the effects of reslurrying on the mixture which has settled out due to inactivity at Crystal River. If the amount or concentration of COM is found to be substantially different from that specified above, no further activity will be initiated without regulatory approval.

2. When adequate resuspension of the coal in oil has occurred, the contents of all six compartments will be mixed together and recirculated until an homogenous mix is reached. This will consist of 4600 barrels of coal/oil mixture at approximately 6% coal by weight.

3. This mixture will be pumped through the normal oil line into the Higgins 80,000 barrel tank. No stratification problems in the tank are expected.

Sheet #1 (attached) shows that the resulting mixture in the Higgins oil tank will be .34% coal by weight. Florida Power oil purchasing specifications call for .5% or less sedimentation. Sheet #1 also shows that the total ash percentage in the oil tank will be .085% (assuming the original 60,000 barrels in the tank meets the Florida Power purchase specification of .05% ash).

Sheets #2 & #3 (attached) address the effects on particulate loading at Higgins Plant of burning the dilute coal/oil mixture. On Sheet #2 an average particulate loading for Higgins Plant is calculated since the tank will be feeding all three units. This average is based on the latest particulate loading test data for Higgins Plant. Since Units 1 and 2 were tested on 1% sulfur oil with .03% ash, the particulate loadings for these units have been raised to reflect the particulate loading expected on the .05% ash, 2% sulfur oil. All assumptions and calculations used in finding this average particulate loading for Higgins Plant are shown on Sheet #2. On Sheet #3 the average particulate loading for Higgins Plant while burning the dilute coal/oil mixture is calculated. This is based on the average particulate loading for Higgins Plant calculated on Sheet #2 and on other fuel constants as shown. These calculations show that the average particulate loading for Higgins Plant due to the burning of the dilute coal/oil mixture will be raised from .066 lbs/million BTu to .081 lbs/million BTu (during the time which represents the burning of this 64,600 barrels of dilute COM).

In conclusion, the effects of mixing this small amount of coal/oil mixture in the large tank at Higgins should be negligible both in terms of plant fuel handling and operation and environmental impact. If you should require further information in your effort to secure regulatory approval for this project, please contact me.

Joe W. Cochran

Joe W. Cochran
COM Development Engineer

JWC/iw
Attachments.

cc: Mr. S. Douglas
Mr. N. B. Spake

SHEET 1.

Dilution and Burning of Leftover COM from Crystal River.

COM Leftover is 1400 BBL @ 15% coal by weight.

Crystal River Fuel property averages:

	Ash(%)	ρ (lb/ft^3)
Oil	.11	60.29
Coal	10.0	84.73
COM*	1.59	63.02

*Linear combination of oil and coal properties in 15:85 ratio.

1400 BBL 15% COM weighs 495398 lb. (353.86 lb/bbl)

Coal portion weights-- 74310 lb. or 37.15 tons
Ash in COM is -------- 7876.8 lb.
Ash from Coal is ----- 7431.0 lb.

Assume this COM is mixed with 60,000 BBL of oil (in 80,000 BBL tank at Higgins) and 3200 BBL of oil (from Crystal River) and all of this oil has .05% Ash (as per FPC purchasing specs.) and ρ = 60.29 lb/ft^3

63,200 BBL of oil weights 21.395 x 10^6 lb. (@ 338.53 lb/BBL)
This oil contains 10697.4 lb. Ash.

The final COM mix in the tank would be 64,600 BBL.

$$\text{Coal Percentage} = \frac{74310\ (100)}{(21.395 \times 10^6)+495398} = .34\%$$

Total Ash = 7876.8 + 10697.4 = 18574.2 lb.

$$\text{Ash Percentage} = \frac{18574.2\ (100)}{(21.395 \times 10^6)+495398} = .085\%$$

JWC 11/15/78

SHEET 2.

Higgins Plant, Avg. Particulate Loading on #6, 2%S, oil.

Last Test Data:

Unit	Test Points (lb/MBTU)			Avg. lb/MBTU	% Fuel Ash
1	.055	.057	.047	.053	.03 (1%S)
2	.046	.025	.034	.035	.03 (1%S)
3	.110	.081	.087	.093	.05 (2%S)

Assume: Approximately the same loadings on the three 40 MW units.

Comb. Efficiency is constant for 1 or 2%S oils (i.e. - only ash loadings change particulate loadings).

Heating Value (both oils) = 18500 $\frac{BTu}{lb.}$

Unit 1: The change in particulate loading is due only to the change in Fuel Ash. The ash portion of particulate is represented by:

$$\frac{(.8)(10^6 \frac{BTu}{MBTu})(\% \text{ Ash})}{(\text{Heat Value } \frac{BTu}{lb})(100)} = \text{lb. of ash as particulate/MBTu fired}$$

Where .8 is the fraction of ash discharged as particulate. the particulate loading adjusted for .05% Ash Fuel is:

$$.053 - \frac{(.8)(10^6)(.03)}{(18500)(100)} + \frac{(.8)(10^6)(.05)}{(18500)(100)}$$

$$.053 + \frac{(.8)(10^6)(.05-.03)}{(18500)(100)} = .062 \ \frac{lb}{MBTu}$$

Unit 2: As above, adjusted loading is:

$$.035 + \frac{(.8)(10^6)(.05-.03)}{(18500)\ (100)} = .044 \ \frac{lb}{MBTu}$$

Unit 3: No adjustment necessary, test was run on .05% Ash oil.

Higgins Plant average particulate loading (adjusted to .05% Ash oil is:

$$\frac{.062 + .044 + .093}{3} = .066 \ \frac{lb}{MBTu}$$

JWC 11/17/78

SHEET 3.

Particulate Generation: Comparison of Diluted Leftover COM to #6 Oil.

Assume average Higgins Plant (Units 1, 2 & 3) on #6 oil (.05% ash) is .066 lb/MBTu*. Assuming 80% of the particulate generated leaves as flyash, total particulate generation is .066/.8 = .083 lb/MBTu

Total Ash Generation (.05% Ash in Fuel) = $\left(\frac{10^6 \frac{BTu}{MBTu}}{18500 \frac{BTu}{lb_{fuel}}}\right)\left(.0005 \frac{lb_{ash}}{lb_{fuel}}\right) = .0270 \frac{lb_{ash}}{MBTu}$

Unburned Carbon in Particulate = Particulate - Ash
= .083 - .027 = .056 $\frac{lb}{MBTu}$

Total Carbon Generation (85% C in Fuel) = $\left(\frac{10^6 \frac{BTu}{MBTu}}{18500 \frac{BTu}{lb_{fuel}}}\right)\left(.85 \frac{lb_C}{lb_{fuel}}\right) = 45.9459 \frac{lb}{MBTu}$

% Unburned Carbon = $\left(\frac{.056}{45.9459}\right)(100) = .121\%$

(i.e. 99.88% combustion efficiency)

*Average from latest tests.

Assume combustion efficiency stays constant on the diluted COM.

% Carbon in COM (.34% coal) = (1-.0034)(85)+(.0034)(68.7)=84.94%
(oil 85%, coal 68.7%)

Dilute COM higher heating value = (1-.0034)(18500)+(.0034)(12000) = 18478 $\frac{BTu}{lb}$

Total Carbon Generation = $\left(\frac{10^6 \frac{BTu}{MBTu}}{18478 \frac{BTu}{lb_{fuel}}}\right)\left(.8494 \frac{lb_C}{lb_{fuel}}\right) = 45.97 \frac{lb_C}{MBTu}$

Unburned Carbon = (.00121)(45.97 $\frac{lb_C}{MBTu}$ = .056 $\frac{lb}{MBTu}$

Total Ash Generation (.085% Ash) = $\left(\frac{10^6 \frac{BTu}{MBTu}}{18478 \frac{BTu}{lb_{fuel}}}\right)\left(.00085 \frac{lb_{ash}}{lb_{fuel}}\right) = .0460 \frac{lb}{MBTu}$

Particulate Output on dilute COM = (.8)(.056 + .0460) = .081 $\frac{lb}{MBTu}$

JWC 11/17/78

Pinellas

FPC Higgins

FIELD INSPECTION REPORT

I. Introduction

A. Facility: Florida Power Corporation (FPC) Higgins Plant

B. Location: Oldsmar, Florida (non attainment area for SO_2)

C. Neds No: 10-3600-00012

D. Date: October 31, 1978

E. Investigators: Wayne Aronson (USEPA)
Denise W. Pack (USEPA)
Wayne Martin (Pinellas City - Air Pollution Control)

F. Persons Contacted: Dwight Picket - Assistant Plant Manager

G. Purpose: To make an on site quality assurance inspection of the air emission points in order to determine the compliance status of the facility.

II. Executive Summary

A. Summary of Findings

This facility has three boilers and four peaking units. At the time of inspection the peaking units and boiler #1 were not in operation. Boiler #3 was operating in compliance and boiler #2 was operating marginally out of compliance with applicable visible emission limiting regulations.

B. Complying Points

1. Boiler #3 in compliance with applicable particulate visible emission limiting regulations.

C. Violating Points

1. Boiler #2 exceeded 20% limit by 1% opacity and in violation of applicable visible emission regulations.

D. Compliance Status Indeterminable

1. At the time of the inspection, boiler #1 was not operating - compliance with applicable emission limiting rules could not be determined.

E. Visible Evaluation

Three sets of visible emission readings were taken of boiler #2 stack and two were taken of boiler #3 stack. The opacity readings for boiler #2 stack have been labeled A, B and C and the averages were 18, 21 and 15%, respectively. The opacity readings for boiler #3 stack have been labeled A and B and the averages were 14 and 15%, respectively.

F. Photographs

35 mm photographs were taken of both stacks and are in the source file.

III. Findings

A. Plant Description

The is an oil-fired steam plant engaged in the generation of electricity for sales distribution to commercial and residential customers. There are three identical boilers at the FPC - Higgins Plant with a total rated capacity of 120 MW power. An additional 70 MW of electricity is provided by peaking units.

Boilers 1 and 2 and peaking units have the capability of burning Natural Gas and/or fuel oil. Boiler #3 burns #6 fuel oil. The generation of SO_2 and SO_3 emissions in all units are controlled by the use of low sulfur fuel and excess SO_2. There are no additional control devices installed on the boilers at this facility.

B. Emission Point Characterization

1. Boilers 1, 2, and 3

Boilers 1, 2, and 3 have identical rated generating capabilities of 42 megawatts each. Boilers 1 and 2 were manufactured by Babcock and Wilcox. Boiler No. 3 was manufactured by Combustion Engineer. All three boilers are rated for steam temperature of 950 degrees fahrenheit.

Boilers 1 and 2 are equipped with 6 burners each and are capable of burning natural gas and/or No. 6 residual fuel. #3 is equipped with 8 spectus burners and burns only No. 6 residual fuel.

At the time of the inspection, boiler #1 was not operating Boiler #2 and 3 were operating at the following parameters:

2. Summary of Operating Parameters of Boiler 2 & 3

*See attachment #1

Attachment #1

Boiler No.	M. W.	10^3 3/hr steam	excess O_2	Super Heat Temp.	10^3 #/hr Air flow
2	26	260	1%	900°F	340
3	26	240	.4%	950°F	370

3. Peaking Units 1, 2,3,and 4

Peaking Units 1, 2, 3, and 4 have rated capacities of 30 MW, 30 MW, 40 MW and 40 MW of power respectively. All of the units were manufactured by Worthy Generating and have the capability of being fired with either natural gas or #2 distillate oil. At the time of inspection none of the peaking units were operating.

4. Summary of Emissions Data for Boilers 1, 2, & 3

The result from the companies most recent particulate and SO_2 test are as follows:

Particulate

Boiler No.	load x 10^8 BTU	Actual #/10^6	Allowable #/10^6 BTU
1	4.98	.091	.10
2	4.68	.069	.10
3	4.88	.084	.10

SO_2

Boiler No.	load x 10^8 BTU	Actual #/10^6 BTU	Allowable #/10^6 BTU
1	4.98	2.71	2.75
2	4.68	2.71	2.75
3	4.88	2.71	2.75

These test results, submitted January 18, 1978, indicate that Boilers 1, 2, and 3 are operating in compliance with the applicable particulate and SO_2 emission limiting regulations.

C. In - stack monitors

This company has no in stack continuous particulate and SO_2 monitors.

IV Background

A. History of Enforcement Action

No enforcement action has been taken against this facility by this agency.

B. State Compliance Determination

According to State files and as reported in the September 1978 quarterly report this source is in compliance with applicable Florida Regulations.

Prepared by Denise H. Lack

Date Feb 6, 1979

Reviewed by Jesse Basinville

Date 2/14/79

RECORD OF VISUAL DETERMINATION OF OPACITY

Page 1 of 1

I.D. # _____ Type Facility POWER PLANT Obs Certification Date 9/78

Company FLORIDA POWER CORP Control Device NONE Obs Affiliation EPA

Location HIGGINS PLANT Hrs Observation 2:00 PM Pt of Emissions BOILERS 2 & 3

Test Number 1 Observer WJA Hgt of Discharge Pt _____

Date 10/3/78

	Initial			Final			
Clock Time	2:54PM						
Observer Location Distance to Discharge	300 ft						
Direction from Discharge	S						
Height of Observation Point	GROUND						
Background Description	SKY						
Weather Conditions Wind Direction	WEST						
Wind Speed	8-10 MPH						
Ambient Temperature	80°F						
Sky Conditions (clear, overcast % clouds, etc.)	PARTLY CLOUDY						
Plume Description Color	WHITE						
Distance Visible							
Other Information							

Summary of Average Opacity

Set Number	Time Start	Time End	Opacity Sum	Opacity Average
A(2)	3:03	3:09	410	17.83
B(2)	3:09	3:15	510	21.29
A(3)	3:07	3:13	350	14.58

Readings ranged from _____ to _____ % opacity

The source was/was not in compliance with _____ at the time of evaluation

X _____ Observer's signature

UNIT #2

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:54	0	30	30	25	30		
	1	25	25	25	25		
	2	25	25	—	—	CLOUDS	
3:03	3	25	20	20	25		
	4	20	20	15	20		
	5	20	20	15	20		
	6	20	15	10	15	T	
	7	15	15	15	15	SUN BEHIND CLOUDS	
	8	10	10	15	15	T	
	9	15	15	15	15		
	10	20	20	25	25		
	11	25	25	25	25		
	12	25	25	25	25		
	13	20	20	20	20	T	
	14	20	20	20	20	SUN BEHIND CLOUDS T	
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						

UNIT #3

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:54	30	25	25	25	25		
	31	20	20	20	20		
	32	20	20	—	—	CLOUDS	
3:03	33	20	20	20	15		
	34	15	15	—	—	CLOUDS	
3:07	35	10	10	10	10	T	
	36	10	10	10	10	SUN BEHIND CLOUDS	
	37	10	10	10	10	T	
	38	10	15	20	20		
	39	20	20	20	25		
	40	20	20	20	20		
	41	20	20	20	20		
	42	20	—	—	—	CLOUDS	
	43						
	44						
	45						
	46						
	47						
	48						
	49						
	50						
	51						
	52						
	53						
	54						
	55						
	56						
	57						
	58						
	59						

* G.P.O. 1978—745-844/1406, REGION NO. 4

RECORD OF VISUAL DETERMINATION OF OPACITY

I.D. = _____ Type Facility Power plant Obs Certification Date 9-78

Company FLORIDA POWER Control Device — Obs Affiliation ~~FPC~~ Pinellas Co

Location OLDSMAR FL Hrs Observation 3:00pm Pt of Emissions Boilers 2 & 3

Test Number 1 Observer Wayne R. Martin Hgt of Discharge Pt _____

Date 10-31-78

	Initial			Final
Clock Time	2:55 pm			
Observer Location Distance to Discharge	300 ft			
Direction from Discharge	S			
Height of Observation Point	Ground			
Background Description	Sky			
Weather Conditions Wind Direction	West			
Wind Speed	8-10 MPH			
Ambient Temperature	80°F			
Sky Conditions (clear, overcast % clouds, etc.)	Partly Cloudy			
Plume Description Color	White			
Distance Visible				
Other Information				

Summary of Average Opacity

Set Number	Time Start	Time End	Opacity Sum	Opacity Average
B2	3:05	3:11	635	26.4
B3	3:05	3:11	365	15.2

Readings ranged from _____ to _____ % opacity

The source was/was not in compliance with _____ at the time of evaluation

X Wayne R Martin

Observer's signature

Visit # 2

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:55	0	25	30	30	30		
	1	25	30	30	25		
	2	30	25	—	—	clouds	
	3						
3:05	18	25	20	20	20		
	6 2	25	30	25	25		
	7 3	25	25	25	25	2a	
	8 4	25	25	25	25		
	9 5	30	30	25	25		
	10 6	30	35	35	35		
	7	35	35	30	30		
	8	25	25	20	25		
3:13	9	25	30	20	20		
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						

Visit # 3

Hr	Min	Seconds 0	15	30	45	Steam Plume If applicable: Attached	Detached
2:55	30	15	20	20	25		
	31	15	20	20	15		
	32	20	15	—	—	clouds	
	33						
3:05	1	20	15	15	15		
	2	15	20	15	15		
	3	15	15	15	15	3a	
	4	15	15	15	15		
	5	15	20	10	10		
	6	15	20	20	25		
	7	25	25	25	20		
	8	20	15	15	20		
3:13	9	15	15	15	10		
	43						
	44						
	45						
	46						
	47						
	48						
	49						
	50						
	51						
	52						
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	59						

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

ANNUAL OPERATIONS REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 19.77 prior to March1st of the following year.

D.E.R.
MAR 7 1978
SOUTHWEST DISTRICT
TAMPA

I GENERAL INFORMATION:

1. Source Name: Higgins Unit No. 1
2. Permit Number: AO52-2040
3. Source Address: P.O. Box J
   Oldsmar, Fl. 33557
4. Description of Source: Steam Unit

II OPERATING SCHEDULE:

24 hrs/day 7 days/wk 52 wks/yr
Operated 5503.4 hours in 1977

III RAW MATERIAL INPUT PROCESS WEIGHT:

Raw Material	Input Process Weight
	tons/yr
	tons/yr
	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).

382.073 10^6 cubic feet Natural Gas
8940 10^3 gallons No. 6 Oil, 2.3 %S
10^3 gallons Propane
1.75 10^3 gallons No. 2 Oil
tons Coal
10^6 lb Black Liquor Solids
tons Carbonaceous
0.2%S.
tons Refuse

Other (Specify type and units)

V EMISSION LEVEL (tons/yr):

A.
61 Particulates
Nitrogen Oxide
Carbon Monoxide
Hydrocarbon
Total Reduced Sulfur
1676 Sulfur Dioxide
Flouride

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 emission test results

VI CERTIFICATION:

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

W. P. Stewart
Signature of Owner or Authorized Representative

W. P. Stewart, Director, Power Productio
Typed Name and Title

March 3, 1978
Date

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:

TO: File

THRU: Dan A. Williams

FROM: William H. Brown

RE: Florida Power Corporation, Higgins

Unit #1 is a 42 MW, 488 x 10^6 BTU steam generator, in 1977 it operated 5503.4 hours using 382.1 x 10^6 cu. ft. natural gas and 8940 x 10^3 gal. of #6 fuel oil with 2.3% sulfur or a discharge of 1676 tons SO_2/yr. and 61 T/yr. TSP.

Unit #2 is a 45 MW 511 x 10^6 BTU steam generator. In 1977 it operated 6620.3 hours burning 362.8 x 10^6 cu. ft. of natural gas 13321 x 10^3 gal. #6 fuel oil, 1.9 x 10^6 gal #2 fuel oil the emissions were 69 T/yr. TSP, 408.5 T/yr. NO_x, and 2500 T/yr. ~~TSP~~ SO_2 ✓

Unit #3 is a 45 MW 512 x 10^6 BTU steam generator. In 1977 it operated 5089.8 hours burning 13582.3 x 10^3 gal. #6 fuel oil 1.34 x 10^6 gal. #2 oil with an emission of 85.6 T/yr. TSP, 425 T/yr. NO_x and 2547 T/yr. SO_2.

This facility has four peaking deisel turbines. The total installation emits 221.6 T/yr. TSP, 1309.6 T/yr. NO_x, 6747 T/yr. SO_2.

This operation on Recon had less than 20% opacity and seemed to be in compliance.

Brown

File: Pinellas Co. AP.

D.E.R.

MAY 1 1978

SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

April 12, 1978

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

Dear Mr. Puchaty:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1
Bartow No. 1
Bartow No. 2
Bartow No. 3
Higgins No. 1
Higgins No. 2
Higgins No. 3

Should there be any questions concerning this data, please contact me at (813)866-4281.

Sincerely,

FLORIDA POWER CORPORATION

D. A. Shantz, Supervisor
Chemical & Environmental Services

Enclosure

DAS/hw 3/4a

ANCLOTE NO. 1

January	334366 BBL	
February	343550 BBL	Average % S = 2.02
March	477430 BBL	

BARTOW NO. 1

January	87759 BBL	
February	33884 BBL	Average % S = 2.38
March	0	

BARTOW NO. 2

January	12600 BBL 640535 MCF	
February	19561 BBL 554278 MCF	Average % S = 2.38
March	1098 BBL 769946 MCF	

BARTOW NO. 3

January	177627 BBL	
February	191202 BBL	Average % S = 2.38
March	220374 BBL	

HIGGINS NO. 1

January	18405 BBL 4050 MCF	
February	27623 BBL 41361 MCF	Average % S = 2.45
March	29491 BBL 39874 MCF	

HIGGINS NO. 2

January	21094 BBL 4801 MCF	
February	22798 BBL 0	Average % S = 2.45
March	40870 BBL 5122 MCF	

HIGGINS NO. 3

January	6674 BBL	
February	24889 BBL	Average % S = 2.45
March	45287 BBL	

D.E.R.

JAN 20 1978

SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

January 18, 1978

Mr. David Puchaty, Manager
Southwest District FDER
7601 Highway 301 North
Tampa, FL 33610

Dear Mr. Puchaty:

The Florida Power Corporation submits the following environmental compliance test data on the three steam units at the Higgins plant in Oldsmar, Florida. All tests were conducted in accordance with procedures specified by the Department of Environmental Regulation. The particulate value is an average of the three required tests and the SO_2 number was calculated assuming 100% conversion of the fuel sulfur as determined from the attached analysis. The total BTU's fired per hour was calculated by multiplying the unit net heat rate (BTU/Kr) and net load (Kwhr). The test results are:

Higgins #1 (AO 52-2040)

Particulate - 0.091 lb/10^6 BTU
SO_2 - 2.71 lb/10^6 BTU
Opacity - 20%

BTUS - (12220 BTU/Kwh) (40800 Kwh) = 4.98 x 10^8 BTU

Higgins #2 (AO 52-2041)

Particulate - 0.069 lb/10^6 BTU
SO_2 - 2.71 lb/10^6 BTU
Opacity - 15%

BTU's - (12000 BTU/Kwh) (39050 Kwh) = 4.68 x 10^8 BTU

Higgins #3 (AO 52-2042)

Particulate - 0.084 lb/10^6 BTU
SO_2 - 2.71 lb/10^6 BTU
Opacity - 20%

BTU's - (12080 BTU/Kwh) (40400 Kwh) = 4.88 x 10^8 BTU

Attached are copies of the field data sheets, the visible emission report, fuel oil analysis and the computer printouts for each test.

Should you have any questions concerning this information, please call me at 866-4544.

Sincerely,

R.E. Parnelle, Jr., Manager
Environmental Operations

REPjr/js 3/5a

Attachments

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 1

TEST DATE : 11/9/77
TEST NO: 3-77

LOAD: 43 MW

TEST CONDITION:
%O2: 5.20 ,%CO2: 12.8 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.97 LBM/LBM-MOLE

AVG STACK VELOCITY= 32.37 FT/SEC

CONCENTRATION @ STP= .7244408E-05 LBS/SCF

CONCENTRATION @ STP= .5074868E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 103.86

PARTICULATE MATTER=.094 LBS/10**6 BTU @STP

% H2O @ STP= 11.69

% EXCESS AIR= 31.61

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

[redacted]

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 1

TEST DATE : 11/10/77
TEST NO: 4-77

LOAD: 43 MW

TEST CONDITION:
%O2: 5.20 ,%CO2: 12.8 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.10 LBM/LBM-MOLE

AVG STACK VELOCITY= 34.30 FT/SEC

CONCENTRATION @ STP= .7456087E-05 LBS/SCF

CONCENTRATION @ STP= .5223153E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 102.47

PARTICULATE MATTER=.103 LBS/10**6 BTU @STP

% H2O @ STP= 10.63

% EXCESS AIR= 31.61

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

[redacted]

AIR POLLUTION ANALYSIS

PLANT: HIGGINS TEST DATE : 10/25/77
UNIT: 2 TEST NO: 1-77

LOAD: 41.5 MW

TEST CONDITION:
%O2: 5.60 ,%CO2: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.97 LBM/LBM-MOLE

AVG STACK VELOCITY= 35.32 FT/SEC

CONCENTRATION @ STP= .6075591E-05 LBS/SCF

CONCENTRATION @ STP= .4256085E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 105.96

PARTICULATE MATTER=.092 LBS/10**6 BTU @STP

% H2O @ STP= 11.31

% EXCESS AIR= 34.90

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

AIR POLLUTION ANALYSIS

PLANT: HIGGINS TEST DATE : 10/28/77
UNIT: 2 TEST NO: 3-77

LOAD: 43 MW

TEST CONDITION:
%O2: 5.60 ,%CO2: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.11 LBM/LBM-MOLE

AVG STACK VELOCITY= 34.47 FT/SEC

CONCENTRATION @ STP= .2674178E-05 LBS/SCF

CONCENTRATION @ STP= .1873321E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 104.04

PARTICULATE MATTER=.038 LBS/10**6 BTU @STP

% H2O @ STP= 10.24

% EXCESS AIR= 34.90

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 3

TEST DATE : 11/4/77
TEST NO: 1-77

LOAD: 42 MW

TEST CONDITION:
%O2: 5.60 ,%CO2: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.88 LBM/LBM-MOLE

AVG STACK VELOCITY= 32.61 FT/SEC

CONCENTRATION @ STP= .5113399E-05 LBS/S3F

CONCENTRATION @ STP= P.3582049E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 108.88

PARTICULATE MATTER=.064 LBS/10**6 BTU @STP

% H2O @ STP= 12.08

% EXCESS AIR= 34.90

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 3

TEST DATE : 11/4/77
TEST NO: 2-77

LOAD: 41.5

TEST CONDITION:
%O2: 5.60 ,%CO2: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.08 LBM/LBM-MOLE

AVG STACK VELOCITY= 32.83 FT/SEC

CONCENTRATION @ STP= .8511839E-05 LBS/SCF

CONCENTRATION @ STP= .5962731E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 105.63

PARTICULATE MATTER=.111 LBS/10**6 BTU @STP

% H2O @ STP= 10.44

% EXCESS AIR= 34.90

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 3

TEST DATE : 8 NOV 77
TEST NO: 3-77

LOAD: 41 MW

TEST CONDITION:
%O2: 5.60 ,%CO2: 12.4 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.11 LBM/LBM-MOLE

AVG STACK VELOCITY= 30.64 FT/SEC

CONCENTRATION @ STP= .6115342E-05 LBS/SCF

CONCENTRATION @ STP= .4283932E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 106.19

PARTICULATE MATTER=.076 LBS/10**6 BTU @STP

% H2O @ STP= 10.22

% EXCESS AIR= 34.90

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

Filo

RECEIVED

OCT 1975

~~A0 52-2574~~ HIGGINS # 1

INSTRUCTIONS FOR COMPLETING THE EPA AIR POLLUTANT EMISSIONS REPORT (FORM 158-R75)

The pollutants to be reported are the following: Particulate Matter, Sulfur Dioxide, Nitrogen Oxides, Hydrocarbons, Carbon Monoxide and Fluorides.

Data requested in this report should be representative of the previous calendar year and any changes that have taken place since this reporting period and the date of this report should be clearly identified. (Such as new fuel supplies, process modifications, change in emission rates, etc.)

Section I of the Emissions Report requests general information on the size and location of your plant, institution, or establishment. Sources of pollutant emissions will be located on a map by EPA to within one hundred meters, thus, more than just the plant address is requested. Where there is more than one building or facility, or where sources of pollution are separated by more than 50 meters, each source should be located on a map, engineering drawing, or sketch and identified by source code or description, in addition to the written description.

Section II (two pages) relates to fuel combustion; Section III, to the disposal of combustible solid and liquid wastes; Section IV, to manufacturing and other processes and operations; Section V, to air cleaning equipment; and Section VI, to stack and pollutant emissions data. Please enclose a simple flow diagram of your processes or operations.

In Section II through VI, the first column is headed "Source Code." This code identifies each source of emissions and is used to relate the combustion, disposal, and process and operations data in Sections II through IV, with the air cleaning equipment in Section V and the stack pollutant emissions data in Section VI. A boiler in Section II would be related by its source code to its air cleaning equipment in Section V, and the stack and pollutant emissions data would be reported in Section VI for that boiler using the same code. You may use a source coding system as suggested in footnote "a" or you may use a coding system already in use within your facility.

In Sections III through V, there is a requirement that the method of combustible waste disposal, a description of the process or operation, and the type of air cleaning equipment to be identified. Air cleaning equipment to remove a pollutant (e.g., particulates) from a source may consist of a combination of two or more types; report all types and the arrangement of the combinations.

Sources, boilers or process units may be grouped, combined (see instruction a for Sections II and IV) when units are essentially identical or discharge through the same stack or common emissions control equipment. The combined capacity of grouped boilers should not exceed 10 million BTU per hour. Report the number of units which have been grouped. If units which are grouped discharge through separate stacks, report stack data for one typical, representative stack, if the emission rates are essentially identical.

In Section II, it is requested that data relating to sulfur and ash content of fuels be provided. In addition, to providing the weighted average for the year of record, please provide information as to the maximum sulfur and ash content either used or planned to be used (whichever is greater) in the future.

Fuel combustion sources, reported in Section II, include internal combustion units, turbines and fuel combustion for kilns, dryers, etc. Where combustion is a part of a process as in kilns, dryers, foundries, glass melt tanks, etc., this is indicated in Section II by using the process source code (e.g. IVa, IVb, etc.) instead of the fuel combustion source code. Waste materials such as bark, woodwaste, and waste solvents used as fuel in boilers or dryers will be reported in the combustion section, Section II (do not report in the waste disposal section). Give the heat content, ash and sulfur contents of special fuels and wastes used as fuel. Solvents, liquid and gas fuels handling and storage operations which have losses to the air are reported as sources. Report the units (pounds, tons, gallons, barrels or 10^3 cubic feet) for any quantity which is reported. Pollutants from each source are reported separately.

In Section VI, it is requested that an estimate of pollutant emissions be provided. Please attach a copy of the calculations used to prepare this estimate. If you feel that any of the data requested in this report does not adequately describe your operation or facility, please attach additional statements or other appropriate information of a clarifying nature. If there are unusual or marked variations in operating time that would cause variations in emissions, these variations should be detailed on a separate sheet.

Date Report Submitted: October 5, 1975

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

FORM APPROVED
OMB NUMBER 158-R76

For Official Use Only:
Date Sent:
Date Returned:
UTM Grid Coordinates:
SIC No.:
Source ID:

Plant, institution, or establishment name: HIGGINS POWER PLANT UNIT #1

Plant, institution, or establishment address: Box J (Street or Box Number) Oldsmar (City) Florida (State) 33557 (Zip)

Person to contact regarding this report: R. E. Parnelle Title: Environmental Operations Administrator Telephone: 813/866-4544

Mailing address: P.O. Box 14042 (Street or Box Number) St. Petersburg (City) Florida (State) 33733 (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: 10 feet above mean sea level, _____ feet below mean sea level.

Information is representative of calendar year: 1974.

Land area at plant location: 117 acres. Enclose a sketch of layout if there is more than one building.

Plant location: (give nearest cross streets, describe by landmarks or enclose a map, engineering drawing, or sketch)
Shore Drive South of Oldsmar at Booth Point

☐ 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: Department of Environmental Regulation, P.O. Box 9205, Winter Haven, Florida 33880.

Date Report Submitted: October 5, 1975

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: HIGGINS POWER PLANT UNIT #1

Normal operating schedule for fuel use: 24 Hours per day 7 Days per week 52 Weeks per year 8760 Hours per year.

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

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]
1	1	545 X 10^6 BTU/Hr.	Front Fired Gun Type Oil Burner	1951	15%	47

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.

Date Report Submitted: October 5, 1975

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: HIGGINS POWER PLANT UNIT #1

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]	Percent Ash (Solid Fuel Only)[e,f]	Delivered Cost of Fuel $/Quantity	Future Use[g]
		Quantity[d]	Percent Distribution by Season				Maximum	Average						
			Spring March/ May	Summer June/ Aug.	Fall Sept./ Nov.	Winter Dec./ Febr.								
1	Gas	624,000 MCF	28%	30%	23%	19%	517.3 MCF	300.0 MCF	N/A	1051 BTU/Cu.Ft.	None	N/A	Variable	-24%
1	#6 Oil	13,364,400 Gals.	28%	30%	23%	19%	3,654 Gals.	2,119 Gals.	N/A	148,790 BTU/Gal.	2.2	N/A	Variable	-24%

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.

Date Report Submitted: October 5, 1975

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION III - COMBUSTIBLE SOLID AND LIQUID WASTES DISPOSAL

Plant, institution, or establishment name: HIGGINS POWER PLANT UNIT #1

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: 24 Hours per day 7 Days per week 52 Weeks per year 8760 Hours per year.

Seasonal and/or peak operation period: (Specify) None

Dates of annually occurring shutdowns of operations: None. Additional operating information enclosed ☐.

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

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.
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.

Date Report Submitted: October 5, 1975

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION IV - PROCESS/OPERATIONS EMISSIONS

Plant, institution, or establishment name: HIGGINS POWER PLANT UNIT #1

Normal operating schedule: 24 Hours per day 7 Days per week 52 Weeks per year 8760 Hours per year.

Seasonal and/or peak operation period: None

Dates of annually occurring shutdowns of operations: None. 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[j] 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 TO OIL FIRED POWER PLANT)								

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.

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.

Date Report Submitted: October 5, 1975

ENVIRONMENTAL PROTECTION AGENCY
AIR POLLUTANT EMISSIONS REPORT

FORM APPROVED
OMB NUMBER 158-R75

SECTION V - AIR CLEANING EQUIPMENT

Plant, institution, or establishment name: HIGGINS POWER PLANT UNIT #1

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			
1	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.

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.

Date Report Submitted: October 5, 1975

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: HIGGINS POWER PLANT UNIT #1

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		
								Tons Per Year	Lbs. Per Hour	
					Average	Maximum			Average	Maximum
1	174	12'6"	68	310	120,000	160,000	Particulate	168	53	91
							Sulfur Dioxide	2,744	869	1,498
							Nitrogen Oxide	837	265	457
							Hydrocarbon	Unknown		
							Carbon Monoxide	Unknown		
							Fluorides	Unknown		

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.

Florida Power CORPORATION

ENVIRONMENTAL & FUEL OIL

LABORATORY

Tel: 866-5723

REPORT NO.: 238

SAMPLE DESCRIPTIONS:

DATE: October 10, 1977

Refer to Results

PLANT: Higgins

ANALYSIS: Ambient SO_2 Sampling Program

LABORATORY RESULTS

Description	Date	SO_2 $\mu g/m^3$	SO_2 ppm
H-1	9/21/77	-Void-	
H-1	9/27/77	-Missing-	
H-1	10/3/77	-MDL-	
H-1	10/9/77	-MDL-	

911 856 Note: MDL = Min. Det. Limit

B. P. Hunt, M.A.
Environmental Chemist

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

January 10, 1978

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

Mr. W. P. Stewart, Director
Power Production
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Stewart: Re: AO52-2040, AO52-2042, AO52-2041
AO52-2039, AO52-2038, AO52-2037

Limited manpower availability and scheduling difficulties force us to require that the Southwest District be given written notice 30 days in advance of any stack testing done for the purpose of complying with the regulations of the department, or with the conditions of any permit you hold.

The 30 day notice requirement will be added as a condition of your operating permit, when it is renewed. In the interim time, a minimum notice of 10 working days will be acceptable.

Failure to notify the Southwest District in the prescribed manner will render the results of any test unacceptable to this office.

As a part of the notification, please supply this office with the following information:

1. Source to be sampled.
2. Anticipated operating rate.
3. Test method to be used.
4. Description of sampling equipment.
5. Pollutants to be sampled.

We appreciate the cooperation you have shown in the past, and hope we can continue this cooperation in the future. If you have any questions, please contact this office.

Sincerely,

Robert Stephens

Robert Stephens
Office of Enforcement
Southwest District

RS:en

Florida Power
CORPORATION

June 27, 1975

Mr. W. E. Linne
Florida Department of Pollution Control
P.O. Box 9205
Winter Haven, FL 33880

Dear Mr. Linne:

We are forwarding applications to Operate Pollution Sources for our Bartow Plant Unit #1; Higgins Plant Units 1, 2 and 3; and Higgins Peaking Units P-1, P-2, P-3 and P-4.

Our check, No. 0155726 dated June 26, 1975, in the amount of $160 is also enclosed to cover the required filing fee of $20 per application.

If you should have any questions regarding these applications, please telephone me at (813) 866-4544.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl
Atts.

Florida Power
CORPORATION

D. E. R.

APR 26 1976

SOUTH WEST DISTRICT
ST. PETERSBURG

April 22, 1976

Mr. B. B. Vest
Southwest District, FDER
921 Executive Center Drive North
Suite 200
St. Petersburg, Florida 33742

Dear Mr. Vest:

The Environmental Testing Group of Florida Power Corporation conducted emission tests for Higgins No. 1 during the week of April 12, 1976.

The particulate sampling was done in accordance with techniques published by the Department of Environmental Regulation. The particulate number reported below is the average of the required tests. The SO_2 number was calculated by oxidizing all the sulfur in the fuel to SO_2. The number of BTU's burned was obtained as follows:

42,300 KWH X 12220 BTU/KWH = 516906000 BTU/HR

The results obtained from the emission tests are:

				STDS
Particulate	.080	lb/10^6 BTU	in compliance	0.10
SO_2	2.60	lb/10^6 BTU		2.75
Visible	20%	Opacity	in compliance	20%

Attached are the field data sheets, the visible emission report, fuel oil analysis from which the SO_2 was calculated, and the computer printouts for each test.

Should you have any questions concerning this information, please call me at 866-4544.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr., Manager
Environmental Operations

REP:bb

Attachments

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 1

TEST DATE : 12 APR 76
TEST NO: 1-76

LOAD: 44.5 MW

TEST CONDITION:
%O2: 7.00 ,%CO2: 10.0 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.87970 LBM/LBM-MOLE

AVG STACK VELOCITY= 34.48294 FT/SEC

CONCENTRATION @ STP= .5550696E-05 LBS/SCF

CONCENTRATION @ STP= .3888385E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 95.82368

PARTICULATE MATTER= .8032721E-01 LBS/10**6 BTU @STP

% H2O @ STP= 9.681884

% EXCESS AIR= 46.94209

SULFUR DIOXIDE= .0 LBS/10**6 BTU @STP

NITROUS OXIDE= .0 LBS/10**6 BTU @ STP

READY

RUN NUMBER 1-76
DATE 12 APR 76
ENGINEERS C+S
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 2.1
C FACTOR (NOMOGRAPH) 1.1
$t_{AMBIENT}$ 100
STACK TEMP. (T_S) 320
METER TEMP. ($T_M = t_{AMB} + 20$) 120

PLANT: HIGGINS
UNIT: 1
LOAD: _____ MW
% O_2: _____ FUEL: 0.1
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER 1/4
PROBE LENGTH 6
TYPE PITOT TUBE S
PITOT TUBE (C_P) 0.85
PROBE HEATER TEMP. -
AVERAGE ΔP 0.2
STATIC PRESS. ($P_S = P_{ATM} + P_G$) 30.17
$P_m = P_{ATM}$ 30.18
P_S / P_m 0.99
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.24

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
	INITIAL	334.75	0	0	0			0				
1	3		0.21	0.64	0.64	103	101					
2	6		0.24	0.72	0.72	105	101				6.7	
3	9		0.28	0.85	0.85	109	102					
4	3	338.68	0.23	0.69	0.69	112	103				6.7	
5	6		0.26	0.78	0.78	115	103					
6	9	342.73	0.28	0.85	0.85	119	104				6.8	
7	3		0.25	0.75	0.75	121	105					
8	6		0.28	0.85	0.85	123	107					
9	9	347.09	0.30	0.91	0.91	125	108					
10	3		0.25	0.75	0.75	127	109					
11	6		0.28	0.85	0.85	129	110					
12	9	351.29	0.30	0.91	0.91	131	111					
13	3		0.28	0.85	0.85	131	112					
14	6		0.30	0.91	0.91	132	113				7.3	
15	9	355.73	0.32	0.97	0.97	134	114					
16	3		0.26	0.78	0.78	134	116				7.3	
17	6		0.30	0.91	0.91	135	117					
18	9	360.06	0.32	0.97	0.97	136	117				7.3	
19	3		0.24	0.72	0.72	131	118					
20	6		0.24	0.72	0.72	131	118					
21	9	364.04	0.25	0.75	0.75	132	118					
22	3		0.25	0.75	0.75	133	118					
23	6		0.26	0.78	0.78	134	119					
24	9	368.10	0.26	0.78	0.78	136	120					

TOTAL _____ min. _____ cf.
_____ hr.

AVG. p_M _____ "H_2O / "Hg

AVG. _____ t_M

7.02

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER _____
DATE _____
ENGINEERS _____
SAMPLE BOX NUMBER _____
METER BOX NUMBER _____
METER ΔH _____
C FACTOR (NOMOGRAPH) _____
$t_{AMBIENT}$ _____
STACK TEMP. (T_S) _____
METER TEMP. ($T_M = t_{AMB} +$) _____

PLANT: _____
UNIT: _____
LOAD: _____ MW
% O_2: _____ FUEL: _____
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER _____
PROBE LENGTH _____
TYPE PITOT TUBE _____
PITOT TUBE (C_P) _____
PROBE HEATER TEMP. _____
AVERAGE ΔP _____
STACK PRESS. ($P_S = P_{ATM} + P_G$) _____
$P_m = P_{ATM}$ _____
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + p_M$) _____

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE " HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3		0.25	0.75	0.75	136	120	0				
26	6		0.25	0.75	0.75	136	120					
27	9	372.28	0.25	0.75	0.75	137	121					
28	3		0.21	0.64	0.64	137	121					
29	6		0.23	0.69	0.69	137	122					
30	9	376.13	0.22	0.66	0.66	137	122					
31	3		0.21	0.64	0.64	137	122					
32	6		0.21	0.64	0.64	137	122					
33	9	379.87	0.19	0.57	0.57	137	122					
34	3		0.19	0.57	0.57	137	122					
35	6		0.20	0.60	0.60	137	122					
36	9	383.51	0.20	0.60	0.60	137	122					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												32.5

TOTAL 108 min. 48.76 cf.
_____ hr.

AVG. p_M .06 "H_2O "Hg

AVG. 121.91 t_M
541.97

$\Delta p = 0.25$

$O_2 = 7.02$

AVE. Ts = 785

WATER

IMPINGERS

#1	823	
	742	
		81
#2	610	
	602	
		8
#3	519.	
	516.5	
		2.5
#4	915	
	905	
		10

TOTAL 101.5

● PARTICULATE ●

THIMBLE #4 79.2232 − 79.1128 = .1104

BEAKER #4 95.9850 − 95.9823 = .0027

TOTAL .1131 gm

AIR POLLUTION ANALYSIS

PLANT: HIGGINS TEST DATE : 14 APR 76
UNIT: 1 TEST NO: 3-76

LOAD: 42.5 MW

TEST CONDITION:
%O2: 7.00 ,%CO2: 10.0 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.87650 LBM/LBM-MOLE

AVG STACK VELOCITY= 33.94859 FT/SEC

CONCENTRATION @ STP= .5313148E-05 LBS/SCF

CONCENTRATION @ STP= .3721977E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 95.90854

PARTICULATE MATTER= .7989436E-01 LBS/10**6 BTU @STP

% H2O @ STP= 9.708454

% EXCESS AIR= 46.94209

SULFUR DIOXIDE= .0 LBS/10**6 BTU @STP

NITROUS OXIDE= .0 LBS/10**6 BTU @ STP
READY

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER 3-76
DATE 4-14-76
ENGINEERS S&C
SAMPLE BOX NUMBER 1
METER BOX NUMBER 1
METER ΔH 2.1
C FACTOR (NOMOGRAPH) 1.1
$t_{AMBIENT}$ 100
STACK TEMP. (T_S) 320
METER TEMP. ($T_M = t_{AMB} + 20$) 120

PLANT: HIGGINS
UNIT: 1
LOAD: _____ MW
% O_2: _____ FUEL: 01

BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER 1/4
PROBE LENGTH 6
TYPE PITOT TUBE S
PITOT TUBE (C_P) .85
PROBE HEATER TEMP. -
AVERAGE ΔP 0.2
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.19
$P_m = P_{ATM}$ 30.20
P_S / P_m 0.99
METER PRESS. ($P_M = P_{ATM} + p_H$) 30.25

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3	433.05	0.19	0.57	0.57	100	98	0				
26	6		0.21	0.63	0.63	102	98					
27	9	436.80	0.25	0.75	0.75	105	98					
28	3		0.21	0.63	0.63	108	99					
29	6		0.22	0.65	0.65	111	100					
30	9	440.69	0.27	0.91	0.81	114	100					
31	3		0.23	0.69	0.69	116	102					
32	6		0.24	0.72	0.72	120	103					
33	9	444.72	0.28	0.85	0.85	122	104					
34	3		0.23	0.69	0.69	122	106					
35	6		0.24	0.72	0.72	124	107					
36	9	448.81	0.29	0.89	0.89	126	108					
37	3		0.27	0.81	0.81	128	109					
38	6		0.27	0.81	0.81	130	110					
39	9	453.08	0.31	0.95	0.95	131	111					
40	3		0.27	0.81	0.81	132	113					
41	6		0.30	0.91	0.91	132	114					
42	9	457.43	0.31	0.95	0.95	133	114					
43	3		0.22	0.65	0.65	129	114					
44	6		0.25	0.75	0.75	129	115					
45	9	461.39	0.24	0.72	0.72	130	116					
46	3		0.24	0.72	0.72	130	116					
47	6		0.26	0.79	0.79	130	117					
48	9	465.46	0.25	0.75	0.75	132	117					

TOTAL _____ min. _____ cf.
_____ hr.

AVG. p_M _____ "H_2O / 0.05"Hg

AVG. _____ t_M

AVE. Ts = _____

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER _____
DATE _____
ENGINEERS _____
SAMPLE BOX NUMBER _____
METER BOX NUMBER _____
METER ΔH _____
C FACTOR (NOMOGRAPH) _____
$t_{AMBIENT}$ _____
STACK TEMP. (T_S) _____
METER TEMP. ($T_M = t_{AMB} +$) _____

PLANT: _____
UNIT: _____
LOAD: _____ MW
% O_2: _____ FUEL: _____
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER _____
PROBE LENGTH _____
TYPE PITOT TUBE _____
PITOT TUBE (C_P) _____
PROBE HEATER TEMP. _____
AVERAGE ΔP _____
STACK PRESS. ($P_S = P_{ATM} + P_G$) _____
$P_m = P_{ATM}$ _____
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + p_H$) _____

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3		0.23	0.69	0.69	132	117	0				
26	6		0.25	0.75	0.75	133	118					
27	9	469.48	0.24	0.72	0.72	133	118					
28	3		0.23	0.69	0.69	133	118					
29	6		0.26	0.79	0.79	133	118					
30	9	473.51	0.24	0.72	0.72	134	119					
31	3		0.22	0.65	0.65	135	120					
32	6		0.24	0.72	0.72	135	120					
33	9	477.41	0.22	0.65	0.65	136	121					
34	3		0.20	0.60	0.60	136	121					
35	6		0.21	0.63	0.63	136	121					
36	9	481.16	0.21	0.63	0.63	136	121					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
												320

TOTAL 108 min. / _____ hr. 48.11 cf. $\Delta p = 0.244$ AVG. p_M _____ "H_2O / .05 "Hg AVG. 119 t_M 579 AVE. Ts = 780

WATER

	799
#1	733
	66
	621.5
#2	598.0
	23.5
	506
#3	503
	3
	966.0
#4	957.5
	8.5

TOTAL 101

PARTICULATE

	79.9062	
THIMBLE #2	79.8006	
	.1056	

	99.6365	
BEAKER #2	99.6347	
	.0018	

TOTAL	.1074

Gilbert Associates, Inc. engineers and consultants
Reply To: P. O. Box 1498, Reading, PA 19603
Gilbert Commonwealth Companies
Laboratory Services
30 Noble Street, Reading, PA 19611
215-775-2600

CERTIFICATE OF ANALYSIS

LABORATORY NO: 24001 RECEIVED: 3/30/76 REPORTED: 4/6/76

CLIENT: Florida Power Corporation
Higgins Plant, Oldsmar,FL

SAMPLE DESCRIPTION: No. 6 Fuel Oil
No. 2 Fuel Oil Tank
Sampled 3/24/76

- - - - - - - - - - - -

SODIUM	ppm Na	54.3
GRAVITY	°API	13.3
VISCOSITY	SSF @ 122°F	223
SULFUR	%	2.39
ASH	%	0.075
VANADIUM	% V	0.025
WATER (by distillation)	%	0.52
POUNDS PER GALLON		8.138
B.t.u. PER POUND		18,329
B.t.u. PER GALLON		149,161

Respectfully submitted,

T. M. Isert

T. M. Isert - Chief Chemist
Laboratory Services

OMD
cc: S. Z. Douglas
W. P. Stewart
G. W. Marshall
J. B. Clardy ✓
B. P. Hunt

RECEIVED
APR 0 8 1976
PRODUCTION DEPARTMENT

VISIBLE EMISSION FIELD REPORT

FLORIDA POWER CORPORATION

P.O. BOX 14042, ST. PETE., FLA. 33733

DATE 12 APR 76
TIME 1300

PERMIT NUMBER A052-2040
SOURCE NAME Higgins #1 COUNTY Pinellas
SOURCE LOCATION Oldsmar
SOURCE DESCRIPTION (TYPE) Power Plant
POINT OF OBSERVATION Southeast
DISTANCE TO SOURCE 200 ft

MIN	SECONDS 0	15	30	45	MIN	SECONDS 0	15	30	45
0	20		20		30				
1	20		20		31				
2	20		20		32				
3	20		20		33				
4	20		20		34				
5	20		20		35				
6	20		20		36				
7	20		20		37				
8	20		20		38				
9	20		20		39				
10	20		20		40				
11	20		20		41				
12	20		20		42				
13	20		20		43				
14	20		20		44				
15	20		20		45				
16	20		20		46				
17	20		20		47				
18	20		20		48				
19	20		20		49				
20	20		20		50				
21	20		20		51				
22	20		20		52				
23	20		20		53				
24	20		20		54				
25	20		20		55				
26	20		20		56				
27	20		20		57				
28	20		20		58				
29	20		20		59				

DIRECTION OF OBSERVER FROM SOURCE Southeast

DIRECTION OF WIND FROM SOURCE North

WIND VELOCITY 5 MPH

DIRECTION OF SUN FROM SOURCE Southeast

CLOUD COVERAGE (IN %) 10%

NOTE:
1. MINIMUM OF 25 READINGS MUST BE TAKEN.
2. READINGS ARE TO BE TAKEN EVERY 15-30 SECONDS TO THE NEAREST 5% OPACITY.

SUM OF OPACITY READINGS 1200

TOTAL NUMBER OF READINGS 60

OPACITY = $\frac{\text{SUM OF OPACITY READINGS}}{\text{TOTAL NUMBER OF READINGS}}$ = 20%

OBSERVER Dennis A. Shantz CERT. NO.

NOTES -

THIS FIELD REPORT SHEET IS DRAWN IN ACCORDANCE WITH THE REQUIREMENTS OF METHOD 9 (VISUAL DETERMINATION OF THE OPACITY OF OMISSIONS) EPA STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES, FEDERAL REGISTER VOL.36, NO. 247, DEC. 23, 1971 AND STATE OF FLORIDA DEPT. OF POLLUTION CONTROL AIR POLLUTION REGULATIONS F.A.C. CH. 17-2.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Orlando
Location of School

5 Nov 1975
Date

This is to Certify That

DENNIS A SHANTZ has completed the STATE OF FLORIDA PLUME EVALUATION SCHOOL and is qualified to rate visible emmissions pursuant to EPA Reference Method 9.

Certifying Official

Training Off.
Title

Form I-8 (7/75)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

APR 2 1976

Mr. F. E. Hoffmanns
District Engineer
Department of Environmental Regulation
Southwest District
9721 Executive Center Drive, North
Suite 200
St. Petersburg, Florida 33702

Dear ~~Mr. Hoffmanns~~ Fred:

Attached are copies of the visible emission observations taken on my recent trip to your district. Mr. Bill Brown requested copies of these for your files.

I would like to express my appreciation for the cooperation extended to me by you and your staff during my visit.

Sincerely yours,

Dick

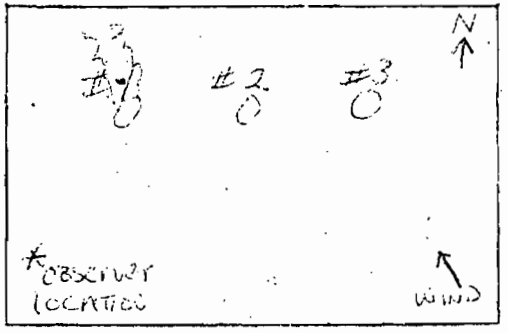
Richard A. Schutt
Environmental Engineer
Air Enforcement Branch
Enforcement Division

Attachments (7)

FIGURE 9-1
RECORD OF VISUAL DETERMINATION OF OPACITY

PAGE 1 of 2

COMPANY FLA Power Corp.
LOCATION Oldsmar, FLA.
TEST NUMBER 1
DATE MARCH 15 1976
TYPE FACILITY Power PLANT
CONTROL DEVICE NONE



HOURS OF OBSERVATION 10:44 - 10:58
OBSERVER RICHARD A. SCHUTT
OBSERVER CERTIFICATION DATE MARCH 1976
OBSERVER AFFILIATION EPA
POINT OF EMISSIONS Higgins Unit No. 1
HEIGHT OF DISCHARGE POINT 150 Feet

	Initial			Final
CLOCK TIME	10:44			10:58
OBSERVER LOCATION Distance to D scharge	500Ft.			
Direction from Discharge	SW			
Height of Observation Point	Ground			
BACKGROUND DESCRIPTION	Blue Sky			
WEATHER CONDITIONS Wind Direction	SE			
Wind Speed	10-15MPH			
Ambient Temperature	80°F			
SKY CONDITIONS (clear, overcast, % clouds, etc.)	10-15%	CLOUDS		
PLUME DESCRIPTION Color	Black			
Distence Visible	100 Ft.			
OTHER INFORMATION	Unit came on line-Fire burning oil.			

SUMMARY OF AVERAGE OPACITY

Set Number	Time Start--End	Opacity Sum	Opacity Average
1	10:44-10:56	545	22.7
2	10:50-10:58	550	22.9

Readings ranged from 15 to 30 % opacity

The source ~~was~~ was not in compliance with 17-2 at the time evaluation was made.

FIGURE 9-2 OBSERVATION RECORD PAGE ___ OF ___

COMPANY _____
LOCATION _____
TEST NUMBER _____
DATE _____

OBSERVER _____
TYPE FACILITY _____
POINT OF EMISSIONS _____

Hr.	Min.	Seconds 0	15	30	45	STEAM PLUME (check if applicable) Attached	Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

FIGURE 9-2 OBSERVATION RECORD (Continued) PAGE 2 OF 2.

COMPANY FLA. Power Corp
LOCATION CRYSTAL RIVER, FLA
TEST NUMBER 1
DATE MARCH 15, 1976

OBSERVER R. SCHUTT
TYPE FACILITY POWER PLANT
POINT OF EMISSIONS Biggin Unit 1

Hr.	Min.	Seconds 0	15	30	45	STEAM PLUME (check if applicable) Attached	Detached	COMMENTS
	30							
	31							
	32							
	33							
	34							
	35							
	36							
	37							
	38							
	39							
	40							
	41							
	42							
	43							
10	44			15	20			
10	45	20	25	20	25			
10	46	25	25	20	25			
10	47	20	25	25	20			
10	48	25	25	25	25			
10	49	25	25	20	25			
10	50	20	25	25	30			
10	51	25	30	30	25			
10	52	25	25					
	53							
10	54			20	20			
	55	20	20	20	20			
	56	25	25	20	25			
	57	20	20	20	20			
	58	20	20					
	59							

[FR Doc.74-26150 Filed 11-11-74;8:45 am]

ANNUAL OPERATING REPORT
Calendar year 1976

D. E. R.
MAR 10 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Submit a separate report for each permitted source by FEBRUARY 28, 1977

SECTION 1: General

SOURCE NAME: HIGGINS UNIT #1

MAILING ADDRESS: FLORIDA POWER CORPORATION
P. O. Box 14042, St. Petersburg, FL 33733

TELEPHONE NO: 813/866-4544

OPERATING PERMIT NO: A052-2040

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 (6949.8 hours (1976))
e.g. 8 hrs perday, 5 dys per wk and 50 wk/yr.

b. DESIGN CRITERIA: MAXIMUM OUTPUT 46 MW
e.g. 850 MW, 750 tons/dy

c. NORMAL(AVERAGE) OUTPUT 28.4 MW = Gross Generation / Hours Operated
e.g. 424 MW, 670 tons/dy.

d. MAXIMUM PEAK THAT OCCURED DURING ANY ONE DAY 46 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
N/A	N/A tons/yr
	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.

862.7 10^6 cu ft Gas 9109.9 10^3 gal NO. 6 OIL 2.4 %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. 54.2 tons of particulates 1789 tons of sulfur dioxide

Not Tested tons of nitrogen dioxide Not Tested tons of carbon monoxide

Not Tested tons of hydrocarbon tons (other)

b. STATE METHOD OF CALULATIONS USED IN DETERMINING EMISSION RATES

$$\left(\frac{\text{Lbs. Particulate}}{10^6}\right)\left(\frac{10^6 \text{ BTU}}{\text{BBL}}\right)\left(\text{BBLS}\right)\left(\frac{\text{Ton}}{2000 \text{ Lbs}}\right) = \text{Tons Particulate}$$

$$\left(\frac{\text{Lbs. Oil}}{\text{Gal. Oil}}\right)\left(\frac{42 \text{ Gal}}{\text{BBL}}\right)\left(\%\ \text{S}\right)\left(\frac{2 \text{ Lb } SO_2}{\text{Lb S}}\right)\left(\text{BBLS}\right)\left(\frac{\text{Ton}}{2000 \text{ Lbs}}\right) = \text{Tons } SO_2$$

ANNUAL OPERATING REPORT
calendar year 1976

SECTION 5(cont't)

c. STACK TESTED: 12-14 April 1976 date

STACK TEST CONDITIONS: 45 MW PROCESS RATE DURING TEST

STACK TEST CONDUCTED BY: FLORIDA POWER CORP. (Campbell & Shantz)

STACK TEST WITNESSED BY: DER (Ralph Gardner)

SECTION 6: OPERATIONAL PROBLEMS, IF ANY: NORMAL

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: UNKNOWN

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.

for W.P. Stewart
Eustace Parnelle
Signature of owner or authorized representative

R. E. Parnelle, Jr., Manager, Environmental Operations
Typed name and title

March 4, 1977
Date

DEPARTMENT OF POLLUTION CONTROL

OF THE

STATE OF FLORIDA

In re: Application of Florida Power Corporation for Variances to State Air Emission Standards for Fossil Fuel Steam Generators.

Higgins Unit No. 1
Permit No. A052-2040

Comes now, FLORIDA POWER CORPORATION, by and through its undersigned duly authorized officer, and files this Application for a variance to the existing air emission standards for Fossil Fuel Steam Generators as prescribed by Chapter 17-2.04(6)(e) 2. a and b, Rules of the Florida Department of Pollution Control (FDPC). This application is filed pursuant to Section 403.201 of the Florida Statutes. The following facts are submitted in support of this Application.

1. Higgins Unit No. 1 is currently operating pursuant to FDPC Operation Permit No. A052-2040. A separate Application for a new Operation Permit has been filed.

2. The burners on Higgins Unit No. 1 are being modified and it is expected that, with this modification, the unit will meet the State Air Emission Limiting Standards prescribed by Chapter 17-2.04(6)(e) 2. a and b, FDPC Rules, which become effective July 1, 1975.

3. Stack emission tests will be performed shortly after the burner modification is completed to determine if it is in compliance with the aforesaid standards.

4. The burner modificat-on and subsequent stack emission testing may not be completely accomplished before July 1, 1975.

THEREFORE, Florida Power Corporation requests a variance from Florida Air Emission Limiting Standards prescribed by Chapter 17.2.04(6)(e) 2. a and b, for its Higgins Unit No. 1 until January 1, 1977. An Adjudicatory Hearing is requested.

Dated: June 18, 1975

Respectfully submitted,

By Richard E. Raymond
Richard E. Raymond
Sr. Vice President

OFFICE OF THE GENERAL COUNSEL

By H. A. Evertz III

S. A. Brandimore
R. W. Neiser
H. A. Evertz, III
F. H. Bass, Jr.
J. A. McGee

Attorneys for
Florida Power Corporation
P. O. Box 14042
St. Petersburg, FL 33733

All communication with respect to this Application should be addressed to:

Messrs. R. E. Parnelle and H. A. Evertz, III, Esq.
Florida Power Corporation
P. O. Box 14042
St. Petersburg, FL 33733

Florida Power
CORPORATION

September 9, 1975

Mr. W. E. Linne
Florida Department of
Environmental Regulation
P. O. Box 20350
St. Petersburg, Florida 33733

Dear Mr. Linne:

The Environmental Testing Group of Florida Power Corporation conducted the emission tests for Higgins No. 1 (Permit No. A052-2040) on July 31 and September 3, 1975.

The particulate sampling was done in accordance with techniques published by the Department of Environmental Regulation. The particulate number reported below is the average of the required tests. The SO_2 number was calculated by oxidizing all the sulfur in the fuel to SO_2. The number of BTUs burned was obtained as follows:

40,700 KWH x 12,268 BTU/KWH = 499,307,600 BTU/Hr.

The results obtained from the emission tests are:

Particulate	0.09 lb/10^6 BTU
SO_2	2.49 lb/10^6 BTU ~~+~~ 2.15
Visible	30% opacity

Attached are the field data sheets, the visible emission report, fuel oil analysis from which the SO_2 was calculated, and the computer printouts for each test.

Should you have any questions concerning this information, please call me at (813) 866-4544.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cb
Atts.

Higgins 1, 2, 3
Anclote 1
Bartow 1, 2, 3
Crystal 1, 2

Tomkins

75TH YEAR

Florida Power
CORPORATION

September 3, 1975

Mr. J. H. Kerns
Florida Dept. of Environmental Regulation
500 E. Central Avenue
Winter Haven, FL 33880

Dear Mr. Kerns:

Re: Your letter dated August 26, 1975 -
concerning Applications for Air Operation Permits
Crystal River Units 1 and 2

Your letter dated August 27, 1975 - concerning
Applications for Air Operation Permits for
Higgins Units 1, 2 and 3
Anclote Unit 1
Bartow Units 1, 2 and 3

Florida Power Corporation has filed with the DER an Application for Variances to Florida Air Emission Limiting Standards for Fossil Fuel Steam Generators for Crystal River Units 1 and 2; Anclote Unit 1, Bartow Units 1, 2 and 3; and Higgins Units 1, 2 and 3.

We have changed the burners on Higgins Unit 3; and since the request for Variances, have modified the burners on Bartow Unit 1. Tests have shown that these units are now in compliance and test results have been forwarded to the DER.

Burners on Higgins Units 1 and 2 have also been modified and will be tested September 2 - 12, 1975. The results of these tests will be forwarded to the DER as soon as available.

Crystal River Units 1 and 2 have been identified by the Federal Energy Administration (FEA) as candidates for conversion from oil to coal. It is our desire that the DER process our Application for Variances for these units as expeditiously as possible, as an emission control strategy would be unwise until the fuel issue is settled by the FEA.

We had every intention to be in compliance at Anclote Unit No. 1 and Bartow Units 2 and 3 but burner modifications which we tried on these units did not work satisfactorily. A letter giving details of our "good faith" effort to meet the emission standards was sent by our President, A. H. Hines, to your Secretary, Mr. J. W. Landers, on July 17, 1975. Further comments on the subject were contained in my response to a letter from your Mr. J. P. Subramani. We are now negotiating with manufacturers for methods by which we can bring these units into compliance, but we do request a variance from emission standards until this can be accomplished.

To summarize: We have submitted Applications for Operation Permits and stack test data which should be sufficient for you to issue Air Operation Permits for Bartow Unit 1 and Higgins Unit 3. Higgins Units 2 and 3 will be tested September 2 - 12 and results forwarded to you as soon as available. Crystal River Units 1 and 2 are being considered by the FEA for conversion from oil to coal, and we request a variance from emission standards until this issue is settled. We are negotiating with manufacturers for methods to bring Anclote Unit 1 and Bartow Units 2 and 3 into compliance and we have requested a variance until this can be accomplished.

Should you have any questions concerning the contents of this letter, please call me at (813) 866-4544.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl

cc: J. P. Subramani
W. P. Stewart

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
POST OFFICE BOX 9205
500 EAST CENTRAL AVENUE
WINTER HAVEN, FLORIDA 33880

JOSEPH W. LANDERS JR.
SECRETARY

AUGUST 12, 1975
FLORIDA POWER CORP.
PINELLAS CO. AP

B. L. Griffin
Vice-President
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

RE: Air Operation Permit
Higgins Unit #1, 2 & 3
Anclote Unit #1
Bartow Unit #1, 2 & 3

Dear Mr. Griffin:

Operation permit applications submitted on June 24, 1975 for the above reference, Steam Generators, indicates emissions based on test data are not in compliance with Chapter 17-2.04(6)(e) 1 a,b, Particulate Matter and Visible Emission.

According to Chapter 17-2.03 (2), General Restrictions, all existing air pollution sources shall comply with Chapter 17-2 FAC Air Pollution no later than July 1, 1975. After review of the applications and all the information, the Department has determined that the operation of the above installations will not be in accord with applicable laws, rules, or regulations. The Department is denying the permits according to Chapter 17-4.07 Standards of Observing or Denying Permits F.A.C. We therefore wish to inform Florida Power Corporation of the following options available:

1) Submission of a compliance schedule in conjunction with a consent order which will result in a bond deposit and a court order to eliminate the illegal emission.

2) Termination of operations.

I would suggest that your company select the option you plan on pursuing and inform this office no later than September 1, 1975. If this office can be of further assistance, please do no hesitate to contact us.

Sincerely,

J. H. Kerns

J. H. Kerns, P.E.

Higgins #1

AIR POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 1

TEST DATE : 31 JULY 75
TEST NO: 2-75

LOAD: 43 MW

TEST CONDITION:
%O2: 6.00 ,%CO2: 10.0 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.33684 LBM/LBM-MOLE

AVG STACK VELOCITY= 35.67613 FT/SEC

CONCENTRATION @ STP= .6127791E-05 LBS/SCF

CONCENTRATION @ STP= .4292653E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 99.42737

PARTICULATE MATTER= .8998579E-01 LBS/10**6 BTU @STP

% H2O @ STP= 13.91686

% EXCESS AIR= 37.09200

SULFUR DIOXIDE= .0 LBS/10**6 BTU @STP

NITROUS OXIDE= .0 LBS/10**6 BTU @ STP
READY

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER 2-75
DATE 31 July 1975
ENGINEERS C+S
SAMPLE BOX NUMBER 1
METER BOX NUMBER 1
METER ΔH 2.1
C FACTOR (NOMOGRAPH) 1.03
$t_{AMBIENT}$ 105
STACK TEMP. (T_S) 320
METER TEMP. ($T_M = t_{AMB} + 20$) 125

PLANT: HIGGINS
UNIT: 1
LOAD: 43 MW
% O_2: ____ FUEL: 0.1
BTU's BURNED: ____

HEATER BOX SETTING ____
PROBE TIP DIAMETER 1/4
PROBE LENGTH 6
TYPE PITOT TUBE S
PITOT TUBE (C_P) 0.84
PROBE HEATER TEMP. ____
AVERAGE ΔP 0.25
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.15
$P_m = P_{ATM}$ 30.07
P_S / P_m 1.001
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.13

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3	363.10	0.21	0.63	0.63	112	110	0				
26	6		0.23	0.69	0.69	118	110				6.1	
27	9	366.90	0.24	0.72	0.72	122	111				6.1	
28	3		0.24	0.72	0.72	124	111				6.0	
29	6		0.25	0.75	0.75	127	112				6.0	
30	9	371.02	0.25	0.75	0.75	130	113				6.0	
31	3		0.26	0.77	0.77	132	114				6.1	
32	6		0.26	0.77	0.77	135	115					
33	9	375.16	0.25	0.75	0.75	136	116					
34	3		0.27	0.80	0.80	136	118				6.0	
35	6		0.28	0.84	0.84	137	118				6.0	
36	9	379.44	0.27	0.80	0.80	138	119				6.0	
37	3		0.28	0.84	0.84	138	120				6.0	
38	6		0.29	0.87	0.87	140	120				6.0	
39	9	383.84	0.29	0.87	0.87	141	121				6.1	
40	3		0.25	0.75	0.75	140	122					
41	6		0.30	0.90	0.90	141	123					
42	9	388.21	0.30	0.90	0.90	142	124					
43	3		0.23	0.69	0.69	134	124					
44	6		0.27	0.80	0.80	135	124					
45	9	392.42	0.28	0.84	0.84	137	124					
46	3		0.24	0.72	0.72	136	124					
47	6		0.28	0.84	0.84	138	124					
48	9	396.61	0.29	0.87	0.87	140	125					

TOTAL ____ min. ____ cf.
____ hr.

AVG. p_M ____ "H_2O / ____ "Hg

AVG. 128.9 t_M
588.9

AVE. Ts = ____

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER _____
DATE _____
ENGINEERS _____
SAMPLE BOX NUMBER _____
METER BOX NUMBER _____
METER ΔH _____
C FACTOR (NOMOGRAPH) _____
$t_{AMBIENT}$ _____
STACK TEMP. (T_S) _____
METER TEMP. ($T_M = t_{AMB} +$) _____

PLANT: _____
UNIT: _____
LOAD: _____ MW
% O_2: _____ FUEL: _____
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER _____
PROBE LENGTH _____
TYPE PITOT TUBE _____
PITOT TUBE (C_P) _____
PROBE HEATER TEMP. _____
AVERAGE ΔP _____
STACK PRESS. ($P_S = P_{ATM} + P_G$) _____
$P_m = P_{ATM}$ _____
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + p_M$) _____

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ACTUAL	DRY GAS TEMP. °F (t_M) INLET	OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3		0.24	0.72	0.72	140	125	0				
26	6		0.27	0.80	0.80	141	125					
27	9	400.97	0.29	0.87	0.87	142	126					
28	3		0.23	0.69	0.69	142	126					
29	6		0.27	0.80	0.80	142	126					
30	9	405.21	0.29	0.87	0.87	143	127					
31	3		0.23	0.69	0.69	143	127					
32	6		0.26	0.77	0.77	143	127					
33	9	409.37	0.27	0.80	0.80	144	128					
34	3		0.21	0.63	0.63	144	128					
35	6		0.25	0.75	0.75	144	128					
36	9	413.47	0.27	0.80	0.80	144	128					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												

TOTAL 108 min. (1.48 hr.) 50.37 cf. $\Delta\rho = 0.261$ AVG. p_M .79 "H_2O (0.06"Hg) AVG. 128.9 t_M (588.9) $O_2 = 6.03$ AVE. Ts = 789.

Water

Impinger #1

873.3
726.0
147.3

Impinger #2

574.0
615.5
-41.5

Impinger #3

530.5
499.0
40.5

Impinger #4

917.2
907.8
9.4

Total 155.7

Participate

Maine

87.7165
87.7052
.1213

Vermont

95.9878
95.9821
.0057

Total

.1213
.0057
.1270

POLLUTION ANALYSIS

PLANT: HIGGINS
UNIT: 1

TEST DATE : 3 SEPT 75
TEST NO: 3-75

LOAD: 44MW

TEST CONDITION:
%02: 5.70 ,%C02: 10.3 , %CO: 0.0

AVG MOLECULAR WEIGHT= 28.65381 LBM/LBM-MOLE

AVG STACK VELOCITY= 34.01886 FT/SEC

CONCENTRATION @ STP= .6346983E-05 LBS/SCF

CONCENTRATION @ STP= .4446202E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 96.32481

PARTICULATE MATTER= .8973432E-01 LBS/10**6 BTU @STP

% H20 @ STP= 11.54239

% EXCESS AIR= 36.24969

SULFUR DIOXIDE= .0 LBS/10**6 BTU @STP

RUN NUMBER 3-75
DATE 3 Sept 1975
ENGINEERS C+S
SAMPLE BOX NUMBER 1
METER BOX NUMBER 1
METER ΔH 2.1
C FACTOR (NOMOGRAPH) 1.03
$t_{AMBIENT}$ 105
STACK TEMP. (T_S) 320
METER TEMP. ($T_M = t_{AMB} + 20$) 125

FIELD DATA

PLANT: HIGGINS
UNIT: 1
LOAD: 43 MW
% O_2: _____ FUEL: 0.1
BTU's BURNED: _____

HEATER BOX SETTING -
PROBE TIP DIAMETER 1/4
PROBE LENGTH 6
TYPE PITOT TUBE S
PITOT TUBE (C_P) 0.85
PROBE HEATER TEMP. -
AVERAGE ΔP 0.25
STATIC PRESS. ($P_S = P_{ATM} + P_G$) 30.08
$P_m = P_{ATM}$ 30.00
P_S / P_m 1.001
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.05

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFACE ΔH (p_M) "H_2O (YELLOW) ACTUAL	DRY GAS TEMP. °F (t_M) INLET	DRY GAS TEMP. °F (t_M) OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
	INITIAL	823.9	0	0	0			0			O_2	
1	3		0.25	0.74	0.74	115	112	.5				
2	6		0.28	0.82	0.82	119	112	.5			5.95	317
3	9	828.15	0.32	0.95	0.95	122	113	.5			5.95	316
4	3		0.25	0.74	0.74	125	114	.5			5.9	325
5	6		0.27	0.80	0.80	128	114	.5			5.9	325
6	9	832.33	0.29	0.86	0.86	131	115	.5			5.9	326
7	3		0.25	0.74	0.74	132	117	.5			5.9	325
8	6		0.25	0.74	0.74	134	118	.5				
9	9	836.443	0.27	0.80	0.80	136	119	.5			5.9	325
10	3		0.22	0.65	0.65	136	120	.5			5.9	325
11	6		0.23	0.68	0.68	137	122	.5			5.9	325
12	9	840.385	0.24	0.72	0.72	139	123	.5			5.9	325
13	3		0.21	0.63	0.63	139	124	.5			5.9	327
14	6		0.23	0.68	0.68	140	125	.5			5.95	327
15	9	844.28	0.23	0.68	0.68	142	126	.5				
16	3		0.18	0.55	0.55	140	126	.5				
17	6		0.19	0.57	0.57	141	127	.5				
18	9	847.90	0.19	0.57	0.57	141	128	.5				
19	3		0.22	0.65	0.65	137	128	.5				
20	6		0.29	0.86	0.86	139	129	.5				
21	9	852.17	0.30	0.90	0.90	142	130	.5				
22	3		0.24	0.72	0.72	142	130	.5				
23	6		0.27	0.80	0.80	143	130	.5				
24	9	856.41	0.28	0.84	0.84	145	130	.5				

TOTAL _____ min. _____ cf.
_____ hr.

AVG. p_M _____ "H_2O / "Hg AVG. _____ t_M

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER _____
DATE _____
ENGINEERS _____
SAMPLE BOX NUMBER _____
METER BOX NUMBER _____
METER ΔH _____
C FACTOR (NOMOGRAPH) _____
$t_{AMBIENT}$ _____
STACK TEMP. (T_S) _____
METER TEMP. ($T_M = t_{AMB} +$) _____

PLANT: _____
UNIT: _____
LOAD: _____ MW
% O_2: _____ FUEL: _____
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER _____
PROBE LENGTH _____
TYPE PITOT TUBE _____
PITOT TUBE (C_P) _____
PROBE HEATER TEMP. _____
AVERAGE ΔP _____
STACK PRESS. ($P_S = P_{ATM} + P_G$) _____
$P_m = P_{ATM}$ _____
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + p_M$) _____

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFACE ΔH (p_M) "H_2O (YELLOW) DESIRED	ACTUAL	DRY GAS TEMP. °F (t_M) INLET	OUTLET	PUMP VAC. GAUGE "HG.	BOX TEMP. °F	IMPINGER TEMP. °F	STACK PRESS. "H_2O	STACK TEMP. °F
25	3		0.25	0.74	0.74	143	130	.5				
26	6		0.25	0.74	0.74	145	131	.5				
27	9	860.6	0.27	0.80	0.80	146	131	.5				
28	12		0.22	0.65	0.65	147	132	.5				
29	15		0.25	0.74	0.74	145	132	.5				
30	18	864.655	0.25	0.74	0.74	147	132	.5				
31	21		0.20	0.60	0.60	145	133	.5				
32	24		0.22	0.65	0.65	146	133	.5				
33	27	868.577	0.24	0.72	0.72	147	134	.5				
34	30		0.18	0.55	0.55	146	134	.5				
35	33		0.20	0.60	0.60	147	134	.5				
36	36	872.313	0.20	0.60	0.60	147	134	.5				
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												

TOTAL 108 min. / _____ hr. 48.413 cf. $\Delta_p = 0.241$ AVG. p_M 0.72 "H_2O / .05 "Hg AVG. 132.17 t_M 592.17 $O_2 = 5.913$ AVE. Ts = 784

LAB ANALYSIS

"MOISTURE DETERMINATION"

I. #1 Impinger + Particulate + H_2O = 825 g

#1 Impinger + H_2O added = 728 g

H_2O Collected = 97 grams

II. #2 Impinger + Particulate + H_2O = 627.3 g

#2 Impinger + H_2O added = 619.2 g

H_2O Collected = 9.1 grams

III. #3 Impinger + Particulate + H_2O = 502.5 g

#3 Impinger (Dry) = 497.8 g

H_2O Collected = 4.7 grams

IV. #4 Impinger + Silica Jel + H_2O = 906.0 g

#4 Impinger + Silica Jel = 897.0 g

H_2O Collected = 9.0 grams

V. Particulate Collecting Flask + H_2O = — g

Particulate Collecting Flask (Dry) = — g

H_2O COLLECTED = grams

TOTAL H_2O COLLECTED = I + II + III + IV + V = 119.8

Particulate

Thimble #1

72.8158
72.7027
.1131

Beaker #1

98.5676
98.5553
.0123

Total

.0123
.1131
.1254

Gilbert Associates, Inc. engineers and consultants
Reply To: P. O. Box 1498, Reading, PA 19603
Gilbert Commonwealth Companies
Laboratory Services
30 Noble Street, Reading, PA 19611
215-775-2600

CERTIFICATE OF ANALYSIS

LABORATORY NO: 23324 RECEIVED: 8/6/75 REPORTED: 8/15/75

CLIENT: Florida Power Corporation, Higgins Plant
Oldsmar, FL

SAMPLE DESCRIPTION: No. 6 Fuel Oil
Bunker "C"
#1 S
Sampled 7/30/75

- - - - - - - -

SODIUM	ppm Na	53.0
GRAVITY	°API	12.6
VISCOSITY	SSU @ 122°F	217
SULFUR	%	2.31
ASH	%	0.071
VANADIUM	% V	0.024
WATER (by distillation)	%	0.90
POUNDS PER GALLON		8.178
B.t.u. PER POUND		17,955
B.t.u. PER GALLON		146,836

Respectfully submitted,

T. M. Isert, Chief Chemist
Laboratory Services

MAH
cc: S. Z. Douglas
W. P. Stewart
G. W. Marshall
J. B. Clardy
B. P. Hunt

VISIBLE EMISSION FIELD REPORT

FLORIDA POWER CORPORATION

P.O. BOX 14042, ST. PETE., FLA. 33733

DATE 9-3-75
TIME @ 1:30 PM

PERMIT NUMBER AO 52-2040
SOURCE NAME HIGGINS NO 1 COUNTY PINELLAS
SOURCE LOCATION OLDSMAR FL
SOURCE DESCRIPTION (TYPE) POWER PLANT
POINT OF OBSERVATION SOUTH WEST
DISTANCE TO SOURCE 350 FEET

MIN	SECONDS 0	15	30	45	MIN	SECONDS 0	15	30	45
0	30		30		30				
1	30		30		31				
2	30		30		32				
3	30		30		33				
4	30		30		34				
5	30		30		35				
6	30		30		36				
7	30		30		37				
8	30		30		38				
9	30		30		39				
10	30		30		40				
11	30		30		41				
12	30		30		42				
13	30		30		43				
14	30		30		44				
15	30		30		45				
16	30		30		46				
17	30		30		47				
18	30		30		48				
19	30		30		49				
20	30		30		50				
21	30		30		51				
22	30		30		52				
23	30		30		53				
24	30		30		54				
25	30		30		55				
26	30		30		56				
27	30		30		57				
28	30		30		58				
29	30		30		59				

DIRECTION OF OBSERVER FROM SOURCE SOUTH WEST

DIRECTION OF WIND FROM SOURCE EAST

WIND VELOCITY 5-10 MPH

DIRECTION OF SUN FROM SOURCE WEST

CLOUD COVERAGE (IN %) 10%

NOTE:
1. MINIMUM OF 25 READINGS MUST BE TAKEN.
2. READINGS ARE TO BE TAKEN EVERY 15-30 SECONDS TO THE NEAREST 5% OPACITY.

SUM OF OPACITY READINGS 1800

TOTAL NUMBER OF READINGS 60

OPACITY = $\frac{\text{SUM OF OPACITY READINGS}}{\text{TOTAL NUMBER OF READINGS}}$ = 30

OBSERVER Ronald R. Campbell

CERT. NO.

NOTES -

THIS FIELD REPORT SHEET IS DRAWN IN ACCORDANCE WITH THE REQUIREMENTS OF METHOD 9 (VISUAL DETERMINATION OF THE OPACITY OF OMISSIONS) EPA STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES, FEDERAL REGISTER VOL.36, NO. 247, DEC. 23, 1971 AND STATE OF FLORIDA DEPT. OF POLLUTION CONTROL AIR POLLUTION REGULATIONS FAC CH. 17-2.

907-489

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

May 28, 1975

Florida Power Corp.
P. O. Box J
Oldsmar, Florida 33557

Dear Sir:

In a review of permits by this office it was noted that permit number See Ref. below will expire on 7/1/75.

Your attention is called to Chapter 17-4.09 FAC Renewals which require the permittee to apply for renewal of a permit (60) sixty days prior to the expiration of any Department permit.

Separate applications must be submitted for each point source.

If the permit is no longer applicable, please inform this office.

Your cooperation in this matter is appreciated.

Yours truly,

J. Tessitore

J. Tessitore
Air Permitting Engineer
West Central Region

JT/pm

Ref: AO 52-2040
AO 52-2041
AO 52-2042
AO 52-2036

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 9, 1975
Pinellas County - AP
Florida Power Corp.

Production Superintendent
Florida Power Corporation
P. O. Box J
Oldsmar, Florida 33557

Re: Permits AO52-2042
AO52-2041
AO52-2040
AO52-2036

Dear Sir:

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

file

Florida Power
CORPORATION

April 25, 1974

D. P. C.
APR 27 1974
WEST CENTRAL REGION

Mr. W. E. Linne
Department of Pollution Control
P. O. Box 9205
500 E. Central Ave.
Winter Haven, Florida 33881

Dear Mr. Linne:

In accordance with condition number 2 of Operation Permits A052-2040, 2041 and 2042, the Florida Power Corporation submits the following emission data. In addition, an analysis of the oil sulfur content, which was utilized to determine SO_2, is attached.

A052-2040
(Higgins Unit #1)

0.10 lb/10^6 BTU Particulates allowed

Particulates	-	0.17 lb/10^6 BTU
Sulfur Oxides	-	2.34 lb/10^6 BTU

0.10 lb/10^6 BTU SO_2 allowed

A052-2041
(Higgins Unit #2)

Allot 66 lb/hr Total particulate emissions

Particulates	-	0.14 lb./10^6 BTU
Sulfur Oxides	-	2.34 lb/10^6 BTU

A052-2042
(Higgins Unit #3)

Particulates	-	0.12 lb/10^6 BTU
Sulfur Oxides	-	2.34/10^6 BTU

If you have any questions concerning this information, please feel free to contact me at (813) 866-4544.

Very truly yours,

R. Eustice Parnelle, Supervisor
Chemical & Environmental Surveillance

REP:rt
Atts.

GILBERT ASSOCIATES, INC.

ENGINEERS AND CONSULTANTS

LABORATORY SERVICES

LABORATORY
30 NOBLE STREET
READING, PA. 19602

PLEASE REPLY TO
POST OFFICE BOX 1498
READING, PA. 19603

CERTIFICATE OF ANALYSIS

SAMPLE OF: FUEL OIL

LABORATORY NO: 21899

YOUR NO:

SUBMITTED BY: Florida Power Corporation
Higgins Plant
Oldsmar, Florida

MARKED: Bunker C Oil
No. 2 Fuel Oil Tank

SAMPLED: January 30, 1974

RECEIVED: February 6, 1974

REPORTED: February 20, 1974

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SODIUM	ppm Na	56.6
GRAVITY	°API	13.0
VISCOSITY	SSF @ 122°F	309
SULFUR	%	2.17
ASH	%	0.13
VANADIUM	%	0.020
WATER (by distillation)	%	0.38
POUNDS PER GALLON		8.155
B.t.u. PER POUND Corrected for water, ash, sulfur		18,324
B.t.u. PER GALLON		149,432
B.t.u. PER BARREL		6,276,144

Respectfully submitted,

T. M. Isert, Chief Chemist
Laboratory Services

MAH
cc: S. Z. Douglas
G. W. Marshall
G. E. Panter