Florida Power
CORPORATION

D. E. R.

AUG 9 1991

SOUTHWEST DISTRICT
TAMPA

August 7, 1991

Peter A. Hessling, Administrator
Pinellas County Air Quality Division
315 Court Street
Clearwater, Florida 34616

Dear Mr. Hessling:

Re: Bartow Plant - Compliance Order A91-005

Enclosed is the completed compliance order A91-005 with the required signatures. Included is a check in the amount of $3,600 and a copy of the computerized maintenance schedule which requires inspection of the gas recirculation control dampers and linkage at regularly scheduled maintenance outages. Maintenance records will be retained for a period of three years.

Please contact Scott H. Osbourn at 866-5158 if you have any questions.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Florida Department of Environmental Regulation

mrj/WJP12.Hesslin1.let

Florida Power
CORPORATION

January 26, 1995

Quarterly Report Submissions
Acid Rain Division
USEPA
401 M Street, S.W.
Washington, D.C. 20460

Dear CEM Section Chief:

Re: 40 CFR Part 75 Quarterly Electronic Data Report Submittal
Plant ORIS Number 634

Florida Power Corporation (FPC) is submitting the enclosed quarterly CEM electronic data report (EDR) for Bartow Units 1, 2, and 3, ORIS Number 634. The EDR contains the data deficiencies summarized on the following page.

If you have any questions, please contact Mr. Mike Kennedy at (813) 866-4344 or me at (813) 866-4387.

Compliance Certification

I understand that EPA may reject any electronic data submission (including Quarterly Reports) if it does not conform to the formatting requirements of EPA's Electronic Data Reporting, Version 1.1, as required by 40 CFR 75.64.

I certify that all data submitted in this report were recorded in accordance with the applicable requirements of 40 CFR Part 75, and that all emissions and quality control data were reported using Component ID codes, System ID codes, and Formula ID codes which represent current operating conditions.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, and with the exceptions given on the following page, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

W. Jeffrey Pardue, C.E.P.
Designated Representative

cc: B. M. Cumbie, FPC Plant Manager
M. D. Harley, FDEP/Tallahassee
W. C. Thomas, FDEP/Southwest District

FLORIDA POWER CORP. EDR NOTES FOR QUARTER 4, 1995

PLANT INFO	NOTES	
NAME: Bartow ORISPL: 000634	- RecType 300-1:	**Unit Operating Data** Missing Data for 10/06/95:08-09 All other records affected accordingly.
	- RecType 300-2:	**Unit Operating Data** Missing Data for 10/06/95:08-09 All other records affected accordingly.
	- RecType 300-3:	**Unit Operating Data** Missing Data for 10/06/95:08-09 All other records affected accordingly.

H. Kerns

D.E.R.

SEP 4 1991

SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

bcc: S.H. Osbourn
B.M. Baldwin
M.R. McCain
J.A. Simpson
G.A. Brannen

August 29, 1991

File: Wildwood Paint and Sandblast Facility

Mr. Bill Thomas
Florida Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

Dear Mr. Thomas:

Re: Wildwood Central Repair Shop - Painting and Sandblasting Operations

The purpose of this letter is to provide additional information regarding the paint and sandblasting operations at Florida Power Corporation's (FPC) Central Repairs shop. The Wildwood Central Repair Shop receives and refurbishes transformers, voltage regulators, and electrical switches from throughout the FPC system. These electrical components undergo surface preparation, via sandblasting or manual sanding, and are then painted in one of the two spray booths onsite.

All sandblasting takes place within an enclosed room at the Central Repair site. This room is approximately 20 feet square and 10 feet in height. Sandblasting of small components is conducted in an enclosed glass bead recirculation system. This small enclosed system is located within the sandblast room and utilizes its own filtration system for recovery and recycling of abrasive glass beads. Larger electrical components are also processed within the sandblast room. These components are on pallets and are manually sandblasted. The larger component system is used infrequently, typically 20 days per year or less. Central Repair estimates annual material usage at approximately 400 pounds of sand and 250 pounds of glass beads for the "open" and closed systems, respectively. Both the enclosed and the open sandblast systems, contained within the sandblast room, exhaust through highly efficient fiberglass filters to the ambient air.

There are two paint spray booth operations onsite. The larger booth measures approximately 20 feet square and 20 feet in height, has a total fan exhaust capacity of 56,000 cfm (at 1/4 inch static pressure), and a calculated face velocity of 100 fpm. The second booth is smaller, measuring 8 feet square by 7 feet in height with respective figures of 7,400 cfm fan capacity and a face velocity of 125 fpm. The booths exhaust at the back through filters arranged in rows, running the full width of each booth (four rows and two rows for the large and small booths, respectively). The media is made of fire-resistant paper and formed into double accordion-type folds with staggered holes to provide a highly efficient filter. A breakdown of coating/solvent usage and composition for the previous 12 month period was requested and recently received from Central Repair (see attachment). The total of approximately 850 gallons divided by 260 days of operation (2,080 hr/yr and 8 hr/day) equates to an average of 3.3 gallons per day.

The operations described were constructed and brought online during 1990. FPC issued specifications to each respective vendor requiring conformance with OSHA and EPA regulations for the type of equipment and installation required. The paint and sandblasting operations have been constructed and operated in conformance with these specifications. Further, based on our assessment, FPC submits that an air operation permit for these sources is not required at this time. If your District Office is in agreement, we request that your written concurrence be provided for our files.

If you should have any questions or require additional information, please do not hesitate to contact Mr. Scott H. Osbourn of my staff at (813) 866-5158.

Sincerely,

W. Jeffrey Pardue, Manager
Environmental Programs

cc: Harry Kerns, FDER

Attachment
mrj/SHO2.Tbomas.let

AIR

RKL 10/7

Florida Power
CORPORATION

October 3, 1988

Mr. Bruce Barrett
US Environmental Protection Agency
Region IV
345 Courtland Street NE
Atlanta, Georgia 30308

RV — make sure this request of approval, will be incorporated into our permit — Pls. give a suitable copy to Air
Jo 10/7

Dear Mr. Barrett:

Subject: Crystal River South, NPDES FL0000159

In Florida Power Corporation's (FPC) March 1, 1988, proposal to the Environmental Protection Agency (EPA), a conceptual schedule for construction was included. Based on that schedule and subsequent discussions among our respective staffs concerning location, number, and type of cooling towers, a compliance schedule was developed. That schedule was based on preliminary information. Some key decisions concerning the cooling towers and a key regulatory decision by the State of Florida have created some potential difficulties in meeting certain interim compliance milestones. The final date for cooling tower operation is not affected.

Attached are two schedules, one for wood helper cooling towers and one for concrete helper cooling towers. As shown in these schedules under either scenario, construction cannot begin on the tower erection until January 1990. Part I.B.1."c","d", and "e" of the NPDES permit require the towers to be operational earlier than 8-31-91 if the Florida Department of Environmental Regulation (DER) issues the air construction permit which includes the Prevention of Significant Deterioration (PSD) permit earlier than 1-31-90. The DER has advised FPC that an air construction permit will be required prior to <u>any</u> work (including site preparation) on the cooling towers. This permit will be required by September 1, 1989, in order to support the very tight construction schedule. Under the existing permit requirements, issuance of this air construction permit would require that the towers be operational by March 31, 1991. This clearly cannot be accomplished.

D. E. R.

OCT 05 1988

GENERAL OFFICE: 3201 Thirty-fourth Street South • P.O. Box 14042 • St. Petersburg, Florida 33733 • (813) 866-5151
A Florida Progress Company

SOUTHWEST DISTRICT
TAMPA

Florida Power Corporation has elected to build concrete helper cooling towers. Concrete towers offer structural advantages over wood towers as well as greater operational reliability and maintainability. Use of concrete will not change the thermal performance of the towers or increase particulate emissions over that expected from wood towers. Construction of concrete towers requires an additional four months. In order to meet the 8-31-91 operation date in the NPDES permit, FPC has compressed the existing construction schedule.

Florida Power Corporation requests that Part I.B.1."c","d", and "e" be changed by deleting the requirement to begin tower operation, conduct flow verification, and conduct discharge temperature monitoring prior to August 31, 1991, if the DER issues the air construction permit (including PSD) prior to 1/31/90. The date to implement operation should remain 8-31-91 unless the DER does not timely issue a PSD permit to FPC. A suggested revision to the compliance schedule page is attached.

In order to protect Florida Power Corporation's options to continue negotiations to resolve this issue, we are filing a petition for an evidentiary hearing under separate cover letter. Our intent is to resolve this issue through informal negotiations with the EPA; however, this issue is of such importance to FPC that we feel it imperative that we protect all options to bring this matter to resolution. In the event of a timely resolution of this matter, FPC would promptly withdraw our petition for the evidentiary hearing.

Please contact Mr. W. Jeffrey Pardue (813)866-4387 of my staff if you have any questions.

Sincerely,

J. A. Hancock
Vice President
Fossil Operations

JAH/bm
Attachments

cc: Richard Garrity (DER-Tampa)
Richard Harvey (DER-Tallahassee)
Richard Drew (DER-Tallahassee)

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

a. Effluent Flow Reduction (001 and 002)
   1. Progress report ——— 02/28/89
   2. Progress report ——— 08/31/89
   3. Progress report ——— 02/28/90
   4. Intallation completed ——— 08/31/90

b. Hatchery (Part III.K)
   1. Submit necessary permit applications ——— 02/28/89
   2. Start construction ——— 08/31/89
   3. Initial plan and budget ——— 11/30/89
   4. Progress report ——— 12/31/89
   5. Implement operation ——— 03/31/90
   6. Subsequent annual plan and budget ——— 11/30/XX
   6. First annual report ——— 03/31/91
   7. Subsequent Annual Reports ——— 03/31/XX

c. Helper Cooling Towers (001, 002, and 005 and Part III.L)
   1. Submit complete PSD application ——— 05/31/89
   2. Start construction and progress report ——— ~~*02/28/90~~ 10/01/
   3. Progress report ——— *08/31/90
   4. Progress report ——— *02/28/91
   5. Implement operation ——— *08/31/91

d. Condenser Cooling Water Flow Verification (Part III.M)
   1. Report ——— *02/28/92

e. Discharge Temperature Monitoring (Part III.N)
   1. Start field surveys ——— *08/31/91
   2. Submit report ——— *02/28/92
   3. Implement changes, existing eqpt. (if required) ——— *05/31/92
   4. Implement changes, new eqpt. (if required) ——— *02/28/93

f. Seagrass Monitoring and Planting (Part III.O)
   1. Biological survey ——— Fall 1991
   2. Biological survey ——— Fall 1993
   3. Submit report ——— 11/30/93

ITEMS 4 - 23 ARE APPLICABLE ONLY IF NEEDED, BASED ON RESULTS OF THE ABOVE REPORT AND MAY BE TERMINATED ON PERMITTING AUTHORITY APPROVAL IF/WHEN SUBSEQUENT DATA INDICATES THAT NO FURTHER ACTION IS REQUIRED.

   4. Sprig planting ——— 04/01/94
   5. Biological survey ——— Fall 1995
   6. Submit annual report ——— 11/30/95

~~* Date is subject to slippage if the the PSD Permit is not issued by the FDER by 01/31/90 and to advancement if the PSD Permit is issued sooner; i.e., start of construction is to be not later than one month after issuance of the PSD permit, and other compliance dates similarly slipped or advanced.~~

* Date is subject to slippage if the air construction permit (including PSD) or the dredge and fill permits are not issued by the FDER by 09/01/89; i.e., start of construction is to be not later than one month after issuance of the PSD permit and the dredge and fill permits and other compliance dates similarly slipped.

B. SCHEDULE OF COMPLIANCE (continued)

1. f. Seagrass Monitoring and Planting (continued)

7. Biological Survey	Fall 1996
8. Submit final report	11/30/96
9. Start plot planting	04/01/97
10. Biological survey	Fall 1997
11. Submit report	11/30/97
12. Start plot planting	04/01/98
13. Biological survey	Fall 1998
14. Submit report	11/30/98
15. Start plot planting	04/01/99
16. Biological survey	Fall 1999
17. Submit report	11/30/99
18. Start plot planting	04/01/00
19. Biological survey	Fall 2000
20. Submit report	11/30/00
21. Start plot planting	04/30/01
22. Biological survey	Fall 2001
23. Submit report	12/31/01

g. BMP Plan (Part IV)

1. Develop plan	03/31/89
2. Implement plan	03/31/90

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress, or, in the case of specified actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and probability of meeting the next scheduled requirement.

COMMENCE PROJECT — AWARD AE — COMMENCE CONSTRUCTION — PROJECT COMPLETION

FILE NO.	DESCRIPTION	1988 S O N D	1989 J F M A M J J A S O N D	1990 J F M A M J J A S O N D	1991 J F M A M J J
	DETAILED ENGINEERING				
	AWARD	C			
	SUBSURFACE INVESTIGATIONS	—			
	SITE DESIGN	—			
	FOUNDATION DESIGN	—			
	BASIN DESIGN	—			
	MODEL PUMP STRUCTURE	—			
	PUMP STRUCTURE DESIGN	—			
	BUILDING DESIGN	—			
	MECHANICAL DESIGN	—			
	ELECTRICAL DESIGN	—			
	PROCUREMENT				
	COOLING TOWER	B C R	D		
	INTAKE PUMPS & MOTORS	P B C	D		
	PIPE (FRP)	P B C	D		
	TRAVELLING SCREENS	P B C	D		
	BUTTERFLY VALVES & OPERATORS	P B C	D		
	TRANSFORMER	P B C	D		
	SWITCHGEAR - 4160 VOLT	P B C	D		
	SWITCHGEAR - 480 VOLT	P B C	D		
	MOTOR CONTROL CENTERS	P B C	D		
	CATHODIC PROTECTION	P B C	D		
	CABLE	P B C	D		
	SUBSTATION EQUIPMENT	P B C	D		
	CONTROL & INSTRUMENTATION EQUIPMENT	P B C	D		
	BATTERIES & CHARGERS	P B C	D		
	CHLORINATION & DECHLORINATION EQUIPMENT	P B C	D		
	CONSTRUCTION				
	GENERAL CONSTRUCTION - PHASE I	P B C M			
	GENERAL CONSTRUCTION - PHASE II	P B C	M		
	SHEET PILE & GROUT PUMP STRUCT	—			
	ELECTRICAL DUCTBANK & GROUNDING	—			
	INSTALL SITE FIRE PROTECTION SYSTEM	—			
	CONSTRUCT PUMP STRUCTURE	—			
	STRUCTURAL FILL-CLG TWR 1 & 2	—			
	DRILL PIERS-CLG TWR 1 & 2	—			
	CONSTRUCT BASIN-CLG TWR 1 & 2	—			
	ERECT COOLING TOWER 1*	—			
	ERECT COOLING TOWER 2*	—			
	INSTALL FRP PIPE-CLG TWR 1 & 2	—			
	STRUCTURAL FILL-CLG TWR 3 & 4	—			
	DRILL PIERS-CLG TWR 3 & 4	—			
	CONSTRUCT BASIN-CLG TWR 3 & 4	—			
	ERECT COOLING TOWER 3*	—			
	ERECT COOLING TOWER 4*	—			
	INSTALL FRP PIPE-CLG TWR 3 & 4 & PUMP STRUCT	—			
	BUILDING CONSTRUCTION	—			
	SUBSTATION MODIFICATION (BY FPC)	—			
	GENERAL MECHANICAL	—			
	GENERAL ELECTRICAL	—			
	CHECKOUT	—			
	THERMO AND DRIFT TESTS	—			

*INCLUDES ALL VENDOR SUPPLIED MECHANICAL AND ELECTRICAL EQUIPMENT

NOTE:
TOWER 1 & 2 ARE ON GULF SIDE OF PLANT

LEGEND
P - PRELIMINARY ISSUE
B - BID ISSUE
R - RECEIVE DRAWINGS
C - AWARD
M - MOBILIZE
D - DELIVER

NO.	DATE	REVISION OR ISSUE	BY	CHK
B	09-27-88	REVISED	JRL	
A	07-15-88	INITIAL ISSUE	JRL	

FLORIDA POWER CORPORATON
HELPER COOLING TOWER

PRELIMINARY SCHEDULE
WOOD TOWER

PROJECT 14774-UUU-F3001

DRAWING NO

F101
09/27/88 13:21:56 ATSSK

COMMENCE PROJECT — AWARD AE — COMMENCE CONSTRUCTION — PROJECT COMPLETION

FILE NO.	DESCRIPTION	1988 S O N D	1989 J F M A M J J A S O N D	1990 J F M A M J J A S O N D	1991 J F M A M J J A
	DETAILED ENGINEERING				
	AWARD	C			
	SUBSURFACE INVESTIGATIONS				
	SITE DESIGN				
	FOUNDATION DESIGN				
	BASIN DESIGN				
	MODEL PUMP STRUCTURE				
	PUMP STRUCTURE DESIGN				
	BUILDING DESIGN				
	MECHANICAL DESIGN				
	ELECTRICAL DESIGN				
	PROCUREMENT				
	COOLING TOWER	B C R		D	
	INTAKE PUMPS & MOTORS	P B C		D	
	PIPE (FRP)		P B C	D	
	TRAVELLING SCREENS	P B C		D	
	BUTTERFLY VALVES & OPERATORS	P B C		D	
	TRANSFORMER	P B C		D	
	SWITCHGEAR - 4160 VOLT	P B C		D	
	SWITCHGEAR - 480 VOLT	P B C		D	
	MOTOR CONTROL CENTERS	P B C		D	
	CATHODIC PROTECTION		P B C	D	
	CABLE		P B C	D	
	SUBSTATION EQUIPMENT	P B C		D	
	CONTROL & INSTRUMENTATION EQUIPMENT	P B C		D	
	BATTERIES & CHARGERS	P B C		D	
	CHLORINATION & DECHLORINATION EQUIPMENT	P B C		D	
	CONSTRUCTION				
	GENERAL CONSTRUCTION - PHASE I	P B C M			
	GENERAL CONSTRUCTION - PHASE II	P B C	M		
	SHEET PILE & GROUT PUMP STRUCT				
	ELECTRICAL DUCTBANK & GROUNDING				
	INSTALL SITE FIRE PROTECTION SYSTEM				
	CONSTRUCT PUMP STRUCTURE				
	STRUCTURAL FILL-CLG TWR 1 & 2				
	DRILL PIERS-CLG TWR 1 & 2				
	CONSTRUCT BASIN-CLG TWR 1 & 2				
	ERECT COOLING TOWER 1*				
	ERECT COOLING TOWER 2*				
	INSTALL FRP PIPE-CLG TWR 1 & 2				
	STRUCTURAL FILL-CLG TWR 3 & 4				
	DRILL PIERS-CLG TWR 3 & 4				
	CONSTRUCT BASIN-CLG TWR 3 & 4				
	ERECT COOLING TOWER 3*				
	ERECT COOLING TOWER 4*				
	INSTALL FRP PIPE-CLG TWR 3 & 4 & PUMP STRUCT				
	BUILDING CONSTRUCTION				
	SUBSTATION MODIFICATION (BY FPC)				
	GENERAL MECHANICAL				
	GENERAL ELECTRICAL				
	CHECKOUT				
	THERMO AND DRIFT TESTS				

*INCLUDES ALL VENDOR SUPPLIED MECHANICAL AND ELECTRICAL EQUIPMENT

NOTE:
TOWER 1 & 2 ARE ON GULF SIDE OF PLANT

LEGEND
P - PRELIMINARY ISSUE
B - BID ISSUE
R - RECEIVE DRAWINGS
C - AWARD
M - MOBILIZE
O - DELIVER

NO.	DATE	REVISION OR ISSUE	BY	CHK
A	09-27-88	INITIAL ISSUE	JRL	

FLORIDA POWER CORPORATION
HELPER COOLING TOWER

PRELIMINARY SCHEDULE
CONCRETE TOWER

PROJECT 14774-UUU-F3011

DRAWING NO.

F181
09/27/88 13:31:18 AISSK

concrete

Gen File

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

July 17, 1986

Mr. T. H. Wooten
Environmental & Licensing Affairs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, FL 33733

Re: Cellulose Filter Disposal

Dear Mr. Wooten:

This is in reply to your letter concerning disposal of the filters exposed to the No. 2 fuel oil.

The fuel analysis report, No. 501, indicated the disposal would not be harmful to the environment. Therefore, the Department of Environmental Regulation has no objection to the disposal of these filters to the Pinellas County Resource Recovery Facility.

If you have any questions, please contact me at (813) 985-7402, ext. 203.

Sincerely,

C. S. Lee
Air Compliance Engineer

CSL/js

cc: Bill Thomas

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date March 31, 1986 Subject FPC - Bartow Unit #3

Time 3:45 PM Permit No.

County Pinellas

MR. Eustice Parnelle Telephone No. 813/866-4544

Representing Florida Power Corp.

[✓] Telephoned Me [ ] Was Called [ ] Scheduled Meeting [ ] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting None

Summary of Conversation/Meeting At 12:58 PM (3-31-86), Bartow Unit #3 was taken off-line because the power wasn't needed. Opacity immediately went up - high (no levels were given to me). Still high as of now (3:45 PM). FPC doesn't know the cause of the problem or when it will be corrected. It may be a fin in the air heater section.

I told him to call tomorrow and tell us when the opacity went down, meeting the standard, and to follow up the event with a letter detailing the causes, corrective action taken, and length of time of incident & opacity readings.

Contacted Pinellas C. L.P. They are investigating.

(continue on another sheet, if necessary)

Signature Allen C. Williams

Title P.E. III

Air

BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565

P.O. BOX 21623
ST. PETERSBURG, FLORIDA 33742-1623

April 11, 1986

D. E. R.

APR 15 1986

SOUTH WEST DISTRICT
TAMPA

Dr. Rick Garrity, District Manager
Department of Environmental Regulation
Southwest District Office
7601 Highway 301, North
Tampa, FL 33610-9544

Re: Pinellas County Resource Recovery Facility Expansion

Dear Dr. Garrity:

As required by our Power Plant Site Certification, Conditions of Certification (2/29/84), Section XIII,C,1, we have attached information concerning construction progress for the third boiler and second turbine generator.

The information consists of excerpts from the monthly Signal Environmental System progress report and contains monthly progress charts detailing engineering, procurement, shipments and actual construction.

Please advise if you require additional information.

Sincerely,

Bob Van Deman

Bob Van Deman, P.E., Director
Solid Waste Management

BVD:rvt
encl.
0431V

cc: Buck Oven, DER
HDR (w/encl.)
W.Ferguson, SES

V. CONSTRUCTION

A. Area 01 - Offsites & Nonprocess Building

The piping tie-in was completed at the City Water Valve Station for the new Fire Water System.

B. Area 02 - Refuse, Receiving & Handling

Concrete was placed at the north Refuse Building entrance. Erection was completed on the Crane Operator's pulpit extension and structural steel in the existing Crane Control Room.

C. Area 03 - Refuse Fired Boiler

Concrete was placed in the Boiler Ash Conveyor foundations. Erection continues on the Precipitator Ash Handling Conveyors and boiler leaveout steel. Final alignment of area pumps began. Piping installation continued for the steam, cooling water, corrosion inhibitor, treated water, condensate, vents, and boiler feedwater systems. Electrical and instrumentation installation continued on the instrument air piping, instrument calibrations and mountings, tube tray and tubing, control panel wire and terminations, and cable tray and conduit for the precipitator.

The Boiler Erector continued installation of the seal air piping to the stoker, economizer casing, superheater header enclosure casing, lower furnace casing, and superheater hoppers. Installation of the additional access door waterwall panels was completed this period. Work continues on the hot air duct, cold air duct, front and rear overfire air duct, economizer-to-precipitator and boiler-to-economizer breeching, sootblowers and piping, insulation, lagging, brickwork, and refractory. The number of welds reported as complete is 4,040 out of an estimated total of 4,040. Overall boiler erection is reported to be 70% complete.

V. CONSTRUCTION (Continued)

C. Area 03 - Refuse Fired Boiler (Continued)

The Stack and Tank Erector has set the inner and outer stack lining sections and has completed the insulation of the inner stack. Breeching supports are presently being installed. Overall progress is reported to be 77% complete.

D. Area 10 - Electrical Power Generation

Concrete was placed in the cooling water piping saddles and fire water valve house. The fire water pump foundation was modified to accept the pump replacement. Surface condenser welding to the turbine was completed, and turbine generator erection continued. Piping installation continued for the steam, condensate drains, cooling water, and vendor furnished turbine piping systems. The cooling water basin tie-in was made and the system was hydrotested this period. The installation of cable, instrument mountings and calibrations, and instrument tubing and tray continues. The electrical tie-in to Florida Power was made during the plant outage.

The Fire Protection Subcontractor has mobilized and installed the main feeds for the cooling tower sprinkler system during the plant outage. Overall progress is reported to be 38% complete for the Phase I contract.

VI. MAJOR ACTIVITIES FOR NEXT MONTH

A. Area 01 - Offsite 7 Nonprocess Buildings

The Fire Protection Underground Piping and Pump House Plans are scheduled to be released for construction.

The Fire Hydrants, Valves, Underground Piping, Electrical materials and Architectural speciality items for the Pump House are scheduled to be awarded.

B. Area 02 - Refuse, Receiving & Handling

The Fire Protection Plans for the Pit and Tipping Floor are scheduled to be released for construction.

Painting and Architectural finish work on the Crane Operator's pulpit, modifications to the Refuse Crane Access Platform, and office area HVAC units are scheduled to be completed.

C. Area 03 - Refuse Fired Boiler

The Hose Stations and Fire Protection over the Hydraulic Unit Plans are scheduled to be released for construction.

Concrete is scheduled to be placed in the U-drains and slab-on-grade. Installation of the Precipitator Ash Handling System and the Metal Stack are scheduled to be completed. The boiler is scheduled to be hydrotested. Work will continue on area pump alignments and boiler leave-out steel.

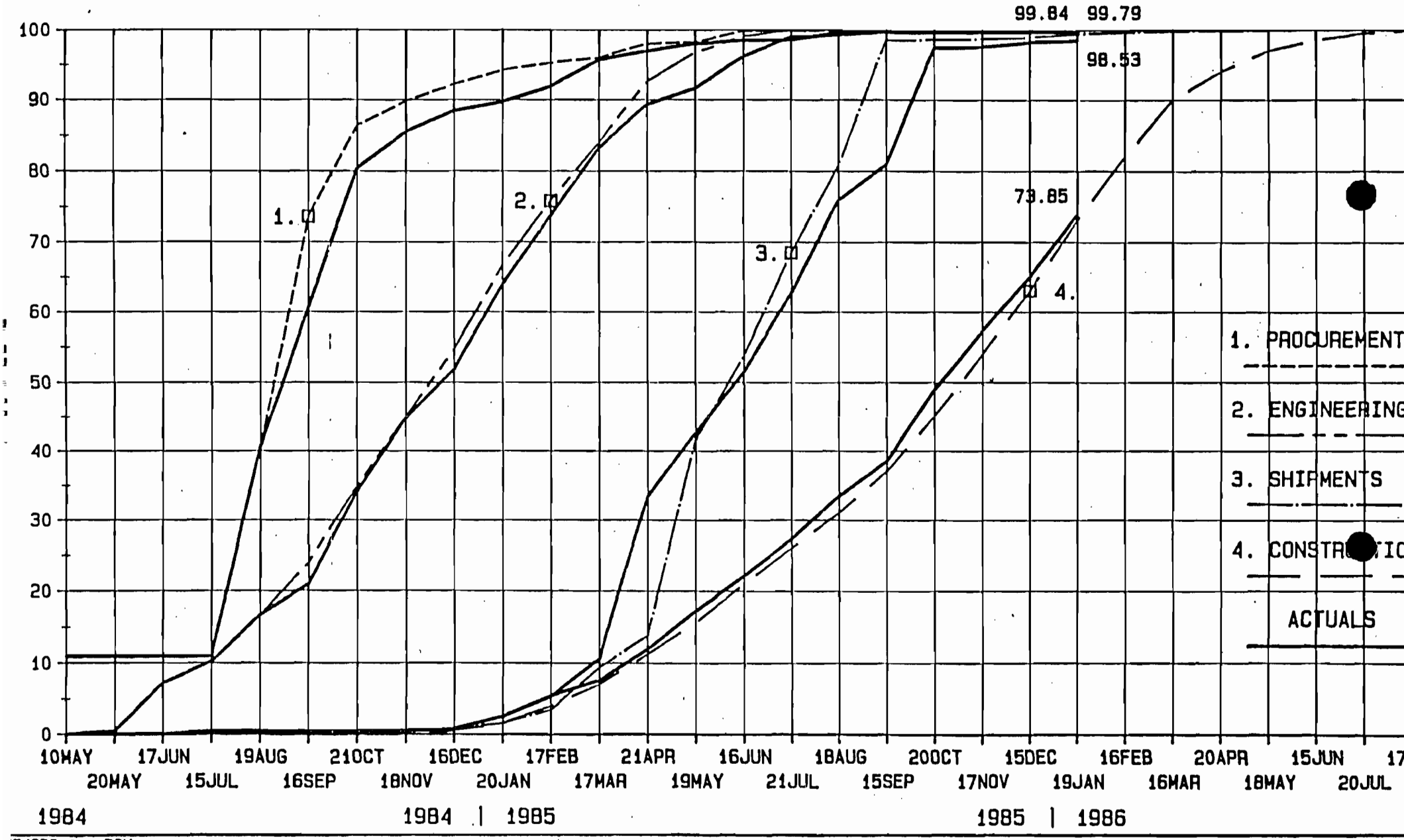
D. Area 10 - Electrical Power Generation

Concrete is scheduled to be placed in the slab-on-grade at the Switchgear Building. Erection of the turbine generator and installation of piping systems will continue. A number of piping systems, including some in the boiler area, are scheduled to be completed and turned over to the plant.

SIGNAL ENVIRONMENTAL SYSTEMS INC.

PINELLAS CO. FLORIDA ADDITION (ORIGINAL)

JANUARY 19, 1986 CONTRACT: 21-2554



V. CONSTRUCTION

A. Area 01 - Offsites & Nonprocess Buildings

Concrete was placed in the fire water pump foundation. Installation of fire water piping stub outs for the pump house slab on grade began.

B. Area 02 - Refuse, Receiving & Handling

Concrete was placed in the waterproofing curb at Elevation 61'. The installation of wire and cable continued.

C. Area 03 - Refuse Fired Boiler

Concrete was placed in the Boiler Ash Conveyor retaining wall and in the remaining area slab on grade and U-drains. Erection of the Precipitator Ash Handling System was completed. Erection continues on boiler leave-out steel and final alignment of pumps. Piping installation continued for the steam, condensate, boiler feedwater, treated water, instrument air, drains, vents, and chemical feed systems. Electrical and instrumentation installation continued for tube tray and tubing, instrument calibration and mounting, control panel wiring, lighting, and conduit and cables.

The Instrument Air and Compressor, City Water, and Demineralized Water Systems have been accepted by Signal.

The Boiler Erector completed on the hydro-testing of the Boiler this period. Work continued on the final fit up and welding of the Economizer Casing and Superheater Header Enclosure Casing. All Superheater Hoppers have been set and work on the lower Furnace Casing is progressing. Installation of the cold air duct, front and rear overfire air duct, boiler-to-precipitator and precipitator-to-stack breeching, insulation, lagging, brickwork, and refractory continued. Overall Boiler erection is reported to be 79% complete.

V. CONSTRUCTION (continued)

C. Area 03 - Refuse Fired Boiler (continued)

The Stack and Tank Erector completed the erection of the Stack, including the platform and obstruction lighting. Overall progress is reported to be 95% complete.

The Equipment and Piping Insulation Subcontractor mobilized this period and completed insulation and lagging of the caustic piping, flash tanks, and vents. Insulation of the steam lines from the Boiler to the Turbine Generator began. Overall progress is reported to be 7% complete.

D. Area 10 - Electrical Power Generation

Concrete was placed in the Switchyard Building area slab on grade and entrance ramps, and the chain-link fence was reinstalled around the Switchyard and Turbine area. The installation of the Turbine Generator continued as well as piping for the steam, lube oil, drains, vents, and cooling water systems. Electrical and instrumentation installation continued for control panel wiring and termination, lighting, instrument calibration and terminations, and instrument tube tray and tubing.

The Cooling Tower, Cooling Water System, Biocide and Dispersant System, Electrical Distribution System, and Switchyard have been accepted by Signal.

The Fire Protection Subcontractor continued the installation of the Cooling Tower Sprinkler System and overall progress is reported to be 67% complete for the Phase I contract.

VI. MAJOR ACTIVITIES FOR NEXT MONTH

A. Area 01 - Offsite & Nonprocess Buildings

Concrete is scheduled to be placed in the fire water pump house foundation and the erection of the pump house and valve house will follow. The installation of the underground fire water piping and electrical duct bank is scheduled to begin.

B. Area 02 - Refuse, Receiving & Handling

The Refuse Building extension, including offices and non-process mechanical and electrical systems are scheduled to be submitted to Signal as completed. The Fire Protection Subcontractor is scheduled to begin work in the refuse pit area.

C. Area 03 - Refuse Fired Boiler

Painting of the Stack, erection of the Bottom Ash Conveyor and Economizer Ash Handling System, and installation of refractory in the Boiler Furnace and Superheater areas are scheduled to begin. Work will continue on area pump alignments and boiler leave-out steel.

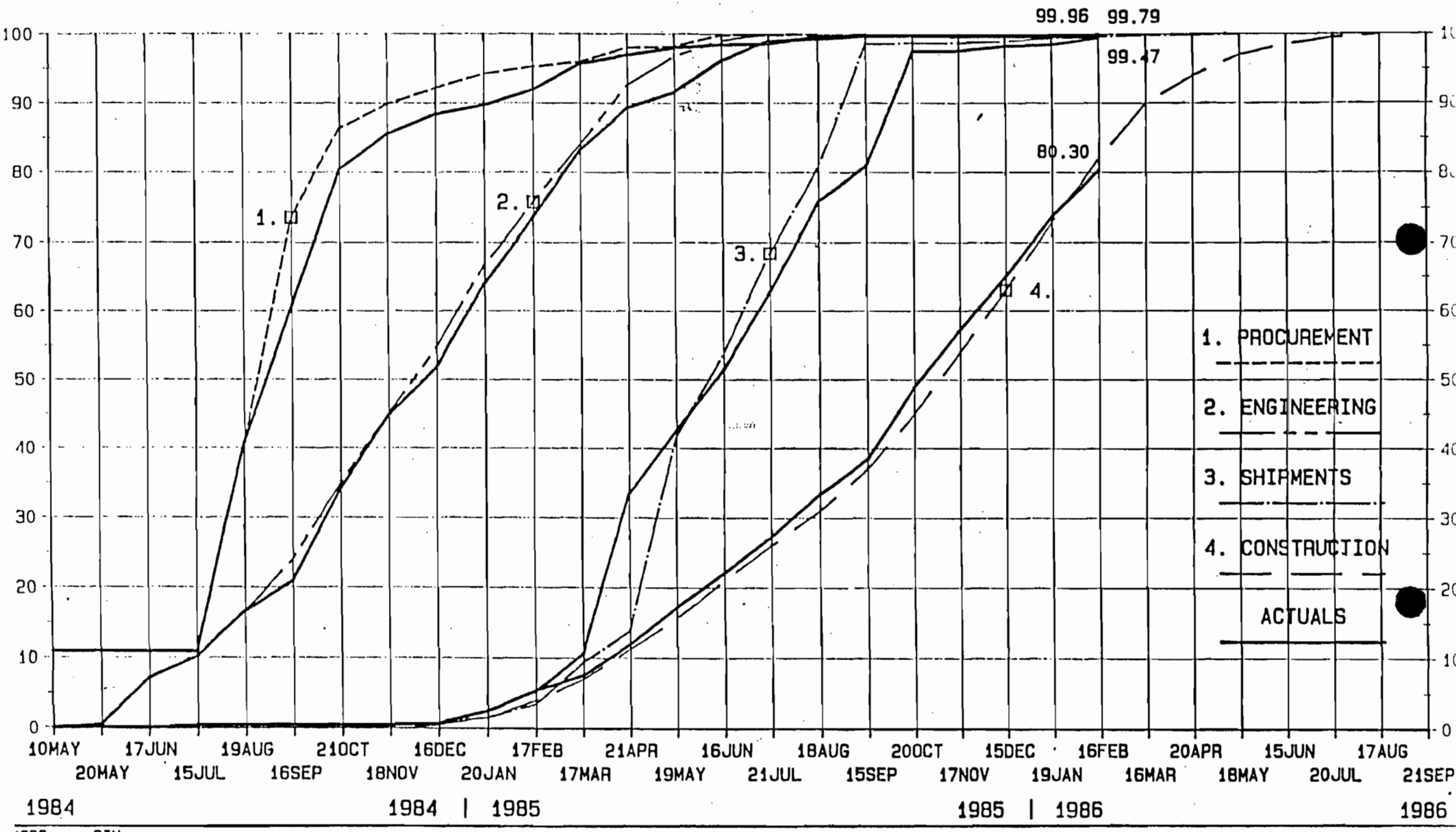
D. Area 10 - Electrical Power Generation

Installation of the Turbine Generator insulation, lagging and casing is scheduled to begin. Installation of Exciter and vendor furnished piping and alignment of the Turbine Generator will continue.

SIGNAL ENVIRONMENTAL SYSTEMS INC.

PINELLAS CO. FLORIDA ADDITION (ORIGINAL)

FEBRUARY 16, 1986 CONTRACT: 21-2554



4CR3 PIN

V. CONSTRUCTION

A. Area 01 - Offsites & Nonprocess Buildings

Concrete was placed in the fire water pump house foundation and the valve and fire water pump houses were erected. The diesel fire water pump and fire water pump house roof trusses were set. Installation of the underground fire water piping and layout for the undergorund electrical duct bank began.

The Fire Protection Subcontractor hydrotested the cooling tower fire protection system and installed the sprinkler heads and nozzles. Work on the pit and tipping floor sprinkler piping continued. Fabrication has begun on the Phase II work which includes the turbine, stoker hydraulic pumps, and refuse building hose stations.

B. Area 02 - Refuse, Receiving & Handling

Privacy partitions were installed in Signal's engineering office, the charging floor parapet wall at the boiler feed chute was demolished, and the existing crane control room was painted. The HVAC Subcontractor performed the testing and balancing of the HVAC equipment which completed his work. The refuse building extension, including offices and non-process systems were turned over to Signal.

C. Area 03 - Refuse Fired Boiler

The erection of the bottom ash vibrating conveyor began and final alignment of the boiler area pumps continued. Piping installation continued for the boiler and economizer shutoff valve, condensate, high pressure condensate, vent, high pressure treated water, and 50 lb. steam systems. Electrical and instrumentation installation continued for instrument calibration and mounting, tube tray and tubing, control panel wire pulling and terminating, cables to precipitator, and boiler area lighting.

V. CONSTRUCTION (continued)

C. Area 03 - Refuse Fired Boiler (continued)

The Boiler Erector continued the installation of the furnace soot hoppers, superheater header casing, front and rear over-fire air duct, cold air duct, and F. D. and I. D. fans. Work on the boiler to economizer, econmizer to precipitator, and precipitator to stack breeching is on-going. Boiler refractory, insulation, and lagging work also continued. Overall Boiler erection is reported to be 92% complete.

The Stack and Tank Erector completed the painting of the stack and is 100% complete.

The Equipment and Piping Insulation Subcontractor continued with the insulation of the low, medium, and high pressure steam piping. Overall progress is reported to be 17% complete.

D. Area 10 - Electrical Power Generation

The generator base plates were grouted, and erection continued on the turbine generator casing and exciter. Piping installation continued on the lube oil, condensate, vents, and 15 lb. steam systems. The lube oil system flush has begun. Electrical and instrumentation installation continued for tube tray and tubing, instruments, lighting, and control panel wire pulling and terminations.

VI. MAJOR ACTIVITIES FOR NEXT MONTH

A. Area 01 - Offsite & Nonprocess Buildings

Work is scheduled to be completed on the built-up roof for the fire water pump house, underground fire water piping, piping inside the pump house, and the underground electrical duct bank to the pump house.

The Paving Subcontractor is scheduled to remobilze to complete site roads and parking lots.

B. Area 02 - Refuse, Receiving & Handling

Handrail is scheduled to be installed around the boiler feed chute to limit access to the pit.

C. Area 03 - Refuse Fired Boiler

Boilout of the Boiler is scheduled to begin April 10, 1986.

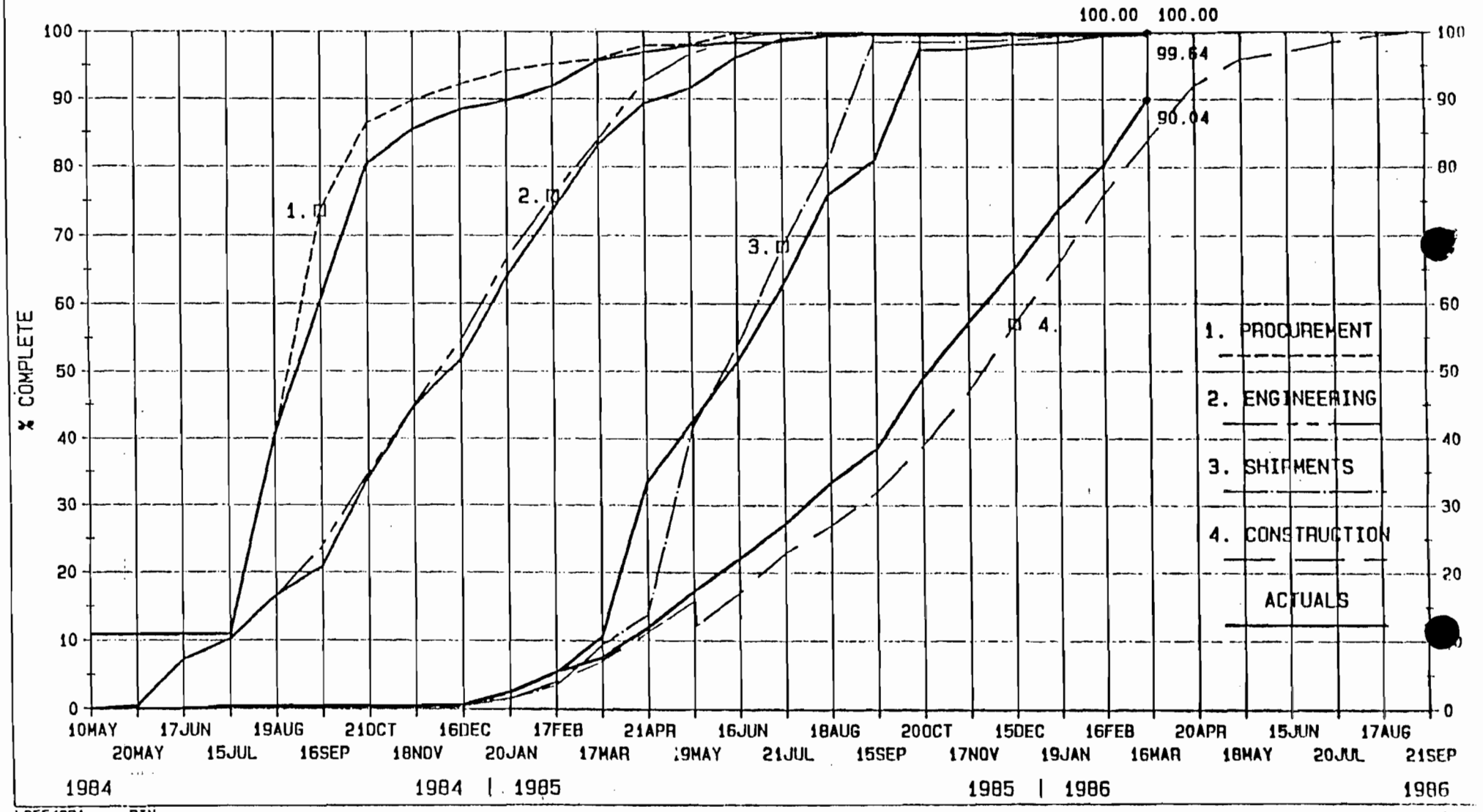
D. Area 10 - Electrical Power Generation

The lube oil system flush is scheduled to be completed. Installation of the turbine casing, exciter, insulation and lagging will continue.

SIGNAL ENVIRONMENTAL SYSTEMS INC.

PINELLAS CO. FLORIDA ADDITION

MARCH 16, 1986 CONTRACT: 21-2554



L2554CR1 PIN

RUST

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

March 20, 1986

Mr. D. A. Shantz
Florida Power Corp.
P.O. Box 14042
St. Petersburg, Florida 33733

Re: Procedural Changes for Excess Emission Reports

Dear Mr. Shantz:

As you may or may not know, the Department has made commitments to EPA to begin tracking excess emission reports on all NSPS sources requiring installation and operation of continuous emission monitors. As a result, several changes have been made to reporting procedures and must be instituted immediately. All items listed below and marked with an (x) should be addressed immediately. Items not conformed to by the next reporting period could result in trouble for both the Department and your company.

( ) Send proof of certification for each monitor. This may be either a copy of the certification letter from EPA or DER Tallahassee or a copy of the test report.

(X) Fill in the "Continuous Emission Monitor Quarterly Report Supplemental Form" for each source and send in with each source quarterly excess emission report. All time is to be in periods of excess emissions. For example, if a H_2SO_4 plant's total operating time for a quarter was 2200 hrs., the Total Source Operation Time (TSOT) would be 733 periods (2200 hrs. x 1 period/3 hrs.). For a power plant with the same operating hours, the TSOT would be 22,000 periods (2200 hrs. x 60 min./hr. x 1 period/6 min.). All excess emissions and monitor downtimes are also reported in periods.

(X) Send all reports to the Air Compliance Engineer in the SW District Office. This office will forward a copy to Tallahassee. Do not send reports directly to Tallahassee.

Your cooperation in this matter is very much appreciated. If you have questions regarding this matter, please call this office at your convenience.

Sincerely,

Ken Roberts
Air Compliance Engineer

KMR/js

Florida Power
CORPORATION

January 24, 1986

Dr. R. D. Garrity
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Dear Dr. Garrity:

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: J. W. Campbell
F. E. Denby
G. L. Macey
G. L. Petersen
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 1985								
Fuel Oil (BBL)	245896	226397	3593	35792	12314	1730	2770	8981
Gas (MCF)	0	0	67629*	0	127573	59103	52646	0
% Sulfur(1)	1.0	1.0	1.9	1.9	1.9	1.7	1.7	1.7
November 1985								
Fuel Oil	137324	113561	29796	74586	0	1249	2800	2539
Gas	0	0	0	0	0	0	0	0
% Sulfur	1.0	1.0	1.9	1.9	-	1.9	1.9	1.9
December 1985								
Fuel Oil	146118	56357	53422	72699	19263	796	665	0
Gas	0	0	3722*	0	151277	10796	3049	0
% Sulfur	1.0	1.0	2.0	2.0	2.0	1.9	1.9	-

(1) In fuel oil

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
October 1985		
Coal (Tons)	98232	91184
% Sulfur	1.0	1.0
November 1985		
Coal (Tons)	93414	112495
% Sulfur	1.1	1.1
December 1985		
Coal (Tons)	91498	86270
% Sulfur	1.0	1.0

Shantz(QtrRpt-1)D12

* Coal-oil mixture, barrels

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

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

TO: Steve Smallwood

FROM: Walter E. Starnes WES

DATE: June 7, 1985

SUBJ: Florida Power Corporation - Bartow Plant

D. E. R.
JUN 12 1985
SOUTH WEST DISTRICT
TAMPA

The petition for reduction of quarterly testing to semiannual testing of the Florida Power Corporation Bartow Unit #2 power plant has been reviewed. The following reviewed and agreed that the test results, 8 quarters in 1983 and 1984 comply with FAC Rule 17-2.600(5)(b)2. with all tests below 0.1# particulate/10^6 Btu and that the relief to the petitioner should be granted: W.C. Thomas, SW District, Ed Svec, Andres Kraul and Walter Starnes, BAQM.

The opacity ranged between 17 and 30 for these tests -- 40 is allowed for quarterly testing.

Two particulate tests in 1982 exceeded 0.1#/10^6 Btu but all other tests since February 19, 1980 inclusive have complied with the .1#/mm Btu standard. All reported opacity tests (3 missing), since, and including February 19, 1980, have been 30 or less. A copy of the petition and the response are attached.

W. G. Thomas suggests that a condition should be included in the order that would automatically rescind the order and would require continuance of quarterly testing if either the particulate or opacity standard is violated.

WES:bjs

Attachments

cc: Carol Forthman - with attachments
Marshall Mott-Smith
W. G. Thomas, S.W. District
Andres Kraul
Ed Svec

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

TYPE II AUDIT CHECKLIST

DATE 10-9-84

COMPANY: FPC - ANCLOTE UNIT # 1
LOCATION: TARPON SPRINGS COUNTY PASCO
SOURCE ID: SCRUBBER TYPE: NONE
TEST COMPANY: FPC
TEST TEAM MEMBERS: TODD BRUETTE, KEN ROY, PHIL WATKINS
POLLUTANT TESTED: TSP METHOD: EPA 17
METHOD MODIFICATIONS: NONE
SAMPLING PORT LOCATIONS: BOTTOM OF DUCT
DISTANCE DOWNSTREAM TO STACK EXIT:
DISTANCE UPSTREAM TO FLOW DISTURBANCE:
INSIDE DIAMETER OF STACK:
APPROX. STACK TEMPERATURE: 300 APPROX. DGM TEMPERATURE: 86
STATIC PRESSURE: BAROMETRIC PRESSURE: 30.22
CHECKED FOR CYCLONIC FLOW: NO IF YES, WHAT WAS DONE
OF POINTS REQUIRED: # OF POINTS TESTED: 32
OF PORTS: 4 POINTS/PORT: 8 TIME/POINT: 2
MINIMUM TOTAL SAMPLE TIME: 60 ACTUAL TOTAL SAMPLE TIME: 64 885.268
MINIMUM SAMPLE VOLUME: 30 dscf ACTUAL SAMPLE VOLUME:
PITOT TUBE LEAK CHECK: POSITIVE SIDE ✓ NEGATIVE SIDE ✓
SAMPLE TRAIN LEAK CHECK: PRE ✓ POST ✓
ORSAT USED: LEAK CHECKED: FYRITE USED:
$\%O_2$ ✓ $\%CO_2$ %CO
GRAB: INTEGRATED: ✓
NOZZLE DIAMETER: .245 CONDITION: ✓
PROPER TRAIN USED: ✓ FILTER LOCATION: in stack
PROBE LENGTH: 27' LINER MATERIAL: S/S
PROBE/PITOT/THERMOCOUPLE MOUNTED PROPERLY: ✓
FILTER INSTALLED PROPERLY: ✓ FILTER LABELED: ✓
GLASSWARE CLEAN: ✓ ASSEMBLED PROPERLY: ✓
IMPINGER EXIT TEMPERATURE: 55 MOISTURE COLLECTED(ML):
SILICA GEL SATURATED: SILICAGEL LABELED:
FILTER RECOVERY ON SITE: yes (Harley) OK:
FRONT HALF RINSED: LABELED: ACETONE WASH: ✓
WATER WASH: LEVEL MARKED: CONTAINER TYPE:
VISIBLE EMISSIONS TEST PERFORMED: DER 30% OTHER
MANOMETER LEVELED: yes ZEROED: yes

CALIBRATION DATES

DRY GAS METER: 5-30-84 PITOT TUBE: NOZZLE:
THERMOCOUPLE: MAGNEHELIC: THERMOMETERS:

PLANT DATA

PERMITTED RATE: OPERATING RATE: 500 MW
FUEL TYPE: OIL FUEL RATE:
GROSS GENERATION(MW): 500 MW

(over)

NOMOGRAPH K FACTOR ESTIMATION

$K = 849.8\ (Dn)^4\ H@\ (Cp)^2\ (1-Bws)\ Tm/Ts$ Temp. in °Rankin

$K = 849.8\ (\ )^4(\ \ )(\ )^2\ (\ \ \ )(\ )/(\ )$

K =

GENERAL COMMENTS

Explained post test calibration by sonic/orifice meter requirements to Todd and Ken. Will call Ken Roberts if need more detailed info.

Was test team supervisor given the opportunity to read over this checklist? _____ Did he do so? _____

OBSERVER'S NAME Louis Fernandez TITLE Env Spec II

AFFILIATION FDER SIGNATURE Louis J. Fernandez

Craig

D.E.R.

SEP 14 [illegible]

SOUTHWEST DISTRICT

Pinellas Gwen

EMERGENCY RESPONSE REPORT

MEMO TO: JACOB F. STOWERS III, Director
Department of Environmental Management

WILLIAM K. HENNESSEY, S. W. District Manager
Department of Environmental Regulation, Tampa

THRU: JOYCE M. GIBBS, Chief
Division of Air and Water Quality, P.C.D.E.M.

FROM: PETER A. HESSLING, Environmental Engineer
Enforcement, P.C.D.E.M.

SUBJECT: EXPLOSION OF A FLORIDA POWER CORPORATION TRANSFORMER CONTAINING PCB's ON SEPTEMBER 1, 1981

DATE: SEPTEMBER 4, 1981

At about 8:55 a.m. on September 1, 1981, this office received a call from Frank Hill of the Clearwater Fire Department requesting assistance in handling and overseeing operations at an Eckerd Drug store at Mandalay Avenue and Baymont Street on Clearwater Beach where a PCB laden electric transformer had exploded and possibly contaminated the area. He stated that the Fire Department was unfamiliar with the handling procedures of PCB's, and wanted guidance from an environmental control agency. He was informed that we would notify the EPA emergency response office in Atlanta and that he should notify Florida Power Corporation officials, if he hadn't already, as they had the responsibility and liability for emergency cleanup of any hazardous material spill from their equipment. He was informed that someone from our Department would be dispatched to the site immediately to observe and verify proper clean-up and handling of the situation.

He was informed that EPA guidelines for most liquid hazardous material spills recommend not to use water or foam on the spilled material, but recommend to contain and absorb any spilled material with absorbant clay/sand mixtures or oil absorbant pads.

He was informed that this County Department does not have personnel sufficiently trained nor the equipment/materials to take control responsibility at the site of hazardous material spills, but we would offer any assistance we could at the site to the Fire Department and Florida Power Officials.

The EPA emergency response office in Atlanta was notified at 9:05 a.m. Mr. Ray Wilkerson with EPA took the information and concurred with me that the PCB material should be contained and removal from the spill area with absorbant type materials. Precautions of securing the area and minimizing contact with any PCB contaminated surfaces was also recommended. He requested to be notified as soon as possible when we got to the site so that he could be informed as to the amount and area of PCB contamination. If the amount spilled was less than about 5 gallons, then no EPA official would be immediately dispatched. Mr. Wilkerson was told we would notify him after assessing the situation.

At 9:10 a.m. the Director of P.C.D.E.M., Mr. Stowers, was notified of the situation and directed that we go to the site to assess and oversee the handling of the situation.

At approximately 9:35 a.m. Peter Hessling of P.C.D.E.M. arrived at the site and contacted Mr. Henry Ehrman, Bob Chauncey and Tim Jewel of the Florida Power Corporation, Safety Department, who were handling the operation for the utility firm. The fire department officials had cordoned off the block and were turning over control to the Florida Power response team. The network transformer that shorted-out was contained in a concrete well beneath the sidewalk, and covered with metal grating in front of the Eckerd Drug store. Mr. Ehrman stated that a small amount of the 22 gallons of PCB laden oil, that was in the transformer, leaked out and was contained in the well area. A large black soot area covered a portion of the front of the building and roof area. When asked if the soot could contain PCB residues, the Florida Power people replied that it is possible, but they did not think it was likely in this case.

They stated that the smoke and carbon residue were probably due primarily to the burning of lacquer insulation and other plastic parts of the transformer. The inside of the store did not appear to be affected at all by the smoke, etc. in that there was no carbon residue or smoke damage. According to the store manager, the transformer made several loud explosion like noises and crackles at about 8:35 a.m. when it first shorted (arced) out. He went outside the building to observe where the black smoke and noises came from and the unit arced-out again smoking profusely. He then went back into the store and called the Clearwater Fire Department. A Florida Power serviceman happened to be within the immediate vicinity when it occurred and he notified his dispatch center who in turn notified the Safety team.

Several passers-by claimed to be made dizzy by the smoke when the transformer first exploded. The Florida Power and Eckerd Company officials obtained their names, etc., as they requested to be examined at a hospital. This matter was handled by the Florida Power officials.

The Florida Power officials described their clean-up procedures as follows: They would pump any water and PCB laden oil. which leaked out into the concrete well, into 55 gal. drums for shipment to a hazardous waste disposal facility; they would sweep up any residue from the sidewalk area; they would wash/wipe off any area of the building, that had the carbon resideu on it, with chlorethane solvent. The initial phases of the clean-up were observed and appeared to be proper. They began by wiping-off the front roof area and upper portions of the building. The pumping out of the well into a sealed drum was also observed to be initiated. The Florida Power officials stated that they felt only a small amount of PCB laden oil had leaked out of the transformer. They stated that the clean-up should be completed later in the afternoon. When asked if they would be doing any testing to determine if and how much any PCB residuals were present after clean-up, Mr. Ehrman and Mr. Jewel replied that they wouldn't as they did not think it was required.

Before leaving the site and by phone in the office, the Eckerd Company officials, notably Mr. Jack Hatcher, requested that this office and or Florida Power give them

a certification that the store was uncontaminated and could be reopened. It was explained to Mr. Hatcher that the liability and responsibility for such statements rested with Florida Power Corporation according to the clean-up requirements of the EPA hazardous material regulations and/or EPA officials and/or whichever health department or insurance officials which had the authority according to normal post fire situations where consumable goods are involved. He was told that according to my observations there did not appear to be contamination of the inside of the building, but that exact determination would have to be made by other officials that Florida Power was mainly the liable party, according to the EPA regulations. It was pointed out to him that he could request EPA officials to come to the site to assess and sample for any contamination levels present. He was given the EPA phone numbers and names of contact persons.

A call was placed by me to Mr. Ralph Jennings of EPA, Atlanta. Mr. Jennings is the regions contact person for PCB matters. The case was outlined to him and he was requested to have someone perform residual sampling and testing of the area for PCB's. He stated he would do so and would have the Florida EPA resident inspector, Mr. Carlton Layne, contact this office when he was to make his field investigation. He also requested to be informed of any further developments in this case.

A follow-up report will be made after Mr. Layne's field visit and the results are known. Mr. Jennings requested confidentialty regarding Mr. Layne's investigation. If there are PCB residues in excess of 50 ppm, then EPA may take formal action against the responsible party for inadequate clean-up of a hazardous material spill, and possibly for other violations of pertinent regulations.

TO Mr. Kenneth Roberts
Florida Dept. of Environmental Regulation
7601 Highway 301 North
Tampa, Fla 33610

FROM T.L. Brouette (H8) (File)
Florida Power Corp. FPC Bartow
P.O. Box 14042
St. Petersburg, Fla 33733

Florida Power CORPORATION

SUBJECT: FPC Bartow Unit #2 - Testing Schedule DATE: June 24, 1985

FOLD

Ken: This is to confirm my conversations with Bob Soich (June 14, 1985) and you (June 20) regarding the above. It is our understanding that the Department has agreed in principle with our request to test the subject unit on a semi-annual basis. Both you and Bob Soich indicated, therefore, that FPC would not be required to provide test data for the second quarter of 1985, since the unit was tested during March 1985. The next test would be due during the second half of 1985 in accordance with the new semi-annual testing requirement. Please indicate your concurrence with this understanding by returning the reply section of this letter.

Thank you,
SIGNED Todd Brouette

REPLY The majority of recommendations submitted to Tallahassee on the request by those asked to comment were in favor of granting the request. Final approval must come from the Secretary however. It has been policy in the past to allow the company to test as per their ASP until a final determination is made. If at that time, the ASP is denied you would be required to return to quarterly testing

DATE 6/27/85 SIGNED K M Roberts

DISTRICT TAMPA

This copy for person addressed

REV. 1-85 906-210(S)

Estter
fyi - Pinellas Co - AP
Florida Power
Bartow
units
1 + 2 + 3

Stack Height Inventory

Firm: Florida Power Corporation

Facility: Weedon Island (Bartow)

Mailing Address: Post Office Box 14042, St. Petersburg, FL. 33733.

Attn: Mr. D. A. Shantz (H8). Supervisor of Environmental Services.

Please correct and/or complete the following information.

Stack Heights Greater Than 65 Meters

Unit(s)	St. Hgt.(m)	Date Stack In Existence*
1	91.4 ✓	9/58 ✓
2	91.4 ✓	8/61 ✓
3	91.4 ✓	7/63 ✓

* The month (if known) and year that the owner or operator had (1) begun, or caused to begin, a continuous program of physical on-site construction of the stack or (2) entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

I certify that the above information is complete and correct to the best of my knowledge.

Signature Peter A. Besseling Date 10 / 9 / 85

Title Chief, Pinellas County Division of Air Quality

Return to: Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Attn: Max Linn

D. E. R.

OCT 10 1985

SOUTH WEST DISTRICT
TAMPA

Florida Power
CORPORATION

February 13, 1984

Mr. Peter A. Hessling
Division of Air Quality
16100 Fairchild Drive
Building V 101
Clearwater, FL 33520

I HAVE REVIEWED THIS REPORT AND IT (DOES ~~DOES NOT~~) INDICATE COMPLIANCE WITH THE PERMIT FOR THIS SOURCE.
DATE 4-5-84 BY [signature]

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

Roy(W06)D13

cc: D. Williams w/encl.
~~E. E. Denby w/encl.~~
T. L. Brouette
Readers

File: Environ 5-1

D. E. R.

FEB 15 1984

SOUTHWEST DISTRICT
TAMPA

A REPORT
ON PARTICULATE EMISSIONS
AT
THE FLORIDA POWER CORPORATION'S
HIGGINS PLANT
OLDSMAR, PINELLAS COUNTY, FLORIDA

UNITS 1, 2, AND 3

JANUARY 16, 17 AND 20, 1984

I HAVE REVIEWED THIS REPORT AND IT (DOES ~~DOES NOT~~) INDICATE COMPLIANCE WITH THE PERMIT FOR THIS SOURCE.
DATE 4-5-84 BY

PREPARED BY:

FLORIDA POWER CORPORATION
POWER PRODUCTION DEPARTMENT
ENVIRONMENTAL SERVICES SECTION

TABLE OF CONTENTS

CROSS-REFERENCED INDEX OF REPORT CONTENTS PER FDER RULE 17-2.700(7)(C)1-21, F.A.C.

LIST OF FIGURES

1.0 INTRODUCTION

On January 16, 17 and 20, 1984, 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 made on all these units.

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

Higgins 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. Unit 1 averaged 0.057 $lb/10^6$ Btu, Unit 2 averaged 0.040 $lb/10^6$ Btu, and Unit 3 averaged 0.037 $lb/10^6$ Btu.

Emission and stack gas parameters are summarized in Table 1, and detailed emission data are presented in Appendix A. Field Data Sheets are located in Appendix B, and the results of visible emission observations for Units 1 and 3 are included in Appendix C. A visible emission observation was not done on Unit 2 due to fog and haze during the time the unit was being tested at full load.

The sulfur dioxide emission for Higgins Plant was calculated assuming 100% conversion of the fuel sulfur to sulfur dioxide. Fuel analysis is found in Appendix B.

Sulfur dioxide (SO_2) 2.56 $lb/10^6$ Btu

3.0 PROCESS DESCRIPTION

The three units at the Higgins Plant were firing No. 6 fuel oil at the time of the tests. Unit 1 generated a net average of 37.9 megawatts during the non-sootblowing tests. Unit 2 generated a net average of 37.7 megawatts during the non-sootblowing tests. Unit 3 generated a net average of 39.0 megawatts during the non-sootblowing tests.

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.

4.0 FIELD AND ANALYTICAL PROCEDURES

4.1 SAMPLING

The sampling and analytical procedures used follow the procedures as outlined in EPA Method 17, in the Code of Federal Regulations, Chapter I, Title 40, Part 60, Appendix A, Method 17, revised as of July 1, 1979. The sampling equipment consisted of the following:

1. Pitobe Assembly

   a. Nozzle - Stainless steel with a sharp, tapered leading edge.

   b. Filter Holder - Nutech stainless steel in-stack filter holder ("flat pack").

   c. Probe - Rigid steel capable of supporting the filter holder.

   d. Pitot - Type "S" constructed and attached to probe according to specifications outlined in the Code of Federal Regulations, Chapter I, Title 40, Part 60, Appendix A, Method 2.

   e. O_2 Probe - Stainless steel 1/8 inch tubing attached to pitot tube in an interference-free arrangement.

   f. Thermocouple - Type "K" attached to the pitot tube such that the tip does not interfere with the pitot tube face openings.

2. Impingers - Four impingers connected in series with glass ball joint fittings and placed in an ice bath. Final gas exit temperature is measured to within $\pm 2°F$ with a thermocouple immersed in the gas stream.

3. Impinger Box - Insulated container with space for the impingers to be immersed in ice water.

4. Control Box - Module containing vacuum gauge, leak-free pump, thermocouples capable of measuring temperature to within $\pm 5°F$, dry gas meter with a minimum of 2 percent accuracy, valves and related equipment as required to maintain an isokinetic sampling rate and to determine sample volume.

5. Nomograph - To determine isokinetic sampling rate (manufactured by Nutech).

A schematic of the sampling train is shown in Figure 1.

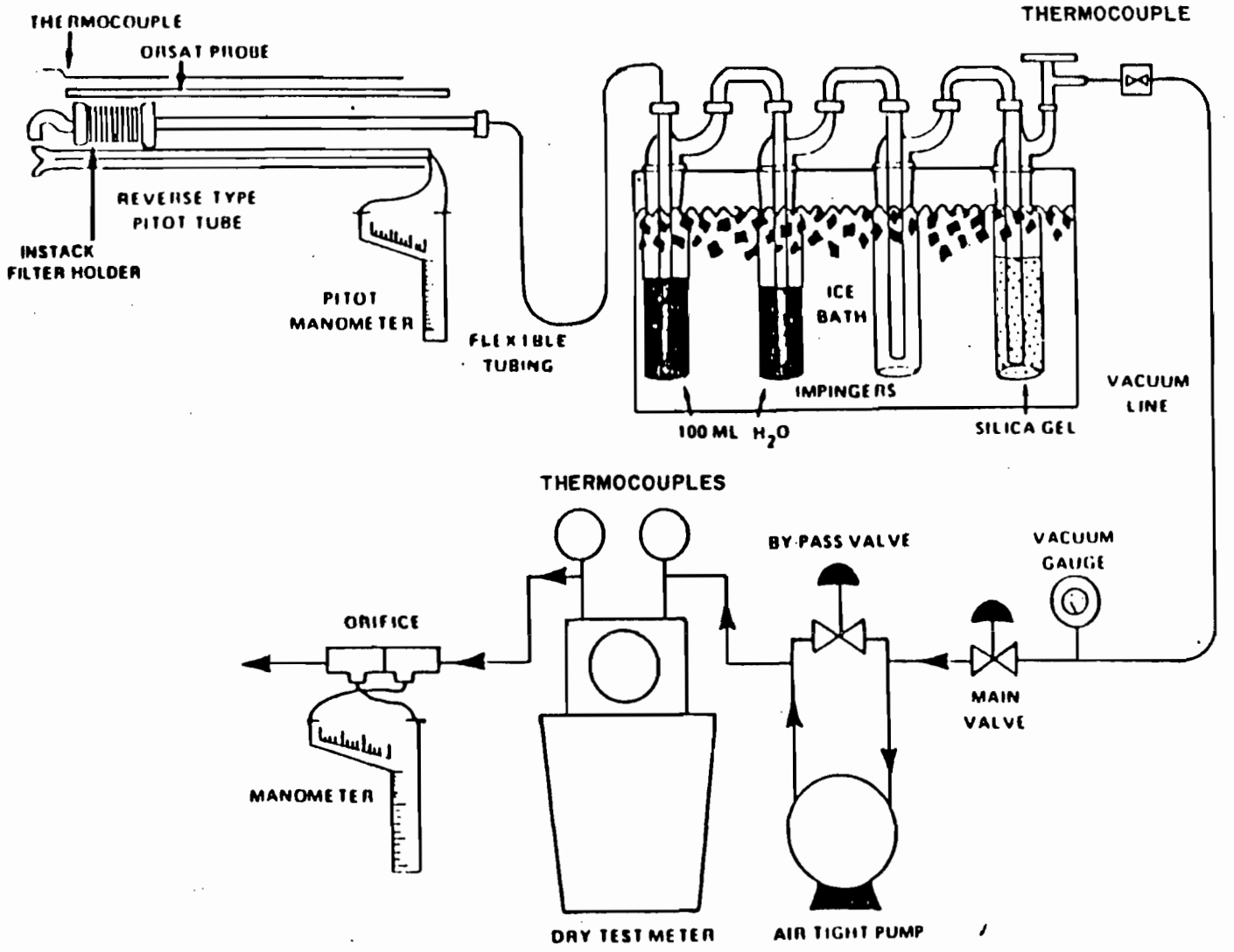


Figure 1

EPA METHOD 17 SAMPLING TRAIN

SOURCE: ENVIRONMENTAL SCIENCE AND ENGINEERING, INC., 1982

FLORIDA POWER CORPORATION

Prior to testing, all fiberglass filters were inspected for imperfections, indelibly marked, dried for at least 2-3 hours at 105°C and desiccated for 2 hours before weighing to the nearest .0001 gram. Clean, marked 250 ml beakers were dried, desiccated and weighed to 0.0001 gram in the same manner.

After weighing, the filters and beakers were stored in a desiccator until used for a test. Immediately before testing, the filter was removed from the desiccator and carefully inserted into the filter holder.

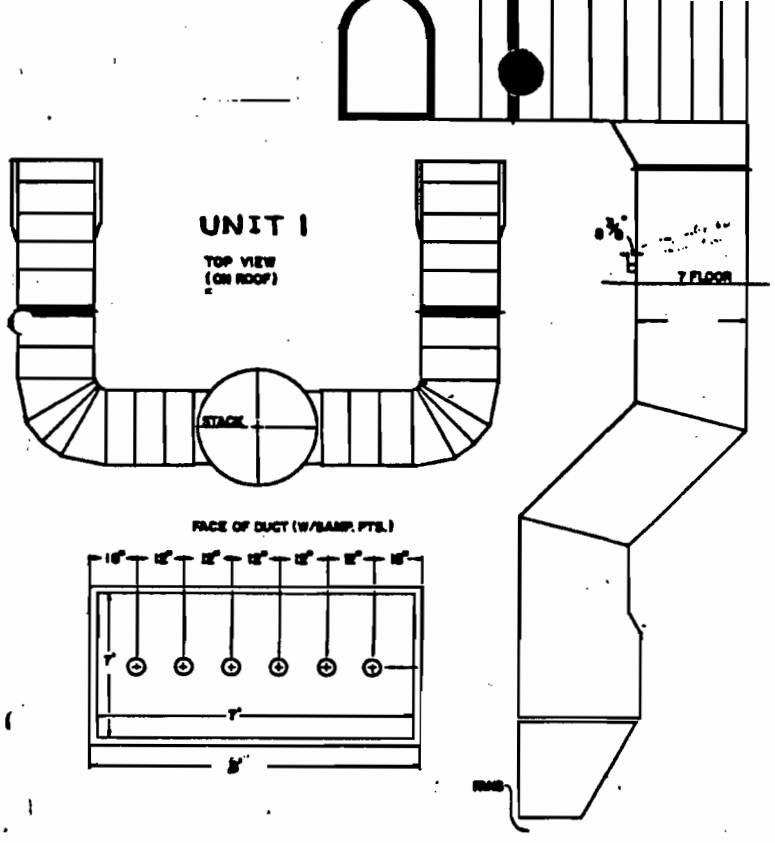
The sample train was prepared in the following manner: approximately 100 ml of distilled water was added to each of the first two impingers. The third impinger was left empty to act as a moisture trap, and silica gel was added to the fourth impinger. All four impingers were then weighed to within ±0.5 g. After assembling the train with the pitobe as shown in the schematic, the system was leak-checked by plugging the inlet to the probe nozzle and pulling a 15-inch Hg vacuum. A leakage rate not in excess of 0.2 cfm was considered acceptable. The pitot tube system was also leak-checked at 2 to 3 inches of water, and any leaks found were corrected.

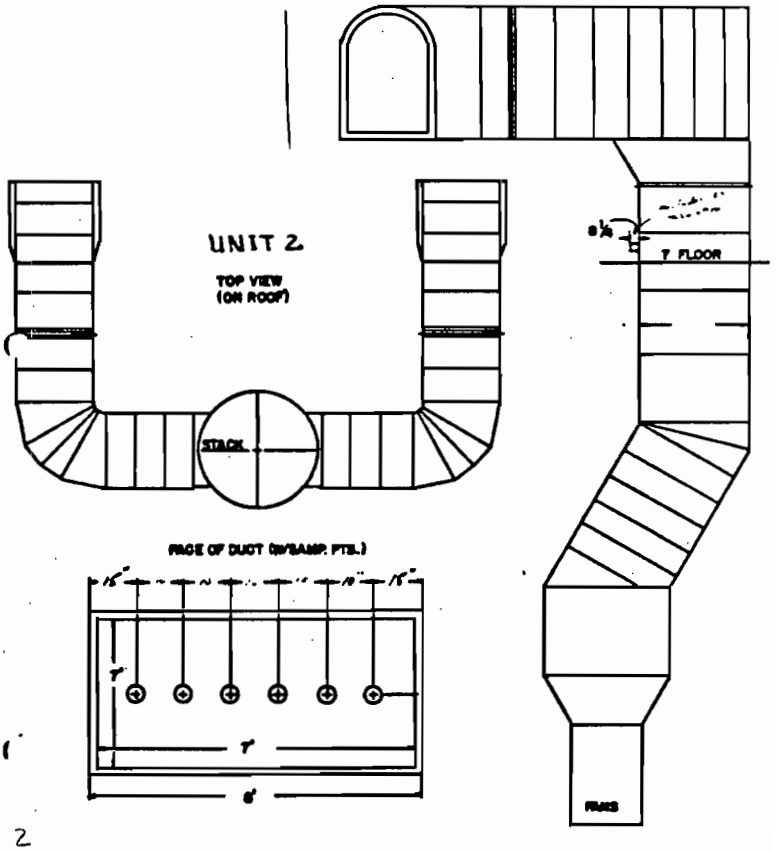
The inside dimensions of each stack were previously measured and recorded. The number of sampling points and the location of these points on a traverse were determined by the guidelines set forth in the Code of Federal Regulations, Chapter I, Title 40, Part 60, Appendix A, Method 1 (see Figure 2). These points were then marked on the probe for easy visibility.

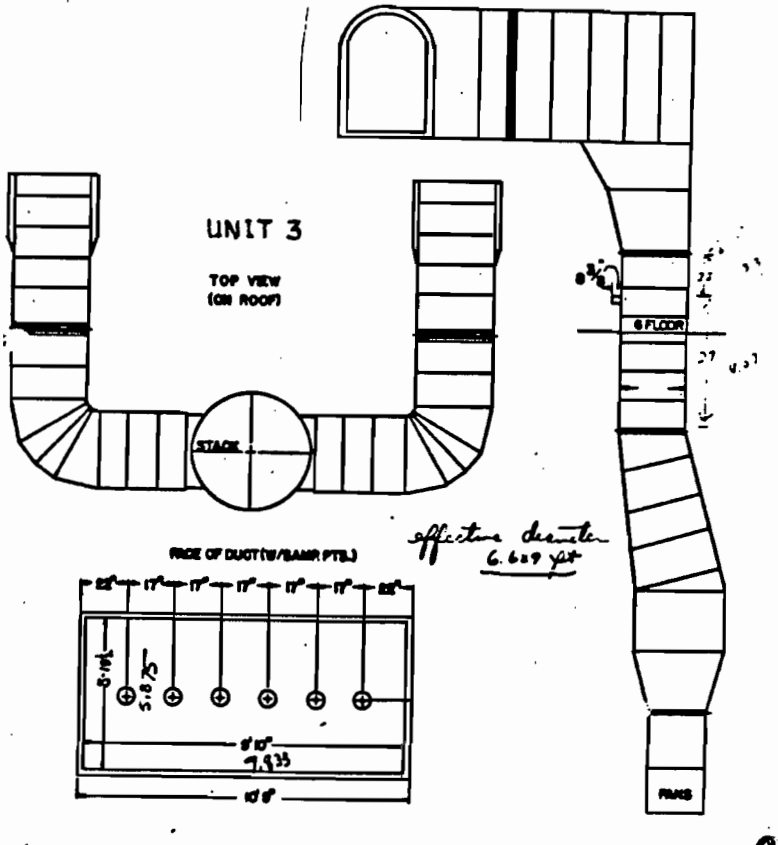
An approximate stack temperature was obtained and an approximate moisture content was estimated based on prior testing experience. Prior testing data was also used to determine the range of velocity head and duct pressure. From these data, the correct nozzle size and the nomograph correction factor were determined.

Just prior to testing, crushed ice was placed around the impingers. The probe was then placed in the stack and the nozzle was placed on the first traverse point with the tip pointing directly into the gas stream. The pump was started and the flow was adjusted to isokinetic conditions. After the required time interval had elapsed, the probe was repositioned to the next traverse point, and isokinetic sampling was reestablished. This was done for each point on the traverse until the run was completed. Readings were taken at every traverse point or when significant changes in stack conditions necessitated additional adjustments in flow rate. At the conclusion of each run, the pump was turned off and the final readings were recorded. A final leak check of the system was performed as previously described at the highest vacuum encountered during testing and a leak check of the pitot system was repeated.

HIGGINS PLANT
STACK SCHEMATICS







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.

A P P E N D I X A

TEST DATA AND SAMPLE CALCULATION

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR,FL

UNIT NUMBER: 1 REMARKS: 1ST 1/2

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	1/20/84	1/20/84	1/20/84	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.16	30.16	30.16	
STACK PRESSURE (IN HG)	30.17	30.17	30.17	
STACK TEMPERATURE (F)	298.0	301.0	300.0	299.7
METER TEMPERATURE (F)	99.0	102.0	99.0	
CONDENSATE COLLECTED (ML)	72.1	53.6	51.1	
PARTICULATES COLLECTED (GM)	0.05970	0.04010	0.04090	
AVG SQRT DELTA P, PITOT (IN H2O)	0.559	0.575	0.546	
AVG DELTA H, ORIFICE (IN H2O)	0.709	0.696	0.677	
NOZZLE DIAMETER (IN)	0.2480	0.2480	0.2480	
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)	29.60	29.31	29.30	
MOLECULAR WT., WET (LB/LB-MOLE)	28.55	28.53	28.55	
VOLUME DRY GAS SAMPLE (ACF)	36.030	35.966	35.338	
VOLUME DRY GAS SAMPLE (SCFD)	34.362	34.118	33.702	
HEAT INPUT (MM BTU/HR)	436.6	436.6	436.6	
% H2O CALCULATED	9.0	6.9	6.7	7.5
% OXYGEN	10.7	9.4	9.5	9.9
% CARBON DIOXIDE	7.3	7.6	7.5	
% EXCESS AIR	97.7	76.7	78.2	
AVG STACK GAS VELOCITY (FT/S)	37.65	38.82	36.83	37.77
ACTUAL GAS FLOW RATE (ACFMD)	95909.	101173.	96215.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	67366.	70783.	67403.	
% ISOKINETIC	98.55	93.12	96.60	
PARTICULATE CONC. (LB/SCFD)	3.83E-06	2.59E-06	2.67E-06	
PARTICULATE EMISSION RATE (LB/HR)	30.94	21.99	21.62	24.85
EMISSION RATE/MM BTU (LB/MM BTU)	0.071	0.050	0.050	0.057

436 mmbtu/hr.

SAMPLE CALCULATION

PLANT NAME: HIGGINS LOCATION: OLDSMAR,FL

UNIT NUMBER: 1 REMARKS: 1ST 1/2

RUN NUMBER: 1

DATA INPUT

AS	- STACK AREA (SQ FT)	46.65
CO	- % CARBON MONOXIDE	0.0
CO2	- % CARBON DIOXIDE	7.3
D	- # OF DUCTS	2.
DELTA H	- AVG DELTA H, ORIFICE (IN H2O)	0.709
FF	- F FACTOR (CU FT/BTU)	9220.
HTRT	- HEAT RATE (BTU/KWH)	11519.
LOAD	- LOAD (KW)	37900.
N2	- % NITROGEN	82.0
O2	- % OXYGEN	10.7
PB	- BAROMETRIC PRESSURE (IN HG)	30.16
PDIF	- SQRT DELTA P AVG, PITOT (IN H2O)	0.559
PM	- METER PRESSURE (IN HG)	30.21
PS	- STACK PRESSURE (IN HG)	30.17
RAD	- NOZZLE RADIUS (IN)	0.1240
TIME	- TIME OF RUN (MIN)	72.0
TM	- METER TEMPERATURE (DEG F)	99.0
TS	- STACK TEMPERATURE (DEG F)	298.0
VL	- VOLUME OF LIQUID COLLECTED (GM)	72.0
VM	- VOLUME OF GAS METERED (CU FT)	36.030

VOLUME WATER VAPOR @ STD. COND. (SCF)

VSTD = .04715*VL 3.4

VOLUME DRY GAS METERED @ STD. COND. (SCFD)

VMSTD = (VM*528*PM*Y)/(29.92*TM) 34.362

% H2O (%)

H2O = (VSTD*100)/(VSTD+VMSTD) 9.0

% EXCESS AIR (%)

EA = (O2-(.5*CO))*100/((.264*N2)-O2+(.5*CO)) 97.7

UNIT NUMBER: 1
RUN NUMBER: 1

MOLECULAR WEIGHT, DRY (LB/LB-MOLE)

DMW = (CO2*.44)+(O2*.32)+((CO+N2)*.28) 29.60

MOLECULAR WEIGHT, WET (LB/LB-MOLE)

WMW = DMW*(1-(H2O/100))+(.18*H2O) 28.55

AVG STACK GAS VELOCITY (FT/S)

VS = 85.48*(.84)*PDIF*SQRT(TS/(PS*WMW)) 37.65

ACTUAL GAS FLOW RATE, DRY (ACFHD)

FSTAK = VS*AS*3600*(1-(H2O/100)) 5754541.

VOLUMETRIC GAS FLOW RATE @ STD. COND. (SCFHD)

FSTD = FSTAK*(528/TS)*(PS/29.92) 4041931.

% ISOKINETIC (%)

PI = (TS*100*((.00267*VLML)+(VMSTD/17.647)))/
(TIME*VS*PS*3.14159*((RAD/12)**2)*60) 98.55

PARTICULATE CONCENTRATION (LB/SCFD)

CSTD = WT/(VMSTD*454) 3.83E-06

PARTICULATE EMISSION RATE (LB/HR)

TOT = FSTD*CSTD*D 30.94

HEAT INPUT (MM BTU/HR)

BTU = HTRT*LOAD/(10**6) 436.6

EMISSION RATE - STATE METHOD (LB/MM BTU)

PARS = TOT/BTU 0.071

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR,FL

UNIT NUMBER: 2 REMARKS: 1ST 1/2

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	1/16/84	1/16/84	1/16/84	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.09	30.09	30.09	
STACK PRESSURE (IN HG)	30.11	30.11	30.10	
STACK TEMPERATURE (F)	275.0	276.0	277.0	276.0
METER TEMPERATURE (F)	102.0	101.0	100.0	
CONDENSATE COLLECTED (ML)	65.6	61.1	52.1	
PARTICULATES COLLECTED (GM)	0.04720	0.02520	0.03520	
AVG SQRT DELTA P, PITOT (IN H2O)	0.490	0.482	0.483	
AVG DELTA H, ORIFICE (IN H2O)	0.568	0.587	0.553	
NOZZLE DIAMETER (IN)	0.2480	0.2480	0.2480	
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)	29.52	29.52	29.52	
MOLECULAR WT., WET (LB/LB-MOLE)	28.47	28.55	28.66	
VOLUME DRY GAS SAMPLE (ACF)	32.516	32.971	32.167	
VOLUME DRY GAS SAMPLE (SCFD)	30.763	31.249	30.542	
% H2O CALCULATED	9.1	8.4	7.4	8.3
% OXYGEN	8.4	8.4	8.4	8.4
% CARBON DIOXIDE	8.8	8.8	8.8	
% EXCESS AIR	63.4	63.4	63.4	
AVG STACK GAS VELOCITY (FT/S)	32.58	32.02	32.05	32.22
ACTUAL GAS FLOW RATE (ACFMD)	82870.	82081.	83050.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	59909.	59258.	59857.	
% ISOKINETIC	99.21	101.88	98.58	
PARTICULATE CONC. (LB/SCFD)	3.38E-06	1.78E-06	2.54E-06	
PARTICULATE EMISSION RATE (LB/HR)	24.30	12.63	18.23	18.39
EMISSION RATE/MM BTU (LB/MM BTU)	0.052	0.027	0.039	0.040

460 mmbtu/hr.

FLORIDA POWER CORPORATION

PARTICULATE SAMPLING REPORT

PLANT NAME: HIGGINS LOCATION: OLDSMAR, FL

UNIT NUMBER: 3 REMARKS: 1ST 1/2

	RUN 1	RUN 2	RUN 3	AVG
DATE OF RUN	1/17/84	1/17/84	1/17/84	
NET TIME OF RUN (MIN)	72.0	72.0	72.0	
BAROMETRIC PRESSURE (IN HG)	30.07	30.07	30.07	
STACK PRESSURE (IN HG)	30.06	30.06	30.06	
STACK TEMPERATURE (F)	278.0	284.0	287.0	283.0
METER TEMPERATURE (F)	96.0	98.0	103.0	
CONDENSATE COLLECTED (ML)	33.1	69.1	43.1	
PARTICULATES COLLECTED (GM)	0.03390	0.02880	0.04130	
AVG SQRT DELTA P, PITOT (IN H2O)	0.420	0.436	0.421	
AVG DELTA H, ORIFICE (IN H2O)	0.437	0.462	0.403	
NOZZLE DIAMETER (IN)	0.2480	0.2480	0.2480	
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)	29.78	29.59	29.56	
MOLECULAR WT., WET (LB/LB-MOLE)	29.15	28.43	28.79	
VOLUME DRY GAS SAMPLE (ACF)	28.673	30.542	30.226	
VOLUME DRY GAS SAMPLE (SCFD)	27.384	29.064	28.508	
% H2O CALCULATED	5.4	10.1	6.6	7.4
% OXYGEN	7.3	6.7	6.6	6.9
% CARBON DIOXIDE	10.2	10.2	10.2	
% EXCESS AIR	50.9	44.8	43.9	
AVG STACK GAS VELOCITY (FT/S)	27.68	29.21	28.08	28.32
ACTUAL GAS FLOW RATE (ACFMD)	72169.	72400.	72254.	
VOLUMETRIC GAS FLOW RATE (SCFMD)	51875.	51621.	51310.	
% ISOKINETIC	100.41	107.10	105.69	
PARTICULATE CONC. (LB/SCFD)	2.73E-06	2.18E-06	3.19E-06	16.71
PARTICULATE EMISSION RATE (LB/HR)	16.97	13.52	19.65	
EMISSION RATE/MM BTU (LB/MM BTU)	0.039	0.030	0.043	0.037

452 mmbtu/hr.

A P P E N D I X B

FIELD DATA SHEETS AND FUEL/HEAT INPUT DATA

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 1
SAMPLING LOCATION A & B Duct
DATE 1-20-84
RUN NUMBER 1-84
OPERATORS Watkins, Roy, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. ¼" .248
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 75°
BAROMETRIC PRESSURE (P_{BAR}) 30.18
STATIC PRESSURE (P_{STAT})
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.17
METER PRESSURE (P_M) = $P_{BAR} + \Delta H/13.6$ 30.21
P_S/P_M
DUCT OR STACK % O_2
ASSUMED MOISTURE 10%
C FACTOR
DUCT OR STACK AREA (A_S), ft² ~~45.93~~ 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial @15" Hg Final 0@5" Hg

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 6:54	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
B-1	2	700.135	.35	.75	.75	84	84	3	84	55	320	8.6
	4		.43	.92	.92	84	84	3	84	49	324	
	6		.45	.96	.96	86	84	3	85	48	330	
2	2		.38 .45	.81	.81	89	84	3	86	48	329	8.8
	4		.40	.86	.86	92	84	3	88	47	330	
	6	706.844	.43	.92	.92	94	84	3	89	47	329	
3	2		.34	.74	.74	96	85	3	90	48	325	8.6
	4		.39	.84	.84	98	85	3	91	47	330	
	6	710.040	.43	.87	.87	100	86	3	93	47	329	
4	2		.36	.79	.79	100	87	3	93	48	328	8.5
	4		.36	.78	.78	102	87	3	94	48	329	
	6	713.220	.40	.87	.87	103	88	3	95	47	329	
TOTAL OR AVERAGE		36.030	.559 $\sqrt{\Delta P}$	.709 .105		99° 559°R				298° 758°R		10.2%

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	638.5	555.0	479.0	704.5
INITIAL	577.0	556.0	479.0	696.0
LIQUID COLL.	61.5	2.0	0.0	8.5
TOTAL VOLUME	72.0			

	GAS MEASUREMENTS TIME	CO_2	O_2	CO	N_2
1		2.3	10.7		
2					
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 5	BEAKER NO. 9
FINAL WEIGHT	0.4490	95.4671
TARE WEIGHT	0.4527	95.4037
WEIGHT GAIN	-.0037	.0634
TOTAL	.0597	

Plant Higgins #1 Date 1-20-84 Run No. 1-84

p. 2

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (Δ P) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
B-5	2	713.220	.30	.65	.65	102	89	2	95	~~48~~	327	8.6
	4		.38	.83	.83	105	89	3	97	47	330	
	6	716.325	.38	.83	.83	106	90	3	98	47	329	
6	2		.28	.62	.62	106	90	2	~~98~~	48	325	8.4
	4		.32	.70	.70	107	91	3	99	47	329	
	6	719.279	.34	.74	.74	107	92	3	99	47	329	
						~~94~~	~~47~~		95			
A-1	2		.22	.52	.52	99	92	2	95	55	268	12.5
	4		.22	.52	.52	102	93	2	97	50	270	
	6	721.898	.22	.52	.52	102	93	2	97	49	270	
2	2		.22	.52	.52	102	93	2	97	51	265	12.0
	4		.25	.59	.59	104	94	2	99	49	270	
	6	724.590	.25	.59	.59	105	94	2	99	48	270	
3	2		.24	.57	.57	104	94	2	99	50	265	13.0
	4		.27	.64	.64	107	95	2	101	49	270	
	6	727.402	.27	.64	.64	108	95	2	101	49	270	
4	2		.24	.57	.57	108	95	2	101	50	266	13.0
	4		.29	.69	.69	109	96	3	102	~~50~~	270	
	6	730.314	.30	.72	.72	110	96	3	103	49	270	
5	2		.26	.62	.62	110	96	3	103	51	265	13.0
	4		.29	.69	.69	111	97	3	104	50	270	
	6	733.857	.30	.72	.72	112	97	3	104	50	270	
6	2		.24	.58	.58	112	98	2	105	51	265	13.0
	4		.29	.69	.69	112	98	2	105	50	269	
	6	736.165	.28	.67	.67	113	98	2	105	~~50~~	270	
	8:20											

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 1
SAMPLING LOCATION A & B Duct
DATE 1-20-84
RUN NUMBER 2-84
OPERATORS Roy, Watkins, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. 1/4" -.248
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 77
BAROMETRIC PRESSURE (P_{BAR}) 30.16
STATIC PRESSURE (P_{STAT}) A -.13 B/13.01
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.17
METER PRESSURE (P_M) = $P_{BAR} + \Delta H / 13.6$ 30.21
P_S/P_M
DUCT OR STACK % O_2
ASSUMED MOISTURE 10%
C FACTOR
DUCT OR STACK AREA (As), ft² ~~45.93~~ 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 00 15" Final 5"

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 8:50	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
A-1	2	736.316	.20	.48	.48	96	95	2	95	64	260	
	4		.23	.54	.54	95	95	2	95	56	265	10.5
	6	738.918	.21	.50	.50	97	95	2	96	54	264	
2	2		.22	.55	.55	98	95	2	97	53	264	
	4		.26	.62	.62	100	96	2	95	52	262	10.2
	6		.26	.62	.62	102	96	2	99	51	264	
3	2	741.467	.25	.60	.60	103	95	2	98	53	261	
	4		.27	.65	.65	105	95	2	100	51	260	10.1
	6		.29	.70	.70	106	96	2	101	51	266	
A 4	2	744.528	.25	.60	.60	107	95	2	101	52	261	10.1
	4		.30	.72	.72	108	96	2	102	51	266	
	6		.32	.77	.77	110	96	2	103	51	263	
TOTAL OR AVERAGE		35.966	.575 $V\Delta P$	.696 .05		102°F 562°R				80°F 761°R		9.4%

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	629.5	560.5	479.0	710.5
INITIAL	584.5	558.0	479.0	704.5
LIQUID COLL.	45.0	2.5	0.0	6.0
TOTAL VOLUME		53.5		

	GAS MEASUREMENTS TIME	CO_2	O_2	CO	N_2
1					
2		7.6	9.4		
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 6	BEAKER NO. 12
FINAL WEIGHT	0.4606	104.0012
TARE WEIGHT	0.4591	103.9626
WEIGHT GAIN	.0015	.0386
TOTAL	.0401	

Plant Hooker #1 Date 1-20-84 Run No. 2-84

Ps = 15

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
A-5	2		.24	.63	.63	110	96	2	103	52	262	10.1
	4		.30	.72	.72	111	97	2	104	52	264	
	6		.32	.77	.77	111	97	2	104	51	264	
A-6	2	750.585	.25	.60	.60	112	97	2	104	53	261	10.2
	4		.28	.68	.68	112	98	2	105	52	263	
	6		.30	.72	.72	113	98	2	105	52	263	
B-1	2	753.525	.34	.74	.74	104	95	2	102	61	338	
	4		.37	.80	.80	107	98	3	102	53	339	
	6		~~.37~~ .42	.80	.80	108	98	3	103	51	339	8.6
B-2	2	756.718	.37	.80	.80	108	98	3	103	52	338	
	4		.40	.87	.87	109	98	3	103	51	338	
	6		.37	.80	.80	110	98	3	104	50	339	
B-3	2	759.949	.34	.74	.74	109	98	2	103	52	337	8.6
	4		.37	.80	.80	110	98	2	104	51	339	
	6		.37	.80	.80	111	99	3	105	51	339	
B-4	2	763.125	.34	.74	.74	110	98	2	104	52	337	
	4	~~763.125~~ REC	.34	.74	.74	111	98	2	105	51	339	8.6
	6		.37	.81	.81	111	98	2	105	51	339	
B-5	2	766.278	.32	.70	.70	111	98	2	105	52	337	
	4		~~.34~~ .32	.70	.70	112	98	2	105	52	339	
	6		.34	.74	.74	112	99	2	106	52	339	8.6
B-6	2	769.318	.28	.61	.61	111	99	2	105	53	338	
	4		.32	.70	.70	112	99	2	106	52	339	8.6
	6		.32	.70	.70	112	99	2	106	52	339	
		772.282										

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 1
SAMPLING LOCATION A + B DUCT
DATE 1-20-84
RUN NUMBER 3-84
OPERATORS Watkins, Ray, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. 1/4" .248
METER ΔHa 1.88
PITOT Cp .84

AMBIENT TEMPERATURE 78
BAROMETRIC PRESSURE (P_{BAR}) 30.16
STATIC PRESSURE (P_{STAT}) .01
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.17
METER PRESSURE (P_M) = $P_{BAR} + \Delta H / 13.6$ 30.21
P_S/P_M
DUCT OR STACK % O_2
ASSUMED MOISTURE 10%
C FACTOR
DUCT OR STACK AREA (A_S), ft² ~~45.93~~ 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0.015 "Hg Final 0.05 "Hg

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 10:45	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) in. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) in. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
B-1	2	772.445	.34	.73	.73	92	92	2	92	62	335	
	4		.37	.79	.79	92	93	2	92	52	339	8.8
	6	775.500	.40	.86	.86	94	93	3	93	51	339	
2	2		.35	.76	.76	95	92	3	93	51	330	9.0
	4		.38	.81	.81	97	92	3	94	49	339	
	6	778.670	.38	.82	.82	100	92	3	96	49	340	
3	2		.35	.76	.76	100	92	3	96	49	335	8.8
	4		.36	.77	.77	102	92	3	97	49	340	
	6	781.792	.37	.80	.80	104	93	3	99	49	340	
4	2		.34	.69	.69	104	93	2	99	49	336	9.2
	4		.33	.71	.71	105	93	2	99	49	340	
	6	784.828	.34	.74	.74	106	93	3	100	49	340	
TOTAL OR AVERAGE		35.338	.546 $\sqrt{\Delta P}$	.677 .05		99°f 559°R				300°f 760°R		9.5

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	607.0	563.0	479.5	716.5
INITIAL	565.0	560.5	479.0	710.5
LIQUID COLL.	42.0	2.5	0.5	6.0
TOTAL VOLUME		51.0		

GAS MEASUREMENTS	TIME	CO_2	O_2	CO	N_2
1					
2		7.5	9.5		
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 7	BEAKER NO. A
FINAL WEIGHT	0.4658	100.4447
TARE WEIGHT	0.4557	100.4169
WEIGHT GAIN	.0131	.0278
TOTAL	.0409	

CONTINUED ON BACK

Plant Higgins #1 Date 1-20-84 Run No. 3-84

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PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (Δ P) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
B-5	2	784.828	.28	.61	.61	105	93	2	100	50	336	9.0
	4		.33	.72	.72	106	94	2	100	50	336	
	6	787.810	.35	.76	.76	107	94	2	100	49	340	
6	2		.28	.61	.61	106	94	2	100	50	335	8.8
	4		.29	.63	.63	107	95	2	101	50	339	
	6	790.707	.32	.69	.69	108	95	3	101	50	339	
A-1	2		.22	.52	.52	101	94	2	97	54	263	10.0
	4		.25	.60	.60	102	95	2	98	50	263	
	6	793.425	.23	.57	.57	103	95	2	99	49	263	
2	2		.22	.53	.53	102	95	2	98	50	260	10.5
	4		.25	.60	.60	103	96	2	99	49	263	
	6	796.208	.26	.62	.62	104	96	2	100	49	263	
3	2		.23	.55	.55	104	96	2	100	50	260	10.0
	4		.26	.62	.62	105	96	2	100	49	263	
	6	799.040	.28	.67	.67	106	97	2	101	49	263	
4	2		.25	.60	.60	106	97	2	101	50	260	10.0
	4		.28	.67	.67	107	97	2	102	49	263	
	6	801.935	.28	.67	.67	107	97	2	102	49	263	
5	2		.26	.63	.63	107	97	2	102	50	261	10.5
	4		.29	.70	.70	108	98	2	103	50	263	
	6	804.891	.30	.70	.70	109	98	2	103	49	267	
6	2		.22	.53	.53	107	98	2	102	49	263	
	4		.28	.67	.67	108	98	2	103	49	263	
	6	807.783	.28	.67	.67	104	98	2	104	49	263	
	12:10											

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 2
SAMPLING LOCATION A+B DUCT.
DATE 1-16-84
RUN NUMBER 1-84 (1st half)
OPERATORS Watkins, Roy, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. 1/4" .248 - .247 - .248 (.248)
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 90°
BAROMETRIC PRESSURE (P_{BAR}) 30.09
STATIC PRESSURE (P_{STAT}) 4.10 / 13.6 = .30 ; 8.13 / 13.6 = .02
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.10
METER PRESSURE (P_M) = $P_{BAR} + \Delta H / 13.6$ 30.13
P_S/P_M
DUCT OR STACK % O_2
ASSUMED MOISTURE 10%
C FACTOR .90
DUCT OR STACK AREA (A_S), ft² 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0@15"Hg Final 0@5"

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 7:21	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2 Tel
A-1	2	510.689	.18	.42 ~~40~~	.42 ~~45~~	94	95	2	95	66	279	9.1
	4		.20	.46	.46	92	95	2	94	56	280	
	6	513.165	.24	.56	.56	93	94	2	94	54	279	
2	2		.21	.49	.49	95	94	2	94	54	278	9.2
	4		.22	.51	.51	96	94	2	95	52	280	
	6	515.755	.25	.58	.58	98	94	2	96	51	280	
3	2		.20	.47	.47	100	94	2	97	52	275	9.4
	4		.24	.56	.56	101	94	2	97	51	280	
	6	518.423	.28	.65	.65	103	95	2	99	51	280	
4	2		.23	.54	.54	103	95	2	94	53	276	9.2
	4		.25	.58	.58	105	95	2	100	51	280	
	6	521.219	.28	.66	.66	106	96	2	101	57	280	

TOTAL OR AVERAGE 32.516 | 0.490 ($V\Delta P$) | .57, .568 / .04 | 102°F / 562°R | — | — | 275°F / 735°R

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	649.0	592.0	470.5	690.0
INITIAL	594.5	590.5	469.0	681.0
LIQUID COLL.	54.5	1.5	0.5	9.0
TOTAL VOLUME		65.5		

	GAS MEASUREMENTS TIME	CO_2	O_2	CO	N_2
1					
2					
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 13	BEAKER NO. 1
FINAL WEIGHT	.4416	104.1175
TARE WEIGHT	.4550	104.0569
WEIGHT GAIN	.0134	0606
TOTAL	.0472	

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CONTINUED ON BACK

RET: 6 Yrs. RESP: Prod. Eng. 911 908

Plant Higgins #2 Date 1-16-84 Run No. 1-84

No 5B p. 2

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (Δ P) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2 (Tal)
				ACTUAL	DESIRED	IN	OUT					
5	2	521.219	.24	.56	.56	107	96	2	101	53	277	9.0
	4		.26	.61	.61	108	97	2	102	52	280	
	6	523.995	.27	.64	.64	109	97	2	103	51	280	
6	2		.26	.61	.61	109	98	2	103	53	278	9.0
	4		.28	.66	.66	110	98	2	104	52	280	
8:03	6	526.858	.28	66	.66	111	98	2	104	52	280	
						~~103~~	~~98~~					
B-1	2		.28	.67	.67	103	98	2	101	52	~~263~~ 273	9.0
	4		.27	.64	.64	105	99	2	102	48	274	
	6	529.732	.27	.64	.64	106	99	2	102	48	273	
2	2		.22	.52	.52	106	99	2	102	49	270	8.8
	4		.26	.62	.62	107	99	2	103	48	274	
	6	532.544	.28	.67	.67	109	99	2	104	47	273	
3	2		.21	.50	.50	109	99	2	104	48	270	8.8
	4		.26	.62	.62	110	100	2	105	48	273	
	6	535.345	.26	.62	.62	111	100	2	105	48	273	
4	2		.22	.53	.53	110	100	2	105	50	270	9.2
	4		.24	.57	.57	111	100	~~2~~	105	49	273	
	6	538.070	.26	.62	.62	112	101	2	106	48	273	
5	2		.21	.50	.50	111	101	2	106	50	270	9.0
	4		.21	.50	.50	112	101	2	106	49	272	
	6	540.657	.23	.55	.55	112	101	2	106	49	272	
6	2		.19	.46	.46	112	101	2	106	50	270	9.2
	4		.20	.48	.48	112	102	2	107	50	272	
	6	543.205	.22	.53	.53	112	102	2	107	49	272	
	8:50											

Ramon Solis - Observer

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 2
SAMPLING LOCATION At B DUCTS
DATE 1-16-84
RUN NUMBER 2-84
OPERATORS Watkins, Ray, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 54"
NOZZLE DIAMETER, in. ¼" .248
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 90
BAROMETRIC PRESSURE (P_{BAR}) 30.09
STATIC PRESSURE (P_{STAT}) .02
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.11
METER PRESSURE (P_M) = $P_{BAR} + \Delta H / 13.6$ 30.13
P_S/P_M
DUCT OR STACK % O_2
ASSUMED MOISTURE 10%
C FACTOR .90
DUCT OR STACK AREA (As), ft^2 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0@15" Hg Final 0@5" Hg

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 9:35	DRY GAS METER READING FT^3	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
B-1	2	543.448	.26	.65	.65	93	94	2	94	58	273	9.2
	4		.27	.68	.68	94	94	2	94	53	274	
	6	546.345	.27	.68	.68	95	94	2	95	44	273	
2	2		.25	.63	.63	97	94	2	96	51	273	8.8
	4		.27	.68	.68	99	94	2	97	49	273	
	6	549.277	.29	.74	.74	101	94	2	97	48	273	
3	2		.21	.53	.53	102	94	2	98	52	272	8.8
	4		.25	.62	.62	102	94	2	98	49	272	
	6	552.003	.25	.62	.62	104	95	2	99	49	273	
4	2		.20	.50	.50	104	95	2	99	52	271	9.2
	4		.24	.60	.60	106	95	2	100	50	273	
	6	554.726	.25	.62	.62	107	96	2	101	49	273	
TOTAL OR AVERAGE		32.971	.482 / $V\Delta P$	.587	.04	101°F	561°R			276°F	736°R	

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml)			
	1	2	3	4
FINAL	620.0	594.0	477.5	695.0
INITIAL	573.0	592.0	470.5	690.0
LIQUID COLL.	47.0	2.0	7.0	5.0
TOTAL VOLUME		61.0		

	GAS MEASUREMENTS				
	TIME	CO_2	O_2	CO	N_2
1		8.8			
2		8.8	8.4		
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg)		
SAMPLE	FILTER NO. 14	BEAKER NO. 2
FINAL WEIGHT	.4399	99.1577
TARE WEIGHT	.4524	99.1194
WEIGHT GAIN	-.0125	.0377
TOTAL	.0252	

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CONTINUED ON BACK

RET: 6 Yrs. RESP: Prod. Eng. 911908

Plant Higgins #2 Date 1-16-84 Run No. 2-84

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PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (Δ P) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
5	2		.20	.50	.50	107	96	2	101	52	271	9.0
	4		.22	.56	.56	107	96	2	101	51	272	
	6	557.410	.24	.60	.60	108	97	2	102	50	273	
6	2		.18	.45	.45	108	97	2	102	52	272	8.8
	4		.19	.48	.48	108	97	2	102	51	272	
	6	559.923	.21	.53	.53	109	98	2	103	51	272	
A-1	2		.18	.45	.45	104	98	2	101	56	277	8.6
2	4		.20	.50	.50	104	98	2	101	53	279	
	6	562.539	.24	.60	.60	104	98	2	101	50	279	~~8.6~~
2	2		.19	.48	.48	105	98	2	101	52	278	8.6
	4		.22	.56	.56	106	98	2	102	50	250	
	6	565.197	.24	.60	.60	107	98	2	102	49	280	
3	2		.19	.48	.48	107	98	2	102	52	278	8.6
	4		.24	.60	.60	108	98	2	103	50	280	
	6	567.892	.24	.60	.60	108	98	2	103	48	280	
4	2		.22	.56	.56	108	99	2	103	50	279	8.8
	4		.25	.62	.62	104	99	2	104	49	280	
	6	570.727	.26	.66	.66	110	99	2	105	48	280	
5	2		.22	.56	.56	110	99	2	105	49	279	8.6
	4		.25	.62	.62	110	99	2	105	49	280	
	6	573.555	.26	.66	.66	111	99	2	106	48	280	
6	2		.24	.60	.60	111	100	2	106	50	279	9.2
	4		.26	.66	.66	111	100	2	106	49	280	
	6	576.419	.26	.66	.66	112	100		106	48	280	
	11:00											

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT: HIGGINS UNIT: 2
SAMPLING LOCATION: DUCT A ⇒ B
DATE: 1-16-84
RUN NUMBER: 3/84
OPERATORS: K.E. Ray PM Watkins TR Brunetta
SAMPLE BOX NUMBER: 1
METER BOX NUMBER: 2
PROBE LENGTH, in.: 84"
NOZZLE DIAMETER, in.: 1/4"
METER Δ H_a: 1.68
PITOT C_p: .84

AMBIENT TEMPERATURE: 88°f
BAROMETRIC PRESSURE (P_{BAR}): 30.09
STATIC PRESSURE (P_{STAT}): A .08 B .16 ÷ 13.6 = .01
STACK PRESSURE (P_S) = P_{BAR} ± P_{STAT}: 30.10
METER PRESSURE (P_M) = P_{BAR} + Δ H /13.6: 30.13
P_S/P_M:
DUCT OR STACK % O_2:
ASSUMED MOISTURE: 10%
C FACTOR:
DUCT OR STACK AREA (A_S), ft²: 46.65
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0 @ 15" Final 0 @ 8"

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
A-1	11:52	577.041	.17	.39	.39	91	91	1	91	61	278	8.6
	4		.20	.46	.46	91	91	1	91	58	280	
	6		.22	.57	.57	91	92	1	92	57	280	
A-2	2	579.498	.20	.46	.46	94	91	1	93	58	279	8.6
	4		.20	.46	.46	96	91	1	94	52	280	
	6		.24	.55	.55	98	91	1	94	55	281	
A-3	2		.20	.46	.46	98	92	1	95	52	280	8.6
	4		.22	.51	.51	100	92	1	95	55	281	
	6		.25	.57	.57	102	92	1	96	54	281	
A-4	2		.22	.51	.51	102	93	1	97	55	280	8.6
	4		.25	.58	.58	104	93	1	98	57	281	
	6		.27	.63	.63	104	94	2	99	53	281	
TOTAL OR AVERAGE		32.167	.483 √ΔP	.553 / .04		100°F / 560°R					277°F / 737°R	

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	617.0	596.0	478.0	700.0
INITIAL	572.0	594.0	477.5	695.0
LIQUID COLL.	45.0	2.0	0.5	5.0
TOTAL VOLUME		52.5		

GAS MEASUREMENTS

	TIME	CO_2	O_2	CO	N_2
1			8.7		
2					
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg)

SAMPLE	FILTER NO. 1	BEAKER NO. 3
FINAL WEIGHT	.4799	94.9590
TARE WEIGHT	.4547	94.9490
WEIGHT GAIN	.0252	.0100
TOTAL	.0352	

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CONTINUED ON BACK

RET: 6 Yrs. RESP: Prod. Eng. 911 908

Plant HIGGINS 2 Date 1-16-84 Run No. 3/84

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
A-5	2	587.295	.22	.57	.52	106	94	1	100	55	279	8.5
	4		.25	.58	.58	104	94	1	100	54	281	
	6		.27	.63	.63	107	95	2	101	53	281	
A-6	2	590.033	.25	.59	.59	107	95	1	101	55	278	8.6
	4		.30	.70	.70	108	96	2	102	53	281	
	6		.30	.70	.70	108	96	2	102	53	281	
B-1	2	592.952	.24	.61	.61	103	97	2	102	64	275	9.0
	4		.26	.61	.61	103	97	2	100	57	275	
	6		.24	.61	.61	105	97	2	101	55	275	
B-2	2	595.795	.24	.57	.57	105	97	2	101	58	278	9.0
	4		.24	.66	.66	107	97	2	102	54	276	
	6		.24	.61	.61	108	98	2	103	55	276	
B-3	2	598.618	.22	.52	.52	108	98	1	103	57	272	9.2
	4		.25	.59	.59	110	98	2	104	54	275	
	6		.26	.61	.61	110	98	2	104	55	275	
B-4	2		.20	.48	.48	110	98	2	104	56	272	9.2
	4		.24	.57	.57	111	99	2	105	54	275	
	6		.25	.59	.59	111	99	2	105	55	275	
B-5	2	604.046	.20	.48	.48	111	99	2	105	56	273	9.0
	4		.22	.52	.52	112	100	2	106	55	275	
	6		.22	.52	.52	112	100	2	106	54	275	
B-6	2	606.662	.18	.43	.43	112	100	1	106	56	272	8.8
	4		.20	.48	.48	112	100	1	106	55	274	
	6		.22	.52	.52	113	101		107	54	275	
		609.708										
	13:20	~~13:00~~										

Rev. 3/83

911908
Back

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT Higgins UNIT 3
SAMPLING LOCATION A + B Ducts
DATE 1-17-84
RUN NUMBER 1-84
OPERATORS Watkins, Roy
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84
NOZZLE DIAMETER, in. 1/4 - .248
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 78
BAROMETRIC PRESSURE (P_{BAR}) 30.07
STATIC PRESSURE (P_{STAT}) A -.17 B -.16/13.6 = .01
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.06
METER PRESSURE (P_M) = $P_{BAR} + \Delta H / 13.6$ 30.09
P_S/P_M
DUCT OR STACK % O_2 7.3
ASSUMED MOISTURE 10 %
C FACTOR .90
DUCT OR STACK AREA (A_S), ft² 45.93
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0@15" Hg Final 0@5"

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 7:34	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
A-1	2	610.043	.17	.34	.39	88	85	1	88	59	281	
	4		.18	.41	.41	88	88	1	88	54	286	7.2
	6	612.339	.18	.41	.41	89	88	1	88	53	286	
2	2		.16	.37	.37	90	88	1	89	54	280	7.2
	4		.17	.39	.39	92	88	1	90	54	286	
	6	614.610	.20	.46	.46	94	88	2	91	51	287	
3	2		.15	.37	.37	95	89	1	92	52	275	7.2
	4		.17	.42	.42	96	89	2	92	51	256	
	6	616.975	.19	.47	.47	98	89	2	93	50	287	
4	2		.17	.42	.42	98	90	1	94	51	284	
	4		.19	.47	.47	99	90	2	94	51	286	
	6	619.428	.21	.52	.52	100	91	2	95	51	287	
TOTAL OR AVERAGE		28.673	.420 / VΔP	.437 / .03		96 / 556				298 / 738		

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	593.0	597.5	478.0	675.0
INITIAL	569.0	596.0	478.0	667.5
LIQUID COLL.	24.0	1.5	0.0	7.5
TOTAL VOLUME	33.0			

GAS MEASUREMENTS	TIME	CO_2	O_2	CO	N_2
1		10.2	7.3		
2					
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 3	BEAKER NO. 4
FINAL WEIGHT	.4884	100.2990
TARE WEIGHT	0.4592	100.2943
WEIGHT GAIN	.0292	0047
TOTAL	.0339	

CONTINUED ON BACK

Plant Higgins #3 Date 1-17-84 Run No. 1-84

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (Δ P) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
A-5	2	619.428	.17	.43	.43	100	91	1	95	53	276	7.2
	4		.20	.49	.49	107	92	2	97	51	286	
	6	621.909	.21	.52	.52	103	92	2	97	51	286	
6	2		.20	.50	.50	102	93	2	96	52	285	7.1
	4		.21	.52	.52	104	93	2	97	51	286	
	6	624.501	.22	.55	.55	104	94	2	99	51	286	
B-1	2		.18	.46	.46	98	94	2	96	57	263	7.0
	4		.20	.50	.50	100	94	2	97	52	275	
	6	627.034	.21	.53	.53	100	96	2	97	51	274	
2	2		.17	.43	.43	100	94	2	97	53	269	7.8
	4		.19	.48	.48	101	94	2	97	52	274	
	6	629.545	.21	.53	.53	102	94	2	98	51	274	
3	2		.15	.38	.38	103	95	2	99	53	268	7.6
	4		.16	.40	.40	104	95	2	99	52	274	
	6	631.906	.18	.45	.45	104	95	2	99	51	275	
4	2		.14	.36	.36	104	95	1	99	53	265	7.4
	4		.16	.40	.40	104	96	2	100	52	275	
	6	634.233	.18	.46	.46	105	96	2	101	52	275	
5	2		.14	.36	.36	104	96	2	100	54	264	7.2
	4		.16	.40	.40	105	96	2	101	52	274	
	6	636.527	.17	.43	.43	106	97	2	101	52	274	
6	2		.14	.36	.36	104	97	2	101	56	274	7.6
	4		.15	.36	.30	105	97	2	102	53	274	
	6	638.716	.14	.33	.33	106	97	1	101	52	274	
	9:05											

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 3
SAMPLING LOCATION A & B DUCT.
DATE 1-17-84
RUN NUMBER 2-84
OPERATORS K.E. Roy PM WATKINS
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. 1/4"
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 89
BAROMETRIC PRESSURE (P_{BAR}) 30.07
STATIC PRESSURE (P_{STAT}) .01
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.06
METER PRESSURE (P_M) = $P_{BAR} + \Delta H/13.6$ 30.09
P_S/P_M 1
DUCT OR STACK % O_2 6.7%
ASSUMED MOISTURE 10%
C FACTOR
DUCT OR STACK AREA (A_S), ft² 45.93
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0 @ 18" Final

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 10:01	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O ACTUAL	METER ORIFICE PRESSURE DIFFERENTIAL (ΔH) In. H_2O DESIRED	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F IN	GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F OUT	PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
B-1	2	638.955	.28	.50	.50	89	89	1"	~~276~~ 89	75	276	8.0
	4		.21	.52	.52	89	89	1"	89	54	277	
	6		.21	.52	.52	91	89	1"	90	51	277	
B-2	2	641.845	.18	.45	.45	94	89	1"	91	54	276	7.6
	4		.18	.45	.45	96	90	1"	93	52	277	
	6		.21	.52	.52	96	90	1"	93	51	277	
B-3	2	644.222	.16	.40	.40	97	90	1"	93	55	273	7.8
	4		.17	.42	.42	99	91	1"	95	52	278	
	6		.20	.50	.50	100	91	1	95	57	278	
B-4	2	646.632	.16	.40	.40	99	91	1"	95	57	279	7.6
	4		.18	.45	.45	101	92	1"	97	52	279	
	6		.19	.48	.48	102	92	1"	97	51	279	
TOTAL OR AVERAGE		30.542	.436 $\sqrt{\Delta P}$	.462 / .03		98° f / 558° R					284° f / 744° R	

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml) 1	2	3	4
FINAL	702.5	551.5	478.5	680.0
INITIAL	593.0	597.5	478.0	675.0
LIQUID COLL.	109.5	-46.0	0.5	5.0
TOTAL VOLUME		69.0		

	GAS MEASUREMENTS TIME	CO_2	O_2	CO	N_2
1					
2		10.2	6.7		
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg) SAMPLE	FILTER NO. 3	BEAKER NO. 5
FINAL WEIGHT	.48200	106.5834
TARE WEIGHT	0.46034	106.5763
WEIGHT GAIN	.02166	.0071
TOTAL	.02876	

Plant HIGGINS Date 1-17-83 Run No. 2-83-

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
B-5	2	649.038	.14	.40	.40	101	93	1	97	54	274	7.6
	4		.17	.43	.43	103	94	1	99	52	280	
	6		.17	.43	.43	104	94	1	99	51	279	
B-6	2		.15	.38	.38	104	94	1	99	54	279	7.7
	4		.15	.38	.38	105	95	1	100	53	279	
	6		.15	.38	.38	105	95	1	100	52	279	
A-1	2	653.640	.17	.39	.39	100	96	1	98	60	286	7.2
	4		.20	.46	.46	99	97	1	98	55	290	
	6		.20	.46	.46	100	96	1	98	51	290	
A-2	2	656.220	.16	.37	.37	100	96	1	98	52	289	7.0
	4		.19	.44	.44	102	96	1	99	51	291	
	6		.20	.46	.46	104	96	1	100	51	291	
A-3	2	658.665	.16	.37	.37	104	94	1	100	53	288	7.2
	4		.17	.39	.39	105	97	1	101	51	291	
	6		.21	.50	.50	106	98	1	102	51	292	
A-4	2	661.437	.18	.44	.44	106	98	1	102	54	290	7.2
	4		.20	.46	.46	108	98	1	103	52	291	
	6		.22	.52	.52	108	99	1	104	51	291	
A-5	2	664.027	.21	.50	.50	108	98	1	103	54	290	7.2
	4		.22	.52	.52	109	99	1	104	52	291	
	6		.28	.65	.65	110	100	1	105	51	291	
A-6	2	666.820	.24	.52	.52	110	100	1	105	52	289	7.2
	4		.24	.52	.52	110	100	1	105	52	291	
	6		.22	.51	.51	111	100		106	51	290	
		669.497										

PARTICULATE FIELD DATA

Florida Power CORPORATION

PLANT HIGGINS UNIT 3
SAMPLING LOCATION A & B Duct
DATE 1-17-84
RUN NUMBER 3-84
OPERATORS Watkins, Ray, Brouette
SAMPLE BOX NUMBER 1
METER BOX NUMBER 2
PROBE LENGTH, in. 84"
NOZZLE DIAMETER, in. 1/4"
METER ΔH_a 1.68
PITOT C_P .84

AMBIENT TEMPERATURE 82
BAROMETRIC PRESSURE (P_{BAR}) 30.07
STATIC PRESSURE (P_{STAT})
STACK PRESSURE (P_S) = $P_{BAR} \pm P_{STAT}$ 30.06
METER PRESSURE (P_M) = $P_{BAR} + \Delta H/13.6$ 30.09
P_S/P_M
DUCT OR STACK % O_2 6.6
ASSUMED MOISTURE 10
C FACTOR
DUCT OR STACK AREA (A_S), ft² 45.93
TOTAL PTS = 36 x 2 minutes/pt = 72 minutes
LEAK CHECKS: Initial 0@15"Hg Final 0@5"Hg

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME 12:36	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) In. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) In. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
A-1	2	669.731	.17	.39	.39	91	93	1	92	68	275	
	4		.18	.41	.41	92	93	2	92	63	291	7.2
	6	672.090	.20	.45	.45	93	93	2	93	62	292	
2	2		.15	.34	.34	95	93	1	94	62	285	7.2
	4		.18	.41	.41	97	93	2	95	60	293	
	6	674.465	.20	.46	.46	98	93	2	95	59	293	
3	2		.16	.37	.37	99	93	2	96	60	290	7.2
	4		.19	.43	.43	101	93	2	97	59	293	
	6	676.936	.21	.48	.48	102	94	2	98	58	293	
4	2		.16	.37	.37	103	96	2	98	59	280	7.2
	4		.19	.44	.44	105	95	2	100	58	292	
	6	679.443	.21	.48	.48	106	95	2	101	58	292	
TOTAL OR AVERAGE		30.226	.421 $\sqrt{\Delta P}$	.403 .03		103°F 563°R					287°F 747°R	

VOLUME OF LIQUID WATER COLLECTED	IMPINGER WEIGHT (g) OR VOLUME (ml)			
	1	2	3	4
FINAL	600.0	556.0	479.0	695.6
INITIAL	568.0	551.5	478.5	680.0
LIQUID COLL.	32.0	4.5	0.5	5.0
TOTAL VOLUME	43.0			

	GAS MEASUREMENTS				
	TIME	CO_2	O_2	CO	N_2
1		10.2	6.6		
2					
3					
4					

WEIGHT OF PARTICULATE COLLECTED (mg)		
SAMPLE	FILTER NO. 4	BEAKER NO. 6
FINAL WEIGHT	0.4544	101.4622
TARE WEIGHT	0.4556	101.4197
WEIGHT GAIN	-.0012	.0425
TOTAL	.0413	

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CONTINUED ON BACK

RET: 6 Yrs. RESP: Prod. Eng. 911908

Plant Higgins #3 Date 1-17-84 Run No. 3-84

p. 2

PORT AND TRAVERSE POINT NUMBER	CLOCK TIME	DRY GAS METER READING FT³	VELOCITY HEAD (ΔP) in. H_2O	METER ORIFICE PRESSURE DIFFERENTIAL (Δ H) in. H_2O		GAS SAMPLE TEMPERATURE AT DRY GAS METER (TM) °F		PUMP VACUUM in Hg GAUGE	SAMPLE BOX TEMPERATURE °F	IMPINGER OR CONDENSER TEMPERATURE °F	STACK TEMPERATURE °F	O_2
				ACTUAL	DESIRED	IN	OUT					
A-1	2	679.643	.19	.44	.44	106	96	2	101	59	290	7.4
	4		.21	.48	.48	107	96	2	101	58	292	
	6	682.098	.21	.49	.49	109	97	2	103	57	292	
6	2		.20	.47	.47	108	97	2	103	54	285	6.8
	4		.21	.49	.49	110	98	2	104	58	292	
	6	684.807	.22	.51	.51	110	98	2	104	58	292	
B-1	2		.16	.38	.38	106	98	2	102	61	274	
	4		.18	.42	.42	108	99	2	103	56	286	
	6	687.312	.20	.47	.47	108	100	2	104	55	286	7.6
2	2		.16	.38	.38	108	100	2	104	57	280	
	4		.18	.42	.42	110	100	2	105	56	286	
	6	689.940	.21	.49	.49	111	101	2	106	56	287	7.6
3	2		.15	.35	.35	111	101	2	106	57	282	
	4		.17	.40	.40	112	102	2	107	57	286	
	6	692.503	.20	.47	.47	113	102	2	107	57	286	
4	2		.14	.33	.33	113	102	2	107	58	283	7.7
	4		.16	.38	.38	114	103	2	108	58	286	
	6	695.009	.18	.42	.42	115	103	2	109	57	286	
5	2		.14	.33	.33	114	104	2	109	59	280	
	4		.16	.38	.38	115	104	2	109	58	286	
	6	697.488	.16	.38	.38	116	105	2	110	58	286	
6	2		.14	.33	.33	115	105	2	110	58	280	
	4		.15	.35	.35	116	105	2	110	59	286	7.5
	6	699.957	.13	.31	.31	116	106	2	111	58	285	
	1:58											

CHEMICAL LABORATORY
CRYSTAL RIVER NORTH OFFICE BUILDING
TEL: (904) 795-4811
MICROWAVE: 228-1141

FUEL OIL ANALYSIS REPORT NO.50
01/30/84

PLANT: HIGG DATE SAMPLED: 01/16/84

LAB NO.: FC-1259

SAMPLE DESC: HIGGINS #6 FUEL OIL COMPOSITE/ BUNKER "C"

ANALYSIS

CALORIFIC VALUE	BTU/LB	18216	ASH	%	0.06
CALORIFIC VALUE	BTU/GAL	151375	CARBON	%	.
CALORIFIC VALUE	BTU/BBL	6357741	HYDROGEN	%	.
API GRAVITY @60 F	DEGREES	10.3	NITROGEN	%	.....
DENSITY @60 F	LB/GAL	8.3100	OXYGEN	%	.
VISCOSITY @ 122 F	SSF	201	SULFUR	%	2.33
VISCOSITY @ . F	SSU	.			
LOWER HEATING VALUE	BTU/LB	.			

ASPHALTENES	%	.	ALUMINUM	PPM	.
CARBON RESIDUE			CALCIUM	PPM	.
(RAMSBOTTOM)	%	.	NICKEL	PPM	.
FLASH POINT	F	.	SILICA	PPM	:
POUR POINT	F	20	SODIUM	PPM	28
WATER & SEDIMENT	%	.	VANADIUM	PPM	130
WATER BY DIST.	%	0.20			

COMMENTS

.....

D. E. R.

FEB 10 1984

SOUTH ... DISTRICT
TAMPA

J. A. Witherow

A P P E N D I X C

VISIBLE EMISSIONS DATA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

Todd L. Brouette, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.

This certificate expires on March 15 1984

Judi Sears — Certification Officer

Todd L Brouette — Bearer's Signature

DER Form PERM 5-9 (Jun 79)

Florida Power CORPORATION

RECORD OF VISUAL DETERMINATION OF OPACITY

Location: HIGGINS #1	Hours of Observation: 1035-1134
Permit Number: AO52-56652	Observer: T.L. Brouette
Date: JANUARY 20, 1984	Observer Certification Date: EXPIRES MARCH 15, 1984
Type Facility: STEAM GENERATOR - OIL FIRED	Point of Emissions: STACK
Control Device: NONE	Height of Discharge Point: 174'

	Initial			Final
CLOCK TIME	1035			1134
OBSERVER LOCATION Distance to Discharge	~300'		~	SAME
Direction from Discharge	SSW			
Height of Observation Point	Ground			
BACKGROUND DESCRIPTION	C.C. SKY			
WEATHER CONDITIONS Wind Direction	NE			
Wind Speed	~10+ MPH			
Ambient Temperature	~50°F			
SKY CONDITIONS (Clear, overcast % clouds, etc.)	overcast H. mist.			
PLUME DESCRIPTION Color	lt. brown			
Distance Visible	—			
Other Information	~			

SUMMARY OF AVERAGE OPACITY

SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
1	1035	1134		25

Readings ranged from 25 to 25 opacity.

The source ☒ was ☐ was not in compliance with 25 at the time evaluation was made.

NOTES:

1. Minimum of 24 readings to be taken at 15 second intervals.
2. Readings are to be to the nearest 5% opacity.

Rev. 4/83

907 804

OBSERVATION RECORD

HOUR	MINUTE	SECONDS 0	15	30	45	STEAM PLUME (Check if applicable) ATTACHED	DETACHED	COMMENTS
1035	0	25						HIGGINS #1
	1	25						— means no Δ in reading
	2	25						
	3	25						
	4	25						
	5	25						
	6	25						
	7	25						
	8	25						
	9	25						
1045	10	25						
	11	25						
	12	25						
	13	25						
	14	25						
	15	25						
	16	25						
	17	25						
	18	25						
	19	25						
	20	25						
	21	25						
	22	25						
	23	25						
	24	25						
1100	25	25						
	26	25						
	27	25						
	28	25						
	29	25						
	30	25						
	31	25						
	32	25						
	33	25						
	34	25						
	35	25						
	36	25						
	37	25						
	38	25						
	39	25						
1115	40	25						
	41	25						
	42	25						
	43	25						
	44	25						
	45	25						
	46	25						
	47	25						
	48	25						
	49	25						
	50	25						
	51	25						
	52	25						
	53	25						
	54	25						
1130	55	25						
	56	25						
	57	25						
	58	25						
	59	25						

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

Todd L. Brouette, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.

This certificate expires on March 15 1984

Judi Sears — Certification Officer

Todd L Brouette — Bearer's Signature

DER Form PERM 5-9 (Jun 79)

Florida Power CORPORATION

RECORD OF VISUAL DETERMINATION OF OPACITY

Location: HIGGINS # 3	Hours of Observation: 1220 - 1319
Permit Number: AO52-56654	Observer: T. L. BROUETTE
Date: JANUARY 17, 1984	Observer Certification Date: EXPIRES MARCH 1984
Type Facility: Steam Generator - Oil Fired	Point of Emissions: STACK
Control Device: None	Height of Discharge Point: 174'

	Initial			Final
CLOCK TIME	1220	1250		1319
OBSERVER LOCATION Distance to Discharge	~300'	SAME		SAME
Direction from Discharge	SW	SAME		
Height of Observation Point	Ground	SAME		
BACKGROUND DESCRIPTION	Blue to whitish	"		
WEATHER CONDITIONS Wind Direction	SSW	"		
Wind Speed	~5MPH	0-5MPH		±3
Ambient Temperature	~74°F	SAME		~70°F
SKY CONDITIONS (Clear, overcast % clouds, etc.)	clouds ~50%	clouds ~65%		clouds ~85%
PLUME DESCRIPTION Color	White	SAME		faint brown against sky
Distance Visible	—	—		—
Other Information	—	—		—

SUMMARY OF AVERAGE OPACITY

SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
1	1220	1319	-	30

Readings ranged from 30 to 30 opacity.

The source ☒ was ☐ was not in compliance with 30 at the time evaluation was made. Limit = 40

NOTES:

1. Minimum of 24 readings to be taken at 15 second intervals.
2. Readings are to be to the nearest 5% opacity.

Rev. 4/83

907 804

OBSERVATION RECORD

HOUR	MINUTE	SECONDS 0	15	30	45	STEAM PLUME ([redacted]heck if applicable) [redacted]ACHED	DETACHED	[redacted]OMMENTS
1220	0	30	—o	—o	—o			
	1	30	—o	—o	—o			—o indicates reading unchanged
	2	30	—o	—o	—o			
	3	30	—o	—o	—o			
	4	30	—o	—o	—o			
	5	30	—o	—o	—o			
	6	30	—o	—o	—o			
	7	30	—o	—o	—o			
	8	30	—o	—o	—o			
	9	30	—o	—o	—o			
1230	10	30	—o	—o	—o			
	11	30	—o	—o	—o			
	12	30	—o	—o	—o			
	13	30	—o	—o	—o			
	14	30	—o	—o	—o			
	15	30	—o	—o	—o			
	16	30	—o	—o	—o			
	17	20	—o	—o	—o			
	18	30	—o	—o	—o			
	19	30	—o	—o	—o			
	20	30	—o	—o	—o			
	21	30	—o	—o	—o			
	22	30	—o	—o	—o			
	23	30	—o	—o	—o			
	24	30	—o	—o	—o			
1245	25	30	—o	—o	—o			
	26	30	—o	—o	—o			
	27	3-	—o	—o	—o			
	28	30	—o	—o	—o			cloudcover incr. —
	29	30	—o	—o	—o			thunderheads in N Sky
	30	30	—o	—o	—o			
	31	30	—o	—o	—o			
	32	30	—o	—o	—o			
	33	30	—o	—o	—o			
	34	30	—o	—o	—o			
	35	30	—o	—o	—o			
	36	30	—o	—o	—o			
	37	30	—o	—o	—o			
	38	30	—o	—o	—o			
	39	30	—o	—o	—o			
1300	40	30	—o	—o	—o			
	41	30	—o	—o	—o			
	42	30	—o	—o	—o			
	43	30	—o	—o	—o			
	44	30	—o	—o	—o			
	45	30	—o	—o	—o			
	46	30	—o	—o	—o			
	47	30	—o	—o	—o			
	48	30	—o	—o	—o			
	49	30	—o	—o	—o			
	50	30	—o	—o	—o			
	51	30	—o	—o	—o			
	52	30	—o	—o	—o			plume difficult to distinguish
	53	30	—o	—o	—o			
	54	30	—o	—o	—o			
1315	55	30	—o	—o	—o			
	56	30	—o	—o	—o			
	57	30	—o	—o	—o			
	58	30	—o	—o	—o			
1319	59	30	—o	—o	—o			

A P P E N D I X D

SAMPLING EQUIPMENT SPECIFICATIONS

Nutech CORPORATION

(919) 682-0402

FLAT PACK IN-STACK FILTER

The Model 225 flat pack filter is designed to collect in-stack particulates under isokinetic sampling conditions. Based upon the design of Bob Martin of EPA, it is normally mounted on the end of a Method 5 probe. An optional feature available on the Nutech sampling probe is an extendable pitot tube for use with an in-stack filter. The rectangular design of filter holder and paper provides a large filter area and particulate reservoir and simplifies disassembly and clean up.

Materials of Construction:

Filter support - sintered stainless steel

Body - stainless steel

Fittings: Swagelok or gyrolok

Filter Paper: Gleman Type A-E glass fiber

Dimensions:

Filter - 2" x 6-1/4"

Air Flow Area - 9 in^2

In-line added length to probe - 9"

Maximum Diam. - 2-3/4"

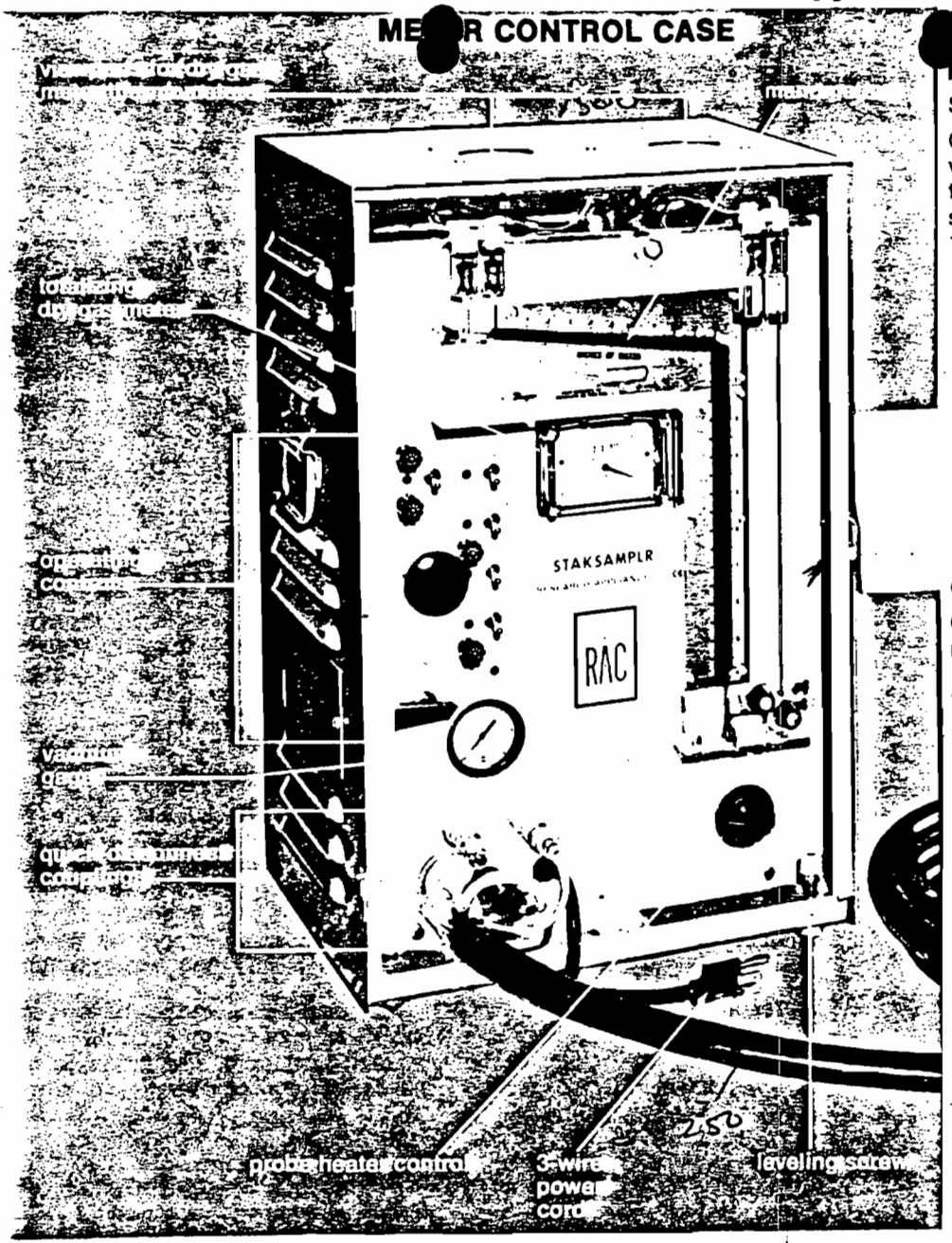
Maximum operating temperature:

Depends on gasket material i.e., silicone rubber 300-325°F

Performance data is being generated in EPA for tentative sampling Method 17.

Users: EPA, consultants, electric power plants, pulp and paper mills, machinery and equipment manufacturers.

2806 Cheek Road Durham, N.C. 27704 P.O. Box 12425 Research Triangle Park, N.C. 27709



Specifications

METER CONTROL CASE

STANDARD

Contains vacuum pump, inclined-vertical manometer, dry gas meter, thermometers, controls and selector switches; steel w/baked enamel finish; 15"W x 24"H x 13½" D; weight 87 lbs.

Pump: ¼ hp, 1725 rpm, 5.4 amps, 4 cfm free flow, fused (for overload protection).

Manometer: Dual column, encased design; 0—1.0" water (0.01" MD) inclined scale; 1.1—10" water (0.1" MD) vertical scale; ±1% full scale accuracy.

Dry Gas Meter: 0—999.9 cu ft (digital readout).

OPTIONAL

Contains vacuum pump, two panel-mounted differential pressure gages, inclined manometer, dry gas meter, thermometers, controls and selector switches. (Same pump, dry gas meter, and physical specifications as above.)

Pressure Gages: 0—2.0" water (0.05" MD); 0—5.0" water (0.1" MD); ±2% full scale accuracy.

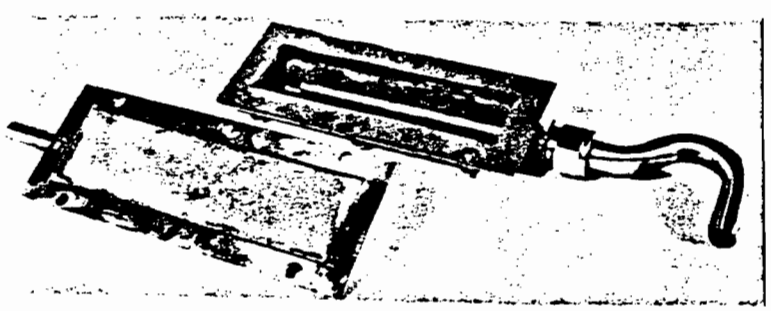
Manometer: 0—1.0" water (0.02" MD) inclined scale; ±1% full scale accuracy.

SAMPLING EQUIPMENT DATA

RESEARCH APPLIANCE COMPANY
Route 8, Gibsonia, Pa. 15044 • 412—443-5935
Environmental Instruments / Laboratory Products

IN-STACK FILTER

The Nutech all stainless steel in-stack filter meets the most demanding sampling requirements. Heliarc welded construction and precision machining assure leak-proof operation. The flat-pack filter attaches easily to most probes, and extendable pitot tubes provide accurate stack gas velocity measurement. The filter is available with either a silicone rubber or TFE gasket. A tight fitting stainless steel frit collects and prevents filter paper collapse.



FLAT PACK FILTER SYSTEM
Stainless steel throughout w/swaged fittings
Filter size: 2" x 6-1/4"
System dimensions 2-3/4" x 8-1/4"

Nutech Corporation
P. O. Box 12425
Research Triangle Park, N. C. 27709

A P P E N D I X E

CALIBRATION DATA

Florida Power
CORPORATION

METER CONSOLE CALIBRATION FORM

Name Kenneth E Ray Date 12-30-83

Console No. 2 Dry Gas Meter No. _____ Correction Factor

Wet Test Meter No. _____ Correction Factor _____

Barometric Pressure, P_b 30.25 in. Hg Previous Calibration Date 6/28/83

Orifice manometer setting, ΔH, in. H_2O	Gas volume wet test meter V_w, ft^3	Gas volume dry gas meter V_d, ft^3	Temperature				Time θ, min	Y	ΔH@
			Wet test	Dry gas meter					
			Meter t_w, °F	Inlet t_{di}, °F	Outlet t_{do}, °F	Average t_d, °F			
0.5	5.939	6.140	64°	98.2	82.0	90.100	15	1.0066	1.6762
0.75							10		
1.00	5.559	5.758	62.5	86.500	70.667	78.583	10	.9927	1.7189
1.50							10		
2.00	7.994	8.207	63.0	96.333	76.667	86.500	10	1.0129	1.6415
4.00							5		
						Average		1.004	1.6788

Calculations

ΔH	$\frac{\Delta H}{13.6}$	Y $\frac{V_w P_b (t_d + 460)}{V_d (P_b + \frac{\Delta H}{13.6}) (t_w + 460)}$	ΔH@ $\frac{0.0317 \Delta H}{P_b (t_d + 460)} \left[\frac{(t_w + 460)\theta}{V_w}\right]^2$
0.5	0.0368		
0.75	0.0551		
1.00	0.0735		
1.50	0.1103		
2.00	0.1471		
4.00	0.2941		

Y = Ratio of accuracy of wet test meter to dry test meter. Tolerance = ± 0.02

ΔH@ = Orifice pressure differential that gives 0.75 cfm of air at 70°F and 29.92 inches of mercury, in. H_2O. Tolerance = ± 0.15

Orifice ΔH@ should fall between 1.59 – 2.09 or modification may be necessary for some sampling situations.

1. Pitot Tube Calibration Data

Measurements as per Federal Register Vol. 42
No. 160, Tues. Aug 18, 1977
P_2 41760 - Fig. 2-2
P2 41761 - Fig. 2-3

A_1 - 0°
A_2 = <2°
B_1 = <2°
B_2 = 0°
Z_1 = .2 cm
Z_2 = .2 cm
W = 0

This is essentially a new pitot tube manufactured to the specifications as outlined in the above mentioned issue of the Federal Register. The dimensions recorded above were recorded on 9-7-82. Pitot tubes are inspected before each test.

2. Probe Nozzle Measurement

The probe nozzle is measured before each test with an inside micrometer. Measurements are made to the nearest .001" and recorded on the F.P.C. Field Data Sheet.

3. Thermocouple and R.T.D. Calibration

All calibration performed with a Hewlett-Packard digital volt meter using a procedure specified by A.S.T.M. In addition, all new thermocuples were checked against an A.S.T.M. thermometer at 212°F and found to agree within ± 1°F. 1-10-83 Before each test the 4 thermocouples in the train are checked against each other in ambient air.

3-30-83

K. E. Roy

WEIGHT TRACEABILITY CERTIFICATE

TO: Florida Power Corporation
P.O. Box 14042
St Petersburg, Florida 33733 Attn Ken Roy

The balances listed below have been serviced by our representative on Nov. 8, 1983
This is to certify that the test weights used are traceable to the National Bureau of Standards.

Weight Check identification number of test weight used TS - 311
Calibration date of test weights used April 13, 1982
National Bureau of Standards test number N.B.S Cert. # 732/221514
National Bureau of Standards test date TRACEABLE CERTIFICATE BY TROEMNER, INC 3-15-82

Type and serial number of balances serviced and/or calibrated:

Mettler H-10	ser # 353168	

James Hawthorn
Weight Check Service Representative

12-29-83
Date of Issue

Weight Check
P.O. Box 1125
Jupiter, Fl. 33468
305-746-1682

APPENDIX F

PERSONNEL

APPENDIX F: PERSONNEL

The following individuals provided data and/or services necessary for the completion of the test program herein described:

Process Variable and Fuel/Heat Input Data

W. R. Barnes

K. E. Roy

P. M. Watkins

J. A. Witherow

Source Testing and Visible Emissions Evaluation (V.E.E.)

T. L. Brouette

K. E. Roy

D. A. Shantz

P. M. Watkins

Sample Analysis

K. E. Roy

P. M. Watkins

Report Preparation

T. L. Brouette

K. E. Roy

P. M. Watkins

Es-Her
Dan
Air

BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA
315 COURT STREET
CLEARWATER, FLORIDA 33516

January 25, 1983

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

Dear Mr. Hennessey:

We would appreciate it very much if you could forward to our office, copies of all the correspondence in which the Florida Power Corporation is seeking relief from quarterly stack testing the steam generators and annual visible emissions tests for the peaker units in Pinellas County.

We would also request copies of any DER response in order to be aware of current requirements in regard to frequency of stack testing and opacity standard for steam generators, as well as frequency of VE testing for peaker units.

Sincerely,

Joyce M. Gibbs, Chief
Division of Air Quality

RS/jh

Please locate the rest of the Order on F.P.C. for
Bartow No 2
Higgins 1, 2, 3
Aneste 1 & 2
cannot find them in the files.
Thanks.

DER

COMPLIANCE VERIFICATION INSPECTION

FLORIDA POWER CORPORATION
PAUL L. BARTOW PLANT STEAM GENERATORS
PINELLAS COUNTY
NEDS NUMBERS: 052-0011-01, 02 and 03
PERMIT NUMBERS: AC52-36102, AC52-54946 and AC52-54947
OPERATING PERMIT NUMBERS: A052-6206, 56650 and 56651
SOURCES TESTED: A052-56650 and A052-56651
DATE OF INSPECTION: MARCH 22, 1983

The Florida Power Corporation Paul L. Bartow Plant is located in Weedon Island, St. Petersburg, Florida.

Plant contact person was Mr. John Meyer, Instrument Control Engineer. Mr. Philip Watkins, Mr. Kenneth Roy and Mr. Robert Willis, members of the Florida Power Corporation stack testing team, performed the stack test on steam generator No. 2. Ramon Solis of Pinellas County Division of Air Quality, D.E.M., performed the inspection, witnessed the first run of the stack test and performed visible emissions tests on Units 2 and 3.

The stack test was performed to comply with the first quarter testing requirement for 1983, under steady state conditions.

At the time of the inspection, the boiler No. 2 was stabilized at an input production rate of 805,000 lbs./hr. of steam flow. The production rate (output) was 109.0 MW, gross load. Auxiliary load was 5.4 MW. Net load was 103.6 MW. Fuel used during the test was oil number 6 at an approximate rate of 7080 gal./hr. The sampling procedure was good.

Test results for particulate matter were 0.054 lbs. per million BTU, using the "F" factor method.

The steam units 2 and 3 were also tested for visible emissions. The V.E. test for unit No. 2 was performed concurrently with the stack test. Average opacity during the worst six minutes of operation was 25% for unit No. 2 and 40% for unit No. 3.

The steam generating unit numbers 1, 2 and 3 of the Paul L. Bartow Plant are considered to be in compliance with Chapters 17-2 and 17-4, Florida Administrative Code.

RS/fm

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. BARTOW Date 3/22/83

Plant Address WEEDON ISLAND, ST. PETERSBURG, FL.

Source to be Tested STEAM GENERATOR NO. 2 Permit No. A052-56650

Plant Contact JOHN MEYER INSTRUMENT CONTROL ENGINEER

Observers RAMON SOLIS Affiliation PINELLAS COUNTY DIV. OF AIR QUALITY, DEM.

Reviewed Pretest Meeting Notes, Etc? _____

Comments: FIRST QUARTER, NORMAL TESTING 1983
STEADY STATE CONDITIONS

Test Team Company Name FLORIDA POWER CORP. Phone 866-5700

Test Team Company Address _____

Supervisor's Name _____

Other Members PHILIP WATKINS METER BOX
KENNETH ROY PROBE
ROBERT WILLIS PROBE

GENERAL/SAMPLING SITE

Stack/Duct Cross Section Dimensions 54.9137 SQ. FT. EACH DUCT

Material of Construction STEEL Leaks NO

Internal Appearance N/A

Nipple? YES 6A 6B Length 6" Flush With Inside Wall? YES

Table 1. OBSERVATION CHECKLIST

GENERAL/SAMPLING SITE (continued)

Photos taken? NO Of what N/A

Opacity Reading of Plume YES 25%

Drawing of Sampling Location:

GENERAL INFORMATION

Type fuel used OIL NO. 6 Rate 7080 GAL/HR

Production Rate (Input) 805 000 LBS/HR STEAM FLOW TPH

Production Rate (Output) GROSS 109 MW TPH

SERVICE 5.4 MW

103.6

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 0 – 10"

Table 4. OBSERVATION CHECKLIST

GENERAL SAMPLING SYSTEM (continued)

Meter Box Brand RESEARCH APPLIANCE CORP Sample Box Brand N/A

BOX No. 2

Calibration Date Of Equiptment: Dry Gas Meter 12/31/82

Pitot Tube Magnehelic N/A

Thermometers THERMOCOUPLES Number of Sampling Points/

Traverse From Fed. Reg. 6 PORTS (A) 6 PORTS (B) 4 POINTS/PORT Number Points to be

used 48 Sampling Time Per Point 2 MIN

Total Sampling Time Minutes 96 MIN

SAMPLING TRAIN ASSEMBLY

Filter Media Type GLASS FIBER Impingers Clean? NO

Meter Box Leveled? YES Orifice Manometer Zeroed? YES

Probe Hot Along Entire Length? N/A Filter

Compartment Temperature. N/A IN Impingers iced down? YES 48°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.* 80 °F Estimated Value of Ps/Pm* 1

Estimated Moisture Content 10 % How Estimated? PREVIOUS TESTS

C Factor* .95 Estimated Stack Temp.* 300 °F Desired Nozzle Dia.* 3/16" .189

Leak Check Performed Before Sampling YES 0 @ 15 IN

Table 4. OBSERVATION CHECKLIST

FINAL DRY GAS METER — 237.596
INITIAL DRY GAS — 195.299
42.297

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? —

Is Data Recorded in a Permanent Manner? YES

Are Data Sheets Complete? YES Is Leak Test Performed at Completion of Run? YES 0 @ 8 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. STATE METHOD

Volume Metered 42.297 ACF First Δp Readings A) .55 .78 .78

O_2	.74	.78	.78	.74	.85	.60	.68	.70	.50	.60	.70	.74
1 - 5.2	.70	.65	.65	.65	.78	.55	.78	.78	.65	B) .53	.74	.78
2 - 4.2	.68	.65	.63	.63	.74	.46	.60	.68	.50	.58	.68	.60
3 - 4.2	SAMPLE RECOVERY .65	.65		.65	.80	.85	.48	.60	.74	.65		
4 - 4.2												
5 - 5.0												
6 - 5.0												
1 - 5.4												
2 - 4.8												
3 - 4.2												
4 - 4.4												
5 - 4.4												
6 -												

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 BLACK PARTICULATE 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:
GOOD SAMPLING PROCEDURE

Was the Test Team Supervisor Given the Opportunity to Read Over This Checklist? YES Did He Do So? Philip Mantkus

Observer's Name RAMON SOLIS Title ENV. SPEC. II

Affiliation PINELLAS COUNTY DIV. OF AIR QUALITY DEM. Signature Ramon Solis

Table 5. SAMPLE RECOVERY CHECKLIST

EPA Form 9...

SOURCE NAME: FLORIDA POWER CORP. [redacted] RTOW PLANT	SOURCE ID NUMBER: A[redacted]-56650	OBSERVATION DATE: 3/22/83
ADDRESS: STEAM UNIT NO. 2	OBSERVER'S NAME (PRINT): RAMON SOLIS	
	ORGANIZATION: PINELLAS COUNTY DIV. OF AIR QUALITY	
STATE: FLORIDA / ZIP: / PHONE: 866-5700	CERTIFIED BY: ETS/DER	DATE: 3/6/83

PROCESS: STEAM GENERATOR UNIT NO. 2	OPERATING MODE: FULL LOAD
CONTROL EQUIPMENT: NONE	OPERATING MODE: N/A
DESCRIBE EMISSION POINT: BRICK LINED CONCRETE STACK	
EMISSION POINT HEIGHT ABOVE GROUND LEVEL:	EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 299'
DISTANCE TO EMISSION POINT: 700'	DIRECTION TO EMISSION POINT: 275
DESCRIBE EMISSIONS: 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: 2 STACK DIAMETERS S OF SMOKESTACK	
DESCRIBE BACKGROUND: SKY	
COLOR OF BACKGROUND: BLUE	SKY CONDITIONS: 30% CC
WIND SPEED: 10 MPH	WIND DIRECTION: NE
AMBIENT TEMPERATURE: 65°F	RELATIVE HUMIDITY: 55%
COMMENTS: VE TEST CONCURRENT WITH THE FIRST QUARTER 1983 NORMAL STACK TEST	

START TIME 9:50 — STOP TIME 10:20

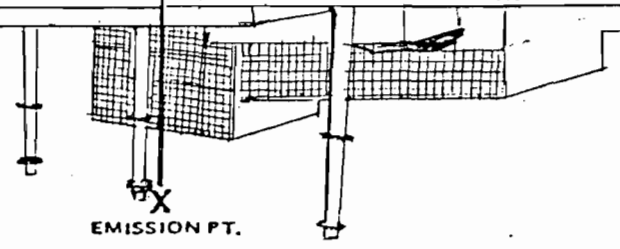
	0	15	30	45		0	15	30
1	25	25	25	25	31			
2	25	25	25	25	32			
3	25	25	25	25	33			
4	25	25	25	25	34			
5	25	25	25	25	35			
6	25	25	25	25	36			
7	25	25	25	25	37			
8	25	25	25	25	38			
9	25	25	25	25	39			
10	25	25	25	25	40			
11	25	25	25	25	41			
12	25	25	25	25	42			
13	25	25	25	25	43			
14	25	25	25	25	44			
15	25	25	25	25	45			
16	25	25	25	25	46			
17	25	25	25	25	47			
18	25	25	20	20	48			
19	25	20	20	20	49			
20	20	20	20	20	50			
21	20	20	20	20	51			
22	20	20	20	20	52			
23	20	20	20	20	53			
24	20	20	20	20	54			
25	20	20	20	20	55			
26	20	20	20	20	56			
27	20	20	20	20	57			
28	20	20	20	20	58			
29	20	20	20	20	59			
30	20	20	20	20	60			

AVERAGE OPACITY (WORST SIX MIN): 25%

NUMBER OF READINGS ABOVE: 40 % WERE 0

RANGE OF OPACITY READINGS FROM 20% TO 25%

SOURCE LAYOUT SKETCH



DRAW NORTH ARR...

OBSERVER'S SIGNATURE: Ramon Solis — DATE: 3/22/83

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS.

SIGNATURE

VERIFIED BY

TITLE

DATE

EPA TR 101

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: FLORIDA POWER CORP. BARTOW PLANT	SOURCE ID NUMBER: A[redacted]52-56651	OBSERVATION DATE: 3/22/83
ADDRESS: STEAM UNIT NO. 3	OBSERVER'S NAME (PRINT): RAMON SOLIS	
WEEDON ISLAND, ST. PETERSBURG	ORGANIZATION: PINELLAS COUNTY DIV. OF AIR QUA	
STATE: FLORIDA / ZIP: / PHONE: 866-5700	CERTIFIED BY: ETA/DER	DATE: 3/16/82

PROCESS: STEAM GENERATOR UNIT NO. 3	OPERATING MODE: PARTIAL LOAD
CONTROL EQUIPMENT: NONE	OPERATING MODE: N/A
DESCRIBE EMISSION POINT: BRICK LINED CONCRETE STACK	
EMISSION POINT HEIGHT ABOVE GROUND LEVEL: 299'	EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 299'
DISTANCE TO EMISSION POINT: 700'	DIRECTION TO EMISSION POINT: 275°
DESCRIBE EMISSIONS: SMOKE	
COLOR OF EMISSIONS: GRAY	CONTINUOUS ☒ FUGITIVE ☐ INTERMITTENT ☐
WATER VAPOR PRESENT: NO ☒ YES ☐	IF YES, IS PLUME: ATTACHED ☐ N/A DETACHED ☐
AT WHAT POINT WAS OPACITY DETERMINED:	
DESCRIBE BACKGROUND: SKY	
COLOR OF BACKGROUND: BLUE	SKY CONDITIONS: 30% CC
WIND SPEED: 10 MPH	WIND DIRECTION: NE
AMBIENT TEMPERATURE: 65°	RELATIVE HUMIDITY: 55%
COMMENTS: GROSS 110 MW 2,000 PSI 690,000 LBS/HR STEAM	

START TIME: 9:50 — STOP TIME: 10:20

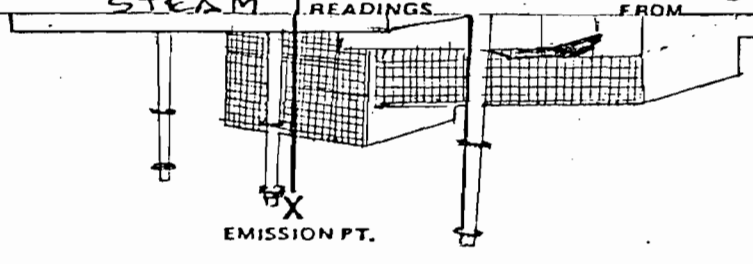
	0	15	30	45		0	15	30
1	40	40	35	35	31			
2	35	40	40	40	32			
3	40	40	40	40	33			
4	40	40	40	40	34			
5	40	40	40	40	35			
6	40	40	40	40	36			
7	35	35	35	35	37			
8	35	35	35	35	38			
9	40	40	40	40	39			
10	40	40	40	40	40			
11	40	40	40	35	41			
12	35	35	40	40	42			
13	40	40	40	40	43			
14	40	40	40	40	44			
15	40	40	40	40	45			
16	40	40	40	40	46			
17	40	40	40	40	47			
18	35	35	35	35	48			
19	35	35	35	35	49			
20	35	40	40	40	50			
21	40	40	40	40	51			
22	40	40	40	40	52			
23	40	40	40	40	53			
24	40	40	40	40	54			
25	40	40	40	40	55			
26	40	40	40	40	56			
27	40	40	40	40	57			
28	40	40	40	40	58			
29	40	40	40	40	59			
30	40	40	40	40	60			

AVERAGE OPACITY WORST SIX MIN: 40%

NUMBER OF READINGS ABOV: 40 — % WERE: 0

RANGE OF OPACITY READINGS: FROM 35 TO 40%

SOURCE LAYOUT SKETCH



DRAW NORTH ARR

OBSERVER'S SIGNATURE: Ramon Solis	DATE: 3/22/83	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 33610-9544

September 23, 1983

Mr. T. H. Wooten
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

Re: Pinellas County - AP
Florida Power Corporation
Bartow No. 1 - Fly Ash System
AO52-71893

Dear Mr. Wooten:

In response to your letter of August 22, 1983, requesting a modification of the referenced permit, the following changes are hereby made:

1. Change the Permittee from: Mr. W. S. O'Brien to Mr. J. A. Hancock, Vice President, Fossil Operations

This letter must be attached to and becomes a part of the referenced permit.

If we can be of further assistance, please give us a call.

Sincerely,

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

JWE/scm

cc: PCDEM

Dan
Air
Es/Ha

Florida Power
CORPORATION

August 22, 1983

W. K. Hennessey
District Manager
Southwest District
Florida Department of
Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610-9544

Subject: Bartow #1 Operating Permits
A052-63210 & A052-71879

Dear Mr. Hennessey:

We have reviewed the above permits and find them acceptable except for some minor changes and clarifications.

On Page 1 of 9 of permit A052-63210, we would request that the megawatt rating be changed to 120MW instead of 93.4MW. This reflects the actual capacity of the unit and since the maximum heat input stays the same as in the permit (1,220 MMBTU/hr.) this is no increase in emissions. While the previous permit showed 93.4MW, it was incorrect and additionally there has been a slight improvement in the efficiency of the unit with conversion to coal-oil mixture.

The official listed as permitee for Florida Power Corporation should be changed from Mr. W. S. O'Brien to Mr. J. A. Hancock, Vice President, Fossil Operations. The address remains as is and Mr. Hancock's telephone number is (813) 866-4524. Once this unit completed its construction phase, it came under Mr. Hancock's authority.

In regards to the application of RACT to the bag filter covered by permit A052-71879, we agree to stipulate that the total annual particulate matter emissions for this facility will be less than one ton ~~ten~~ per year, thereby exempting the facility.

If you have any questions concerning these comments, please contact me at (813) 866-5528.

Sincerely,

Rusty Wooten

T. H. Wooten

THW/md

D.E.R.
AUG 23 1983
SOUTHWEST DISTRICT
TAMPA

Permitting

Florida Power
CORPORATION

October 21, 1983

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
July 1983								
Fuel Oil (BBL)	423102	377791	0	0	161308	13179	10429	19743
Gas (MCF)	0	0	*97694	0	18710	70331	77996	0
% Sulfur(1)	2.1	2.1	-	-	2.4	2.5	2.5	2.5
August 1983								
Fuel Oil	267802	358180	297	7925	118439	13662	13886	3465
Gas	0	0	*72779	0	134552	41398	41293	0
% Sulfur	2.1	2.1	2.3	2.3	2.3	2.4	2.4	2.4
September 1983								
Fuel Oil	45622	307766	0	37397	119339	632	5749	8390
Gas	0	0	*87276	0	194788	2738	25367	0
% Sulfur	2.1	2.1	-	2.3	2.3	2.3	2.3	2.3

(1) In fuel oil

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
July 1983		
Coal (Tons)	95131	129354
% Sulfur	1.2	1.2
August 1983		
Coal (Tons)	98437	106450
% Sulfur	1.3	1.3
September 1983		
Coal (Tons)	85713	64966
% Sulfur	1.4	1.4

Shantz(QtrRpt)D12

* Coal-oil mixture, barrels

permitting

Florida Power
CORPORATION

file Pinellas County - FF
Florida Power Corp
General

July 20, 1983

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

T. L. Brouette

for D. A. Shantz
Supervisor
Environmental Services

D.E.R.

JUL 21 1983

SOUTHWEST DISTRICT
TAMPA

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 1983								
Fuel Oil (BBL)	317385	299761	236	60833	39025	0	0	0
Gas (MCF)	0	0	27874*	0	266589	0	0	0
% Sulfur	2.3	2.3	2.4	2.4	2.4	-	-	-
May 1983								
Fuel Oil	308789	288878	311	67021	2616	1093	1485	4293
Gas	0	0	80761*	0	59679	3034	24515	0
% Sulfur(1)	2.1	2.1	2.5	2.5	2.5	.....	No Sample	.....
June 1983								
Fuel Oil	348057	328585	199	27193	113675	9684	8320	10131
Gas	0	0	73546*	0	273038	52377	49386	0
% Sulfur(1)	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5

(1) In fuel oil

	CRYSTAL RIVER 1	CRYSTAL RIVER 2
April 1983		
Coal (Tons)	86724	74433
% Sulfur	1.2	1.2
May 1983		
Coal (Tons)	75932	122382
% Sulfur	1.4	1.4
June 1983		
Coal (Tons)	96834	122775
% Sulfur	1.3	1.3

Shantz(QtrRpt)D12

* Coal-oil mixture, barrels

Florida Power
CORPORATION

November 3, 1980

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
Anclote No. 2
Bartow No. 1
Bartow No. 2
Bartow No. 3
Higgins No. 1
Higgins No. 2
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
Chemical & Environmental Services

Shantz(QtrRpt)D-12-2

Enclosures

cc: D. I. Flynn
D. W. West
D. V. Pickett

File: ENVIRON 5-1

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
July 1980								
Fuel Oil (BBL)	356750	358859	96544	118079	192169	33888	34949	50451
Gas (MCF)	-0-	-0-	-0-	-0-	-0-	1073	1200	-0-
% Sulfur	2.16	2.16	2.10	2.10	2.10	1.97	1.97	1.97
August 1980								
Fuel Oil	329191	327232	84426	108642	134167	18247	32799	43793
Gas	-0-	-0-	-0-	-0-	126	14109	25429	-0-
% Sulfur	2.21	2.21	2.18	2.18	2.18	2.32	2.32	2.32
September 1980								
Fuel Oil	212389	355610	71659	93284	143676	9899	30258	38771
Gas	-0-	-0-	-0-	-0-	246	6960	45222	-0-
% Sulfur	1.99	1.99	1.95	1.95	1.95	2.20	2.20	2.20

Shantz(QtrRpt)(D-12-2)

DSB RPD

Florida Power
CORPORATION

D.E.R.
APR 18 1980
SOUTHWEST DISTRICT
TAMPA

April 17, 1980

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

Dear Mr. Puchaty:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1
Anclote No. 2
Bartow No. 1
Bartow No. 2
Bartow No. 3
Higgins No. 1
Higgins No. 2
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
Chemical and Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: D. I. Flynn
D. W. West
D. V. Pickett

File: ENVIRON 5-1

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
January 1980								
Fuel Oil (BBL)	225253	297665	53979	36992	104401	19732	24117	0
Gas (MCF)	0	0	0	0	0	6496	0	0
% Sulfur	2.12	2.12	2.12	2.12	2.12	2.17	2.17	2.17
February 1980								
Fuel Oil	375681	361345	54637	73560	137616	28064	27244	22710
Gas	0	0	0	0		137	136	0
% Sulfur	2.04	2.04	2.06	2.06	2.06	2.28	2.28	2.28
March 1980								
Fuel Oil	411836	413696	70836	56918	174481	32479	35327	41751
Gas	0	0	0	0	0	62209	54257	0
% Sulfur	2.37	2.37	2.26	2.26	2.26	2.26	2.26	2.26

Brown Thru → File

Pinellas G-AP

Citrus G-AP

FL P C GEN PINELLAS

D.E.R.

DEC 5 1979

SOUTHWEST DISTRICT TAMPA

Florida Power CORPORATION

November 29, 1979

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

Subject: Ambient SO_2 Monitoring
Anclote Plant
Bartow Plant
Crystal River Plant
Higgins Plant

Dear Mr. Puchaty:

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

Dennis A. Shantz

D. A. Shantz, Supervisor
Chemical and Environmental Services

Attachment

File: ENVIRON 5-1-2

Shantz(PuchSO2) D12

File: Pinellas Co - AP

Florida Power
CORPORATION

October 12, 1979

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

Dear Mr. Puchaty:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1
Anclote No. 2
Bartow No. 1
Bartow No. 2
Bartow No. 3
Higgins No. 1
Higgins No. 2
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
Chemical and Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: D. I. Flynn
D. W. West
D. V. Pickett

File: ENVIRON 5-1

FUEL REPORT

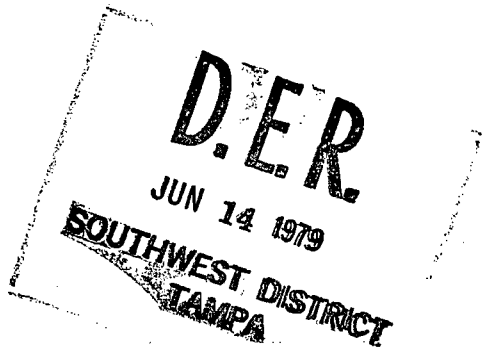
	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
July 1979								
Fuel Oil (BBL)	336281	372414	110937	123210	165769	20370	32976	44552
Gas (MCF)	0	0	0	0	20976	100425	58267	0
% Sulfur	1.0	1.0	2.4	2.4	2.4	1.0	1.0	1.0
August 1979								
Fuel Oil	293463	334797	98237	109351	153620	100	33680	34772
Gas	0	0	0	0	84306	19863	43150	0
% Sulfur	1.0	1.0	2.2	2.4	2.2	1.0	1.0	1.0
September 1979								
Fuel Oil	367696	337860	86168	85967	137102	29032	23549	27323
Gas	0	0	0	0	131184	13363	36273	0
% Sulfur	1.0	1.0	2.2	2.2	2.2	1.0	1.0	1.0

Shantz(QtrRpt)2(D12)

File: Pasco C-AP

Florida Power
CORPORATION

June 11, 1979



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

Dear Mr. Puchaty:

The Florida Power Corporation submits the following environmental compliance test data on steam units 1 and 2 at the Anclote plant in Tarpon Springs, Florida. All tests were conducted in accordance with procedures specified by the Department of Environmental Regulation.

Each Unit was tested while burning 2.5% sulfur oil and 1% sulfur oil. Only 1% sulfur fuel is currently being delivered to the Anclote Plant. We anticipate that both units will be burning 1% sulfur fuel by July 1, 1979.

The particulate value is an average of three required tests as calculated by the "F" factor method and the State method. The SO_2 number was calculated assuming 100% conversion of the fuel sulfur as determined from the attached analyses. The total BTU's fired per hour was calculated by multiplying the unit heat rate (BTU/KWHnet) by the net generation. The test results are:

Anclote #1 (A051-2802)

	1% Sulfur	2.5% Sulfur
Particulate "F" Factor Method	.037	.078
Particulate State Method	.037	.090
Lbs. $SO_2/10^6$ BTU	1.09	2.58
Opacity	15.3%	38.8%
BTU's/Hr	9450 BTU/KWH x 494,000KW = 4.67×10^9 BTU	

Anclote #2 (AC51-14734)

	1% Sulfur	2.5% Sulfur
Particulate "F" Factor Method	.026	.075
Particulate State Method	.030	.094
SO_2	1.07	2.58
Opacity	19.6%	40%
BTU's/Hr	9450BTU/KWH x 493,000 KW - 4.66×10^9 BTU	

Attached are copies of the field data sheets, the visible emission report, fuel oil analyses, the computer printouts for each test and the calibration data for the instruments.

Should you have any questions concerning this information, please call me at 866-4281.

Sincerely,

D. A. Shantz, Supervisor
Chemical and Environmental Services

DAShewM05 (D3)

Florida Power
CORPORATION

D.E.R.
MAY 3 1979
SOUTHWEST DISTRICT
TAMPA

April 30, 1979

Mr. P. David Puchaty
Department of Environmental Regulation
7601 Highway 301 N.
Tampa, Fl. 33610

Subject: Higgins Repowering Project, Pinellas County, Florida, - Cancelled

Dear Mr. Puchaty:

This is to advise you that the repowering project for the Higgins Generating Plant has been cancelled. The uncertainties surrounding the required exemption from the Federal Powerplant and Industrial Fuel Use Act (FUA), which prohibits the use of oil in such installations, placed undue financial risk on the company. It became apparent that in order to maintain the project schedule for the required in-service date, large sums of money would have to be spent or committed prior to our obtaining a decision regarding our petition for exemption. Present estimates of the likelihood of our receiving such an exemption do not support our taking such large financial risks. The company is presently reassessing its generation plan to determine what changes, if any, are necessary in order to support our projected system load requirements.

Accordingly we are requesting that our permit applications for Prevention of Significant Deterioration (PSD), Best Available Control Technology, and DER Form Perm. 12-1 be rescinded for this project.

We sincerely appreciate the time and consideration that you and your staff have given us regarding this project. If I can furnish you any additional information or answer any further questions regarding this matter please feel free to call my office.

Sincerely,

W. W. Vierday
Manager, Licensing Affairs

WWV:db

File: Pinellas G-AP

Brown

Florida Power
CORPORATION

April 17, 1979

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

Dear Mr. Puchaty:

Enclosed are the quarterly reports on fuel use and sulfur content for the following units:

Anclote No. 1
Anclote No. 2
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 and Environmental Services

Shantz(QtrRpt)D12

Enclosures

cc: D. I. Flynn
D. W. West
D. V. Pickett

File: ENVIRON 5-1

FUEL REPORT

	ANCLOTE 1	ANCLOTE 1	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
January 1979								
Fuel Oil (BBL)	281238	195842	108605	36519	193220	19807	25490	11408
Gas (MCF)	0	0	0	546747	83893	45681	17056	0
% Sulfur	1.0	1.0	2.3	2.3	2.3	1.0	1.0	2.3
February 1979								
Fuel Oil	409655	3019	40831	24001	167460	15393	0	30157
Gas	0	0	0	546432	71655	102302	0	0
% Sulfur	1.0	1.0	2.0	2.0	2.0	1.0	1.0	2.3
March 1979								
Fuel Oil	434601	0	58607	48784	135834	4000	2809	49311
Gas	0	0	0	468189	36171	194955	11625	0
% Sulfur	1.0	-	2.1	2.1	2.1	1.0	1.0	2.1

Shantz(QtrRpt)2(D12)

FUEL REPORT

	ANCLOTE 1	ANCLOTE 1 2?	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
January 1979								
Fuel Oil (BBL)	281238	195842	108605	36519	193220	19807	25490	11408
Gas (MCF)	0	0	0	546747	83893	45681	17056	0
% Sulfur	1.0	1.0	2.3	2.3	2.3	1.0	1.0	2.3
February 1979								
Fuel Oil	409655	3019	40831	24001	167460	15393	0	30157
Gas	0	0	0	546432	71655	102302	0	0
% Sulfur	1.0	1.0	2.0	2.0	2.0	1.0	1.0	2.3
March 1979								
Fuel Oil	434601	0	58607	48784	135834	4000	2809	49311
Gas	0	0	0	468189	36171	194955	11625	0
% Sulfur	1.0	-	2.1	2.1	2.1	1.0	1.0	2.1

Shantz(QtrRpt)2(D12)

Bill - might inform Dan when he gets back

F.P.C Gas

PDP Williams ~~Bonner~~ McArthur

KC: 5-18-79

D.E.R.
MAY 16 1979
SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

May 11, 1979

Mr. James T. Wilburn
Chief
Air Enforcement Branch
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30308

Re: Delayed Compliance Order: DCO-78-6

Dear Mr. Wilburn:

In response to your March 28, 1979 letter, this report contains further explanation of the excess opacities included in the last quarterly report for 1978 and the first quarterly report for 1979. The information pertaining to the November 17, 1978 particulate emission violation has been sent in a separate letter dated May 1, 1979.

Before discussing the details of each startup, it would be worthwhile to discuss, in general, the factors which affect the startup of a large, coal-fired power plant.

There are two types of startups which are common. A hot startup is a startup occurring when the turbine metal temperature is hot. This is usually the result of a short shutdown of a few hours to a few days. The other kind of startup is a cold startup, occurring when the turbine metal temperature is close to ambient temperature. This usually follows a scheduled maintenance outage of longer than one week duration.

There are two stages with each type of startup. The first is boiler firing on light oil and the second is boiler firing on coal. The boiler is first fired on light oil to warm the furnace and to achieve the necessary steam pressure and temperature to put the unit on line. Coal is never fired until after the unit is on line. When light oil is fired, there is little particulate input, however, the opacity recorder often records opacity values of 100%. We feel that the measured opacity is due to the release of ash retained in the boiler prior to shutdown.

<u>COLD STARTUPS</u> The longest startup is a cold startup. The furnace must be warmed up slowly to minimize thermal stresses. The turbine must also be slowly prewarmed with steam to minimize thermal stress. The result is a

relatively long period of time firing light oil. Once the unit is put on line, coal is fired but the precipitator is not in service. Usually it takes two coal mills and about three hours of coal firing to achieve an air heater exit gas temperature of 250°F. The precipitator cannot be put in service until 250°F exit gas temperature is achieved because of the danger of moisture and of being below the acid dew point temperature. Damage to the precipitator would mean a reduction in collection efficiency and increased pollution over the long run.

HOT STARTUPS Just as slow firing is required on cold startups to minimize thermal stresses from too rapid a turbine metal change, rapid firing is required on a hot startup to also minimize thermal stresses. The problem on a hot startup is that there is usually a significant mismatch between the steam and turbine metal temperature. Once the unit is put on line, then a rapid increase in coal firing is required to raise the steam temperature up to the turbine metal temperature and thereby prevent quenching of the turbine metal. Usually light oil firing is of a shorter duration on a hot startup because the furnace is already hot, but the length of time firing on light oil on a hot startup varies widely according to initial boiler and turbine temperatures.

OTHER FACTORS Equipment problems during startups can and often do result in delays which cause startup times to vary widely. These equipment problems vary from light oil system tripouts to precipitator power problems.

The details of each startup included in the quarterly reports are as follows:

November 23, 1978

Unit tripped due to loss of service air.
Unit was off from 1045 until 1800 November 23.

(1415-1715) - 50% Opacity
Light oil fire.
The excess opacity recorded during this time is due primarily to retained ash in the boiler. Opacity is constantly decreasing.

(1800-1930) - 100% Opacity
Coal firing.
Precipitator was placed in service at the end of this time period.

November 30, 1978

Unit tripped due to 230KV bus insulation failure.
Unit was off from 0245 until 1330 November 30.

This incident was improperly reported in the quarterly report because the times designated on the chart were wrong.

(0245-0305) - 100% Opacity
The boiler tripped off line.

(0555-0630) - 45% Opacity
Began light oil firing but flame scanner problems interrupted startup.

(0900-1030) - 80% Opacity
Reinitiated light oil fire.

(1330-1455) - 100% Opacity
Coal firing.
Precipitator on at 1455.

December 11 and 12, 1978

The unit was shut down on Dec. 7, 1978 for chemical cleaning. Unit was off line from 2350, Dec. 7, until 2157, Dec. 11.

(1500-1630) - 80% Opacity
Light oil fire. This part of the startup was missed on the quarterly report.

(2157-0100) - 100% Opacity
Coal Firing. Precipitator on at 0100.

(0500-0620) - 35% Opacity
This was reported as part of the startup because it occurred when problems were encountered placing #25 coal mill in service.

December 28 and 29, 1978

Unit was shut down at 1122, Dec. 26, 1978 to fix #6 feedwater heater. The unit was off line from 1122, Dec. 26, until 0213, Dec. 29.

(0515-1000) - 80% Opacity
Firing light oil. Leaks in feedwater heater interrupted startup.

(2230-2400) - 70% Opacity
Firing light oil.

(0213-0500) - 95% Opacity
Coal firing. Precipitator on at 0500.

January 6, 1979

Unit was shut down to repair #6 feedwater heater.
Unit was down from 2332, Jan 5, until 1030, Jan. 6.

(0332-0830) - 60% Opacity
Firing light oil. During this period many problems were encountered with the light oil system.

(1030-1200) - 100% Opacity
Coal firing. Precipitator on at 1200.

(1200-1600) - 40% Opacity
This excess opacity incident was reported as part of the startup because we were experiencing problems with getting the precipitator in service. These problems resulted in a shutdown of the unit at 2314.

January 7 and 8, 1979

(1952-2400) - 70% Opacity
Firing light oil. This incident was missed and not included in the quarterly report.

(0218-0624) - 100% Opacity
Coal firing. Precipitator on at 0624. Feedwater heater began leaking again and the unit was shut down at 0815.

(1012-1230) - 70% Opacity
Firing light oil.

(1355-1650) - 100% Opacity
Coal firing. Precipitator on at 1650.

February 7 and 8, 1979

Unit was shut down to repair #6 feedwater heater.
Unit was off from 1148, Feb. 5, until 0200, Feb. 8

(1825-1900) - 75% Opacity
Light oil firing.

(0400-0445) - 70% Opacity
Coal firing. Precipitator on at 0445.
During this startup the opacity monitor did not appear to be operating properly. The opacity should have exceeded 30% for a longer period during the light oil operation. The first coal mill was put in service at 0200 and the opacity should have been 100% from then until the precipitator was put in service. Our checks of the monitor seemed to indicate that it was functioning properly but there must have been some problem which we were unable to detect.

February 17 and 18, 1979

Unit was shut down to repair #6 feedwater heater.
Unit was off from 2241, Feb. 16, until 0030, Feb. 18.

2/17 (2122) - 2/18 (0030) - 70% Opacity
Firing light oil.

February 17 and 18, 1979 (Continued)

(0030-0530) - 100% Opacity
Coal firing. Precipitator on at 0530.

March 2, 1979

Unit was shut down to clean air tempering coils.
Unit was off from 2237, Mar. 1, until 2140, Mar. 2.

(1650-1730) - 70% Opacity
Firing light oil.

(2140-2330) - 70% Opacity
Coal firing. Precipitator on at 2330.

In the future, our quarterly reports will include an explanation of each startup. Should you require further information, please advise.

Very truly yours,

FLORIDA POWER CORPORATION

G. C. Moore
Assistant Vice President
Power Production

DASekcF02
D3

Harry

Bill

Please respond.

Florida Power
CORPORATION

November 6, 1978

Mr. P. D. Puchaty
Florida Dept. of Environmental
Regulation
7601 Highway 301 North
Tampa, Florida 33610

Re: Stipulation for Consent Order
Bartow Unit 3

Dear Mr. Puchaty:

In accordance with paragraph 3 of the referenced order, Florida Power Corporation proposes to discontinue "hi-vol" ambient particulate sampling on January 1, 1979. It has been more than one year since the installation of the new burners and all data collected to date have demonstrated no ambient particulate problem in the vicinity of the Bartow plant.

Your concurrence with this action is requested.

Very truly yours,

H. A. Evertz III

H. A. Evertz III
Senior Counsel

HAE:mrl

Kerns
Williams
xc: 4-12-79

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

DISTRICT ROUTING SLIP

TO: David Pumbaty DATE: 4-2

____ PENSACOLA – NORTHWEST DISTRICT
____ PANAMA CITY – Northwest District Branch Office
____ TALLAHASSEE – Northwest District Branch Office
X TAMPA – SOUTHWEST DISTRICT
____ ORLANDO – ST. JOHNS RIVER DISTRICT
____ JACKSONVILLE – St. Johns River Subdistrict
____ GAINESVILLE – St. Johns River Subdistrict Branch Office
____ FORT MYERS – SOUTH FLORIDA DISTRICT
____ PUNTA GORDA – South Florida Branch Office
____ MARATHON – South Florida Branch Office
____ WEST PALM BEACH – South Florida Subdistrict
____ FORT PIERCE – South Florida Subdistrict Branch Office

COMMENTS:

for your files

D.E.R.
APR 6 1979
SOUTHWEST DISTRICT
TAMPA

FROM: Vicki

TEL.:

REV. JUL 77

David Puchaty - for permit files

Florida Power
CORPORATION

Dept. Of Environmental Regulation
RECEIVED
APR 2 1979
OFFICE OF SECRETARY

March 29, 1979

Mrs. Vicky Tshinkel
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Re: Higgins Repowering Project, Pinellas County, Fla.

Dear Mrs. Tshinkel:

This is to update your office regarding our efforts to license Florida Power Corporation's proposed Higgins Repowering Project, Pinellas County, Fla. Subsequent to our meeting with you and your staff in Tallahassee on January 22, 1979, and to our following presentation to the Environmental Regulation Commission (ERC) meeting in Tallahassee on January 24, 1979, we have submitted appropriate air construction permit applications to both the Department of Environment Regulation (DER), Tampa office, and the Environmental Protection Agency (EPA), Atlanta, under cover letter(s) dated March 2, 1979. A copy of our letter to Mr. Winston A. Smith, EPA, and Mr. P. David Puchaty is attached for your reference and files.

Because of the tight construction schedule we are facing and to assure that needed generation is provided for our customers by October, 1981, we continue to solicit a prompt review of our application(s) by both agencies. Also, we have requested the EPA to respond to our application as expeditiously as practical, and are hoping for a response from the agency (in regards to a determination of LAER) within two months of our application.

We appreciate the time and consideration that you, your staff and the Environmental Regulation Commission have given us and we will continue to keep you advised. If we can provide any further information to your office regarding this project, please advise.

Sincerely,

W. W. Vierday
Manager, Licensing Affairs
WWV/nmg
Attachment
cc: Mr. W. D. Frederick, Jr. Chairman, ERC
Mr. W. A. Smith, EPA
Mr. P. David Puchaty

DER
APR 6 1979
SOUTHWEST DISTRICT
TAMPA

bx: Mr. M. H. Kleinman
Mr. [illegible] S. O'Brien
Mr. N. B. Spake

Florida Power
CORPORATION

March 2, 1979

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

Subject: Florida Power Corporation's Proposed
Higgins Repowering Project

Dear Mr. Puchaty:

Enclosed herewith we submit in quadruplicate our application for Prevention of Significant Deterioration Analysis with Appendices for the proposed combustion turbine installations for our Higgins Repowering Project. Also enclosed in quadruplicate are DER Forms PERM 12-1, Application to Construct an Air Pollution Source, and BACT applications for each unit.

Subject applications are for our proposed construction including six (6) combustion turbine units (please note that we have designated the units as P-5, P-6, P-7, P-8, P-9 and P-10) at the aforementioned site.

Our check in the amount of $120 for permit fees is enclosed.

If we can answer any questions or can furnish any additional information surrounding our application, please advise.

Please be advised that appropriate applications were filed with the Environmental Protection Agency under cover letter dated March 2, 1979.

Your cooperation is appreciated.

Sincerely,

W. W. Vierday
Manager
Licensing Affairs

WWV/bz

Attachments
Ck. #322867

bx: Mr. M. H. Kleinman
W. S. O'Brien
Mr. N. B. Spake

Florida Power
CORPORATION

CERTIFIED - RETURN RECEIPT REQUESTED

March 2, 1979

Mr. Winston A. Smith
Environmental Protection Agency
345 Courtland Street N.E.
Atlanta, Georgia 30308

Subject: Florida Power Corporation's
Higgins Repowering Project

Dear Mr. Smith:

Enclosed herewith we submit in duplicate Application for Prevention of Significant Deterioration (PSD) permit for our Higgins Repowering Project, Pinellas County. Also we are attaching in duplicate copies of our Application for Determination of Best Available Control Technology (BACT) for Air Pollution Source and Construction Permit Application DER Form 12-1 for your information and files. All aforementioned applications were submitted to the Department of Environmental Regulation under cover letter dated March 2, 1979.

We are advised that EPA's "Interpretive Ruling" is to be applied to this permit application and that our application will be evaluated as to its compliance with EPA's OFFSET POLICY. Although Florida Power Corporation does not necessarily agree that LAER should be applicable to this project we solicit a prompt determination (applicable LAER) from the EPA.

We assert for EPA's consideration that LAER for the Higgins Repowering Project should be defined as .8% sulfur. We further offer the following arguments for consideration:

> We assert that LAER should be determined on a "project by project" basis, specifically for a repowering project. Considerations should include 1) efficiency of the installation, i.e., MW output per fuel consumption; 2) overall net benefits to the environment; 3) feasibility of the project as impacted by the LAER determination; and, last but not least 4) overall net benefits to the PUBLIC.

The Higgins Repowering Project will ultimately result as one of the most efficient generation facilities on the Company's system. If the Higgins Repowering Project is not licensable to permit an inservice date of October 1981, needed megawatt generation capacity must be acquired from less efficient peaking unit installations. Our permit applications reflect that the project will provide both emission reductions for SO_2 and a positive net air quality benefit to the Pinellas (SO_2) non-attainment area. Further our proposed installation will not impact the SIGNIFICANT LEVELS of the Hillsborough (TSP) non-attainment area. We reiterate that .8% sulfur fuel is the "break even" factor for a feasible Higgins Repowering Project. That is, a determination of LAER of anything less than .8% sulfur fuel would result in an unfeasible project.

Because of the tight construction schedule we are facing, a prompt review of our application would be most appreciated. Further if there are any further questions or if we can furnish any additional information please advise.

Finally, we would encourage the EPA to take into consideration the overall net benefits to the public when evaluating our application and would solicit a prompt approval.

Sincerely,

W. W. Vierday
Manager
Licensing Affairs

WWV/bz

Attachments

P.O. Box 14042, St. Petersburg, Florida 33733

Save up to 35% in energy costs with an Energy Saver Home. Ask your builder.

SAINT PETERSBURG FLA. MAR29'79

15

Florida Power
CORPORATION

Mrs. Vicky Tshinkel
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

Fl Power Co. Higgins Pinellas

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

April 11, 1979

Mr. G.W. Schaefer
Licensing Coordinator
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Schaefer:

Water Quality Certification Pipe Bridge
Higgins Repowering Project

We have received the data and drawings submitted by you in regard to the above pipe bridge. It has been determined that we do not have dredge and fill jurisdiction, nor does it appear that industrial waste permits will be required by this Department. We would suggest that the discharge canal be bermed in immediate area of the crossing to direct any oil spills away from the canal.

We hereby waive the requirement for water quailty certification in accordance with Section #401 of Public Law 95-217 for the proposed bridge.

Sincerely,

R. Craig McCotter
for P.David Puchaty
District Manager

ln

Harry
Dan
response Req'd

XC: 3-16-79
Q

Florida Power
CORPORATION

D.E.R.
MAR 16 1979
SOUTHWEST DISTRICT
TAMPA

John - Prepare a response for Dave's signature. I think it will require a D+F permit. Coordinate w/ Cashill
JK

March 12, 1979

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

Subject: Water Quality Certification
Pipe Bridge, Higgins Repowering Project

Dear Mr. Puchaty:

We have been requested by the U. S. Coast Guard to secure water qualitify certification in accordance with Section #401 of Public Law 95-217 for a proposed pipe bridge at our Higgins Power Plant site, Pinellas County, Florida. The new bridge will cross the existing discharge canal, providing service water, steam, and oil to six new combustion turbines. (See attached drawings).

We are, by receipt of this letter, requesting a waiver of certification under Section #401 and offer the following as support for our request:

1. Bridge supported piping systems are not intended to discharge at any time into area navigable waters.

2. Water piping will contain potable water.

3. Steam piping will contain steam produced from demineralized water.

4. No chemical piping will cross the canal.

5. Oil piping which crosses the canal will be butt-welded, seamless steel pipe and welded in accordance with ASME (American Society of Mechanical Engineers) certified procedures with certified welders. All welded joints crossing the canal will be radiographed.

5. Continued

   a. Oil piping will be ASTM A53, Schedule 40 - design pressure for this class of pipe is between 800 to 1100 PSI depending on pipe size. All oil piping for the project is pressurized at less than 100 PSI.

   b. All oil piping will comply with NDE, (Non-Destructive Examination) requirements of DOT 195 "Transportation Of Liquids By Pipe Line".

   c. Oil piping will be hydro-tested at design pressure to insure integrity of welds.

6. Plant site operations include the use of an approved Coast Guard Transfer Manual and approved FPC procedure (Spill Prevention Control and Counter-Measure Plan).

   a. Oil piping can be valved off on either side of the discharge canal to shut off oil flow in either direction.

A timely review of this matter will be appreciated.

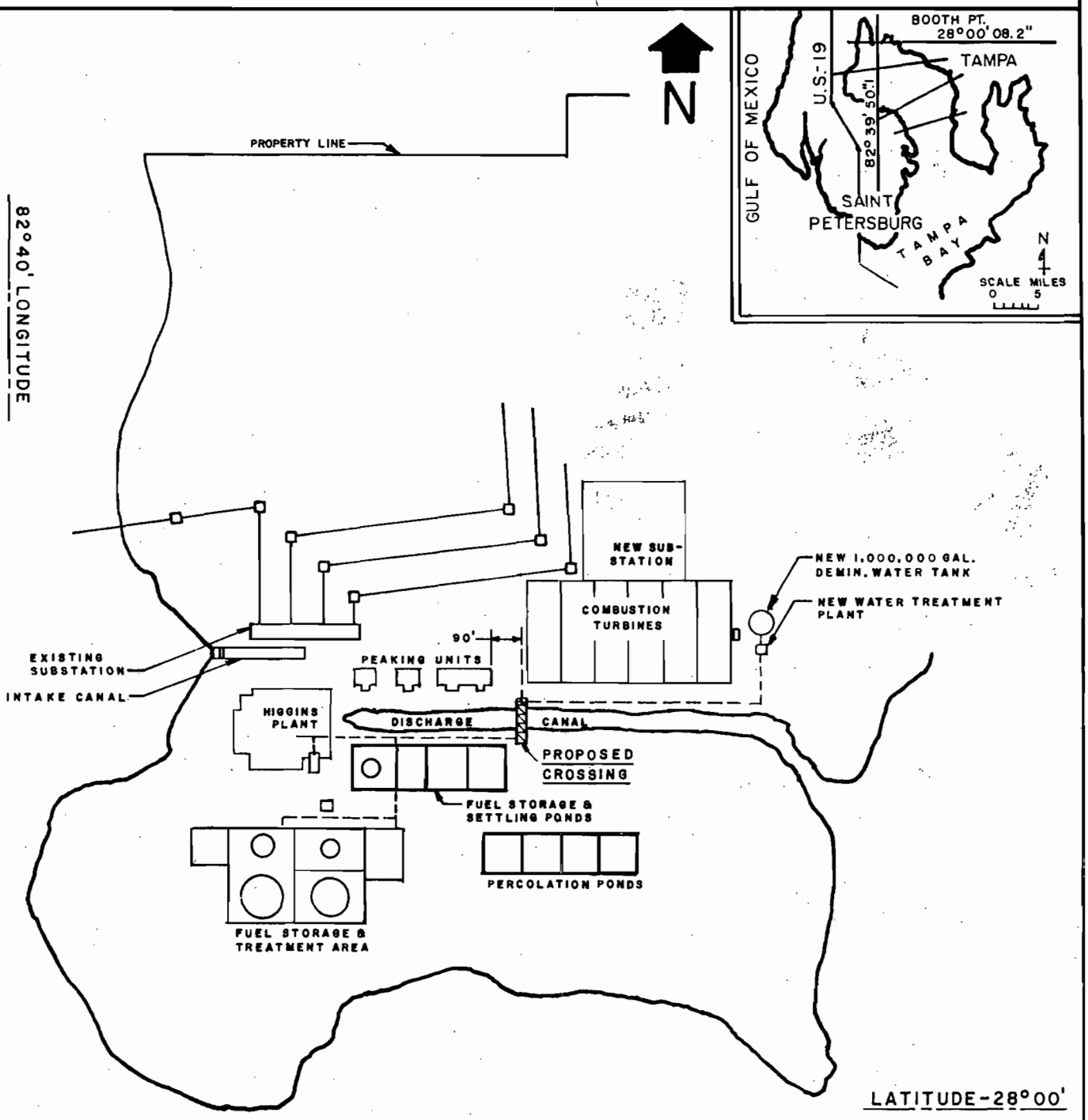
If you have any questions about the project or require additional information, please call me, (813) 866-5416.

Sincerely,

G. W. Schaefer
Licensing Coordinator

Attachment

GWS/bb



PIPE BRIDGE OVER DISCHARGE CANAL

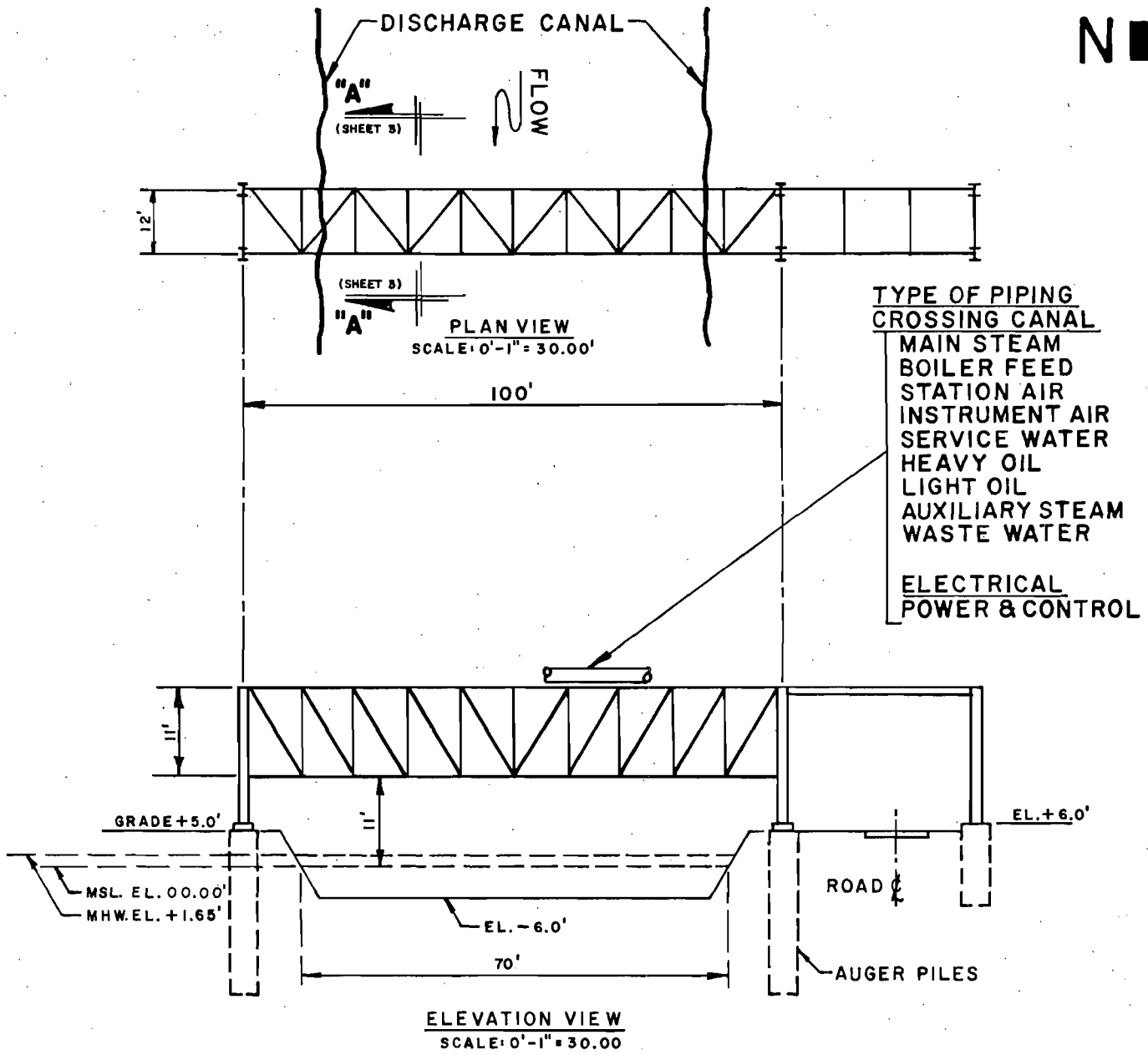
PURPOSE: SEE APPLICATION

DATUM: EL 00.00' MLW

ADJACENT PROPERTY OWNERS

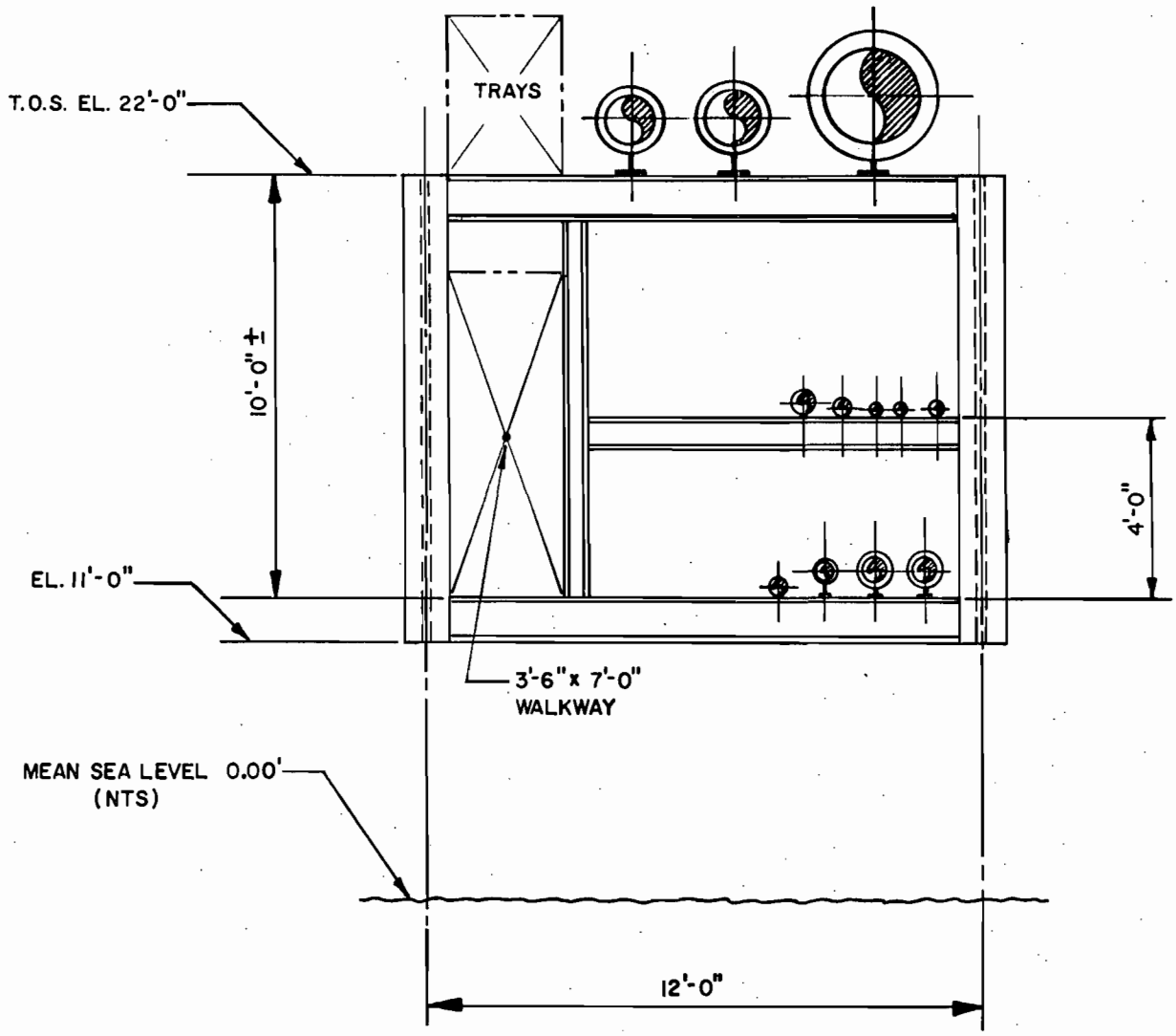
PROPOSED PIPE BRIDGE
ACROSS DISCHARGE CANAL
AT HIGGINS PLANT
COUNTY OF PINELLAS STATE FLORIDA
APPLICATION BY FLORIDA POWER CORP.

SHEET 1 OF 3 DATE 11/30/78
REVISED: 2/15/79



PROPOSED PIPE BRIDGE
ACROSS DISCHARGE CANAL
AT HIGGINS PLANT
COUNTY OF PINELLAS STATE FLORIDA
APPLICATION BY FLORIDA POWER CORP

SHEET 2 OF 3 DATE 11/30/78
REVISED: 2/15/79



SECTION "A - A"

PROPOSED PIPE BRIDGE ACROSS
DISCHARGE CANAL AT HIGGINS PLANT
COUNTY OF PINELLAS, STATE OF FLORIDA
APPLICATION BY FLORIDA POWER CORP.

SHEET 3 OF 3 DATE: 2/16/79

S/c: Pinellas Co-AP

new permit issued on Operation Permit placard.

D.E.R.

MAR 30 1979

SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

March 28, 1979

Mr. Dan Williams
Florida Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

RE: Bartow-Anclote Pipeline Heater Permit Renewal

Dear Mr. Williams:

Enclosed is the permit DER recently issued for Florida Power Corporation's Bartow-Anclote Pipeline Heater. As discussed in our telecom, I am returning this permit so that it can be reissued as an operation permit. It was obviously issued in error as a construction permit.

We appreciate your help in this matter. If I can be of further help, please call me at 813-866-5528.

Sincerely,

Rusty Wooten

Rusty Wooten
Environmental Operations
and Licensing Administrator

RW/nmg
Enclosure

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

April 3, 1979

Mr. H. A. Evertz
Florida Power Corporation
P. O. Box 14042
St. Petersburg, FL 33733

Dear Mr. Evertz:

We are in the process of establishing a stack monitoring schedule for this office from April 1, 1979 through September 30, 1979. Our records indicate your complex has not sampled the emission stack(s) as apermitted by this Department for compliance within the past six months.

Due to the requirements of our scheduling, we request that you submit to this office within ten (10) days from receipt of this letter; a schedule indicating the dates, if possible, of the compliance stack test for your source(s) of pollution which require such test from April 1, 1979 through September 30, 1979.

Please contact Mr. Robert Barker or Mr. Douglas Bramlett at (813) 985-7402 if you should have any questions concerning this matter.

Thank you in advance for your cooperation.

Sincerely,

R. Craig McArthur

R. Craig McArthur
Enforcement Supervisor
Southwest District

RCM:klm

Air

file

Bob B RBB
Doug DSG
Sam SS

D.E.R.
MAR 28 1980
SOUTHWEST DISTRICT
TAMPA

Florida Power
CORPORATION

March 27, 1980

Mr. Dan A. Williams, P.E.
District Air Engineer
Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Subject: Quarterly Particulate Testing

Dear Mr. Williams:

In response to the revised Chapter 17-2, Florida Power Corporation elects to operate the following steam generators at the allowed 40% opacity:

1.	Anclote #1	A051-28250
2.	Anclote #2	A051-24784
3.	Bartow #1	A052-6206
4.	Bartow #2	A052-23168
5.	Bartow #3	A052-6280
6.	Crystal River #1	A009-22447
7.	Higgins #1	A052-20186
8.	Higgins #2	A052-6207
9.	Higgins #3	A052-6593

Attached is our latest schedule for testing these units during the second quarter of 1980. As we discussed on March 26, 1980, tests have not been conducted on Anclote Unit #1 during the previous two quarters because of extensive modifications to the test platform. We will submit the tests on this unit, scheduled for May 1980, as soon as possible to enable further processing of the permit application.

Should you require further information, please advise.

Sincerely,

FLORIDA POWER CORPORATION

Dennis A. Shantz, Supervisor
Chemical & Environmental Services

DASemhR02D1

cc: T. L. Brouette

File: Environ 5-1

1980 SECOND QUARTER ENVIRONMENTAL TESTING SCHEDULE

Anclote 1	May 12 - May 16
Anclote 2	May 19 - May 23
Bartow 1	April 30 - May 5
Bartow 2	April 24 - April 29
Bartow 3	April 21 - April 23
Higgins 1	March 31 - April 3
Higgins 2	April 7 - April 11
Higgins 3	April 14 - April 18
Crystal River 1 -	May 5
Crystal River 2 -	

DASewnhT01D1

File: Pinellas Co-AP

Florida Power
CORPORATION

D.E.R.
APR 22 1981
SOUTHWEST DISTRICT
TAMPA

April 20, 1981

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
Anclote No. 2
Bartow No. 1
Bartow No. 2
Bartow No. 3
Higgins No. 1
Higgins No. 2
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
Chemical & Environmental Services

Shantz(QtrRpt)D-12-2

Enclosures

cc: D. I. Flynn
D. W. West
D. V. Pickett

File: ENVIRON 5-1

FUEL REPORT

	ANCLOTE 1	ANCLOTE 2	BARTOW 1	BARTOW 2	BARTOW 3	HIGGINS 1	HIGGINS 2	HIGGINS 3
January 1981								
Fuel Oil (BBL)	395827	423187	87074	85090	129205	32668	-0-	31782
Gas (MCF)	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
% Sulfur	2.20	2.20	2.30	2.30	2.30	2.29	2.29	2.29
February 1981								
Fuel Oil	307392	295328	55163	49610	124223	13026	9638	7119
Gas	-0-	-0-	-0-	-0-	-0-	3602	3182	-0-
% Sulfur	2.17	2.17	2.10	2.10	2.10	2.21	2.21	2.21
March 1981								
Fuel Oil	194984	262875	81600	23157	151399	20038	19572	12102
Gas	-0-	-0-	-0-	-0-	18430	13433	14338	-0-
% Sulfur	2.24	2.24	2.22	2.22	2.22	2.27	2.27	2.27

Shantz(QtrRpt)(D-12-2)

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

copy to Tampa

JUL 21 1978

Mr. H. A. Evertz, III
Senior Counsel
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Re: Administrative Order
Docket No. AO-76-131(a)

Dear Mr. Evertz:

This is to acknowledge receipt of your July 5, 1978, letter regarding the above referenced Order. Your submittal satisfies the reporting requirement of Part IV - Progress Reports for the quarter ending June 30, 1978.

Your cooperation in this matter is appreciated.

Sincerely yours,

James T. Wilburn
Chief, Air Enforcement Branch
Enforcement Division

cc: Mr. J. W. Landers, Jr.
Dr. P. Parks

Florida Power
CORPORATION

D.E.R.
JAN 20 1978
SOUTHWEST DISTRICT
TAMPA

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 steam units 1 and 3 at the Bartow plant in St. Petersburg, 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/Kwhr) and net load (Kwhr). The test results are:

Bartow #1 (AO 52-2037)

Particulate - 0.075 lb/10^6 BTU
SO_2 - 2.48 lb/10^6 BTU
Opacity - 20%

BTU's - (9853 BTU/Kwh) (204,500 Kwh) = 2.015 x 10^9 BTU

Bartow #3 (AO 52-2039)

Particulate - 0.093 lb/10^6 BTU
SO_2 2.48 lb/10^6 BTU
Opacity - 20%

BTU's - (10,597 BTU/Kwh) (104,200 Kwh) = 1.104 x 10^9 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,

Eustice Parnelle

R.E. Parnelle, Jr., Manager
Environmental Operations

REPjr/js 3/7a
Attachments

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 1

TEST DATE : 11/18/77
TEST NO: 1-77

LOAD: 110 MW

TEST CONDITION:
%O2: 4.70 ,%CO2: 13.3 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.23 LBM/LBM-MOLE

AVG STACK VELOCITY= 56.51 FT/SEC

CONCENTRATION @ STP= .4401190E-05 LBS/SCF

CONCENTRATION @ STP= .3083131E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 100.86

PARTICULATE MATTER=.057 LBS/10**6 BTU @STP

% H2O @ STP= 9.996

% EXCESS AIR= 27.73

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER 1-77
DATE 11-18-77
ENGINEERS S&C
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.9
$t_{AMBIENT}$ 80
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 95

PLANT: PARTON
UNIT: 1
LOAD: _____ MW
% O_2: 1.7 FUEL: OIL
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 .9
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.10
$P_m = P_{ATM}$ 30.25
P_S / P_m 0.99
METER PRESS. ($P_M = P_{ATM} + P_M$) 30.39

POINT	CLOCK TIME	DRY GAS METER CF	PITOT ΔP (RED) "H_2O	ORIFICE ΔH (p_M) "H_2O (YELLOW) DESIRED	ORIFICE 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	STAC TEMP °F
25	2	259.2	0.55	1.5	1.5	76	73	0				
26	4		0.53	1.4	1.4	77	73					
27	6	263.55	0.6	1.6	1.6	80	74					
28	2		0.50	1.35	1.35	82	74					
29	4		0.35	0.94	0.94	84	74					
30	6	266.48	0.50	1.35	1.35	87	75					
31	2		0.40	1.1	1.1	87	76					
32	4		0.40	1.1	1.1	89	76					
33	6	270.36	0.45	1.2	1.2	90	77					
34	2		0.40	1.1	1.1	90	77					
35	4		0.45	1.2	1.2	92	78					
36	6	273.99	0.50	1.35	1.35	94	79					
37	2		0.45	1.2	1.2	94	80					
38	4		0.45	1.2	1.2	96	81					
39	6	277.61	0.45	1.2	1.2	97	82					
40	2		0.53	1.4	1.4	98	83					
41	4		0.48	1.3	1.3	99	83					
42	6	281.40	0.45	1.2	1.2	100	84					
43	2		1.15	3.1	3.1	92	85					
44	4		1.15	3.1	3.1	97	85					
45	6	287.16	1.2	3.2	3.2	102	86					
46	2		1.1	2.95	2.95	105	86					
47	4		1.15	3.1	3.1	109	87					
48	6	292.38	1.1	2.95	2.95	112	88					

AVG. b_a _____ 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. ($P_S = P_{ATM} + P_G$) 30.16
$P_m = P_{ATM}$ 30.25
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.39

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	STAC TEM °F
25	2		0.85	2.3	2.3	109	88	0				
26	4		0.90	2.4	2.4	110	89					
27	6	298.0	0.90	2.4	2.4	112	90					
28	2		0.90	2.4	2.4	110	90					
29	4		0.90	2.4	2.4	112	91					
30	6	303.11	0.90	2.4	2.4	114	92					
31	2		1.05	2.8	2.8	113	92					
32	4		0.75	2.0	2.0	114	92					
33	6	308.33	0.95	2.6	2.6	116	93					
34	2		0.89	2.35	2.35	115	93					
35	4		1.05	2.8	2.8	117	94					
36	6	313.88	1.1	2.95	2.95	120	95					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												

AVG Δp 1.4 AVG 91.75

PARTICULATE

THIMBLE 5	86.7451	
	86.6411	
	.1040	

BEAKER 5	96.5572	
	96.5546	
	.0026	

TOTAL .1066 gm

Water

800
700
100

736
726
10

485
482.5
2.5

537
824.5
12.5

Total 125 g

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 1

TEST DATE : 11/21/77
TEST NO: 2-77

LOAD: 110

TEST CONDITION:
%O2: 4.70 ,%CO2: 13.3 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.27 LBM/LBM-MOLE

AVG STACK VELOCITY= 56.00 FT/SEC

CONCENTRATION @ STP= .7155269E-05 LBS/SCF

CONCENTRATION @ STP= .5012424E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 97.648

PARTICULATE MATTER=.092 LBS/10**6 BTU @STP

% H2O @ STP= 9.712

% EXCESS AIR= 27.73

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

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	STAC TEM °F
25	2	315.87	0.98	2.6	2.6	83	79	0				
26	4		1.1	2.9	2.9	84	79					
27	6	319.20	1.1	2.9	2.9	89	80					
28	2		1.15	3.1	3.1	93	80					
29	4		0.85	2.25	2.25	96	80					
30	6	324.50	0.95	2.5	2.5	98	81					
31	2		0.95	2.5	2.5	96	82					
32	4		0.95	2.5	2.5	99	83					
33	6	329.6	0.98	2.6	2.6	102	84					
34	2		0.95	2.5	2.5	102	84					
35	4		0.88	2.3	2.3	104	86					
36	6	334.6	0.95	2.5	2.5	106	86					
37	2		1.15	3.1	3.1	106	87					
38	4		1.1	2.9	2.9	109	88					
39	6	340.50	1.15	3.1	3.1	111	89					
40	2		1.25	3.3	3.3	110	90					
41	4		1.1	2.9	2.9	112	91					
42	6	346.10	1.25	3.3	3.3	115	92					
43	2		0.5	1.35	1.35	97	92					
44	4		0.44	1.15	1.15	98	92					
45	6	349.70	0.44	1.15	1.15	100	92					
46	2		0.42	1.1	1.1	100	92					
47	4		0.44	1.15	1.15	101	93					
48	6	353.20	0.42	1.1	1.1	102	93					
												90

TOTAL _____ min _____ cf AVG. p_M _____ "H_2O AVG. _____ t_M AVG. _____

Best Available Copy

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER 2-77
DATE 11/21/77
ENGINEERS CH
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.9
$t_{AMBIENT}$ 80
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 95

PLANT: Barton
UNIT: 1
LOAD: ______ MW
% O_2: ______ FUEL: Oil
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 .9
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.15
$P_m = P_{ATM}$ 30.30
P_S / P_m 0.99
METER PRESS. ($P_M = P_{ATM} + P_H$) 30.4

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	2		0.4	1.05	1.05	102	95	0				
26	4		0.42	1.10	1.10	103	94					
27	6	356.7	0.42	1.1	1.1	105	95					
28	2		0.38	1.0	1.0	106	95					
29	4		0.42	1.1	1.1	106	96					
30	6	360.1	0.38	1.0	1.0	106	96					
31	2		0.48	1.25	1.25	107	96					
32	4		0.25	0.66	0.66	107	97					
33	6	363.4	0.30	0.80	0.80	108	97					
34	2		0.52	1.4	1.4	107	97					
35	4		0.55	1.45	1.45	108	98					
36	6	367.26	0.55	1.45	1.45	109	98					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
												290

TOTAL 72 min [illegible] cf $\sqrt{\Delta P}$ .836 AVG. ΔH ______ "H_2O AVG. 96 t_M [illegible] 750

WATER

783
723
60

778
734
44

486.5
485
1.5

919
907
12

TOTAL 117.5 g

Particulate

THIMBLE	#7	96.6306 96.4768	
		.1532	
BEAKER	#7	101.1708 101.1558	
		.0150	
TOTAL		.1682	gm

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 1

TEST DATE : 11/21/77
TEST NO: 3-77

LOAD: 110 MW

TEST CONDITION:
%O2: 4.70 ,%CO2: 13.3 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.30 LBM/LBM-MOLE

AVG STACK VELOCITY= 58.06 FT/SEC

CONCENTRATION @ STP= .5714985E-05 LBS/SCF

CONCENTRATION @ STP= .4003473E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 96.506

PARTICULATE MATTER=.077 LBS/10**6 BTU @STP

% H2O @ STP= 9.479

% EXCESS AIR= 27.73

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

Best Available Copy

PARTICULATE FIELD DATA (Pg: 2)

RUN NUMBER 3-77
DATE 11-21-77
ENGINEERS S-C
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.9
$t_{AMBIENT}$ 80
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 95

PLANT: BARTOW
UNIT: 1
LOAD: 110 MW
% O_2: 1.6 FUEL: OIL
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 0.9
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.15
$P_m = P_{ATM}$ 30.30
P_S / P_m 0.99
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.4

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	2	367.4	0.55	1.5	1.5	92	92	0				
26	4		0.5	1.3	1.3	94	92					
27	6	371.3	0.5	1.3	1.3	97	92					
28	2		0.46	1.2	1.2	98	92					
29	4		0.34	0.90	0.90	100	92					
30	6	374.82	0.42	1.1	1.1	102	92					
31	2		0.42	1.1	1.1	103	93					
32	4		0.42	1.1	1.1	103	94					
33	6	378.35	0.40	1.05	1.05	104	94					
34	2		0.40	1.05	1.05	104	95					
35	4		0.42	1.1	1.1	106	95					
36	6	381.9	0.45	1.2	1.2	106	96					
37	2		0.40	1.05	1.05	105	96					
38	4		0.40	1.05	1.05	106	96					
39	6	385.36	0.40	1.05	1.05	106	97					
40	2		0.48	1.3	1.3	106	97					
41	4		0.45	1.2	1.2	108	97					
42	6	389.04	0.42	1.1	1.1	109	98					
43	2		1.2	3.5	3.5	100	96					
44	4		1.2	3.2	3.2	105	96					
45	6	395.98	1.25	3.3	3.3	110	97					
46	2		1.2	3.2	3.2	112	97					
47	4		1.2	3.2	3.2	115	97					
48	6	401.0	1.2	3.2	3.2	117	98					

TOTAL min cf AVG. b_M "H_2O 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. ($P_S = P_{ATM} + P_G$) 30.15
$P_m = P_{ATM}$ 30.3
P_S / P_m _____
METER PRESS. ($P_M = P_{ATM} + P_H$) 30.1/4

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	2		1.0	2.7	2.7	115	98	0				
26	4		0.95	2.5	2.5	116	98					
27	6	406.39	0.98	2.6	2.6	118	99					
28	2		1.0	2.7	2.7	117	99					
29	4		0.90	2.4	2.4	110	100					
30	6	411.72	0.98	2.6	2.6	120	100					
31	2		1.15	3.1	3.1	117	100					
32	4		0.98	2.6	2.6	111	101					
33	6	417.28	1.0	2.7	2.7	120	101					
34	2		1.0	2.7	2.7	118	101					
35	4		1.1	2.95	2.95	119	102					
36	6	422.92	1.15	3.07	3.05	120	102					
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
												240

TOT: 55.53 of ΔP: .967 AVG. p_M: .14 "H_2O AVG. 102.26 t_M

Water

843.5
783
60.5

822.5
778
44.5

488.5
486.5
2.0

929.5
919
10.5

TOTAL 117.5 g

Particulate

THIMBLE #8

	98.3147
	98.1837
	.1310

BEAKER #8

	95.9893
	95.9823
	.0070

TOTAL .1380 gm

RECORD OF VISUAL DETERMINATION OF OPACITY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

LOCATION Barton #1
PERMIT NUMBER AO52-2037
DATE Nov 18 1977
TYPE FACILITY Power Plant
CONTROL DEVICE

THIS IS TO CERTIFY THAT

DENNIS SHANTZ, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.
This certificate expires on April 10, 1978

Certification Officer

D. A. Shantz
Bearer's Signature

HOURS OF OBSERVATION 1400-1410
OBSERVER D. A. Shantz
OBSERVER CERTIFICATION DATE Oct 77
POINT OF EMISSIONS Stack
HEIGHT OF DISCHARGE POINT 300'

	Initial			Final
CLOCK TIME	1400			
OBSERVER LOCATION Distance to Discharge	1000' ~~Hor~~			
Direction from Discharge	South			
Height of Observation Point	Sea level			
BACKGROUND DESCRIPTION	Blue			
WEATHER CONDITIONS Wind Direction	East			
Wind Speed	5-10			
Ambient Temperature	80°			
SKY CONDITIONS (clear, overcast, % clouds, etc.)	Clear			
PLUME DESCRIPTION Color	White			
Distance Visible	1 mile			
Other Information				

SUMMARY OF AVERAGE OPACITY

Set Number	Time Start--End	Opacity Sum	Opacity Average
1	1400-1410	800	20%

Readings ranged from 20 to 20 % opacity.

The source was/~~was not~~ in compliance with 20% at the time evaluation was made.

NOTES:
1. Minimum of 24 readings to be taken at 15 second intervals.
2. Readings are to be to the nearest 5 % opacity.

OBSERVATION RECORD

Hr.	Min.	SECONDS 0	15	30	45	STEAM PLUME (check if applicable) Attached	Detached	COMMENTS
	0	20	20	20	20			
	1	20	20	20	20			
	2	20	20	20	20			
	3	20	20	20	20			
	4	20	20	20	20			
	5	20	20	20	20			
	6	20	20	20	20			
	7	20	20	20	20			
	8	20	20	20	20			
	9	20	20	20	20			
	10							
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Gilbert/Commonwealth engineers and consultants

LABORATORY SERVICES
30 NOBLE STREET, READING, PA 19611

GILBERT ASSOCIATES, INC., P. O. Box 1498, Reading, PA 19603/Tel. 215 775-2600

CERTIFICATE OF ANALYSIS

LABORATORY NO: 25450 RECEIVED: 11/28/77 REPORTED: 12/9/77

CLIENT: Florida Power Corporation, Bartow Plant
St. Petersburg, FL 33733

SAMPLE DESCRIPTION: #6 Fuel Oil
Plant Strainer
Sampled 11/22/77

- - - - - - - -

ASH	%	0.10
B.t.u. PER POUND		18,213
B.t.u. PER GALLON		148,436
CARBON	%	85.80
CARBON RESIDUE	%	10.66
FIRE POINT	^{o}F	380
FLASH POINT	^{o}F	305
GRAVITY	^{o}API	13.1
HYDROGEN	%	10.92
OXYGEN + NITROGEN	%	0.92
POUNDS PER GALLON		8.150
POUR POINT	^{o}F	+ 60
SODIUM	ppm	60.1
SULFUR	%	2.26
VANADIUM	%	0.003
VISCOSITY	SFS @ 122^{o}F	168.7
WATER (by distillation)	%	0.55

Respectfully submitted,

T. M. Isert, Chief Chemist
Laboratory Services

MAH
cc: D. West
G. W. Marshall
J. B. Clardy
M. S. Adams
B. P. Hunt
J. Alberdi

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 3

TEST DATE : 11/14/77
TEST NO: 4-77

LOAD: 210 MW

TEST CONDITION:
%O2: 3.00 ,%CO2: 15.0 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.38 LBM/LBM-MOLE

AVG STACK VELOCITY= 42.56 FT/SEC

CONCENTRATION @ STP= .8934870E-05 LBS/SCF

CONCENTRATION @ STP= .6259072E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 103.17

PARTICULATE MATTER=.104 LBS/10**6 BTU @STP

% H2O @ STP= 10.25

% EXCESS AIR= 16.09

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

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(pg. 2)

RUN NUMBER 4-77
DATE 11/14/77
ENGINEERS A+C
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.90
$t_{AMBIENT}$ 75
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 90

PLANT: Bartow
UNIT: 3
LOAD: _____ MW
% O_2: _____ FUEL: Oil
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER 1/4
PROBE LENGTH 15
TYPE PITOT TUBE S
PITOT TUBE (C_P) 0.85
PROBE HEATER TEMP. -
AVERAGE ΔP .4
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.55
$P_m = P_{ATM}$ 30.4
P_S / P_m 1.00
METER PRESS. ($P_M = P_{ATM} + P_H$) 30.4

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	2	148.80	0.45	1.2	1.2	75	75	0				
26	4		0.43	1.15	1.15	77	76					
27	6		0.35	0.94	0.94	78	76					
28	8		0.40	1.05	1.05	80	76					
29	10		0.42	1.1	1.1	82	76					
30	12	155.77	0.45	1.2	1.2	84	76					
31	2		0.38	1.0	1.0	82	76					
32	4		0.36	0.96	0.96	83	76					
33	6		0.36	0.96	0.96	84	76					
34	8		0.36	0.96	0.96	86	76					
35	10		0.34	0.92	0.92	86	76					
36	12	162.41	0.45	1.2	1.2	88	76					
37	2		0.38	1.0	1.0	86	78					
38	4		0.34	0.92	0.92	86	78					
39	6		0.34	0.92	0.92	27	78					
40	8		0.38	1.0	1.0	89	78					
41	10		0.34	0.92	0.92	91	79					
42	12	169.70	.51	1.4	1.4	92	79					
43	2		.47	1.2	1.2	88	78					
44	4		.39	1.02	1.02	90	79					
45	6		.35	0.94	0.94	91	79					
46	8		.45	1.2	1.2	92	79					
47	10		.42	1.1	1.1	93	80					
48	12	176.09	.51	1.4	1.4	94	80					
												310

27.29 cf $\sqrt{\Delta P}$ = .632 AVG. b.. .07 "H_2O AVG. 81.7 t_M AVE. T_S = 310

PARTICULATE

THIMBLE #1

77.7162
77.6208
.0954

BEAKER #1

91.5381
91.5232
.0149

TOTAL .1103 gm

Water

#1	797.0	
	741.5	
	55.5	
#2	728.0	
	724.5	
	3.5	
#3	483.5	
	482	
	1.5	
#4	880	
	875	
	5	

TOTAL 65.5 g

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 3

TEST DATE : 11/15/77
TEST NO: 5-77

LOAD: 210 MW

TEST CONDITION:
%O2: 3.00 ,%CO2: 15.0 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.31 LBM/LBM-MOLE

AVG STACK VELOCITY= 41.82 FT/SEC

CONCENTRATION @ STP= .7994203E-05 LBS/SCF

CONCENTRATION @ STP= .5600116E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 104.08

PARTICULATE MATTER=.092 LBS/10**6 BTU @STP

% H2O @ STP= 10.83

% EXCESS AIR= 16.09

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

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PARTICULATE FIELD DATA (Pg: 2)

RUN NUMBER 5-77
DATE 11-15-77
ENGINEERS H & C
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.9
$t_{AMBIENT}$ 70
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 85

PLANT: BARTOW
UNIT: 3
LOAD: 210 MW
% O_2: 0.7 FUEL: Oil
BTU's BURNED:

HEATER BOX SETTING
PROBE TIP DIAMETER 1/4
PROBE LENGTH 15
TYPE PITOT TUBE S
PITOT TUBE (C_P) .85
PROBE HEATER TEMP. -
AVERAGE ΔP .4
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.5
$P_m = P_{ATM}$ 30.38
P_S / P_m 1.00
METER PRESS. ($P_M = P_{ATM} + P_H$) 30.4

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	STAC TEM °F
25	2	176.20	0.45	1.2	1.2	70	70	0				
26	4		0.42	1.1	1.1	72	70					
27	6		0.35	0.94	0.94	74	70					
28	8		0.40	1.05	1.05	75	70					
29	10		0.42	1.1	1.1	76	70					
30	12	183.14	0.50	1.3	1.3	78	70					
31	2		0.37	0.98	0.98	76	70					
32	4		0.32	0.86	0.86	76	70					
33	6		0.32	0.86	0.86	78	70					
34	8		0.35	0.94	0.94	78	70					
35	10		0.35	0.94	0.94	80	70					
36	12	189.68	0.50	1.3	1.3	82	72					
37	2		0.36	0.96	0.96	80	72					
38	4		0.35	0.94	0.94	81	73					
39	6		0.35	0.94	0.94	82	74					
40	8		0.35	0.94	0.94	64	74					
41	10		0.33	0.88	0.88	85	75					
42	12	196.24	0.45	1.2	1.2	86	76					
43	2		0.45	1.2	1.2	84	76					
44	4		0.40	1.05	1.05	85	77					
45	6		0.35	0.94	0.94	86	77					
46	8		0.40	1.05	1.05	86	78					
47	10		0.42	1.1	1.1	86	78					
48	12	203.17	0.45	1.2	1.2	85	78					
												=00
		26.97	$\sqrt{\Delta p}$ = .625		.07		76.56+					760

Water

777
717
60

730
726.5
3.5

483
482
1

993.5
988.5
5.0

TOTAL 69.5 gm

Particulate

Thimble # 2	92.6006	
	92.5089	
	.0917	

Beaker #2	91.2013	
	91.1946	
	.0067	

Total .0984 gm

AIR POLLUTION ANALYSIS

PLANT: BARTOW
UNIT: 3

TEST DATE : 11/15/77
TEST NO: 6-77

LOAD: 210 MW

TEST CONDITION:
%O2: 3.20 ,%CO2: 14.8 , %CO: 0.0

AVG MOLECULAR WEIGHT= 29.29 LBM/LBM-MOLE

AVG STACK VELOCITY= 42.99 FT/SEC

CONCENTRATION @ STP= .7132985E-05 LBS/SCF

CONCENTRATION @ STP= .4996813E-01 GRAINS/SCF

% TIME SAMPLED ISOKINETICALLY (FEDERAL STDS)= 101.33

PARTICULATE MATTER=.084 LBS/10**6 BTU @STP

% H2O @ STP= 10.82

% EXCESS AIR= 17.35

SULFUR DIOXIDE=0.0 LBS/10**6 BTU @STP

NITROUS OXIDE=.0 LBS/10**6 BTU @ STP
READY

[redacted]

Best Available Copy

PARTICULATE FIELD DATA (Pg. 2)

RUN NUMBER 6-77
DATE 11/15/77
ENGINEERS H+C
SAMPLE BOX NUMBER 2
METER BOX NUMBER 2
METER ΔH 1.69
C FACTOR (NOMOGRAPH) 0.9
$t_{AMBIENT}$ 70
STACK TEMP. (T_S) 300
METER TEMP. ($T_M = t_{AMB} + 15$) 85

PLANT: Barton
UNIT: 3
LOAD: _____ MW
% O_2: _____ FUEL: Oil
BTU's BURNED: _____

HEATER BOX SETTING _____
PROBE TIP DIAMETER 1/4
PROBE LENGTH 15
TYPE PITOT TUBE S
PITOT TUBE (C_P) .85
PROBE HEATER TEMP. -
AVERAGE ΔP .4
STACK PRESS. ($P_S = P_{ATM} + P_G$) 30.53
$P_m = P_{ATM}$ 30.38
P_S / P_m 1.00
METER PRESS. ($P_M = P_{ATM} + p_M$) 30.45

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	2	203.25	.44	1.2	1.2	81	81	0				
26	4		.45	1.2	1.2	82	80					
27	6		.41	1.1	1.1	84	80					
28	8		.41	1.1	1.1	85	80					
29	10		.42	1.1	1.1	87	80					
30	12	210.17	.46	1.2	1.2	89	80					
31	2		.39	1.05	1.05	89	81					
32	4		.36	0.97	0.97	89	81					
33	6		.36	0.97	0.97	90	82					
34	8		.37	2.99	0.99	91	82					
35	10		.36	2.97	0.97	93	83					
36	12	216.88	.46	1.2	1.2	94	83					
37	2		.39	1.05	1.05	92	83					
38	4		.36	0.97	0.97	92	83					
39	6		.36	0.97	0.97	94	84					
40	8		.37	0.99	0.99	95	84					
41	10		.36	0.97	0.97	96	84					
42	12	223.65	.50	1.3	1.3	97	85					
43	2		.48	1.3	1.3	96	86					
44	4		.42	1.1	1.1	97	86					
45	6		.37	0.99	0.99	98	87					
46	8		.43	1.1	1.1	98	87					
47	10		.48	1.3	1.3	99	88					
48	12	230.81	.52	1.4	1.4	101	89					
												300
		27.56	$\sqrt{\Delta p}$ = .642	AVG =	.07 "H_2O	AVG	87.67 +					760

837

484

733

999

837
807
60

733
730
3

484
483
1

999
993.5
5.5

TOTAL 69.5

LENGTH 15

Particulate

Hinkle # 3

92.1057
92.0253
.0804

Barker # 3

97.3710
97.3635
.0075

Total .0879 gm

RECORD OF VISUAL DETERMINATION OF OPACITY

LOCATION BARTOW 3
PERMIT NUMBER
DATE 11-14-77
TYPE FACILITY STEAM PLANT
CONTROL DEVICE NONE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

RONALD CAMPBELL, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.

This certificate expires on April 10, 1978

Certification Officer — Bearer's Signature

HOURS OF OBSERVATION
OBSERVER R. CAMPBELL
OBSERVER CERTIFICATION DATE
POINT OF EMISSIONS
HEIGHT OF DISCHARGE POINT 300

	Initial			Final
CLOCK TIME				
OBSERVER LOCATION Distance to Discharge	600 ft			
Direction from Discharge	EAST			
Height of Observation Point	GROUND			
BACKGROUND DESCRIPTION				
WEATHER CONDITIONS Wind Direction	SOUTH			
Wind Speed	0-3 MPH			
Ambient Temperature	75			
SKY CONDITIONS (clear, overcast, % clouds, etc.)	CLEAR			
PLUME DESCRIPTION Color	BROWN			
Distance Visible	1 MILE			
Other Information				

SUMMARY OF AVERAGE OPACITY

Set Number	Time Start--End	Opacity Sum	Opacity Average
1	10:10 - 10:20	300	20

Readings ranged from 20 to 20 % opacity.

The source was/~~was not~~ in compliance with 302 at the time evaluation was made.

NOTES:
1. Minimum of 24 readings to be taken at 15 second intervals.
2. Readings are to be to the nearest 5 % opacity.

OBSERVATION RECORD

Hr.	Min.	SECONDS 0	15	30	45	STEAM PLUME (check if applicable) Attached	Detached	COMMENTS
10:10	0	20	20	20	20			
	1	20	20	20	20			
	2	20	20	20	20			
	3	20	20	20	20			
	4	20	20	20	20			
	5	20	20	20	20			
	6	20	20	20	20			
	7	20	20	20	20			
	8	20	20	20	20			
10:20	9	20	20	20	20			
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Gilbert/Commonwealth engineers and consultants

LABORATORY SERVICES
30 NOBLE STREET, READING, PA 19611

GILBERT ASSOCIATES, INC., P. O. Box 1498, Reading, PA 19603/Tel. 215 775-2600

CERTIFICATE OF ANALYSIS

LABORATORY NO: 25450 RECEIVED: 11/28/77 REPORTED: 12/9/77

CLIENT: Florida Power Corporation, Bartow Plant
St. Petersburg, FL 33733

SAMPLE DESCRIPTION: #6 Fuel Oil
Plant Strainer
Sampled 11/22/77

- - - - - - - - -

ASH	%	0.10
B.t.u. PER POUND		18,213
B.t.u. PER GALLON		148,436
CARBON	%	85.80
CARBON RESIDUE	%	10.66
FIRE POINT	^{o}F	380
FLASH POINT	^{o}F	305
GRAVITY	^{o}API	13.1
HYDROGEN	%	10.92
OXYGEN + NITROGEN	%	0.92
POUNDS PER GALLON		8.150
POUR POINT	^{o}F	+ 60
SODIUM	ppm	60.1
SULFUR	%	2.26
VANADIUM	%	0.003
VISCOSITY	SFS @ 122^{o}F	168.7
WATER (by distillation)	%	0.55

Respectfully submitted,

T. M. Isert, Chief Chemist
Laboratory Services

MAH
cc: D. West
G. W. Marshall
J. B. Clardy
M. S. Adams
B. P. Hunt
J. Alberdi

Florida Power
CORPORATION

D.E.R.
MAR 17 1978
SOUTHWEST DISTRICT
TAMPA

March 13, 1978

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

Subject: Ambient SO_2 Monitoring
Anclote Plant
Bartow Plant
Crystal River Plant
Higgins Plant

Dear Mr. Puchaty:

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

Dennis A. Shantz

D. A. Shantz, Supervisor
Chemical and Environmental Services

DAS/hw 2087-P
Attachment
File: ENVIRON 5-1-2

Florida Power CORPORATION

ENVIRONMENTAL & FUEL OIL

LABORATORY

Tel: 866-5723

REPORT NO.: 16

DATE: 2/8/78

PLANT: Bartow

ANALYSIS: Ambient SO_2 Sampling Program

SAMPLE DESCRIPTIONS:

Refer to Results

LABORATORY RESULTS

Description	Date	SO_2 $\mu g/m^3$	SO_2 ppm	Reasons For Voiding
B-1	11/20/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4	"	MDL		
B-1	11/26/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4		Void		Sample line off
B-1	12/2/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4	"	MDL		
B-1	12/8/77	MDL		
B-2	"	10 ~~0.0004~~ 10.0	0.004	
B-3	"	7 ~~0.003~~ 7.0	0.003	
B-4	"	~~MDL~~		
B-1	12/14/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4	"	MDL		
B-1	12/20/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4	"	MDL		
B-1	12/26/77	MDL		
B-2	"	MDL		
B-3	"	MDL		
B-4	"	MDL		

B. P. Hunt, M.A.
Environmental Chemist

911 855

Florida Power
CORPORATION

August 18, 1977

Mr. Bill Brown
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Dear Mr. Brown:

To confirm our Mr. O'Brien's telephone conversations with you and your secretary please be advised that Bartow Unit #2 was on 100% oil from 0950 August 9, 1977 to 1250 August 11, 1977.

Florida Gas Company had to perform maintenance on their line which caused this out-of-compliance condition.

Very truly yours,

R. E. Parnelle, Jr.
Manager
Environmental Operations

REP/bz

APR 21 1977

D. E. R.
APR 25 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

H. A. Evertz, III, Esquire
Corporate Counsel
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Re: Administrative Order
Docket No.: AO-76-131(a)

Dear Mr. Evertz:

I wish to acknowledge receipt of your March 8, 1977, letter transmitting Florida Power Corporation's Plan for the installation, operation, calibration and maintenance of the opacity monitoring equipment for Crystal River Unit Nos. 1 and 2. The plan as proposed is acceptable and satisfies the requirement of the submittal of a plan as stipulated in Part VII of the above referenced Order. As such, the plan is hereby incorporated into the Order and is enforceable as part of the Order.

The next requirement of Part VII of the Order is the submittal of the award of contracts for purchase of these monitors. The date presented in the March 8 plan is April 29, 1977.

Your cooperation in this matter is appreciated.

Sincerely yours,

Original Signed By
Paul J. Traina
Director
Enforcement Division

cc: Mr. J. W. Landers, Jr.
Mr. Banks B. Vest

Craig

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

January 31, 1978

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

Mr. John Stark
Stauffer Chemical Company
P. O. Box 1204
Tarpon Springs, Florida 33589

Dear Mr. Stark:

Re: SO_2 Ambient Air Standard Violations
Northern Pinellas County

This letter is in reference to the conference of January 30, 1978, among Stauffer Chemical Company, Suncoast Paving Company, Florida Power Corporation and the Department.

Evaluation of currently available data and EPA modeling results indicate at this time the emissions from your facility do not form a major contribution to the referenced violations.

Accordingly this office is advising you the recommendations in our letter of January 26, 1978, to reduce present emission levels is no longer applicable at this time.

The Department is continuing its investigation into the ambient air quality violations in northern Pinellas County, and will advise you of any additional requirements on your part as the need arises.

Your cooperation in this matter has been appreciated and should you have any additional questions feel free to contact this office.

Sincerely,

P. David Puchaty
District Manager
Southwest District

PDP:en

cc: Al Clark
Paul Parks

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

January 31, 1978

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

Mr. William T. Camm
Suncoast Pavers, Inc.
Rt. 2, Box 222
Anclote Road
Tarpon Springs, Florida 33589

Dear Mr. Camm:

Re: SO_2 Ambient Air Standard Violations
Northern Pinellas County

This letter is in reference to the conference of January 30, 1978, among Stauffer Chemical Company, Suncoast Paving Company, Florida Power Corporation and the Department.

Evaluation of currently available data and EPA modeling results indicate at this time the emissions from your facility do not form a major contribution to the referenced violations.

Accordingly this office is advising you the recommendations in our letter of January 26, 1978, to reduce present emission levels is no longer applicable at this time.

The Department is continuing its investigation into the ambient air quality violations in northern Pinellas County, and will advise you of any additional requirements on your part as the need arises.

Your cooperation in this matter has been appreciated and should you have any additional questions feel free to contact this office.

Sincerely,

P. David Puchaty
District Manager
Southwest District

PDP:en

cc: Al Clark
Paul Parks

Craig

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

January 31, 1978

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

Mr. John Stark
Stauffer Chemical Company
P. O. Box 1204
Tarpon Springs, Florida 33589

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Northern Pinellas County

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Sincerely,

P. David Puchaty
District Manager
Southwest District

PDP:en

cc: Al Clark
Paul Parks

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

January 31, 1978

JOSEPH W. LANDERS, JR.
SECRETARY

DAVID PUCHATY
DISTRICT MANAGER

Mr. William T. Camm
Suncoast Pavers, Inc.
Rt. 2, Box 222
Anclote Road
Tarpon Springs, Florida 33589

Dear Mr. Camm:

Re: SO_2 Ambient Air Standard Violations
Northern Pinellas County

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Your cooperation in this matter has been appreciated and should you have any additional questions feel free to contact this office.

Sincerely,

P. David Puchaty
District Manager
Southwest District

PDP:en

cc: Al Clark
Paul Parks

File

Florida Power
CORPORATION

D.E.R.
MAR 17 1978
SOUTHWEST DISTRICT
TAMPA

March 13, 1978

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

Subject: Ambient SO_2 Monitoring
Anclote Plant
Bartow Plant
Crystal River Plant
✓Higgins Plant

Dear Mr. Puchaty:

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

Dennis A. Shantz

D. A. Shantz, Supervisor
Chemical and Environmental Services

DAS/hw 2087-P
Attachment
File: ENVIRON 5-1-2

Florida Power CORPORATION

ENVIRONMENTAL & FUEL OIL

LABORATORY

Tel: 866-5723

REPORT NO.: 21

DATE: 2/8/78

PLANT: Higgins

ANALYSIS: Ambient SO_2 Sampling Program

SAMPLE DESCRIPTIONS:

Refer to Results

LABORATORY RESULTS

Description	Date	SO_2 $\mu g/m^3$	SO_2 ppm	Reasons For Voiding
H-1	11/2/77	MDL		
H-1	11/8/77	MDL		
H-1	11/14/77	MDL		
H-1	11/20/77	Missing		
H-1	11/26/77	MDL		
H-1	12/2/77	MDL		
H-1	12/8/77	MDL		
H-1	12/14/77	MDL		
H-1	12/20/77	MDL		
H-1	12/26/77	MDL		

B. P. Hunt, M.A.
Environmental Chemist

911 B55

Florida Power
CORPORATION

March 31, 1977

Mr. Banks B. Vest, Jr.
Florida Department of Environmental Regulation
9721 Executive Center Drive No., Suite 200
St. Petersburg, Florida 33702

Dear Mr. Vest:

With the advent of Spring it is assumed that the emergency shortage of natural gas is over. The following is a tabulation of dates and times when our Bartow Units #2 and #3 were not in compliance with emission standards of the DER for Unit #2 or the Consent Order for Unit #3 due to a shortage of natural gas.

Unit #2

Jan. 19	0920 hrs	to Jan. 21	1245 hrs
Jan. 28	1050 hrs	to Feb. 2	2115 hrs
Feb. 7	0220 hrs	to Feb. 7	1503 hrs

Bartow #3

Jan. 18	1100 hrs	to Jan. 21	1225 hrs
Jan. 28	1025 hrs	to Jan. 30	1140 hrs
Jan. 31	0115 hrs	to Feb. 1	0100 hrs
Feb. 5	0523 hrs	to Feb. 5	0933 hrs
Mar. 23	0900 hrs	to Mar. 23	1900 hrs

Should these or any of our other units be forced to go out of compliance your will be so notified.

Very truly yours,

Eustice Parnelle

R. E. Parnelle
Manager
Environmental Operations

REP/bz

D. E. R.
APR 1 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Florida Power
CORPORATION

January 24, 1977

D.E.R.
JAN 26 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Banks B. Vest, Jr.
Department of Environmental Regulation
9721 Executive Center Drive North
Suite 200
St. Petersburg, Florida 33742

Re: Non-Compliance with Stipulation for
Consent Order dated June 29, 1976
Bartow Unit #3

Dear Mr. Vest:

Please be advised that the above unit exceeded the interim emission standards as set forth in the above described order during the following period:

1100 January 18, 1977 to
1225 January 21, 1977

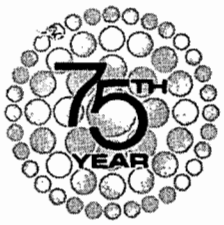
The excursion was caused by the unavailability of natural gas from our supplier because of the emergency situation in the eastern United States resulting from the extreme cold weather. While we consider the cause of this excursion to be a "force majeure" as set forth in paragraph 7. of the order, the compliance dates set forth in paragraph 1. will not be delayed.

Very truly yours,

H. A. Evertz III

H. A. Evertz, III
Corporate Counsel

HAE/pam



Florida Power
CORPORATION

January 17, 1977

Florida Department of Environmental Regulation
9721 Executive Center Drive North
St. Petersburg, FL 33742

SUBJECT: Stipulation for Consent Order
Dated June 24, 1976

Gentlemen:

In regard to the above-cited document, we are hereby transmitting, in accordance with Stipulation 3, the results of "Hi-Vol" sampling conducted adjacent to Bartow Unit 3 during the last two quarters of 1976.

If you have questions concerning this report, please contact the undersigned at (813) 866-4660 or write to the address shown.

Sincerely,

J.B. Clardy
Supervisor, Chemical and
Environmental Services

Enclosure

JBC:hlc 1/14

Florida Power
CORPORATION

ENVIRONMENTAL & FUEL OIL

LABORATORY

Tel: 866-5723

REPORT NO.: 412

DATE: December 31, 1976

PLANT: Bartow

ANALYSIS: Air Particulate

SAMPLE DESCRIPTIONS:

Refer to results.

LABORATORY RESULTS

This is a report of the Quarterly Ambient Air Particulate Concentration.

Plant: Bartow

Location: Weather Tower

Sample: #1

Description	Geo. Mean. $\mu g/m^3$	No. Sampling	No. of Good Samplings	LRV $\mu g/m^3$	HRV $\mu g/m^3$
1st Quarter	-	-	-	-	-
2nd Quarter	-	-	-	-	-
3rd Quarter	36.18	15	14	21.90	57.36
4th Quarter	42.67	16	13	22.67	80.76

* LRV and HRV - Lowest & Highest reported value.

B. P. Hunt, M.A.

D A Sebastiani
T Cole

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30308

DEC 21 1976

NO 6372
RECEIVED
A ____ W ____ SP ____
DEC 22 1976
DER

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. J. W. Landers, Jr., Secretary
Department of Environmental Regulation
2562 Executive Center Circle, East
Montgomery Building
Tallahassee, Florida 32301

Dear Mr. Landers:

Pursuant to Sections 101(a)(3) and 116 of the Clean Air Act, as amended (42 U.S.C. 1857c-8), and in accordance with EPA Enforcement Authority Guidelines (40 FR 14876, April 2, 1975), please be advised that the Environmental Protection Agency hereby defers to the action initiated by your agency to obtain the compliance of Florida Power Corporation Bartow Unit No. 3. EPA acknowledges receipt of adequate documentation to demonstrate that the action taken, with respect to this source, is appropriate, expeditious, and consistent with the proposed enforcement guidelines.

A copy of the letter sent to this source informing them of EPA's deferral to your action and including their compliance schedule is enclosed. EPA will continue to monitor the progress of this source in attaining compliance and, as long as they adhere to their compliance schedule, active EPA involvement is not required. However, please be assured that EPA stands ready to assist your agency in any way to secure the full compliance of this source.

D. E. R.
JAN 7 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Sincerely yours,

Alan Cottle
for Jack E. Ravan
Regional Administrator

RECEIVED
JAN 5 1977

Enclosure

cc: Mr. Terry Cole

RECEIVED
JAN 5 1977
DIVISION OF ENVIRONMENTAL PERMITTING

BUREAU OF ENFORCEMENT
DEC 1976
RECEIVED
BUREAU AQM

TO: Bonha Vest BuD FILE

St Pete

BARTOW #3

DEC 21 1976

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Andrew H. Hines, Jr.
President
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

E.R.
1977
DISTRICT

Dear Mr. Hines:

In our letter dated April 27, 1976, pursuant to Section 113(a)(1) of the Clean Air Act, as amended (42 U.S.C. 1857c-8), you were notified that the Florida Power Corporation Bartow Plant, Unit Nos. 2 and 3 in St. Petersburg, Florida, were found to be in violation of Sections 17-2.04(6)(e)2a and b of the Air Pollution Rules and Regulations of the State of Florida. In addition you were notified that Bartow Unit Nos. 2 and 3 were found in violation of the Federally-approved State compliance schedule which was published in the September 19, 1973, Federal Register at page 26839.

This notice also indicated that the Environmental Protection Agency was prepared to defer further action provided that the Department of Environmental Regulation initiated and completed appropriate action to secure your compliance with all applicable requirements of the Florida Implementation Plan.

Pursuant to Section 101(a)(3) and 116 of the Clean Air Act, as amended (42 U.S.C. 1857C-8), and in accordance with EPA Enforcement Authority Guidelines (40 FR 14876, April 2, 1975), please be advised that the Environmental Protection Agency hereby defers to the action initiated by the Florida Department of Environmental Regulation. By this deferral EPA affirms that it has found the action initiated by the Department of Environmental Regulation to be adequate and appropriate and has determined that further EPA involvement, beyond monitoring State reports on your progress in attaining full compliance, is not required at this time. A copy of the State consent order containing the schedule for Bartow Unit No. 3 you are to follow is attached. EPA has received information documenting that Bartow Unit No. 2 is now in full compliance. EPA reserves the right to initiate action should your facility fail to adhere to this schedule.

If you have any questions concerning this matter, please contact Mr. Paul J. Traina, Director, Enforcement Division at 404/881-2211.

Sincerely yours,

Jack E. Ravan
Regional Administrator

Attachment

cc: Mr. J. W. Landers, Jr. ✓
Mr. Terry Cole

BEFORE THE DEPARTMENT OF
ENVIRONMENTAL REGULATION
STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION, Petitioner, vs. FLORIDA POWER CORPORATION, Respondent.	)	CASE NO.

STIPULATION FOR CONSENT ORDER

THIS STIPULATION is entered by and between FLORIDA POWER CORPORATION and the STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL REGULATION.

WHEREAS, the Environmental Regulation Commission of the Department of Environmental Regulation (formerly the Florida Department of Pollution Control) adopted Section 17-2.04(6)(e)2., Florida Administrative Code (FAC) setting emission limiting standards for existing fossil fuel steam generators. Said standards were adopted in 1972, were subsequently approved by the U. S. Environmental Protection Agency, and became effective July 1, 1975 as the State Implementation Plan (SIP); and,

WHEREAS, notwithstanding diligent efforts by Florida Power Corporation, it has been unable to operate its Bartow Unit 3 in compliance with emission limiting standards for particulates and opacity; and

WHEREAS, Florida Power Corporation has been required to continue operating said Bartow Units 3 in order to provide adequate and reliable electric service to the public; and

WHEREAS, Florida Power Corporation has contracted for the installation of new oil burners which have in other plants demonstrated

improved combustion characteristics which reduce opacity (visible emissions and particulate emissions to an extent which is believed to assure compliance of its Bartow Unit 3 with Florida and federal standards.

NOW, THEREFORE, it is stipulated and agreed as follows:

1. Compliance by Florida Power Corporation with federal and state air emission standards for particulate and opacity (visible emissions) for its existing fossile fuel steam generators described below shall be extended as follows:

COMPLIANCE SCHEDULE FOR BARTOW UNIT 3

Burner Purchase Order Date - December 1975

Start of Construction - March 5, 1977

Completion of Construction - March 31, 1977

Final Compliance - June 30, 1977

INTERIM EMISSION LIMITS

Particulate matter:	0.14 pounds per million BTU heat input - maximum two hour average.
Visible emissions:	40 percent opacity on an average 50 percent opacity shall be permissible for not more than 2 minutes in any hour.

2. On or before June 30, 1977, Florida Power Corporation will be in compliance with all existing Florida emission standards for particulates and opacity (visible emissions) applicable to Bartow Unit 3.

3. Commencing immediately, Florida Power Corporation will conduct "hi-vol" sampling every sixth day for twenty-four hours, adjacent to the unit described in paragraph 1 and provide the results in writing to the Department of Environmental Regulation's St. Petersburg office no

less frequently than quarterly. Upon the completion of the construction of the burner modifications of the unit described in paragraph 1, Florida Power Corporation shall continue such "hi-vol" air sampling adjacent to the units for at least one year after the final compliance date and provide the results of such sampling in writing to the Department of Environmental Regulation's St. Petersburg office no less frequently than each three months, commencing three months after installation of the burners.

4. The Department of Environmental Regulation agrees to waive its right to seek the imposition of civil or criminal fines or penalties against Florida Power Corporation so long as the terms and conditions of this Stipulation are in effect; however, nothing in this Stipulation shall prevent the Department from requesting a court, of appropriate jurisdiction, to utilize its injunctive powers to prevent any violation of any primary or secondary Ambient Air Quality Standard, or to prevent damage to the health or welfare of the people of the state of Florida.

5. It is further agreed by and between the parties that in the event either of Florida Power Corporation's unit which is subject to this agreement is unable to meet the compliance schedule dates set forth in paragraph 1, for any reasons other than those described in paragraphs 7, 8 and 9 hereof, that some damage may occur. Since said damage is too prospective to be exactly determined at this time, it is agreed by and between the parties that the following amounts shall be awarded to the Department of Environmental Regulation and against Florida Power Corporation as liquidated damages each day Florida Power Corporation exceeds the compliance schedule dates for any reasons other than those described in paragraphs 7, 8, 9 and 10, to wit:

a. The sum of $1,000 per day for the first 90 days' violation after said compliance date.

b. The sum of $2,000 per day for the next 60 days.

6. In order to secure the payment of liquidated damages, Florida Power Corporation shall file with the Department of Environmental

Regulation an appropriate bond with good and sufficient surety or other security approved by the Department, in the sum of $210,000. If any payments are made from the bond described in this paragraph, pursuant to paragraph 5, then the Florida Power Corporation agrees that it shall make such additions to the principal amount of the bond, or other security, so that at all times, the total principal amount of the bond or security shall be no less than $180,000 so long as the compliance schedule dates set forth in paragraph 1 have not been complied with for any reasons other than those set forth in paragraphs 7, 8 and 9.

7. Should any event beyond the control of Florida Power Corporation, as described in the "force majeure", occur, Florida Power Corporation may mitigate the liquidated damage set forth herein by acting in the following manner:

a. Florida Power Corporation shall prove the occurrence of the "force majeure" event and the time delay incurred thereby to the Secretary of the Department of Environmental Regulation. The proof of the occurrence shall be made in writing to the Secretary.

b. Florida Power Corporation, upon seeking a determination of the existence of a "force majeure", agrees to pay the Department of Environmental Regulation out-of-pocket expenses for telephone conferences, travel and lodging costs necessary for proving or disproving the claim thereof, not to exceed the sum of $500 for each such occurrence for which a determination is sought.

c. Should the Secretary of the Department of Environmental Regulation find that a "force majeure" event has occurred, he shall also find the reasonable number of days thereof and extend the compliance date set forth in paragraph 1 by an equal number of days.

d. If the Secretary of the Department should find the existence of a "force Majeure" event, Florida Power Corporation agrees to pay the sum of $100 per day, for each day it fails to operate in compliance with the Interim Emission Limits set forth in paragraph 1 above for the amount of days the compliance schedule is increased

past the original agrees upon date as the result of said event. The cumulative total payments under this paragraph shall not exceed $15,000.

e. A "force majeure" is defined for the purposes of this agreement to include the following:

> Acts of God or the public enemy, expropriation or confiscation of facilities; compliance with any order of any governmental authority; shortage or unavailability of materials, equipment, labor or technical personnel outside the control of Florida Power Corporation; unscheduled outages of other equipment within the system which would necessitate the delay in taking units scheduled for burner modification off line; acts of war, rebellion, insurrection or sabotage, or damage resulting therefrom; fires, floods, explosions, washouts, hurricane damage; rules and regulations with regard to transportation by common carriers; accidents; epidemics or breakdowns; riots, strikes, slowdowns and walkouts; blackouts or other industrial disturbances whether direct or indirect; or any cause, whether or not the same class or kind as those specified specifically named above, not within the reasonable control of the company including a decrease in the forecast system reserve margin to a level which would jeopardize the system's reliability.

8. Florida Power Corporation reserves the right to cease operation of its unit discussed in paragraph 1 at any time and the Department agrees that no liquidated or other damages or penalties shall accrue or be owing during any period said unit is not in operation.

9. Upon receipt of notice from Florida Power Corporation that the unit described in paragraph 1 has reached compliance with all existing state emission standards applicable to existing fossil fuel steam generators related to particulate and opacity (visible emissions) the remainder of the bond or other security posted pursuant to this Stipulation, shall be returned to Florida Power Corporation and all obligations arising under this agreement shall forthwith cease.

10. This Stipulation is being entered into by the Department pursuant to the authority granted to it by §403.061 and §403.121, Florida Statutes.

11. Any and all monies paid in accordance with the provision of this agreement shall be paid into the Florida Department of Environmental Regulation Recovery Trust Fund.

12. This Stipulation will authorize Florida Power Corporation to continue operation of the unit described in paragraph 1 so long as it is not in violation of any of the terms or conditions set forth herein.

DATED this 29th day of June, 1976.

FLORIDA POWER CORPORATION

By Richard E. Raymond
Richard E. Raymond
Senior Vice President

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

By

ENVIRONMENTAL PROTECTION AGENCY CONCURRENCE

Region IV of the U. S. Environmental Protection Agency hereby concurs with the aforesaid Stipulation for Consent Order entered into by and between the Department of Environmental Regulation of the State of Florida and Florida Power Corporation.

Dated _____, 1976

REGION IV, U. S. ENVIRONMENTAL PROTECTION AGENCY

By _____

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

TO: Terry Cole

THROUGH: Banks B. Vest, Jr.

FROM: William H. Brown, Southwest District

DATE: September 23, 1976

Florida Power Bartow Units 2 and 3

Eustice Parnelle claims he can keep Unit #2 in compliance within state limits when he uses a combination of gas and oil. He intends to use this combination.

Unit #2 will be shut down for six weeks starting October 17 or 18, 1976, for complete overhaul and reconditioning. Start up usually takes between two and six weeks to iron out the bugs.

Dr. Nayak, on September 17, 1976, agreed that testing could be delayed until sometime after the first of the year.

Unit #3 does not meet emission standards and will not until new burners are installed.

A consent order from Florida Power Corporation to Tallahassee has been sent; we understand you have forwarded it to EPA.

We have applications for operating permits for these two units. Please advise what action, if any, you wish us to take.

WHB/smw

B.4
FILE

FLA. POWER
BARTOW #3

September 15, 1976

D. E. R.
SEP 17 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Paul J. Traina, Director
Enforcement Division
Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Dear Mr. Traina:

In response to your letter of August 30, 1976, regarding the consent agreement between this Department and Florida Power Corporation regarding Bartow Unit #3, please be advised that we do not have the detailed information that you have requested.

This Department has expended a considerable amount of time and effort in order to confirm the appropriateness of each element of the compliance plan. This effort has resulted in what we feel is a most expeditious compliance schedule. We have not however attempted to document those items on which Florida Power Corporation based their imput; e.g., contracts, purchase orders, historical summary, contractors involved, delivery schedules, etc.

In order to respond to your letter, we are requesting that Florida Power Corporation submit this information directly to you.

Thank you for your continued cooperation.

Sincerely,

Terry Cole
Enforcement Administrator

TC:bbc

cc: Mr. Banks Vest
Mr. R. E. Parnelle

September 15, 1976

Mr. R. E. Parnelle, Jr., Manager
Environmental Operations
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Parnelle:

We have been requested by EPA to provide certain information pertaining to Bartow Unit No. 3 in order for them to evaluate the Stipulation for Consent Agreement between DER and Florida Power Corporation. As the information requested is not available in this Department, it is requested that you forward copies directly to EPA. A copy of Mr. Traina's letter is attached for your information.

Please send a copy of the cover letter only transmitting your response to EPA. Thank you for your cooperation in this matter.

Sincerely,

Terry Cole
Enforcement Administrator

TC:bbc
attachment

cc: Mr. Banks Vest
Mr. Paul Traina
Mr. H. A. Evertz

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

AUG 30 1976

Mr. Terry Cole
Enforcement Administrator
Florida Department of Environmental Regulation
2562 Executive Center Circle, East
Montgomery Building
Tallahassee, Florida 32301

Dear Mr. Cole:

This will acknowledge receipt of Mr. Nick Mastro's July 29, 1976, letter transmitting a copy of the Stipulation for Consent Agreement between the DER and Florida Power Corporation. This documentation has been evaluated to determine consistency with the proposed enforcement authority guidelines of 40 CFR Part 65.

In order to allow EPA to fully evaluate the action taken by the State so that final concurrence can be granted, we will need the following additional information:

1. A description of the steps which will be taken by Florida Power Corporation to bring Bartow Unit No. 3 into compliance. This should include identification of who will be supplying the equipment and performing the modifications.

2. A brief history of the problem.

3. Documentation of the need for the time extension. This should include delivery times of major lead-time items and construction times. A pert-chart is desirable.

4. Copies of contracts and/or purchase orders awarded to date for major items.

5. Documentation justifying the interim emission limits.

The information requested above should be submitted as soon as possible and certainly no later than September 15, 1976.

Should you have any questions regarding this matter, please contact Mr. Richard Schutt at 404/526-5291.

Sincerely yours,

Paul J. Traina
Director
Enforcement Division

cc: Mr. Nick Mastro

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

DISTRICT ROUTING SLIP

TO: Bauks Vest. DATE: 10-27-76.

.... N.W. DISTRICT – GULF BREEZE

.... N.W. District Branch Office – PANAMA CITY

.... N.W. District Branch Office – TALLAHASSEE

✓... S.W. DISTRICT – ST. PETERSBURG

.... CENTRAL & SOUTHERN DISTRICT – WEST PALM BEACH

.... Central Subdistrict – WINTER HAVEN

.... Central Subdistrict Branch Office – FORT PIERCE

.... Central & Southern District Branch Office – MARATHON

.... Southwest Subdistrict – FORT MYERS

.... S.W. Subdistrict Branch Office – PUNTA GORDA

.... ST. JOHNS RIVER DISTRICT – ORLANDO

.... St. Johns River Subdistrict – JACKSONVILLE

.... St. Johns River Branch Office – GAINESVILLE

COMMENTS: (The attached is for your information.)
The information attached still does not explain the technology employed by the English burners. It did work for 46 MW. unit. Does that mean similar approach will work for 260 MW unit? It did not work for Bartow unit # 2! Is Bartow # 3 a square ~~for~~ unit? I hope it works. I am not convinced that the proposed modifications will do the job. The new burners do save fuel.
Nayak.

FROM: S. K Nayak. TEL.: 277-1980.

BUD FILE

October 25, 1976

Mr. Paul J. Traina
Director, Enforcement Division
Environmental Protection Agency
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

Dear Mr. Traina:

In response to your letter of August 30, 1976, to Mr. Terry Cole (Florida DER), and Mr. Cole's letter to Florida Power Corporation dated September 15, 1976, concerning Stipulation for Consent Agreement for Bartow Unit #3, the following information is submitted.

Our attempt to bring our Combustion Engineering (CE) corner fired boilers into compliance with the Florida particulate and visible emission standards began with our Avon Park Unit #2 (CE boiler, 46 MW). CE proposed a modification to the existing burners in this unit in August, 1973, and the modification was purchased and installed in October, 1973. The stack test on emissions from this boiler was performed and initially found to be above the particulate standard. After replacing a few deteriorated diffusers and increasing excess air slightly, it met the applicable Florida standards. Based upon this experience, Florida Power installed the same burner modification on Bartow Unit #2, (CE boiler, 127 MW). This was accomplished in March, 1975. Unfortunately this resulted in an extremely "flat flame" which impinged on the furnace walls. Since damage would occur if this condition continued, the modification was removed and the burners returned to the original configuration.

The reason for the difference in performance from Avon Park Unit #2 to Bartow #2 is probably due to the shape of the furnaces and windbox. Avon Park Unit #2 is a square boiler while Bartow Unit #2 is a rectangular boiler.

Almost concurrently with the burner modification on Avon Park Unit #2, Florida Power purchased new British designed burners and installed them in our Higgins Unit #3 (CE boiler, 46 MW). Subsequent stack tests indicated

that the new design burners would meet the Florida particulate and visible emission standards. The reason for trying burner modification as well as new design burners was cost. The Company was in a severely critical financial crisis at that time because of the economic recession and the OPEC oil embargo. New burners of British design are much more expensive than the modification of existing burners. Even though the cost was more, the decision was made to install new design burners on Bartow Unit #3 (CE boiler, 239 MW).

Negotiations with International Combustion Division of Clarke Chapman, Ltd., Derby, England, for new design burners resulted in a contract being signed December, 1975, with delivery scheduled for November, 1976. This scheduled delivery has slipped and delivery is now expected in May, 1977, with installation to begin June, 1977. (See attached schedule).

Until the new burners are installed, Florida Power can meet the interim emission standards which we have heretofore proposed. This will be attained by burning a combination of gas and oil in Bartow Unit #3. Our existing natural gas contracts allow Florida Power to allocate gas to Bartow Unit #3 sufficient to generate an equivalent 40 MW of electricity. Stack tests have indicated that the particulate and visible emissions at this oil to gas ratio of 180 MW to 40 MW will result in Bartow Unit #3 meeting the interim emission standards set forth in the proposed Consent Order. The attached graph indicates the oil to gas ratio that is being burned in Unit #3 to assure compliance with the interim emission standards at all load conditions.

If I can furnish you with additional information, please advise me.

Very truly yours,

H. A. Evertz III

H. A. Evertz, III
Corporate Counsel

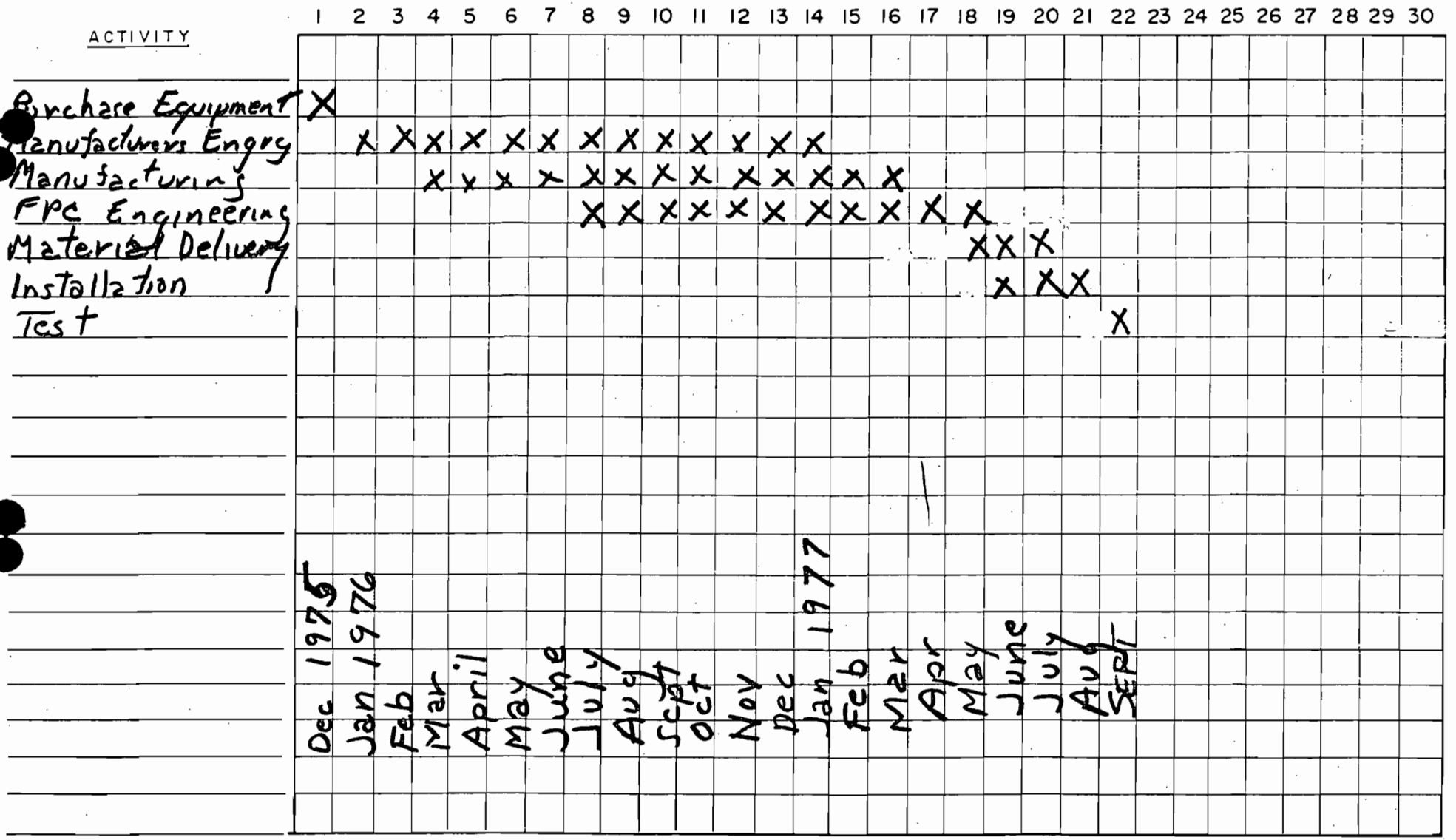
HAE/mrl
Enc.

cc: Dr. S. K. Nayak, DER
Messrs. Richard Schutt
Terry Cole ✓

PROJECT SCHEDULE

REI NO. _____

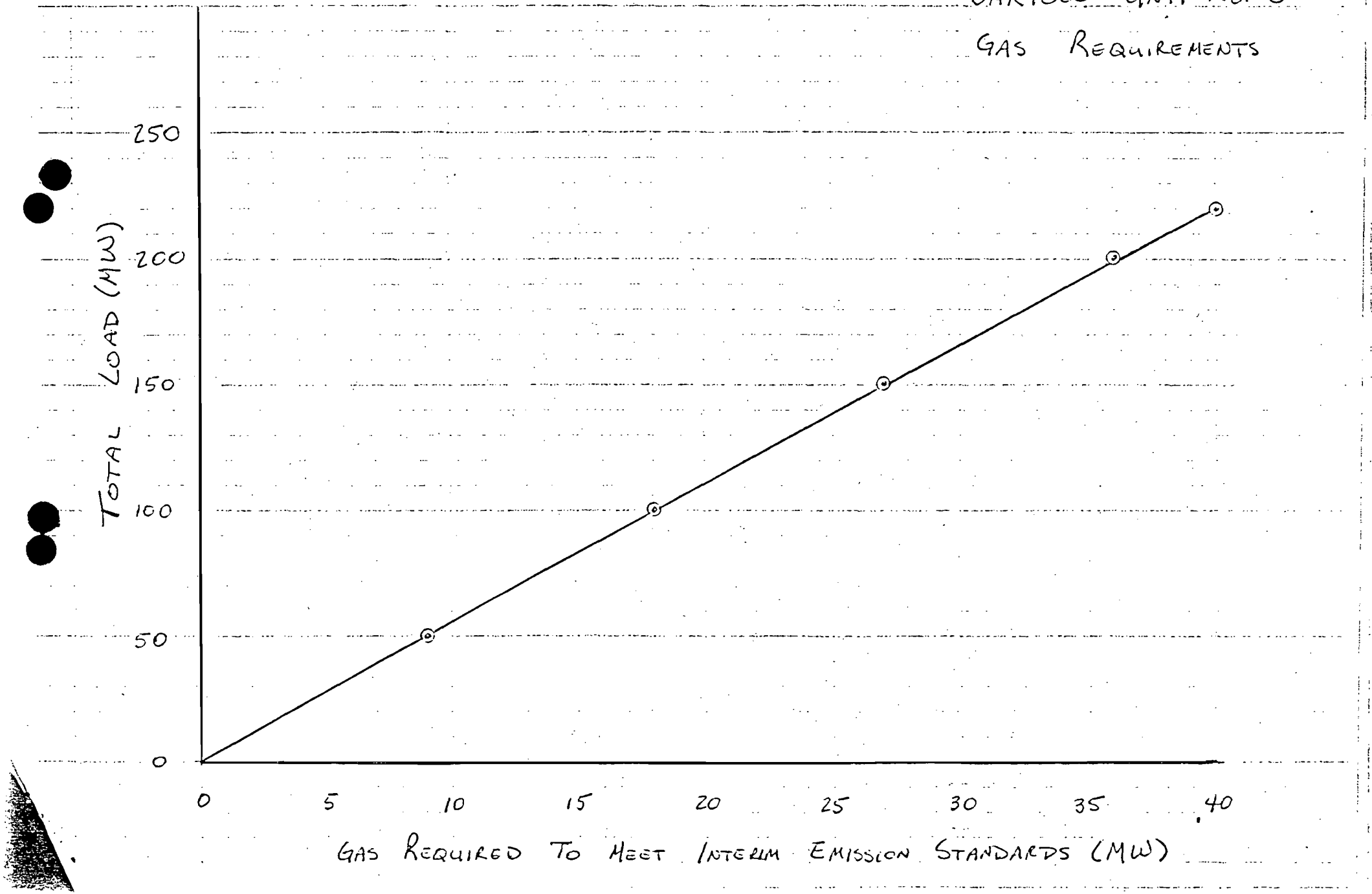
PROJECT IDENTIFICATION Bartow 3 Burner Modification



PREPARED BY _____

DATE _____

BARTOW UNIT NO. 3
GAS REQUIREMENTS



MEMO FROM

BUD STEELMAN

Bartow #3

Gas Curtailment

Gas Taken Off 11⁰⁰A 1-19-77

Until 12⁴⁵A 1-21-77

8-11-76 2

Bartow #3 consent order DER ok'd by DER - to EPA.

2.75 SO_2 .14 Part 40-50 opacity

100 oil Noon to 3 PM to 15 Sept.

unable to run Avon Pk & Higgins

Indian River 3 to be out 4 weeks

Dr. Niack

Time & Reason not.

WH

631710

Florida Power
CORPORATION

March 15, 1977

Mr. Howard Zeller
Deputy Director of Enforcement
Environmental Protection Agency (EPA)
Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Re: Paul L. Bartow Plant
NPDES Permit No. FL0000132
Request for Adjudicatory Hearing

Dear Mr. Zeller:

This letter is in response to discussions in your office on March 7, 1977 regarding the above NPDES permit. As a possible alternate procedure for resolving issues raised in the above request for adjudicatory hearing, we will consider requesting that EPA, in a Section 316(a) proceeding, establish once-through cooling as a lawful alternate effluent limitation during the remaining life of the plant. We recognize that such a variance must be confined to the existing discharge from the three units.

We are available to discuss with you the scope and extent of any such Section 316(a) proceeding. Should this procedure become viable, then we would formally request a Section 316(a) variance in lieu of prosecuting the pending request for adjudicatory hearing.

Very truly yours,

H. A. Evertz III

H. A. Evertz, III
Assistant Counsel

HAE:ncb

cc: Joseph W. Landers, FDER
John Jackson, FDER
Allan J. Topol, Esq.

Florida Power
CORPORATION

Copies made for
& sent to.
T. P. Subramanian
H. Kerns
D. Williams W 2/25/77.

February 17, 1977

D.E.R.
FEB 21 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Banks Vest, District Manager
Florida Department of Environmental Regulation
9721 Executive Center Dr. No.
P.O. Box 20350
St. Petersburg, FL 33742

Re: SO_2 Ambient Monitoring System

Dear Mr. Vest:

Please be advised that the first SO_2 ambient monitor will be delivered to Florida Power Corporation by February 28, 1977, four more will be delivered by mid-March with the remainder being delivered by the end of March. The first installation will be at our Bartow Plant near St. Petersburg, the second at our Crystal River Plant, with the others to follow. You will be notified of the exact installation dates as we gain experience in time required to install the instruments. As you know we are installing bubblers which will be temperature controlled.

Should you have any questions please telephone me at (813) 866-4544.

Very truly yours,

Eustice Parnelle

R. E. Parnelle
Manager
Environmental Operations

REP/bz

Florida Power
CORPORATION

February 17, 1977

D.E.R.
FEB 21 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Banks Vest, District Manager
Florida Department of Environmental Regulation
9721 Executive Center Dr. No.
P.O. Box 20350
St. Petersburg, FL 33742

Re: SO_2 Ambient Monitoring System

Dear Mr. Vest:

Please be advised that the first SO_2 ambient monitor will be delivered to Florida Power Corporation by February 28, 1977, four more will be delivered by mid-March with the remainder being delivered by the end of March. The first installation will be at our Bartow Plant near St. Petersburg, the second at our Crystal River Plant, with the others to follow. You will be notified of the exact installation dates as we gain experience in time required to install the instruments. As you know we are installing bubblers which will be temperature controlled.

Should you have any questions please telephone me at (813) 866-4544.

Very truly yours,

Eustice Parnelle

R. E. Parnelle
Manager
Environmental Operations

REP/bz

Florida Power
CORPORATION

June 6, 1977

D. E. R.
JUN 7 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Bill Brown
Florida Department of Environmental
Regulation
7601 Highway 301 North
Tampa, Florida 33610

Dear Mr. Brown:

Attached is a copy of the letter sent to Secretary Landers reflecting the revised compliance dates for Bartow Unit #3. These are the dates that were agreed to by you and me at our meeting on June 1, 1977.

Should there be any questions please let me know.

Very truly yours,

Eustice Parnelle

R. E. Parnelle
Manager
Environmental Operations

REP/bz
Attachment

bcc: Messrs. A. H. Hines, Jr.
R. E. Raymond
B. L. Griffin
J. T. Rodgers
W. S. O'Brien
W. P. Stewart
R. E. Parnelle, Jr. ✓

June 3, 1977

D. E. R.
JUN 7 1977
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Joseph W. Landers, Jr., Secretary
Department of Environmental Regulation
Montgomery Building
2562 Executive Center Circle East
Tallahassee, Florida 32301

Re: Second Request for Amendment of Stipulation for Consent Order dated June 29, 1976
Bartow Unit #3

Dear Mr. Landers:

This letter is to advise you that, for reasons beyond its control, Florida Power Corporation is not able to meet the Compliance Schedule contained in Paragraph 1 of the above Order as amended pursuant to my request of March 9, 1977. Clarke-Chapman, Ltd., the manufacturer of the new burner for Bartow Unit #3, has experienced various difficulties in designing and fabricating the equipment and control systems. By Telex communication on June 1st, they have advised us that the logic panel with modules and inserts are scheduled for shipment June 8th and the ignitors on June 2nd. Because of this and pursuant to discussions with your staff by Mr. R. E. Parnelle, we are requesting that the Compliance Schedule in Paragraph 1 be further modified and amended as follows:

COMPLIANCE SCHEDULE FOR BARTOW UNIT 3

Burner Purchase Date	December 1975
Start of Construction	July 1, 1977
Completion of Construction	September 30, 1977
Final Compliance	December 31, 1977

Also, Paragraph 2 should be amended to reflect a final compliance date of December 31, 1977.

Very truly yours,

/S/

H. A. Evertz III
Corporate Counsel

HAE:mrl

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

TO: Terry Cole

FROM: P. D. Puchaty

DATE: December 8, 1976

SUBJECT: Florida Power Corp. Fish Kill
Oldsmar Plant, Pinellas County

Attached is a fish kill report with assessment of costs (fish table and expenses). No district contact concerning the assessed cost has been made. Please handle in your usual expeditous manner.

cc: Bud Steelman
Don Moores

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

TO. Terry Cole

THRU P. David Puchaty

FROM: Donald D. Moores

DATE: November 24, 1976

SUBJECT: Fish Kill, Florida Power Corp., Oldsmar Plant
Pinellas County

Attached is a list of fishes which I identified on November 22, 1976, at the Oldsmar Florida Power Corp. Plant. They had been collected by plant personnel and were represented to me as having been killed as a result of a mishap while chlorinating cooling water.

Also included are costs of investigation.

COMMON NAME	SCIENTIFIC NAME	NUMBER	VALUE EACH	TOTAL VALUE
Jack Crevalle	Caranx hippos	2	$3.00	$ 6.00
Lookdown	Selene vomer	1	3.00	3.00
Mojarra	Gerreidae (Diapterus plumieri)	7	1.00	7.00
Pin fish	Lagodon rhomboides	2	.25	.50
Sheepshead	Archosargus probatocephalus	16	5.00	80.00
Silver perch	Bairdiella chrysura	858	.25	214.50
Spadefish	Chaetodipterus faber	44	3.00	132.00
Filefish	Balistidae	1	1.00	1.00
Silver trout	Cynoscion nothus	20	3.00	60.00
Spotted trout	Cynosion nebulosus	2	7.00	14.00
Others not specified:				
Sea robin	Prionotus spp.	2	.10	.20
Toadfish	Opsanus beta	1	.10	.10
Puffers	Sphaeroides spp.	5	.10	.50
Hogchoker	Trinectes maculatus	4	.10	.40
Tongue sole	Symphurus plagiusa	1	.10	.10
Bumper	Chloroscombrus chrysurus	8	.10	.80
Carolina blenny	Hypsoblennius hentz	2	.10	.20
Florida blenny	Chasmodes saburrae	2	.10	.20
	TOTAL	978		$520.50

46 miles travel at 14¢/mile	6.44
Administrative/investigation: 3 hours at $5.34/hour	16.02
Clerical: 1 hour at $3.56/hour	3.56
GRAND TOTAL	$546.52

b. FISH KILL APPRAISAL FORM

INVESTIGATOR:

Name: Donald D. Moores

Title: Pollution Control Spec. II

DATE OF INVESTIGATION:

COMPLAINANT:

Name: Eustis Parnell

Address: Florida Power Corp.

Telephone: 866-4544

First Observation:

Date: Sunday, November 21, 1976

Time: 4:00 P.M.

Initial Contact:

Date: November 22, 1976

Time:

CONDITION OF FISH:

Bloated:

Bulging:

Distressed: Dead, well preserved due to low temperature.

Color of Water: Normal.

DATE(S) OF KILL:

Beginning: Sunday, November 21, 1976

Ending: Sunday, November 21, 1976

LOCATION OF KILL:

Water Body Affected: Safety Harbor (Tampa Bay)

County: Pinellas

Nearest Town: Oldsmar

Extent of Kill (square miles or acres): (intake canal) 20 x 70

Location of kill in lake or stream: (intake canal)

Type of Water: Fresh ___ Salt ___ Estuary X

OBSERVATIONS:

Weather conditions at time of kill? cool, drizzly

Previous few days? same

Water level? High ___ Low X Normal ___

Size of water body affected?

Algal Bloom? None X Slight ___ Moderate ___ Heavy ___

Evidence of dead aquatic vegetation? Yes ___ No X
(a lot of red algae - Hypnea and Gracilaria - had been collected with the fish. Was all still alive.)

WATER CHEMISTRY (Site of Kill):

Depth D. O. (Field) ___ D. O. (Lab) ___ pH ___ Turbidity ___

CO_2 ___

Water Temp. ___ Air Temp. ___ Secchi Desk ___

Water Samples (attach):

Summary of Results:

WATER CHEMISTRY (Background-Unaffected Area):

Depth D. O. (Field) ___ D. O. (Lab) ___ pH ___ Turbidity ___

CO_2 ___

Water Temp. ___ Air Temp. ___ Secchi Desk ___

Water Samples (attach):

Summary of Results:

POLLUTION SOURCES:

Type: Hypochlorite

Name of Source: Chlorination of cooling water

Owner and/or Operator's Name:

Phone: 866-4544 Address: Florida Power Corp., Oldsmar

Was the Department contacted regarding the discharge?

Yes X No ___ If so, Date: 11-22 Time: morning

FISH:

General Appearance:

Normal _____ Swimming upside down or on side ____

Sluggish _____ Spiraling or Corkscrewing ____ Nervous

and Scary ____ Floating Listlessly ____ Lying on

Bottoms _____

Kinds of Fish Killed: See attached list.

Game Fish

Rough Fish

Estimated total number of fish killed? 978

Other animals killed? 1 squid, 1 jellyfish, 1 blue crab

OTHER WITNESSES:

Name: Telephone:

Address:

Name: Telephone:

Address:

OTHER COMMENTS, FACTS OR INFORMATION: (Personal or from conversations with witnesses - attach additional sheets if necessary).

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Bowles West. St. Pete. Office.	INITIAL	DATE
2.	INITIAL	DATE
3.	INITIAL	DATE
4.	INITIAL	DATE

REMARKS:

Attached request was discussed with Mr. Steadman on 12-23-1976. This memo is intended to satisfy the procedural requirements.

S. Nayak

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- NOT PROCESSED
- INITIAL & RETURN

D.E.R.
DEC 28
SOUTH WEST DISTRICT
ST. PETERSBURG

FROM: S. K. Nayak

DATE 12-23-1976.

PHONE 277-1980.

R

DISTRICT

with power
nt investigation

investigation to
Public Service
which Mr. Jenkins
ject environmental
ng to major power
controlling the

gation by con-
relations to
s and Ft. Everglade
PC system were
confined to the
ing the month of

Please compile the pertinent information from our records in the district office and also from the local program offices if applicable. Also acquire copies of the documents related to continuous monitoring of visible emissions from the power plants within your district for the month of October 1976 and prepare a report as complete as possible from the technical standpoint. In order to resolve this problem expeditiously, a second joint meeting is being scheduled soon. As such, a response within the next two weeks is appreciated.

I have discussed the above request with Terry Cole and he has agreed to it.

MEMORANDUM

TO: Banks Vest
Phil Edwards
Warren Strahm

FROM: S. K. Nayak

DATE: December 27, 1976

SUBJECT: Visible emission problems associated with power plants of major power companies, joint investigation by FDER and PSC.

Following our efforts to institute joint investigation to resolve problems common to this department and Public Service Commission, we had our first meeting today in which Mr. Jenkins and Mr. Johnson of PSC participated. The subject environmental problems associated with power plants belonging to major power companies in relation to different parameters controlling the entire system were discussed at great length.

It was decided to institute joint investigation by considering a few typical cases and establish correlations to identify the cause of the problem. Fort Myers and Pt. Everglade plants from FP&L system and Bartow plants of FPC system were selected for this investigation which will be confined to the visible emission problems experienced only during the month of October 1976.

Please compile the pertinent information from our records in the district office and also from the local program offices if applicable. Also acquire copies of the documents related to continuous monitoring of visible emissions from the power plants within your district for the month of October 1976 and prepare a report as complete as possible from the technical standpoint. In order to resolve this problem expeditiously, a second joint meeting is being scheduled soon. As such, a response within the next two weeks is appreciated. Eustice Parnell-12-29-76 No recorders on Bartow stacks. Late-Three are will supply

I have discussed the above request with Terry Cole and he has agreed to it.

CS 4/20/76

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING
TALLAHASSEE, FLORIDA 32301

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

April 15, 1976

D. E. R.

APR 16 1976

SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Wade Hopping
Post Office Box 5617
Tallahassee, Florida 32301

Dear Wade:

We have received comments from the Environmental Protection Agency regarding the agreement between the Department of Environmental Regulation and Florida Power and Light Company. They have pointed out that interim emission limits are required in an agreement extending the compliance date for meeting the applicable emission limitations. It will, therefore, be necessary to amend our agreement to include interim limits. The department feels the following relaxed emission limits to be reasonable during the period:

Particulate matter:	As shown on the attached chart supplied by Florida Power & Light.
Visible emissions:	30 percent opacity on an average, 40 percent opacity shall be permissible for not more than two minutes in any hour.

Emission limits suggested by Mr. Buzz Barrow (0.15 lb/MBTU for particulates and 50 percent opacity) are not acceptable since the documents you have supplied to this department on December 4, 1976, show that the units are able to perform better.

If you have any questions or need clarification on this subject, please feel free to contact me. Thank you.

Sincerely,

Terry Cole
Enforcement Administrator

TC:ac
attachment
cc: Mr. Samuel Tucker
Mr. Dave Gluckman
Mr. Dave Puchaty
Mr. Paul Traina

Ground level ambient standards for SO_2 and particulate matter will be met at all times. Changing to 2½% sulfur fuel is expected to have the following effect upon unit emissions:

UNIT		* Gross Summer Continuous Rating, MW	Capacity Factor in 1974	***Average Percent Gas Burned in 1974	Measured Particulate Emission with 100% oil @ 1%S, #/mB	Calculated Particulate Emissions with 100% oil @ 2½% S, #/mB	**Using [illegible] % Gas Needed to meet 0.1 #/mB Particulate
Port Everglades	#1	214	59.8	38	0.065	0.105	3
	2	214	55.7	38	0.072	0.112	8
	3	385	69.5	38	0.082	0.123	16
	4	385	55.8	38	0.10	0.14	29
	3	285	54.8	42	0.073	0.113	9
	4	285	59.7	42	0.073	0.113	9
Port Canaveral	1	385	62.9	37	0.099	0.14	28
	2	380	55.6	37	0.080	0.121	15
Sanford	3	143	53.1	19	0.06	0.10	0
	4	385	37.3	0	0.094	0.136	NA
	5	385	46.8	0	0.07	0.11	NA
Turkey Point	1	385	76.7	31	0.093	0.135	24
	2	385	74.7	31	0.090	0.131	21
Fort Myers	1	143	35.6	0	0.066	0.106	NA
	2	385	55.2	0	0.08	0.121	NA

No change is expected at the remaining units. Where lower stack heights, relative to the size of new boilers, show the possibility of meteorological downwash - low sulfur oil fuel will be maintained.

Summer Rating, as this is period of maximum load.
Calculated figures.
* Data only available by total plant.

mB = Pounds per million BTU heat input.

Mr. Banks Vest
St Pete
air Pinellas
file

D.E.R.
DEC 4 1975
SOUTH WEST DISTRICT
ST. PETERSBURG

TO: Mr. Dan Farley

FROM: Terry Cole and J. P. Subramani

DATE: December 2, 1975

SUBJECT: Violations of Air Compliance Schedules by Florida Power Corporation

As you know, we have been working with Florida Power Corporation for a period of four months regarding certain units which are in violation of their air compliance schedules and emission limiting regulations of the department for particulates. We worked with them in good faith with the understanding that they had a commitment to bringing these units into compliance as quickly as was feasible from an engineering standpoint.

At a meeting two weeks ago Florida Power Corporation indicated that it would not meet the limits for several years and planned to do nothing until July of 1977, when the SO_2 standards would be finalized. This is an unreasonable period of time for the company to request. We see no alternative at this time but for the department to take legal action in court for mandatory injunction to force them to make the modifications necessary to meet the standards in the shortest time possible. We recommend that the proposed compliance schedule which they initially submitted be used as the compliance schedule for each of the units in question. These units are Anclote No. 1, Bartow No. 2 and Bartow No. 3. If you have any questions on this, we will be glad to brief you.

TC:JPS/ml

cc: Mr. John Bottcher
Mr. Banks Vest

File FPL General

Florida Power
CORPORATION

March 24, 1976

D. E. R.
MAR 30 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. B. B. Vest
921 Executive Center Drive, North
Suite 200
St. Petersburg, Florida 33742

Dear Mr. Vest:

In accordance with the below cited permits, Florida Power Corporation submits the following information for 1975:

Bayboro Peakers
A052-2569, A052-2574-2576

1. Annual Amount of Fuel Utilized

P-1	No. 2	Fuel	Oil	52453	bbl
P-2	"	"	"	"	"
P-3	"	"	"	"	"
P-4	"	"	"	"	"

2. Annual Emissions

	Particulate
P-1	6.03 Tons
P-2	" "
P-3	" "
P-4	" "

	SO_2
P-1	30.2 Tons
P-2	" "
P-3	" "
P-4	" "

3. There are no changes in the information contained in the permit application.

Bartow Steam Plant
A052-2037 A052-2039

1. Annual Amount of Fuel Utilized
   Unit No. 1 - Bunker C 842100 bbl
   Unit No. 2 - Bunker C 842100 bbl
   - Natural Gas 1970696 MCF
   Unit No. 3 - Bunker C 1684042 bbl
   Natural Gas 3941392 MCF

2. Annual Emissions
   Particulate
   Unit No. 1 - 232 Tons
   Unit No. 2 - 528 Tons
   Unit No. 3 - 1055 Tons

   SO_2
   Unit No. 1 - 6909 Tons
   Unit No. 2 - 6909 Tons
   Unit No. 3 -13819 Tons

3. There are no changes in the information contained in the permit application.

Bartow Peakers

1. Annual Amount of Fuel Utilized
   P-1 No. 2 Oil 7570 bbl
   P-2 No. 2 Oil 40689 bbl
   P-3 No. 2 Oil 47580 bbl
   P-4 No. 2 Oil 0 bbl

2. Annual Emissions
   Particulate
   P-1 0.87 Tons
   P-2 4.7 Tons
   P-3 5.5 Tons
   P-4 0 Tons

   SO_2
   P-1 4.37 Tons
   P-2 23.5 Tons
   P-3 27.5 Tons
   P-4 0 Tons

3. There are no changes in the information contained in the permit application.

Crystal River Steam Plant
A09-376, A09-377

1. Annual Amount of Fuel Utilized
   Unit No. 1 - Bunker C 3567693 bbl
   Unit No. 2 - Bunker C 4459617 bbl

2. Annual Emissions
   Particulate
   Unit No. 1 - 1341 Tons
   Unit No. 2 - 1677 Tons

   SO_2
   Unit No. 1 - 28060 Tons
   Unit No. 2 - 35075 Tons

3. There are no changes in the information contained in the permit application.

Higgins Steam Plant
A052-2040 A052-2042

1. Annual Amount of Fuel Utilized
   Unit No. 1 - Bunker C 183739 bbl
   Natural Gas 1862124 MCF
   Unit No. 2 - Bunker C 183739 bbl
   Natural Gas 1862124 MCF
   Unit No. 3 - Bunker C 183739

2. Annual Emissions
   Particulate
   Unit No. 1 - 52 Tons
   Unit No. 2 - 40 Tons
   Unit No. 3 - 49 Tons

   SO_2
   Unit No. 1 - 1429 Tons
   Unit No. 2 - 1429 Tons
   Unit No. 3 - 1429 Tons

3. There are no changes in the information contained in the permit application.

Higgins Peakers
A052-3120, 3118, 3119, 2036

1. Annual Amount of Fuel Utilized

P-1	No. 2 Fuel Oil	230 bbl
	Natural Gas	71098 MCF
P-2	No. 2 Fuel Oil	230 bbl
	Natural Gas	71098 MCF
P-3	No. 2 Fuel Oil	230 bbl
	Natural Gas	71098 MCF
P-4	No. 2 Fuel Oil	230 bbl
	Natural Gas	71098 MCF

2. Annual Emissions

Particulate
P-1 - 0.03 Tons
P-2 - 0.03 Tons
P-3 - 0.03 Tons
P-4 - 0.03 Tons

SO_2
P-1 - 0.13 Tons
P-2 - 0.13 Tons
P-3 - 0.13 Tons
P-4 - 0.13 Tons

3. There are no changes in the information contained in the permit application.

Should there be any questions about this information, please feel free to contact me at (813) 866-4660.

Sincerely,

John B. Clardy, Supervisor
Chemical and Environmental Services

JBC:dll

Florida Power
CORPORATION

March 2, 1976

D. E. R.

MAR 10 1976

SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. F. E. Hoffmanns
Florida Department of Pollution Control
9721 Executive Center Drive North
P. O. Box 20350
St. Petersburg, Florida 33742

Dear Mr. Hoffmanns:

In accordance with our agreement of February 24, 1976, Florida Power Corporation agrees to place sulfur dioxide ambient monitors at the following approximate locations.

Power Plant	No. of Monitors	Approximate Location
Anclote	2	3 kilometers NE 2 Kilometers E
Bartow	3	1/2 Kilometer W 2 Kilometers NE 2 Kilometers W
Crystal River	2	2 Kilometers E 3 Kilometers E
Higgins	1	1 Kilometer N

The exact location will be approved by your office prior to installation. The monitor will be of a type approved by EPA and will be operated for 24 hours every 6th day. Wind speed and direction will also be recorded during the time the monitor is operated.

Reports of the monitoring results will be submitted to the DER quarterly and will contain the result of each monitoring period.

I trust this accurately describes the agreement we made but should there be any correction or addition please let me know. I will keep you informed of our progress in accomplishing that which we have agreed to do.

Very truly yours,

R. E. Parnelle, Jr.
Manager
Environmental Operations

REPJr/bz

Florida Power
CORPORATION

January 13, 1976

Mr. Joseph W. Landers, Jr.
Secretary
Department of Environmental Regulation
2562 Executive Center Circle, E.
Montgomery Building
Tallahassee, Florida 32301

Re: Applications for Variances
Anclote Unit No. 1; and
Bartow Units Nos. 2 and 3

Dear Mr. Landers:

Reference is made to the pending applications for variances. On December 12, 1975 Attorney Wade Hopping, R. E. Parnelle and I met in Tallahassee with Attorney John Bottcher to discuss the above applications. We advised Mr. Bottcher that it was Florida Power Corporation's decision to proceed with burner modifications to the boilers of the above units as expeditiously as possible. It is anticipated that these units would then be able to meet the particulate and opacity emission limitations of Florida.

A contract with ICD, Ltd., of England has now been executed as to the new burners for Bartow Units Nos. 2 and 3. We anticipate the execution of a similar contract for Anclote Unit No. 1 by the end of January. The following compliance schedules are submitted for your consideration.

COMPLIANCE SCHEDULES - INCREMENTS OF PROGRESS

Unit	Contract Signed	Start Construction	End Construction	Final Compliance
Anclote #1	Jan., 1976	Mar. 28, 1977	May 23, 1977	June 23, 1977
Bartow #2	Dec., 1975	Jan. 3, 1977	Feb. 28, 1977	May 28, 1977
Bartow #3	Dec., 1975	May 23, 1977	July 18, 1977	Oct., 18, 1977

To the best of our knowledge the above scheduled dates are firm. The only exception would be unscheduled outages which would cause Anclote Unit No. 1 and another of our large units to be down at the same time. To satisfy system load requirements we would have to adjust the schedule to keep this from occurring.

The pending applications for variances are hereby amended in respect to the final compliance dates.

Very truly yours,

H. A. Evertz III

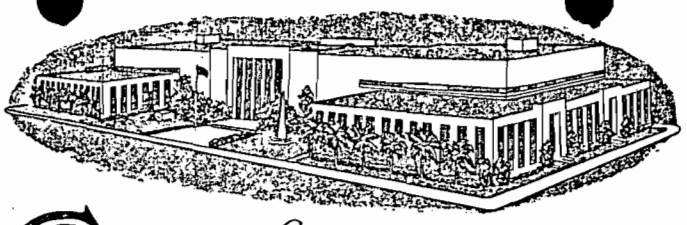
H. A. Evertz, III
Corporate Counsel

HAE:gc

cc: John Bottcher, Esq., FDER, Tallahassee
Mr. Banks Vest, District Manager, DER, St. Petersburg
Wade Hopping, Esq., Tallahassee

ENVIRONMENTAL PROTECTION COMMISSION

ROBERT E. CURRY, CHAIRMAN
FRANCES M. DAVIN, VICE CHAIRMAN
BOB BONDI
ELIZABETH B. CASTOR
BOB LESTER



COUNTY of HILLSBOROUGH
Tampa, Florida 33601

ROGER P. STEWART
DIRECTOR

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

TELEPHONE (813) 272-5960

D.E.R.
JAN 15 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

January 13, 1976

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

Re: Air Pollution Operation Permit Applications

Dear Mr. Kaiser:

On 10/28/75 this office informed you that these applications could not be processed without proof of compliance in the form of a complete stack test report for particulate emissions and a fuel laboratory analysis for SO_2 emissions.

Up to this date, only Gannon No. 4 has met this requirement.

It is therefore necessary that you submit to this office within ten (10) days of receipt of this letter, a schedule of compliance tests for each unit. Otherwise these applications will be returned to you.

Let me remind you that operating a source of pollution without an appropriate and currently valid permit issued by the Department of Environmental Regulation is in violation of the Rules of the Department of Environmental Regulation Section 17-4.03.

Sincerely,

Arturo McDonald
Air Engineer
Hillsborough County Environmental
Protection Commission

AMcD/fd

cc: Banks Vest - DER

3/le

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

DATE: November 7, 1975

TO: Walter E. Starnes

THRU: W. E. Linne W.

FROM: F. E. Hoffmanns FEH

SUBJECT: Florida Power Corporation Variance Request No. V-2,3,4,5

This office agrees with Mr. Oven's comments as given to Mr. Kahel per his memo of October 15, 1975 and as included below:

"(1) Since the variances requested are only for the time needed to correct a violation, an enforcement order, including an appropriate schedule of compliance, would be the simplest and easiest route to take.

(2) If Florida Power Corporation insists on a variance then Florida Power Corporation must submit the appropriate, predictive, air quality display models with supporting information, that will show that ambient air quality standards would not be violated by granting of the variance. The models results will be needed to persuade EPA to approve the resulting modification of the State Air Implementation Plan. Without the model results, the staff in the Districts cannot properly evaluate the variance request."

FEH:rs

cc: Terry Cole
Martin Kahel, Office of Technical Counseling
Bureau of Air Quality Management

TO: Marty Kahel

FROM: Hamilton S. Oven, Jr.

DATE: October 15, 1975

SUBJECT: Power Plant Variance Request - Florida Power Corporation

I have two basic comments on the requests for variances as submitted by Florida Power Corporation:

(1) Since the variances requested are only for the time needed to correct a violation, an enforcement order, including an appropriate schedule of compliance, would be the simplest and easiest route to take.

(2) If Florida Power Corporation insists on a variance then Florida Power Corporation must submit the appropriate, predictive, air quality display models with supporting information, that will show that ambient air quality standards would not be violated by granting of the variance. The models results will be needed to persuade EPA to approve the resulting modification of the State Air Implementation Plan. Without the model results, the staff in the Districts cannot properly evaluate the variance request.

HSOJr/ce
Attachments

cc: Terry Cole
Walt Starnes
W. E. Linne
W. R. Opp
Alex Senkevich
Joel Rodgers

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

VARIANCE REQUEST No. V-2,3,4,5

TO: DAN FARLEY

FROM: Walter E. Starnes WES

DATE: OCTOBER 6, 1975

SUBJECT: Request for a Variance

Attached is a copy of a request for a variance from:

FLORIDA POWER CORPORATION

Please review and coordinate with Legal on scheduling and with the Bureau of Air Quality Management on technical matters.

Kindly refer to the Variance Request No. (as listed above) on all comments and input.

WES/bfc

Florida Power
CORPORATION

Anclote #1 = V-2
Bartow #2 = V-3
Bartow #3 = V-4
Suwannee R. #1 = 5

July 3, 1975

The Honorable J. W. Landers, Jr., Secretary
Florida Department of Environmental Regulation
2562 Executive Center Circle East
Montgomery Building
Tallahassee, Florida 32301

Dear Mr. Landers:

In re: Applications for Variances from Air Emission Standards
Anclote No. 1
Bartow No. 2
Bartow No. 3
Suwannee River No. 1

This letter is in response to a request for additional information from your staff regarding Florida Power Corporation's past efforts to comply with the State's particulate and visible emission standards applicable to the above units. At our request a meeting was held in Tallahassee last Monday, June 30. Your staff was represented by Mr. Brindell, Mr. Bottcher, Mr. Cole, Mr. Subramani, Mr. Starnes and Mr. Farley.

All of the above units are equipped with Combustion Engineering (CE) boilers. Our efforts to bring the units into compliance has been a most frustrating experience. The following is a summary of these efforts.

Florida Power Corporation's effort to meet the particulate and visible emission standard on units designed by Combustion Engineering Corporation (CE) began in 1972.

In early 1973, we were visited by representatives of Spectus Burner Division of Chessco Industries Incorporated. These gentlemen said that their burners would meet the particulate and visible emission standard burning high sulfur (2½ percent) oil and offered to show us examples of their burners in action. Two of our engineers went to England and observed burners of the Spectus design burning high sulfur oil with very little visible emission. Florida Power contracted for Spectus burners to be installed on Higgins No. 3 and this was accomplished in June 1973. Initial performance by these burners was excellent but within a few weeks the "spinner diffuser" eroded away and the burner performance deteriorated. Spinner diffusers made out of another

material were recommended and subsequently installed. This proved to be the answer to the erosion problem and the burners appeared to be operating satisfactorily. The cost of the new burners and installation was approximately $208,000.

Negotiations with CE, which had continued during the installation of new Spectus burners, culminated in modifications to existing burners on Avon Park #2 which was completed in October 1973. This was a much less costly alternative to installation of new burners. The stack emission from these burners was tested in the latter part of October and it was determined that Avon Park #2 met the particulate and visible emission standards.

With this information, Florida Power installed the same burner modification on CE burners on Bartow Unit #2 and Suwannee River Unit #1. These modifications were accomplished in March, 1975. The results were very discouraging. The stack emission did not meet the standard and the plume appearance was worse than before the burner modification was installed. The decision was made to stop installation of this modification on other CE units and to remove the modification from Bartow #2 and Suwannee River #1. Further study leads to the conclusion that the modification works on square furnace boilers but not rectangular furnace boilers.

Realizing that modification to existing burners was not the answer for all CE units, Florida Power Corporation requested proposals from burner manufacturers for new burners with a guarantee that the new burners would meet the particulate and visible emission standard. Burners of new design were considered for all CE boilers. We placed orders, which had to then be cancelled because of our rapidly deteriorating financial condition.

Aware that something must be done regardless of our financial position, we engaged in further consultations with CE and responsible members of Florida Power Corporation's staff visited Combustion Engineering's new burner test facility. This resulted in a modification being performed on Anclote #1 burners. This was accomplished in April 1975. Subsequent stack tests showed that the particulate emission had been reduced approximately 23% but did not meet the standard.

Florida Power's financial condition has improved to the point that we are now considering new burners for all CE units that do not meet the particulate and visible emission standard. Internation Combustion Limited, a burner manufacturer, has visited Bartow and Anclote Plants to observe the present burners and boiler configuration and is now preparing a proposal to Florida Power Corporation for new burners.

The Honorable J. W. Landers, Jr., Secretary
Florida Department of Environmental Regulation

July 3, 1975

The following compliance schedule is anticipated for the affected units and a schedule of capital expenditures to carry out the modification is attached.

UNIT	CONTRACT SIGNED	START MODIFICATION	END MODIFICATION
Anclote No. 1	December 1975	April 1977	June 1977
Bartow No. 2	October 1975	August 1976	September 1976
Bartow No. 3	December 1975	November 1976	January 1977
Suwannee River No. 1	October 1975	November 1976	January 1977

I am sure this will indicate to you a desire on the part of Florida Power Corporation to comply with emission standards and good faith effort to be in compliance by July 1, 1975. The failure of the original CE burner modification to perform in all CE burners and the financial crises which forced us to cancel new burners have caused us to not be in compliance on July 1, 1975.

It is requested that a copy of this letter be included as a supplement to each of the above referenced variance applications.

I must renew my request that your Department assure us in writing that it will not commence any action seeking to assess civil or criminal sanctions during the pendance of these variance requests.

Yours very truly,

FLORIDA POWER CORPORATION

Andrew H. Hines, Jr.
President

AHH, Jr.:cb
Att.

CAPITAL EXPENDITURES BY QUARTER

UNIT	3/75	4/75	1/76	2/76	3/76	4/76	1/77	2/77	TOTAL
ANCLOTE NO. 1	50,000	200,000	200,000	200,000	200,000	200,000	200,000	550,000	1,800,000
BARTOW NO. 2	20,000	100,000	100,000	200,000					420,000
BARTOW NO. 3	50,000	300,000	300,000	400,000	600,000				1,650,000
SUWANNEE RIVER NO. 1	30,000	30,000	30,000	30,000	30,000	130,000			280,000
TOTAL	150,000	630,000	630,000	830,000	830,000	330,000	200,000	550,000	4,150,000

Florida Power
CORPORATION

RECEIVED
JUN 25 1975
Department of Pollution Control
Environmental Law Section

Andrew H. Hines, Jr.
President

June 20, 1975

Mr. Peter P. Baljet, Executive Director
Florida Department of Pollution Control
2562 Executive Center Circle East
Montgomery Building
Tallahassee, FL 32301

RECEIVED DPC
JUN 25 1975
EXECUTIVE DIRECTOR

Dear Mr. Baljet:

Re: Application for Variances to Florida Air Emission Limiting Standards for Fossil Fuel Steam Generators

Enclosed herewith for filing with your Agency are the originals and two copies each of Florida Power Corporation's Application for Variances to State Air Emission Standards for Fossil Fuel Steam Generators for the following stationary sources.

Unit	Permit No.	Request Variance to:
Anclote No. 1	AC-367	July 1, 1977
Bartow No. 1	AO52-2037	January 1, 1976
Bartow No. 2	AO52-2038	January 1, 1977
Bartow No. 3	AO52-2039	January 1, 1977
Crystal River No. 1	AO9-376	July 1, 1977
Crystal River No. 2	AO9-377	July 1, 1977
Higgins No. 1	AO52-2040	January 1, 1977
Higgins No. 2	AO52-2041	January 1, 1977
Higgins No. 3	AO52-2042	July 1, 1976
Suwannee River No. 1	AO61-2044	January 1, 1977
Suwannee River No. 2	AO61-2045	January 1, 1977
Turner No. 3	AO64-380	July 1, 1976
Turner No. 4	AO64-381	January 1, 1976

Members of your Office of Enforcement have recently advised our representatives that they are considering bringing enforcement proceedings against Florida Power Corporation after July 1, 1975, for non-compliance with the Emission Limiting Standards of the Department applicable to the above stationary sources. Under Section 403.201 of the Florida Statutes, Florida Power Corporation is exposed to civil penalties of up to $5,000 per day for each of the aforesaid 13 stationary sources. This adds up to $65,000 per day, or $1,950,000 per month. I understand that this would open the door to additional Federal penalties which would be even greater. Neither Florida Power Corporation nor its customers and stockholders can afford to pay such sums of money. Should your Department elect to pursue said enforcement proceedings we would be driven to shut down the above-listed stationary sources.

These units represent approximately two-thirds of our existing electric generating capacity. The remaining very limited generating capability would largely be used up by essential public services, i.e., hospitals and other emergency services.

I know that your staff has kept you advised that we have been working diligently for many months to meet the applicable air emission limiting standards by the July 1, 1975 deadline. Burner modifications, based upon earlier tests on another unit, have failed to perform as expected on several of the above units. Late deliveries of burner modification parts have put us in the position of having to request variances for other units. The schedule to bring these units into compliance is reflected in the length of variance requested and obviously is contingent upon successful equipment performance. We have made, and will continue to make, a strong effort to achieve the results we both want.

It is not our intent to operate any unit in violation of the law as interpreted by your Department, thereby subjecting Florida Power Corporation to the assessment of civil penalties. We do not feel that it would be in the public interest to shut down two-thirds of our generating capacity at midnight, June 30, 1975. To our knowledge, none of the above units, as presently operated, is causing the components of the air to exceed the applicable ambient air quality standards. Further, we are not aware of any damages to the public health and welfare caused by the present operation of these units. In order

for Florida Power Corporation to continue operating each of the above stationary sources after June 30, 1975, we must have your Department's assurance, in writing, as soon as possible, but not later than June 30, 1975, that it will not commence any enforcement proceedings during the pendency of the several applications for variances.

Very truly yours,

Andrew H. Hines, Jr.
President

ahh/cwp
enclosures

cc: Mr. Jack E. Ravan, Region IV, EPA
Mr. Paul J. Traina, Region IV, EPA
Mr. William D. Frederick, Jr., FDPC
Mr. William T. Mayo, Florida Public Service Commission

File - AIR VARIANCES Procedure

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

TO : JOHN A. REDMOND

FROM: WALTER E. STARNES WES

DATE: OCTOBER 6, 1975

SUBJ: VARIANCE PROCESSING PROCEDURE

The variance request handling and tracking procedure has been implemented. Attached is a copy of the processing procedure and a copy of the processing flow diagram.

The main items are:

(1) The Bureau of Air Quality Management will do the logging and will perform the tracking functions upon notification by the other Sections.

(2) The Legal Section will be responsible for managing the variance request review, for obtaining inputs, and for arranging meetings.

(3) All other Sections are to coordinate their input with the Legal Section.

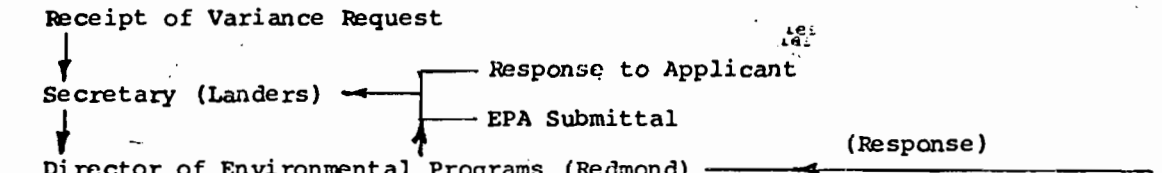
IMPORTANT: Upon receipt of a variance request, the request is to be sent to the Bureau of Air Quality Management. The Bureau of Air Quality Management will assign a tracking number, will send the original to Legal, and will send copies to Enforcement and to the Division of Permitting.

WES/bfj
Attachments

cc: J. Landers
D. Farley
T. Cole
J. Brindell
J. Subramani

VARIANCE PROCESSING PROCEDURE

- AIR PROGRAM -



Bureau of Air Quality Management (Starnes)

1. Log, assign a "tracking" number (such as V-21), and perform tracking functions.
2. Perform technical review.
   a. Coordinate with Legal.
3. After Commission hearing, prepare response to applicant in cooperation with Legal.
   a. Copy of response to appropriate District office.
4. After Commission hearing, prepare EPA submission.

Copy to Legal.

1. Responsible for managing variance review, obtaining inputs, and for arranging a meeting if a consent order is to be considered.
   a. When a consent order is agreed upon, Legal, in coordination with Enforcement, Division of Permitting, BAQM, and appropriate District office, will handle as per the following 2 and 3 plus the court appearance. Step 4 can be by passed unless there is a consent order problem.
2. Responsible for public notice.
   a. Notify BAQM of date.
3. Responsible for coordinating public hearing arrangements with the Division of Environmental Programs and participation in hearing.
   a. Notify BAQM of date.
4. Responsible for coordinating with the Division of Environmental Programs the presentation to the Commission.
   a. Notify BAQM of Commission's ruling.
5. Prepare final response in cooperation with BAQM.

Copy to Division of Permitting.

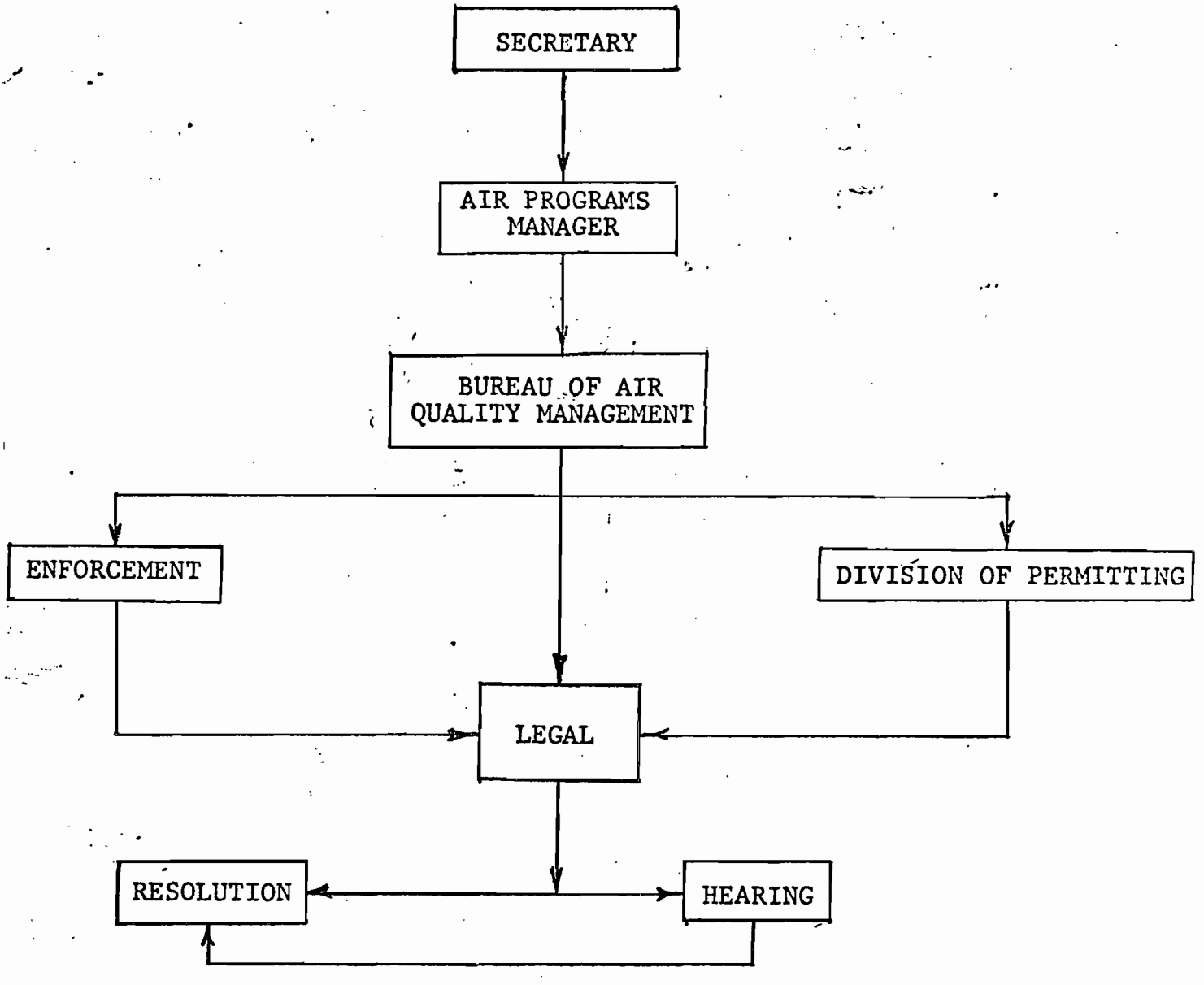
1. Copy to appropriate District/Sub-District office by the Office of Technical Counseling.
   a. District's review and input.
      (1) Coordinate with Legal with copy of input to D.O.P. and to BAQM.

Copy to Enforcement.

1. Enforcement's review and input.
2. Coordinate with Legal with copy of input to BAQM.

VARIANCE PROCESSING FLOW DIAGRAM

- AIR PROGRAM -



WC Region Harry K. HK Fred W File

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING, TALLAHASSEE, FLORIDA 32301

September 30, 1974

PETER P. BALJET
EXECUTIVE DIRECTOR

W. D. FREDERICK, JR.
CHAIRMAN

BARTOW GENL

BARTOW

D. P. C.

OCT 2 974

WEST CENTRAL REGION

Mr. Thomas J. Krilowicz
Program Manager
Power Plant Siting Act
Division of State Planning
Department of Administration
660 Apalachee Parkway
Tallahassee, Florida 32304

Re: Power Plant Siting; 10-Year
Florida Power Company

Dear Mr. Krilowicz:

The ten-year site plan for the Florida Power Company has been reviewed. The plan presents information on the proposed additional generating capacity needed by the utility. The extensive documentation on the habitat flora and faun is of interest, but does not aid in determining the environmental effects of the power plant facilities.

The Florida Power Company identifies immediate needs, the preferred sites, and longer-term needs and potential sites. However, the material on the preferred sites does not discuss the water resource needs and the discharge of water carried wastes, including heat. Neither, do the preferred sites consider the possible effects of other major existing emission sources of air pollutants and interaction with proposed facilities. An alternate site is not specifically identified for each preferred site.

The proposed sites are identified, and most are adequately described. The types of units (fossil fuel or nuclear) proposed for the site should be identified and the emissions and water use and discharge should be discussed for each type unit. If this were done, it would present a more complete picture of the site potential and assist in the evaluation of the site as to the effect on air and water quality.

Plans should be made for gathering background noise data for each preferred site. Also, the availability of fuel should be discussed for each preferred site. Where used, cooling towers should be studied for the effects of fogging.

Floor drainage, service drains, and site drainage should be considered and treatment provided were necessary (floor and service drains and waste streams). Site drainage from industrial

areas should not be discharged directly to receiving water bodies if marsh absorption/percolation areas are available. Oil discharges must be controlled. See Sheet "A."

We realize that this is a first attempt to comply with the State 10-year Power Plant Siting Act and all parties are on a learning curve. Subsequent annual submittals should be more complete.

The following comments are general areas of concern to this Department as they pertain to the individual preferred and potential sites.

Bartow Site

This is an existing site. The proposed construction consists of modifying four single cycle turbines to combined cycle. Condensor cooling will be either flow through or cooling tower. However, there is no data on either system as to temperature effect and liquid wastes discharges.

The impact on air quality due to emissions from the turbines is considered to be within ambient air quality standards. Since the site is in the Tampa Bay area, it is recommended that these emissions be studied further, even though the units are existing.

A background noise survey should be made, and the effect of the modification should be evaluated. Cooling towers, if used, can be an additional noise source.

Debarey Site

From the plan, this appears to be a new site (not the Turner plant) at which 12 single-cycle turbines are either under construction, or planned. A site plan should be furnished and all units identified, those under construction and those proposed.

The proposed generating capacity discussed is two 450 MW combined cycle turbines. The heat rejected from the condensers will be dissipated through a cooling tower. However, data on this system are needed before the site can be evaluated. Water supply is an important consideration.

Emissions from the turbines are expected to meet ambient air quality standards for SO_2, NO_2 and particulates. Although this is a reasonable assumption, it is recommended that the air quality be studied further, with particular reference to existing emission sources from FP & L and FP facilities in the area.

A background noise survey should be made both before and after operation of the single cycle units. The effect of a cooling tower should be evaluated. Fogging possibilities should be studied. Wastewater treatment facilities should be identified and discussed.

East of Orlando

The large tract identified as a potential site for a nuclear generating facility appears more than adequate. The impact of removing this much land from other uses should be addressed. It may be that this site will lend itself safely to multiple uses.

The Department follows the AEC regulations for nuclear generating facilities. Therefore, the release of radionuclides has not been evaluated.

It is expected that the water supply for this facility will be more adequately addressed in subsequent reports. Unless a large volume of water can be made available, this site may not be suitable. The disposal of plant operating waste streams to holding ponds needs further study. This may be an acceptable procedure, but slurry disposal should be addressed early. The environmental and hydrological impact of placing a reservoir on Second Creek should be evaluated in depth.

Transmission lines should be addressed early, if this is to be a preferred site.

Alternate and Potential Sites

Descriptions of the alternate and potential sites are brief but adequate for initial identification. There is no identification as to which alternate sites are to be considered with the preferred sites. More information is needed on the potential sites in relation to the anticipated generating capacity, estimated to be needed between 1980 and 1982. Each of these sites should be completely described as to units (including any existing) and attention given to the available water resources, the discharge of wastewater and air emissions. Various mixes of units at each site, preferred or potential, should be evaluated for pollution potential and affects on the environment.

Crystal River

A site plan showing unit 3 as well as possible location of additional units should be included. All units should be identified as to capacity and fuel. Combined cycle and nuclear units are mentioned as additions. Discharges from the combined cycle units to the receiving water are not expected to have a significant thermal impact. A cooling tower is proposed for any nuclear unit. The cooling water supply and disposal volumes

are not addressed for either type of unit.

Suwannee River - Levy County

A nuclear unit is proposed for this site, with water supply taken from the Suwannee River. Minimum flow in the river at Wilcox is 3,270 cfs with a 7-day, 10-year low flow of 3,750 cfs. No data is given on the make up water or possible flow-through water requirements and temperatures. The effects of blowndown water are not discussed.

Strip Mine - Polk County

From a land use and space aspect, the use of a strip mine site could have a beneficial impact. The use of the pits for recycled cooling water has attractive potential. However, the availability of an adequate supply of make up water is questioned. The area is in a general prezometric low.

Both combined cycle and/or nuclear units are proposed for the site. The impact on the air quality should be modeled.

Lake Jessup-Seminole County

Lake Jessup, being a shallow lake, may present problems as a source for cooling water make up, or as a recipient of blowdown and thermal discharges. No information is given as to the types of units proposed for this site. Water from the Floridan aquifer may not be sufficient to meet demand.

Suwannee River - Suwannee County

Apparently, this site is proposed for a nuclear unit. Data is very sparse, and a response is difficult. The Suwannee River could provide some make up water, and may even be able to receive some wastewater. This site is on a railroad, and should be considered for a possible coal-fired unit.

Little data is available on air quality. Final resolution of the non-degradation rule will decide whether or not a fossil fueled facility can be considered here. It is some distance removed from the Jacksonville-Duval industrial area, which currently controls the Class I air quality priority classification for this region.

"A" for Page 2

Four methods for handling the blowdown water are mentioned. At this time, the Department offers these comments:

1. Deep injection wells - not to be considered, except as a last resort. Generally not suited for a number of the proposed sites.

2. Irrigation (or land spreading) - a possible method, depending on the solids content of the blowdown and porosity of the soil.

3. Ponds - Possible effects of percolation into ground water should be considered. Ponds may not lose sufficient water to overcome the effects of rainfall.

4. Recovery systems - should be considered as a water conservation measure. Disposal of solids should be addressed.

The staff is available to discuss these comments further at your convenience.

Very truly yours,

Donald P. Schiesswohl

for Hamilton S. Oven, Jr., P.E.

HSO:ssp

cc: Northeast Region
Central Region
West Central Region

PEDCo-ENVIRONMENTAL
SUITE 13 • ATKINSON SQUARE
CINCINNATI, OHIO 45246
513/771-4330

J L T.
Tomkins
File

September 16, 1975

Mr. J. F. Schatmeyer, Ph. D.
Director
Environmental Affairs Department
P. O. Box 2842
St. Petersburg, Florida 33731

Dear Sir:

In your letter to Mr. Kenneth Axetell of our office, you made reference to a difference in SO_2 estimates for electric power generation emissions reported by us compared to those reported by the utilities consultant.

We contacted the Federal Power Commission and asked them to provide us with the fuel consumption and sulfur content for each unit in question at the three plants. The attached list relates fuel usage and sulfur content to unit number.

While there are still some discrepancies in the F.P.C. data and the consultant data, we cannot resolve them without knowing the source as well as the particulars of the data used by the utilities consultant.

The NEDS forms in our possession have been modified to reflect the F.P.D. data.

Also, we would appreciate your confirmation of the retirement of the Bayboro Generating Station in April 1974.

Sincerely,

PEDCo-ENVIRONMENTAL SPECIALISTS, INC.

Edwin A. Pfetzing

cc: Joe Tessitore
Wally Jones

EP:jh

BRANCH OFFICES

Suite 110, Crown Center
Kansas City, Mo. 64108

Suite 104-A, Professional Village
Chapel Hill, N.C. 27514

FEDERAL POWER COMMISSION DATA

Unit I.D.	Fuel consumption 10^3 gal	% S	SO_2 emissions TPY
Barton #1	56,708	2.37	10,550
Barton #2	54,457	2.37	10,131
Barton #3	85,252	2.37	15,861
Higgins #1	17,253	2.37	3,209
Higgins #2	20,866	2.37	3,882
Higgins #3	31,237	2.37	5,811
Bayboro #2*	5,802	2.37	1,079
Bayboro #3*	5,802	2.37	1,079

* According to Mr. Tom Hitz, F.P.C., Atlanta, Bayboro Generating Station was retired in April 1974.

JFT.
Barnett 9/23

Florida Power
CORPORATION

September 10, 1975

Mr. J. H. Kerns
Department of Environmental Regulation
P.O. Box 9205
Winter Haven, Florida 33880

Re: Your letter dated August 26, 1975
concerning Crystal River Unit No. 1
and No. 2 Air Permit Applications

Dear Mr. Kerns:

Please be advised that Florida Power Corporation has submitted Application for Variances to Florida Air Emission Limiting Standards for the following Fossil Fuel Steam Generators.

Anclote Unit No. 1
Bartow Unit No. 2
Bartow Unit No. 3
Crystal River Unit No. 1
Crystal River Unit No. 2

It is suggested that our Applications for these Air Operating Permits be held in abeyance until the Variance Request is either granted or denied by the DER.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator
Environmental Operations

REPJr/bz

cc: Mr. W. E. Linne
Mr. J. P. Subramani

M E M O R A N D U M

TO: Files

FROM: W. E. Linne

DATE: September 8, 1975

SUBJECT: Florida Power Compliance Schedule Alternatives

Eustis Parnell called at 2:45 P.M. September 8, 1975 to report their meeting (F.P.) with combustion engineering September 4, 1975 regarding proposals for power plants - other than Crystal River - to meet state opacity and particulate requirements.

Prososals included but,not limited to:

1. change in burners
2. change in fire box
3. reduced S. contained in oil - below present 2.3%
4. reduced ash content in oil - less that 0.06%.
5. electrosatic percipitators

F.P. fuel and economic personnel exploring all alternatives - expects decision some time at end of month or shortly thereafter. Eustis will put the company's decision "in writing" to us as soon as it is available.

WEL:dlc

Make Copy For Jim Carroll

Florida Power
CORPORATION

September 2, 1975

copy to WH 9/5/75 WH

Florida Department of Environmental Regulation

To: Mr. John Bottcher, Tallahassee
Mr. Philip R. Edwards, Fort Myers
Mr. W. E. Linne, St. Petersburg
Mr. William R. Opp, Jacksonville
Mr. Alex Senkevich, Orlando
Mr. Walter Starnes, Tallahassee

Gentlemen:

In response to letters from some of you and considering comments made by industry and DER personnel at the meeting in Tallahassee on August 21, 1975, concerning SO_2 monitoring, Florida Power Corporation proposes the following monitor program.

> Florida Power Corporation will purchase a 24-hour SO_2 Ambient Bubbler Monitor and sample for two weeks to one month at each plant as near as practicable to the "hot spot" as predicted by our ambient air model. If this monitoring indicates that the ambient air is 85% or greater of the ambient standard, further sampling will be performed. If the level is below 85% of the ambient standard, we will repeat the same spot check yearly to determine trends. While sampling, we will record wind speed and direction at the appropriate power plant. This, in addition to supplying monthly amounts of fuel used, per cent sulfur analysis, and hours of unit operation comprise our proposed SO_2 Monitoring Program.

I trust this proposal is acceptable, but should there be questions or need for further discussion, I suggest it be accomplished with representatives of all affected District Offices at the same time.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl
cc: 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 27, 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 15, 1975. If this office can be of further assistance, please do not hesitate to contact us.

Sincerely,

J. H. Kerns

J. H. Kerns, P.E.

JHK/JLT/pm

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

CENTRAL SUBDISTRICT
P.O. BOX 9205
500 E. CENTRAL AVENUE
WINTER HAVEN, FLORIDA 33880

REUBEN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS JR.
SECRETARY

AUGUST 27, 1975
FLORIDA POWER CORPORATION
PINELLAS CO. AP

Mr. W. P. Stewart, Director
Power Production
Florida Power Corporation
P.O. Box 14042, C-4
St. Petersburg, Florida 33733

RE: Atmospheric and Emission Monitoring of Fossil Fuel Steam Generators

Dear Mr. Stewart:

Atmospheric and emission monitoring plans for Florida Power Corporation plants have been reviewed and found unacceptable in meeting the intent of Chapter 17-2.04(6)(2)2.f of the Florida Administrative Code. Therefore, an acceptable plan should be submitted within 30 days of receipt of this letter or enforcement of the above regulation will be necessary.

If you have any questions on the minimum requirement for fulfilling the above regulation, do not hesitate to call upon us.

Sincerely,

J. H. Kerns

J. H. Kerns, P.E.

JHK/JLT/pm
cc: Jim Hale, Planning

STEVE LEWIS RWPM

RECEIVED doesn't want these to come to him

STATE OF FLORIDA

AUG 27 19

DEPARTMENT OF ENVIRONMENTAL REGULATION

D. E. R.

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

CENTRAL SUB DISTRICT
WINTER HAVEN

JOSEPH W. LANDERS JR.
SECRETARY

AUGUST 12, 1975

RECEIVED DER

AUG 15 1975

M E M O R A N D U M

TO: JAY LANDERS

FROM: W. E. LINNE

SUBJECT: FLORIDA POWER CORPORATION AIR PERMIT APPLICATION

The enclosed letters outline the reason for permit denial to the above company.

WEL/DAT/pm

for Marty Kahel - FYI

RECEIVED

AUG 25 1975

D. E. R.
DIV. OF PERMITTING
TECHNICAL COUNSELING

Florida Power
CORPORATION

Secretary

WB 8/18/75
JLT
File

August 12, 1975

Mr. J. P. Subramani
Enforcement Division
Florida Department of Environmental Regulation
2562 Executive Center Circle East
Tallahassee, FL 32301

Dear Mr. Subramani:

Re: Application for Variances

The C.E. mini-fix which will be installed on Bartow #2 has been installed on Palo Seco #2 in Puerto Rico. It has not been tested as yet because of problems with non-boiler related components of the unit. We will forward test results to you as soon as they are available. Suwannee River #1 has been modified the same as Avon Park #2 and will be tested the week of August 11.

Clarke Chapman Ltd. has not installed any of their burners on boilers in this country but their burner is identical in design to the Spectus burner which we have installed on our Higgins #3 Unit. This unit has been tested and found to be in compliance with the standard of 0.1 lb./10^6 BTU. We expect the Clarke Chapman Ltd. installation to perform as well as the Spectus installation.

The latest information concerning Clarke Chapman Ltd.'s concern about asphaltenes is contained in the attached Telex (Attachment #1). As you will note, we are discussing a program to generate comparison data between Eastern and Western hard asphaltene levels and its effect on emissions. Clarke Chapman Ltd. anticipates that the results of these tests will allow a guarantee to accommodate the higher Western levels. You will be kept informed of our activity in this area.

The sequence of events and dates for the installation of burners on Anclote #1 and Bartow #3, and modification to burners on Bartow #2 is Attachment #2, #3 and #4.

Re: Application for Variances

This answers the questions contained in your letter of July 30, 1975. Should you desire further information or clarification, please let me know.

Sincerely,

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl
Atts.

cc: Mr. Dan Farley, DER
Mr. Steve Lewis, DER
Mr. John Bottcher, DER
Mr. W. E. Linne, DER
Mr. J. T. Wilburn, EPA

FLA POWER STB

Best Available Copy

AUG 12, 1975

LOPULCO DERBY 37581 12/8/75 NO 1977 JR

D. E. R.

AUG 18

SOUTH WEST DISTRICT
ST. PETERSBURG

ATTENTION MR F J THOMAS - GENERATION ENGINEERING

;;VVVVVV

BARTOW/ANCLOT

DFVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV

FOLLOWING IS TEX OF GUARANTEE STATEMENT ON SUBJECT UNITS SENT

TO :- COMBUSTION ENGINEERING EN8,3348,&:-

MESSAGE BEGINS:-

;;;;;;;;;;;;;;;;;;

BASED ON A NO 6 FUEL OIL WITH FOLLOWING CONSTITUENT LEVELS:-

1. SULPHUR -2.5 PERCENT MAX.

2. ASH -0.1 PERCENT MAX.

3. HARD ASPHALTENES -3.5 PERCENT TO IP 143 WORLDWIDE.

AND A FULL LOAD OPERATING EXCESS AIR OF 2.5 PERCENT WE WOULD

GUARANTEE TO
GUAPLOEQNOTTO MEET EPA PARTICULATES 0.1 LB/MKB.

WE ARE ALSO PREPARED TO GUARANTEE THAT OUR COMBUSTION EQUIPMENT WILL OUT-PERFORM ON A GIVEN FUEL THE COMBUSTION EQUIPMENT PRESENTLY INSTALLED ON UNITS IN QUESTION.

NOTE:- THERE IS AN APPARENT REPEAT APPARENT LACK OF KNOWLEDGE WITH IN EXXON ON RELATIVE EASE OF COMBUSTION OF WESTERN HEMISPHERE E.G. VENEZUELAN HARD ASPHALTENES IN COMPARISON TO EASTERN HEMISPHERE E.G. MIDDLE EAST HARD ASPHALTENES.

NOTE THAT INDICATIONS ARE (NO FIRM DATA

APPARENTLY AVAILABLE)

THAT WESTERN FUELS, FOR A GIVEN HARD ASPHALTENE LEVEL, ARE SIGNIFICANTLY EASIER TO BURN THAN EASTERN HEMISPHERE FUELS.

THUS FINAL I.C.D. HARD ASPHALTENE LEVEL GUARANTEE IS EXPECTED TO BE SIGNIFICANTLY HIGHER THAN PRESENT 3.5 PERCENT. AT MEETING IN ST. PETE. 30TH JULY EXXON, F.P.C. F.P. (FP+L) ANDL. AND I.C.D. DISCUSSED CO-OPERATIVE TEST PROGRAMME TO GENERATE SUCH VALID COMPARISON DATA.

WB WOULD ANTICIPATE THAT THE RESULTS FROM THESE TESTS 97)• 3

3- 8:

WOULD ALLOW
3,3978 80143 HARD ASPHALTENES GUARANTEE TO ACCOMMODATE HIGHER WESTERN HEMISPHERE LEVELS.

MESSAGE ENDS

ATTACHMENT #1

CAPITAL IMPROVEMENT PROJECT SCHEDULE

C.I.P. NO.

PROJECT IDENTIFICATION Bartow 2 Burner Modification

ACTIVITY	Oct–1975	Nov	Dec	Jan–1976	Feb	Mar	Apr	May	June	July	Aug	Sept
	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 30
Purchase Equipment	X											
Engineering		X	X	X	X	X	X	X	X			
Manufacturing			X	X	X	X	X	X	X	X		
Material Delivery										X	X	
Installation										X	X	
Testing												X

CAPITAL IMPROVEMENT PROJECT SCHEDULE

C.I.P. NO.

PROJECT IDENTIFICATION Anclote 1 Burner Modification

ACTIVITY	Dec–1975	Jan–1976	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan–1977	Feb	Mar	Apr	May	June	July
	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 30
Purchase Equipment	X																			
Engineering		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Manufacturing				X	X	X	X	X	X	X	X	X	X	X	X					
Material Delivery															X	X	X			
Installation																X	X	X		
Testing																			X	

CAPITAL IMPROVEMENT PROJECT SCHEDULE

C.I.P. NO.

PROJECT IDENTIFICATION Bartow 3 Burner Modification

ACTIVITY	Dec--1975	Jan--1976	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan--1977
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Purchase Equipment	X													
Engineering		X	X	X	X	X	X	X	X	X	X			
Manufacturing			X	X	X	X	X	X	X	X	X			
Material Delivery										X	X	X		
Installation												X	X	
Testing														X

PREPARED BY _____

DATE _____

Joe
Otts os
File

W. E. Linne

BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

D. E. R.
AUG 1 1975
SOUTH WEST DISTRICT
ST. PETERSBURG

In the Matter Of:

FLORIDA POWER CORPORATION
Fossil Fuel Steam Generators:

Bartow Unit #1
Higgins Units #1 and #2
Pinellas County

Suwannee River Unit #2
Suwannee County

Turner Units #3 and #4
Volusia County

Respondent.

CASE NO. AP-41-75

Notice No. AP-44-75

RECEIVED
AUG 12 1975
D. E. R.
CENTRAL SUB DISTRICT
WINTER HAVEN

Kerns

RESPONSE TO NOTICE OF VIOLATION AND ORDERS FOR CORRECTIVE ACTION

Comes now, Florida Power Corporation, Respondent, by and through its undersigned attorneys and files this Response to Notice of Violation and Orders for Corrective Action in reply to said Notice No. AP-44-75 in Case No. AP-41-75.

1. Respondent admits that it owns, manages, operates and controls the fossil fuel steam generators listed in Paragraph 1 of the Notice.

2. Respondent neither admits nor denies the alleged violations set forth in Paragraphs 2 and 3 of the Notice and would demand strict proof thereof.

In response to the Orders for Corrective Action included in the aforesaid Notice of Violation, Respondent states:

A. The following is the latest schedule as of July 22, 1975 concerning burner modification and testing of units cited in the subject Notice of Violation.

UNIT	CORRECTIVE UNIT	INSTALLED	TEST DATE	MEETS STANDARD
Bartow #1	B&W Burner Mod.	Yes	June 23	Yes
Higgins #1	B&W Burner Mod.	Yes	July 28	?
Higgins #2	B & W Burner Mod.	Off-line now for installation	Sept. 2	?

UNIT	CORRECTIVE UNIT	INSTALLED	TEST DATE	MEETS STANDARD
Suwannee River #2	B&W Burner Mod.	Yes	Aug. 4	?
Turner #3	B&W Burner Mod.	Yes	Aug. 25	?
Turner #4	New Peabody Burners	Yes	Aug. 18	? *

*Tests performed during the week of July 7 indicated a particulate emission of .11 lbs/10^6 BTU. The unit will be tested again on August 18 and is expected to meet the standard of .1 lbs/10^6 BTU.

B. At this time Respondent can only state that Bartow Unit #1 is in compliance with the standards referred to in Paragraphs 2 and 3 of the Notice of violation. It is expected that the tests will verify compliance of the remaining units on the dates indicated in the schedule set forth in the preceding paragraphs. Respondent will submit the necessary test data and its analysis of the same as they are completed.

C. Respondent requests an informal conference with the Department's Office of Enforcement on the matters contained in the Notice of Violation and the Orders for Corrective Action. It is requested that the time to request a public hearing be extended until twenty (20) days after the date such informal conference is held.

Dated: July 23, 1975

Respectfully submitted,

OFFICE OF THE GENERAL COUNSEL

By /s/ 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, Florida 33733

W. E. Hines
7-23-75

BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of:)	
FLORIDA POWER CORPORATION)	CASE NO. AP-41-75
Fossil Fuel Steam Generators:)	Notice No. AP-44-75
Bartow Unit #1 Higgens Units #1 and 2)	
Pinellas County)	
Suwannee River Unit #2 Suwannee County)	
Turner Units #3 and 4)	
Volusia County)	
Respondent.)	

NOTICE OF VIOLATION

TO: Andrew H. Hines, Jr.
President
Florida Power Corporation
3201 Thirty-fourth Street, South
St. Petersburg, Florida 33733

Pursuant to Section 403.121, Florida Statutes, the Florida Department of Environmental Regulation places the respondent, FLORIDA POWER CORPORATION, on notice that the Department has reason to believe the following:

1. The Respondent owns, manages, operates and controls the following fossil fuel steam generators with more than 250 million BTU input:

a. Bartow Unit #1 located northeast of the City of St. Petersburg in Pinellas County, Florida;

b. Higgens Units #1 and 2 located in Oldsmar, Pinellas County, Florida;

c. Suwannee River Unit #1 located on the Suwannee River near U. S. Highway 90, Ellaville, Suwannee County, Florida;

d. Turner Units #3 and 4 located on the north side of Lake Monroe, Enterprise, Volusia County, Florida.

2. The Respondent has violated Department Rule 17-2.04 (6)(e) 2.a in that for the aforesaid fossil fuel steam generators the Respondent has failed to bring the particulate emissions into compliance as expeditiously as possible and before July 1, 1975.

3. The Respondent has violated Department Rule 17-2.04(6)(e) 2.b in that for the aforesaid fossil fuel steam generators the Respondent has failed to comply with the visible emissions standard of Number 1 on the Ringelmann Chart (20 percent opacity) as expeditiously as possible and before July 1, 1975.

Therefore, the Department, pursuant to the Florida Air and Water Pollution Control Act, Chapter 403, Florida Statutes, and Department Rule Chapter 17-1, Florida Administrative Code, enters this Notice of Violation and the following Orders for Corrective Action which will become final and effective twenty (20) days after service unless a Responsive Pleading is filed and a request for public hearing is made.

ORDERS FOR CORRECTIVE ACTION

1. Respondent shall sample, test, and analyze the emissions from the aforesaid generators and submit the results thereof to the Department by August 15, 1975.

2. If the tests required by paragraph 1 of these Orders for Corrective Action show that the source is not in compliance with applicable standards Respondent should submit to the Department by August 1 a control strategy,engineering plan

and schedule by which the source will expeditiously come into compliance. Respondent may continue to operate the above described units during the implementation of its schedules of compliance; provided it shall use its best efforts to minimize the emission of pollutants in the interim.

Failure to comply with the above Department Order may result in legal action pursuant to Florida Statutes, Sections 403.121 and 403.161 which provide for civil penalty of up to $10,000 per violation for each day the violation occurred and for an injunction to enforce the rules and regulations of the Department.

Respondent may request an informal conference with the Department's Office of Enforcement* on matters contained in the Notice of Violation or the Orders for Corrective Action. Respondent's rights will not be adjudicated at such a conference and the right to request a public hearing on the matters contained herein will not be affected by requesting and participating in such an informal conference.

Respondent has the right to a public hearing on the matters contained in the Notice of Violation or the Orders for Corrective Action. If the public hearing is desired, Respondent shall file a Responsive Pleading pursuant to Department Rule 17-1.26, Florida Administrative Code, within twenty (20) days of service of this Notice, unless an extension of time to file is granted by the Department pending an informal conference.

Respondent is further placed on Notice that if the Respondent does not file the Responsive Pleading or request the informal conference or does not request a public hearing the Orders for Corrective Action contained herein shall become final and effective without further action by the Department.

DONE AND ORDERED this 8 day of July, 1975, at Tallahassee, Florida.

BY AND FOR THE DEPARTMENT OF
ENVIRONMENTAL REGULATION:

JOSEPH W. LANDERS, JR., SECRETARY
Department of Environmental
Regulation
2562 Executive Center Circle, E.
Tallahassee, Florida 32301

* The enforcement of this case will be handled by the following:

Terry Cole, Enforcement Administrator
Office of Enforcement
Department of Environmental Regulation
2562 Executive Center Circle, E.
Tallahassee, Florida 32301

Telephone (904) 488-3277

Unless otherwise notified, please contact the above concerning an informal conference. Direct Responsive Pleadings or request for a public hearing to:

Mr. John C. Bottcher, Esquire
Attorney for the Department
Environmental Law Section
Department of Environmental Regulation
2562 Executive Center Circle, E.
Tallahassee, Florida 32301

Telephone (904) 488-8387

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING
TALLAHASSEE, FLORIDA 32301

JOSEPH W. LANDERS, JR.
SECRETARY

July 8, 1975

Mr. R. E. Parnelle, Jr.
Administrator
Environmental Operations
FLORIDA POWER CORPORATION
P. O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Parnelle:

This is in response to your letter of June 23, 1975 regarding Florida Power Corporation's monitoring program for SO_2.

The plans for Florida Power Corporation's monitoring program relative to Section 17-2.04(6)(e)2.f F.A.C., SO_2 emission rates from fossil fuel steam generators has been forwarded to the appropriate regional office for their review and comment prior to final evaluation by the Air Planning Section.

Sincerely,

James N. Hale
Environmental Administrator
Air Quality Management

JNH/cj

CC: W. E. Linne, West Central Region

BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

In the matter of: FLORIDA ELECTRIC POWER COORDINATING GROUP: Petition for amendment to Section 17-2.05(2)(a), Florida Administrative Code, Petitioner	)	Docket # _____

PETITION FOR RULE CHANGE

Petitioner, FLORIDA ELECTRIC POWER COORDINATING GROUP, on behalf of its members who own and operate electrical generating plants in the State of Florida, with its principal place of business at 402 Reo Street, Suite 103, Tampa, Florida 33601, petitions this Board, pursuant to §120.54(4), Florida Statutes, to adopt the attached amendment to §17-2.05(2)(a), Florida Administrative Code. (See Exhibit I). Petitioner is aware of a similar petition filed on June 27, 1975 by the Florida Sugar Cane League, Inc., and respectfully requests that the two petitions be set down for joint hearing in August or September, 1975, provided that counsel for Petitioner will be unavailable during the weeks of September 8th and 15th, 1975.

1. The proposed amendment would delete §17-2.05(2)(a), Florida Administrative Code, which sets forth unique sulfur dioxide ambient air quality standards for Dade, Broward and Palm Beach Counties, with the result that the sulfur dioxide Ambient Air Qaulity Standards set forth in §17-2.05(1)(a), Florida Administrative Code, would apply uniformly throughout the state.

2. The reasons for the proposed change are:

(a) Oral and written testimony submitted into evidence by Petitioner before the Board of the Florida Department of Pollution Control (the predecessor in interest to the Department of Environmental Regulation) at hearings

held on March 26 and 27, 1975 and April 16, 1975 showed that the specific sulfur dioxide emission limitations applicable to existing power plants in the State of Florida were more stringent than necessary to meet the statewide Ambient Air Quality Standards set forth in §17-2.04(1)(a), Florida Administrative Code.

(b) Petitioner's testimony at the hearings referred to in paragraph 2(a) also showed that substantial savings could be realized by consumers of electricity in Broward, Dade and Palm Beach Counties if less stringent emission limitations were employed that would nevertheless assure maintenance of the statewide Ambient Air Quality Standards for sulfur dioxide.

(c) The unique Ambient Air Quality Standards for sulfur dioxide contained in §17-2.05(2)(a), Florida Administrative Code, are considerably more stringent than the analogous statewide Ambient Air Quality Standards, are too stringent to be reasonably met, and are based upon faulty assumptions.

(d) In its May 20, 1975 hearing, the Board of the Florida Department of Pollution Control amended §17-2.04, Florida Administrative Code, to adjust the emission limitations, statewide, to allow more economical but environmentally justified control of sulfur dioxide emissions. (See Exhibit II). So that the benefit of such amendments may be realized in Broward, Dade and Palm Beach Counties, the exception contained in the current rule setting forth unique, overly stringent sulfur dioxide Ambient Air Qaulity Standards for Dade, Broward and Palm Beach Counties should be eliminated.

(e) It is requested that the records of the hearings dealing with sulfur dioxide emissions held by the Board of the Florida Department of Pollution Control on March 26 and 27, 1975, April 16, 1975, and May 20, 1975 be incorporated into this petition by reference as additional grounds therefor.

Respectfully submitted this 1st day of July, 1975.

Wade L. Hopping, Esquire
Mahoney, Hadlow, Chambers & Adams
Suite 242, Barnett Bank Building
Tallahassee, Florida 32301

Attorney for Florida Electric
Power Coordinating Group

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the foregoing were mailed to Mr. Jay Landers, Executive Secretary, Department of Environmental Regulation, 2562 Executive Center Circle, East, Montgomery Building, Tallahassee, Florida 32301; James R. Brindell, Esquire, General Counsel, Department of Environmental Regulation, 2562 Executive Center Circle, East, Montgomery Building, Tallahassee, Florida 32301; R. Bruce Jones, Esquire, Counsel for Florida Sugar Cane League, Inc., P. O. Drawer E, West Palm Beach, Florida 33402; and George F. Salley, Counsel for Gulf & Western Food Products, 100 Biscayne Tower Building, Miami, Florida 33132; this 1st day of July, 1975.

Wade L. Hopping, Esquire

EXHIBIT I

PROPOSED AMENDMENT TO RULES OF THE
FLORIDA DEPARTMENT OF POLLUTION CONTROL
ON AIR POLLUTION, SULFUR DIOXIDE AMBIENT
AIR QUALITY STANDARDS
CHAPTER 17-2, FLORIDA ADMINISTRATIVE CODE

I. Subsection (a) of section 17-2.05(2), Florida Administrative Code, is deleted and subsections (b) and (c) are relettered (a) and (b).

EXHIBIT II

May 20, 1975

AMENDMENT TO RULES OF THE
FLORIDA DEPARTMENT OF POLLUTION CONTROL
ON AIR POLLUTION, SULFUR DIOXIDE EMISSIONS
FROM FOSSIL FUEL STEAM GENERATORS EXISTING IN JANUARY 1972
CHAPTER 17-2, FLORIDA ADMINISTRATIVE CODE

I. Sections 17-2.04(6)(e) 2.c and d, Florida Administrative Code are substantially re-worded to read as follows:

c. Sulfur dioxide emissions - When liquid fuel is burned emissions shall be no greater than 2.75 pounds per million BTU heat input for sources in all areas of the State except as follows:

(i) 2.5 pounds per million BTU heat input for sources north of Hecksher Drive within Duval County and 1.65 pounds per million BTU heat input for all other sources in Duval County.

(ii) 1.1 pounds per million BTU heat input for all sources in Hillsborough County including Tampa Electric Company's Gannon Station Units 1 through 4 and Hooker's Point Generation Station.

d. Sulfur dioxide emissions - When solid fuel is burned emissions shall be no greater than 6.17 pounds per million BTU heat input for sources in all areas of the State, except for the following sources in Hillsborough County the emissions shall be no greater than:

(i) 2.4 pounds per million BTU heat input for Units 5 and 6 at Tampa Electric Company's Francis J. Gannon Generating Station and;

(ii) 6.5 pounds per million BTU heat input at Tampa Electric Company's Big Bend Generating Station.

II. Section 17-2.04(6)(e) 2, is amended by adding two new subsections e and f and re-lettering the present e to g.

e. This rule shall be re-evaluated and reconsidered by

CODING: Words in struck through type are deletions from existing law; words underlined are additions.

the Board at public hearing prior to July 1, 1977. As part of the re-evaluation and reconsideration required by this rule, the Department shall consider and give due weight to all competent substantial evidence including any findings and conclusions of any studies directed or supervised by the Board. Unless the Board finds that the emission limitations set forth in Section 17-2.04(6)(e) 2.c & d adequately protect public health and welfare, existing fossil fuel steam generators shall be subjected to compliance schedules which must be submitted to the Department on or before August 1, 1977 and which propose increments of progress dates that will as expeditiously as possible bring them into compliance with the following emission limiting standards:

(i) Sulfur dioxide - 1.1 pounds per million BTU heat input when liquid fuel is burned.

(ii) Sulfur dioxide - 1.5 pounds per million BTU heat input when solid fuel is burned.

If the Board finds that the emission limitations set forth in 17-2.04(6)(e) 2.c & d adequately protect public health and welfare this rule shall be continued or amended to reflect such findings and conclusions.

f. Owners of fossil fuel steam generators shall monitor their emissions and the effects of the emissions on ambient concentrations of sulfur dioxide, in a manner, frequency, and locations approved, and deemed reasonably necessary and ordered by the Department. The owners shall submit to the Department a written proposal for such monitoring program on or before July 1, 1975.

III. Department Rules 17-2.04(6)(e) 4 and 5, Florida Administrative Code, are deleted and the following Sections 17-2.04(6)(e) 4 and 5 are substituted:

CODING: Words in ~~struck through~~ type are deletions from existing law; words <u>underlined</u> are additions.

4. Compliance Schedules

(i) Compliance schedules, SO_2 Emissions for existing plants regulated by Section 17-2.04(6)(e) 2.c and d, Florida Administrative Code are repealed as of the effective date of this rule.

(ii) All fossil fuel steam generators, regardless of size, need not comply with any existing compliance schedule SO_2 Emissions required by the Department, but shall as expeditiously as possible comply with the specific emission standards set forth in Subsection 17-2.04(6)(e) 2.c and d or, if applicable, Subsection 17-2.04(6)(e) 3, at option of the owner.

5. If at any time the Board determines, after notice and public hearing, that appropriate and substantially lower sulfur fuels are available on a long term basis at a reasonably comparable cost (including all costs such as contract revision or termination costs) with fuels allowed under this rule, the Board may establish revised emission limiting standards.

IV. The effective date of this amendment shall be June 30, 1975.

CODING: Words in ~~struck through~~ type are deletions from existing law; words <u>underlined</u> are additions.

PROPOSED AMENDMENTS TO RULES OF THE

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

ON AIR POLLUTION, FOR SULFUR DIOXIDE AMBIENT AIR

QUALITY STANDARDS IN THE SOUTHEAST COUNTIES,

BROWARD, DADE, AND PALM BEACH

Alternative proposals to amend Section 17-2.05(2)(a), FAC, follow:

1. Do not amend the rule pending results of the Florida SO_2 two year study.

2. Amend the rule to set the Southeast SO_2 Ambient Air Quality Standards at a point higher than present; but, less than the Florida statewide Ambient Air Quality standards set forth in § 17-2.05(1) FAC. The % increase (relaxation) to be determined by evidence given at the Department of Environmental Regulation Commission hearing.

3. Amend the rule to set the SO_2 Ambient Air Quality Standards for Broward, Dade and Palm Beach Counties at a point higher (less restrictive) than present standards but not above an allowable incremental increase based on the Environmental Protection Agency Significant Air Quality Deterioration rule, Title 40, Code of Federal Regulation § 52.21, December 5, 1974. (See attachment 1.)

4. Repeal § 17-2.05(2)(a) so that the standards in the three counties are equal to Statewide Air Quality Standards 17-2.05(1)(a) FAC.

CODING: Words in ~~struck through~~ type are deletions from existing law; words in *italics* are additions.

PROPOSED AMENDMENT TO

DEPARTMENT OF ENVIRONMENTAL REGULATION

(FORMERLY DEPARTMENT OF POLLUTION CONTROL)

RULE 17-2.04 (6)(e) 2.g.

Section 17-2.04 (6) (e) 2.g., Florida Administrative Code, is repealed.

CODING: Words underlined are additions; words in ~~struck-through~~ type are deletions from existing law.

Walt Starnes

asurs# 1599

Florida Power
CORPORATION

JUN 1975 RECEIVED A, SW, & N

RECEIVED DPC

June 23, 1975

JUN 24 1975

EXECUTIVE DIRECTOR

Mr. Peter P. Baljet
Executive Director
Florida Department of Pollution Control
2562 Executive Center Circle East
Montgomery Building
Tallahassee, FL 32301

Dear Mr. Baljet:

As required by Chapter 17-2.04(6)(e) 2.f, Florida Power Corporation submits the following monitoring program for SO_2.

Florida Power will:

1. Submit monthly an analysis of fuel oil burned to include sulfur and BTU content.

2. Submit monthly the amount and type of fuel burned by each unit.

3. Submit monthly the hours each unit was operated.

This information will enable your Department to calculate the SO_2 emission rate as well as the total SO_2 emitted. Such data, when added to similar data from other sources, will allow your Department to evaluate the affect on ambient concentrations of SO_2.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl
cc: W. P. Stewart

File

Florida Power
CORPORATION

June 12, 1975

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

Dear Mr. Kerns:

Florida Power Corporation has recently received several letters from you requesting visible emission tests for our stationary sources by July 1, 1975.

Please be advised that our stack emission test team is presently testing Crystal River Units and are, therefore, not available to perform visible emission tests at other units.

As you are aware, most of our Air Operation Permits expire July 1, 1975. With our applications for new Operation Permits, we will comment on visible emissions for each of our units.

Sincerely,

Eustice Parnelle

R. E. Parnelle, Jr.
Administrator, Environmental Operations

cl

cc: W. P. Stewart

File-Gen

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING
TALLAHASSEE, FLORIDA 32301

PETER P. BALJET
EXECUTIVE DIRECTOR

May 28, 1975

W.D. FREDERICK, JR.
CHAIRMAN

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO Mr. J. T. Rodgers	POSTMARK OR DATE 6-12-75
STREET AND NO. P.O. Box 14042	
P.O. STATE AND ZIP CODE St. Petersburg, Fla. 33733	
OPTIONAL SERVICES FOR ADDITIONAL FEES	
RETURN RECEIPT SERVICES 1. Shows to whom and date delivered ..... 15¢ With delivery to addressee only ..... 65¢ 2. Shows to whom, date and where delivered .. 35¢ With delivery to addressee only ..... 85¢	
DELIVER TO ADDRESSEE ONLY ..... 50¢	
SPECIAL DELIVERY (extra fee required)	

PS Form 3800 Apr. 1971 NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL (See other side)

☆ GPO : 1972 O - 460-743

Mr. J. T. Rodgers
Vice-President
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

No. 56464

Dear Sir:

The sulfur dioxide rule for existing fossil fuel steam generators, Chapter 17-2.04(6)(e)2 was amended by the Florida Department of Pollution Control Board on May 20, 1975. A copy of the rule is attached for your convenience, Section 17-2.04(6)(e)2.f requires monitoring of sulfur dioxide emissions and the effects of emissions on ambient concentrations.

All affected sources must submit on or before July 1, 1975, a monitoring program for both the emissions and their effects. For the purposes of this requirement the Department will use the following definitions:

"Emission monitoring" means a continuous source sampler on each source or an alternative method for determining sulfur dioxide emissions which can be validated by source sampling.

The "effect of the emissions on ambient concentrations of sulfur dioxide" means an ambient air sampling system which determines concentrations of sulfur dioxide, sulfates, particulates and metallic ions.

Meteorological conditions are to be determined and reported as a requirement for an approvable monitoring program.

The written proposal required by subsection f shall be submitted to any affected local program and the appropriate regional office at the same

time. Following review by both, the region will forward the proposal to the Division of Planning in Tallahassee for final approval to insure uniform application of the requirements.

Your attention to this matter will be appreciated.

Sincerely,

Peter P. Baljet
Executive Director

PPB/sjr

Flo Power

DEPARTMENT OF POLLUTION CONTROL
ST. PETERSBURG SUB-REGIONAL OFFICE
WEST CENTRAL REGION

M E M O R A N D U M:

TO: W. E. Linne

FROM: R. C. Gardner RCG **THRU:** J. H. Kerns

DATE: August 1, 1974

SUBJECT: Bunker "C" oil spill of Florida Power at Allen's Creek on July 30, 1974

Per your telecon talked to Sgt. Holland at Florida Marine Patrol 813/893-2221 and found that Alan Sievers of their Department had been at site but was on way to Tampa to verify another oil spill:

1. Contacted Mr. Joe Wilson, Florida Power, phone 812/866-5725 (Supervisor of Fuel handling and Asst. to R. W. (Dick) Reed (Supervisor of System Fuel Operations-P.L. Bartow plant) phone 813/866-5724

2. At the site of break in the oil transmission line, MLV-6 north side of Allen's Creek, found the following:

   a. Hennessey construction company equipment on site with tractor digging trenches to skim water and oil to holding ponds.

   b. Florida Power men and equipment under Dick Reed at site containing spill. Reed is in overall charge and will meet in my office August 5th or 6th, 1974 to discuss prevention measures and give us his report on the break and clean-up.

   c. "Need-A-Diver" out of Tampa had two(2) Booms at RT 19 bridge to contain oil when tide ebbed at 12:30--1:30 tide at flood.

   d. Clear River, Inc., Warren Bateman, President, out of Jacksonville had two(2) oil skimmer trucks on site to strip Bunker "C" fuel from holding ponds and from back of Booms.

3. Otis Smith and Tony Pierce and myself viewed and reviewed situation at sites and pictures were taken at: (1) oil spill and (2) at up-stream oil containment area (by floating booms).

4. Mr. Reed agreed to contact me at the Sub Regional office for a meeting and full report on or about August 5th or 6th 1974.

← SPEED MESSAGE →

FROM: [illegible]

TO: File

DATE: 8-7-74

FLA Power

Fed. Register. Tues Dec 11 1973
Vol 38 - # 237

3 stream crossings
2 under cross By allo [illegible]
1 over [illegible]

Pressure drop - 180° 250 psig - activity at valve [illegible] Hookup

TO WEL

FROM WHB   Thru RCG

RE   FLA POWER OIL LINE SPILL
meeting 8-6-74 1030 - with Dennis Shantz Environmental Eng & B
RC Gardner - W. H. Brown

The pipe line from Bartow pumping station to the Anclote plant is 33 miles long is a 14" id steel pipe the exterior has a corrosion protection film and is protected against galvanic action. The entire pipe is then insulated. There are ~~10~~ 12 pressure operated valves ~~at~~ 6 ~~at~~ stream crossings (see Exibit #1) which shut off when pressure decreases. No 6 or bunker C oil is heated to 170-180°F and is pumped at 600 psig while line capibility is 1000 psig there is roughly a ~~100~~ 250 psig pressure drop at the plant as well as a temp decrease of ~~30 to 40~~ 40-50°F. The oil can be pumped up to 1½ - 2 days after standing in pipe. Oil leak detection systems comprise pressure drop cutoff valves each side of any stream. & differential flow meeters to ~~shut~~ Alarm ~~off~~ @ 20 BBl/hr. (42 US gal/BBl)

> of the three stream crossings Cross Bayou & Allens Creek go under the soft water Bottom while anclote goes over the top

OIL SPILL

FLA Power investigation showed:

(1) sampling tube EA, station #6 (see Exibit #2) ~~station 6~~ was sheared off on the cement base due to thermal expansion.

(2) This was a minor leak and did not trigger detection equipment.

(3) Oil from leaking valve (#6) traveled along outside of pipe until it hit the water and became visible

(4) ability at each valve to pump to tank truck

CORRECTION & Precautions

(1) Pipe line driven once a day while in use

(2) Flow detection devices cut from 20 to 15 BBl/day cutoff

(3) ~~???~~ Valve encasement in manhole or some other method.

(4) all valves in open hole with pads removed

(5) Research for other protection equipment

OIL TRANSFER

OPERATIONS MANUAL

FLORIDA POWER CORPORATION

BARTOW PLANT

CONTENTS

SECTION I

FACILITY

A. Geographical Location - The Bartow Electric Generating Plant is located on Weedon Island approximately one (1) mile south of Gandy Bridge on the west coast of Tampa Bay (Lat.27° 51' 30" N. and 82°35'50"W). The plant may be reached by taking Weedon Drive from Gandy Blvd. or 83rd Ave. North (Figure 1). The plant address is:

Florida Power Corporation
Bartow Plant
P. O. Box 14042
St. Petersburg, Fl. 33733

B. Physical Description - The Bartow oil transfer facility is a complete oil terminal including tanker, barge and truck transfer sites, a dock service building, control station, fire station and oil tank farm. Tankers are unloaded with two (2) 8" unloading arms and barges are loaded with an 8" loading arm (Figure 2).

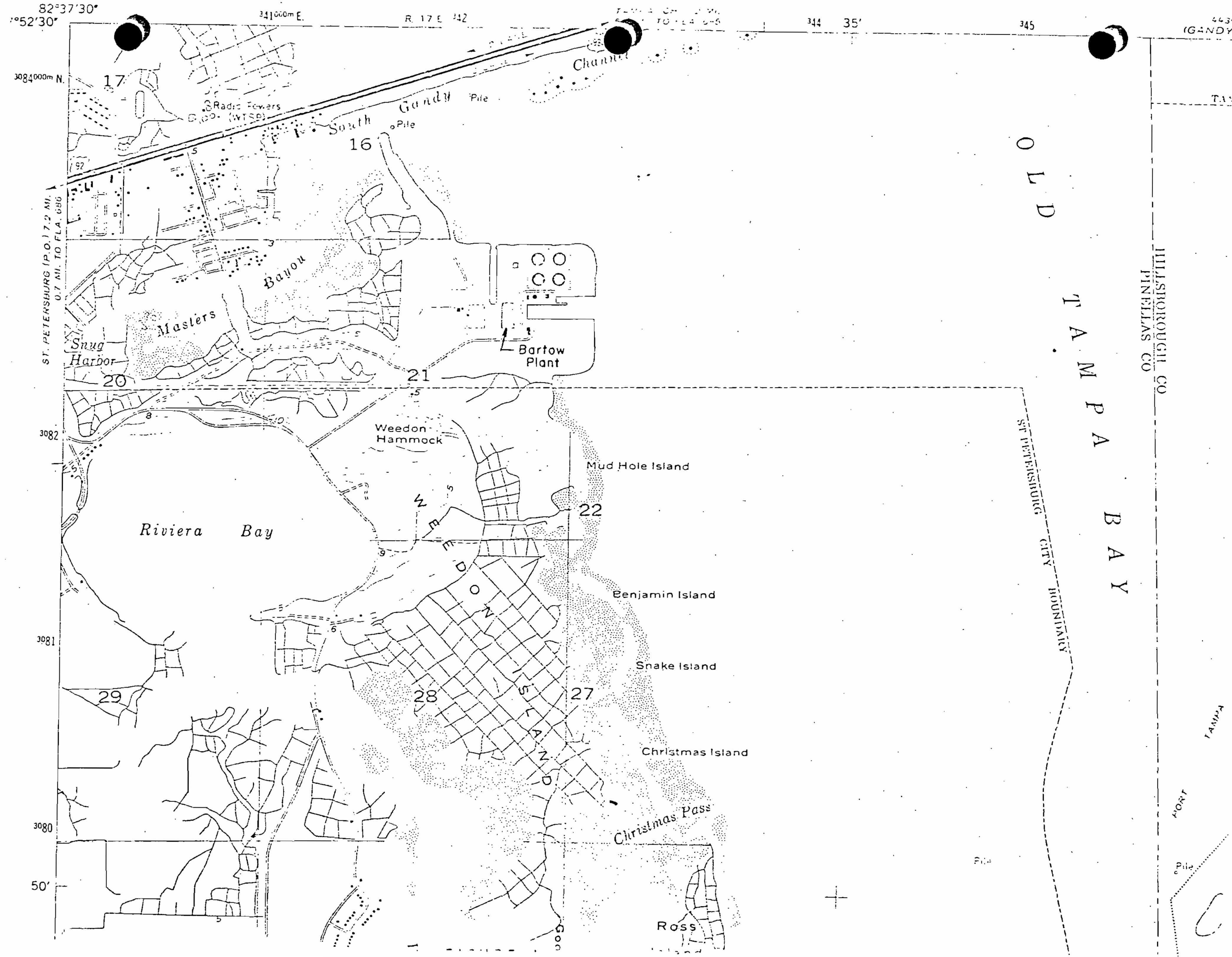
Oil containment booms and power boats are located around the dock. From these convenient locations the barge and tanker slips can be completely isolated. A complete description of all oil containment equipment is included in this manual.

The dock has a complete communication system to include an intercom, P.A. and Bell telephone system. With the P.A. and Intercom system anyone can be contacted at the plant or dock areas through the numerous phone stations. In addition, outside calls can be made from the Bell phone at the dock service building.

Permanent adequate lighting is provided at the dock.

The dock is serviced by a complete fire protection system. It includes a water and foam system with many strategically placed hydrants. In addition, there are numerous ABC fire extinguishers placed at potentially hazardous areas.

C. Hours of Operation - The Bartow oil transfer facility is available for operation 24 hours a day. The average use of the facility is 10 to 14 barges and 4 to 7 tankers per week.



82°37'30"
52'30"
341000m E.
R. 17 E.
344
35'
345
3084000m N.
17
Radio Towers
(WTSP)
South
Gandy
Channel
Pile
Pile
16
ST. PETERSBURG (P.O.) 7.2 MI.
0.7 MI. TO FLA. 686
Bayou
Masters
Snug
Harbor
20
21
Bartow
Plant
OLD
TAMPA
BAY
HILLSBOROUGH CO
PINELLAS CO
ST PETERSBURG CITY BOUNDARY
3082
Weedon
Hammock
Mud Hole Island
22
Riviera
Bay
WEEDON ISLAND
Benjamin Island
3081
Snake Island
29
28
27
Christmas Island
3080
Christmas Pass
Pile
Pile
50'
Ross

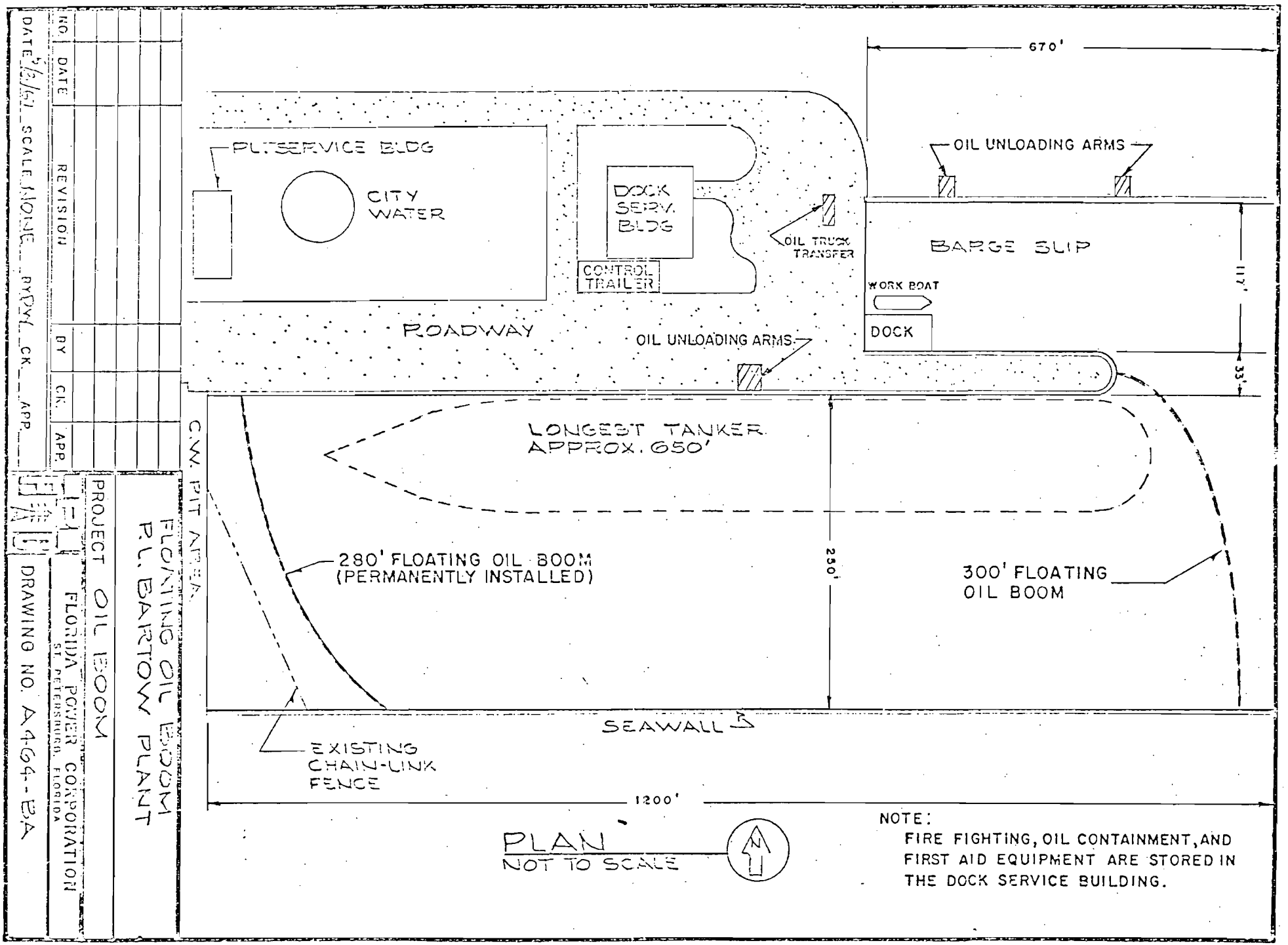

670'
OIL UNLOADING ARMS
P.L. SERVICE BLDG
CITY WATER
DOCK SERV. BLDG
CONTROL TRAILER
OIL TRUCK TRANSFER
BARGE SLIP
WORK BOAT
DOCK
117'
33'
ROADWAY
OIL UNLOADING ARMS
C.W. PIT AREA
LONGEST TANKER APPROX. 650'
280' FLOATING OIL BOOM (PERMANENTLY INSTALLED)
250'
300' FLOATING OIL BOOM
SEAWALL
EXISTING CHAIN-LINK FENCE
1200'
PLAN
NOT TO SCALE
N
NOTE:
FIRE FIGHTING, OIL CONTAINMENT, AND FIRST AID EQUIPMENT ARE STORED IN THE DOCK SERVICE BUILDING.
NO. DATE REVISION BY CK. APP.
DATE 5/2/67 SCALE NONE RYDYL CK. APP.
FLOATING OIL BOOM
P.L. BARTOW PLANT
PROJECT OIL BOOM
FLORIDA POWER CORPORATION
ST. PETERSBURG, FLORIDA
DRAWING NO. A-464-E3A

FIGURE 2

D. Oil Transfer Capability - The facility can load one (1) 16,000 barrel barge and unload two (2) 150,000 barrel tankers simultaneously. Each operation will have its own person in charge who can handle all aspects of the transfer operation.

E. Incompatible Products - No. 6 fuel oil (Bunker C, API, Group I) and No. 2 fuel oil are the only products transferred at the Bartow facility.

F. Applicable Laws and Regulations -

1. Federal

a. River and Harbor Act of 1899

This Act prohibits the discharge of any refuse matter into any navigable water of the United States, its tributaries, or banks. Violators of this Act may be fined or jailed for up to one year. If the discharge was done on purpose, conviction may lead to suspension of an operating license.

b. Oil Pollution Act of 1961

This act prohibits the discharge of oil or any oily mixture within the prohibited zone. The prohibited zone is within 50 miles of shore and may be extended to 100 miles. Penalties for violating this act are the same as for the 1899 Act.

c. Water Pollution Control Act

The purpose of this Act is to enhance the quality and value of our water resources and to establish a national policy for the prevention, control, and abatement of water pollution. Specifically, the Act states "it is the policy of the United States that there should be no discharge of oil into or upon the navigable waters of the United States, adjoining shorelines or into or upon the waters of the contiguous zone." The Act also sets stiff penalties and calls for the issuance of regulations governing oil transfer operations.

d. Coast Guard Regulations

Acting under the authority of the Federal Water Pollution Control Act, the Coast Guard issued regulations for the prevention of oil pollution. These regulations govern the design, construction and operation of vessels operating in the navigable waters and contiguous zone of the United States; and the design, construction and operation of onshore and offshore facilities engaged in the transfer of oil in bulk (more than 250 barrels) to and from vessels. (Copy of regulations is included in this Operations Manual).

F. Applicable Laws and Regulations (continued)

2. State (Pinellas County same as State)

a. Oil Spill Prevention and Control Act - This law became effective on 1 July 1970. It provides for authority in the Department of Natural Resources to act in preventing and controlling oil spills and other pollution. It also sets both criminal and civil penalties for violations of the act and allows for licensing of terminal facilities. (A digest of the State Law is attached to this manual).

b. Department of Natural Resources Regulations - Operators of oil terminal facilities are required to renew registration and license on an annual basis. The department has set a fee for registration and licensing based on the storage capacity of the facility. The regulations also call for terminal operators to present evidence of financial responsibility.

Title 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of Transportation

SUBCHAPTER O—POLLUTION

[CGD 71-160R]

POLLUTION PREVENTION VESSEL AND OIL TRANSFER FACILITIES

1. *Description and purpose of action.* The U.S. Coast Guard, acting under the authority of section 311(j) of the Federal Water Pollution Control Act, as amended (FWPCA), intends to issue regulations governing the design, construction, and operation of vessels operating in the navigable waters and contiguous zone of the United States, and governing the design, construction, and operation of onshore and offshore facilities engaged in the transfer of oil in bulk (more than 250 barrels) to and from vessels.

The purpose of these regulations is to reduce the probability of an accidental discharge of oil or oily wastes during normal vessel operations, during the bulk transfer of oil or oily wastes to or from vessels, or as a result of certain vessel accidents of limited energy. Although the high-energy collision or grounding is spectacular and may create locally severe environmental degradation, more significant and continuous degradation generally results from the regular and frequent discharges of oil into the waters of the United States. Furthermore, it is believed that the most effective means of minimizing the ecological damage of high-energy accidents is to prevent their occurrence through operational controls external to the vessel. The recently enacted Bridge-to-Bridge Communications Act and Ports and Waterways Safety Act should provide this control.

The final regulations are set forth below and constitute a part of this statement.

2. *Probable environmental impact.* The expected impact of these regulations is a reduction in the amount of oil discharged into the navigable waters of the United States.

The magnitude of the incidents at which these regulations are aimed is not known with certainty at this time. It is clear that not all discharges of harmful quantities of oil are reported and that quantities of reported discharges are often underestimated. For this reason, thorough assessment of the impact of these regulations on oil pollution can only follow an initial period of actual regulation. In general, vessel casualties involving a discharge of oil are relatively infrequent and result in medium or major incidents. Discharges during transfer operations are generally more frequent and involve minor or medium incidents, though the potential for a major incident is present whenever large quantities of bulk cargo are handled. It is anticipated that in combination with vessel traffic systems and vessel construction requirements to be developed under authority of the Ports and Waterways Safety Act of 1972, the preventive regulations will significantly reduce the incidence of discharges of oil into U.S. waters.

3. *Adverse environmental effects.* There are no expected adverse environmental effects.

4. *Alternatives.* The Coast Guard has available two distinct alternative courses of regulatory action:

a. Take no action and continue to enforce civil penalties without the benefit of preventive regulation. This course is the "status quo" alternative. Penalty enforcement, however, involves the disadvantage of post-factum action—viz, the damage has already been done. Vigorous penalty action can have only a limited impact upon faulty equipment or procedures which persist in use because of ignorance, indifference, or competitive pressure. The goal of the intended action is to promote oil-free water resources by removing the costs of environmental protection from the competitive arena and making them a fixed cost of operation applicable to all businesses.

b. Issue regulations more stringent than those described in this statement. To do so is to increase the additional cost of compliance out of proportion to the additional enhancement of the marine environment. The public costs of complying with the regulations the Coast Guard intends to promulgate are not precisely known. The regulations, however, based upon comments received at the public hearing, are considered to be a reasonable attempt to deal with known problems at a not unreasonable public cost. In the extreme, oil pollution might be virtually eliminated by issuing regulations so onerous as to make oil transfer or vessel operations economically unfeasible.

Stronger regulations could establish a requirement for persons engaged in oil transfer operations to obtain a permit issued by the Coast Guard. A formal permit system would produce a current inventory of all oil-handling facilities and allow inspection and control of such facilities to determine the adequacy of the physical plant, personnel, and procedures. A permit program of this kind was included in the Notice of Proposed Rule Making for the preventive regulations but has been withdrawn by the Coast Guard for the present time. A discussion of the permit system is contained in the preamble to the final regulations.

Besides these alternatives available to the Coast Guard, there are at least two broad alternative national policies which would significantly reduce oil pollution in U.S. waters. One alternative is to reduce the national demand for oil and thereby to reduce the amount of oil transported by tank vessel and transferred at marine facilities. This reduction might be brought about by one of two means. Demand for oil could be arbitrarily reduced by placing a substantial tax upon the production, transport, or consumption of oil or by establishing a system of rationing or other controls. On the other hand, demand for oil could be more naturally reduced (i.e., without disrupting market forces) by developing alternative sources of energy, such as natural or synthetic gas, nuclear power, solar energy, or geothermal steam. A second national alternative is to promote a substitute for transhipment of oil by waterborne vessel. Other modes of transportation might include pipelines, rail or truck tank cars, or even transmission of electricity generated at oil sources.

The Coast Guard regulations described in this statement represent an attempt to achieve oil-free waters through a reasonable balance of punitive deterrence and modification of design, construction, and operation intended to minimize the opportunity for and the effects of human error or negligence. Recognizing this Nation's social and industrial dependence upon oil, these regulations are intended to provide maximum protection to the environment while remaining within economic and practical bounds. The regulatory process, however, is dynamic and evolutionary. As our experience and information improve, the preventive regulations will be modified as necessary.

5. *Relationship between local short-term use of man's environment and the maintenance and enhancement of long-term productivity.* Studies showing that oil can be harmful to marine organisms lead biologists to believe that chronic or excessive introduction of petroleum and its products into marine ecosystems may seriously disrupt those systems. Therefore, reducing the quantity of oil being discharged into U.S. waters is beneficial to both the short-term uses and the long-term productivity of the marine environment.

6. *Commitments of environmental resources.* This action does not result in any irreversible or irretrievable commitment of environmental resources.

7. *Government, public, and industry problems or objections.* The Coast Guard's proposed regulations were widely disseminated to interested parties and were the subject of a public hearing held on February 15, 1972, in Washington, D.C. Following the public hearing, written comments were accepted through April 21, 1972. All comments, written and oral, were reviewed, and the regulations were subsequently revised as noted in the preamble.

Comments on the draft environmental impact statement for this proposed action were received from only three sources. In light of these comments, the discussion of alternatives was expanded to consider both less extreme and non-Coast Guard alternatives. The anticipated reduction in pollution and the expected public cost of compliance have been discussed qualitatively in paragraphs 2 and 4(b), since no quantitative data are available. Copies of comments received on the draft statement are attached.

This amendment promulgates new regulations that govern certain aspects of the design, equipment, and operation

of facilities and vessels engaged in the transfer of oil. The purpose of the regulations is to prevent the discharge of oil into the navigable waters and contiguous zone of the United States. A minor change to Part 151 of the same Subchapter O, concerning submission of oil record books from vessels in coastwise service, is also included.

A notice of proposed rule making (CGFR 71-160) with respect to these regulations was published in the December 24, 1971, issue of the FEDERAL REGISTER (36 F.R. 24960). Subsequent thereto the Ports and Waterways Safety Act of 1972 (Public Law 92-340) was enacted and which requires regulations be promulgated by the Coast Guard governing ship design and operation to prevent pollution from marine operations. It is emphasized that the regulations promulgated herein are not those required by the Ports and Waterways Safety Act but are issued under the Federal Water Pollution Control Act.

A public hearing on the proposed regulations was held on February 15, 1972, and the record remained open for written comment until April 21, 1972. Some 185 written comments were received from the public in addition to 31 State and territorial government responses and written comments from Coast Guard field offices. As a result of the written and oral comments the proposed regulations have been revised in part.

Many changes have been made to improve clarity without significant change in substance. Those changes that significantly alter the proposed regulations and those items that received considerable comment but which were not revised are discussed in the following paragraphs.

A comment generally applicable throughout the regulations was that the petroleum industry generally uses "barrels" rather than "gallons" as its unit of liquid measure. This change has been made and all volumes have been cited in barrels and rounded off. For example 10,000 gallons has been changed to 250 barrels (10,500 U.S. gallons).

Another general comment concerned the effective dates assigned to the various parts and the consequences of having different effective dates for vessels and facilities. As a result of this latter difficulty, and, to allow adequate time for both vessels and facilities to make the necessary physical and administrative changes required, most of these rules become effective on July 1, 1974. However, although enforcement will not occur before July 1, 1974, it should be noted that §§ 154.500, 154.510, and 155.800 place special requirements on hoses and loading arms manufactured or placed in service after June 30, 1973. Also, to allow the Coast Guard a reasonable period of time to handle the many administrative problems and to assure compliance by July 1, 1974, all existing transfer facilities are required by § 154.110 to file before July 1, 1973, a letter of intent to operate. Section 154.110 becomes effective 30 days after publication of these amendments.

The applicability of Part 154 was questioned and, in particular, objection was made to defining a large facility by the oil capacity of the vessels it serviced. The proposed applicability of Part 154 to oil transfer operations between facilities and vessels with a tank capacity of 10,000 gallons (now 250 barrels) is retained. The Coast Guard believes that this definition is the only way to reflect the operation's potential to pollute. Facilities that service vessels of this minimum capacity, regardless of the amount of oil actually transferred, will do so with equipment and pumping capacities of very large size. As to those objecting to any limitation on the facilities governed, the Coast Guard finds that presently the larger facilities are the significant problem and further, that smaller operations encompass different problems requiring different solutions. If spill data indicates that small facilities are a problem warranting regulation then further rule making action will be undertaken.

Several definitions were added to § 154.105 for clarification of the text and, in particular, the definition of oil was modified to exclude LNG and LPG (liquefied natural and petroleum gases), since, as a result of their properties, they cause an insignificant oil pollution problem.

The regulation which received the most comment was that of Part 154 requiring facility permits to conduct oil transfer operations. Public interest groups strongly supported this proposal and further recommended that vessel to vessel transfers should also be subject to a permit system. Opposition to the permit system was based not upon the concept, but upon the onerous administrative burden that such a system would place upon the industry, States, and the Coast Guard. The status of the existing discharge permit system administered by the Corps of Engineers and the Environmental Protection Agency was cited as a specific example. Opposition further cited legislative history as a basis for argument that a permit system is illegal because Congress had specifically considered and rejected such an approach to oil pollution prevention. The problem of State certification under section 401(a) of the Federal Water Pollution Control Act (FWPCA) was directly addressed by the Coast Guard to each of the State and Territorial Governments. Only 31 replies were received of which only 10 indicated the State had a certification program in existence.

The purpose of the Coast Guard program must be kept clearly in mind when considering permits for oil transfer operations. The program is intended to minimize the risk of a spill during operations which do not include any intentional discharge into the water at a facility which has, by appropriate local, State and Federal agencies, been authorized to be built and operated. It is now the view of the Coast Guard that this purpose can best be achieved by a direct regulatory approach. The permit program will be held in abeyance while experience is gained in controlling oil transfer operations. Based upon this experience, the need for a permit program will be reassessed. Therefore the proposed regulations have been extensively revised to delete the requirements concerning permits and in lieu thereof require each facility to file a letter of intent to operate, control the equipment and conduct of operations, and require operations manuals for each facility. The Coast Guard will inspect each facility, will issue a report of inspection to each facility, will invoke civil penalties for operations conducted in violation of the regulations, and will take action to suspend operations when conditions are found that constitute an unacceptable risk to the environment.

Section 154.110, Letter of Intent, specifies that all facilities that conduct oil transfer operations must submit a letter, 60 days in advance of intended operations, that specifies the name of the operator and the facility and its location. For mobile facilities, such as tank trucks, the Captain of the Port must be advised of specific transfer locations at least 4 hours before each transfer. Initial filing of letters for existing facilities must be done by July 1, 1973.

Section 154.120, Facility inspection, is a revision of proposed § 154.370. The revision requires the facility operator to maintain a record of all inspections conducted by the Coast Guard and to conduct any tests which the Coast Guard deems necessary to determine the facility's compliance with these regulations. The entries in the record of inspection will be made by the Coast Guard inspecting personnel and will reflect the scope of the inspection conducted and the conditions found to exist at the time of inspection. The requirement that the facility conduct all required tests is in keeping with the intent of the proposed regulations and with current policy that testing is a responsibility of the equipment owner or operator.

A new § 154.140, Suspension of oil transfer operations, provides for the Captain of the Port to suspend oil transfer operations whenever, in his opinion, the conditions found at the facility are in such variance with the regulations that further operations would constitute an undue threat to the environment.

A revision to proposed § 154.360, Operations manual: Contents (now designated § 154.310) is to require a description of the "person in charge" training and qualification program to be included in the operations manual.

A new § 154.760, Operations manual: Changes, has been added to Subpart D, Facility Operations, to clarify the intent of the proposals that the facility operator must maintain the manual current to reflect the operations as conducted, and must submit copies of the changes to the Captain of the Port.

Section 154.500 has been modified to permit nonferrous flange materials. The omission of nonferrous flanges was an oversight to the draft proposals and the Coast Guard is not aware of any condition which prevents their usage.

Numerous comments requested that a pressure shutdown switch be accepted in § 154.500 to limit hose and system pressures. The Coast Guard does not believe that a pressure switch and the

necessary associated control circuitry is an acceptable method upon which to rely for pressure control and no change is made in this regard.

A new paragraph (b) has been added to § 154.530, Small discharge containment, to define the "hose handling and loading arm areas" as those areas traversed by the free end of the hose or loading arm to which any oil in the hose may be discharged.

Several comments proposed that § 154.545 should require vessels to be enclosed by booms during transfer operations. The Coast Guard is of the opinion that these regulations are sufficiently broad that a Captain of the Port may, if specific conditions warrant, require a boom in place about the vessel (see §§ 154.140, 154.300(b) and 154.310(m)). However, booms, regardless of size or type, are ineffective in a current of more than 1½ knots and therefore a mandatory requirement for booms in place is not considered appropriate.

Comments suggested that § 154.550, Emergency shutdown, should permit a communications system to suffice under certain conditions. The comments submitted are particularly valid for offshore type facilities where a pier or other such structure is not used. Therefore, the proposed section has been modified to permit dedicated communications systems to a continuously manned control station and to amplify acceptable types of systems and their location.

Second only to the proposed permit requirement in number of comments received was the requirement for lighting contained in §§ 154.570 and 155.790. The objections were basically: The illumination specified was excessive for the need; the high cost of providing the specified degree of lighting; the degree of lighting specified created a navigation hazard to transient vessels by blinding the navigating officers; and many communities have ordinances which would class such illumination as a public nuisance. Because of the general objection to the degree of illumination specified, the Coast Guard conducted illumination surveys at existing facilities that were considered to be adequately illuminated. As a result of these surveys the required illumination level has been reduced to 5 and 1 foot-candles from 10 and 2 as proposed. Additionally, the regulation has been modified to permit the Captain of the Port to accept lighting from portable sources at small or remote facilities and to permit the vessel to provide facility illumination. Fixed lighting is preferred but in some remote areas power is not available and a fixed installation is impracticable.

Proposed §§ 154.710 and 720, which concern designation and qualification of persons in charge, have been combined into a new § 154.710. Additionally, proposed § 154.710(a)(2) has been modified to permit the required 48 hours of experience to be at any facility engaged in oil transfer operations with the provision that the designee must also be familiar with and qualified to operate the facility for which designation is given. This change was made to facilitate the use of personnel at various locations. The Coast Guard retains the prerogative to review the designation of a person in charge to assure he has adequate experience.

Section 154.740 is changed to require the facility operator to maintain a record of facility inspection as previously discussed.

Proposed § 154.365 has been revised and relocated as §§ 154.760 and 154.770, Operations manual: Changes, and availability, respectively. The revision was made for clarity and the relocation was made because the regulation is more a condition for operation than a general requirement.

On June 15, 1972, the United States published a notice for the purpose of implementation and enforcement of laws and treaties in the contiguous zone as permitted by Article 24 of the Convention on the Territorial Sea and Contiguous Zone. Therefore the applicability of Part 155 has been expanded to govern vessels in the navigable waters and contiguous zone in accordance with section 311 of the Federal Water Pollution Control Act. The Contiguous Zone is that area of water extending seaward 9 miles from the 3-mile territorial sea and thus, in general, extends applicability of the vessel oil pollution prevention regulations to 12 miles off shore.

Part 155.105 has several new definitions added for clarity in application of the part.

A great deal of criticism concerned the definition of "vessel" excluding public vessels, Navy or Coast Guard vessels, and thereby exempting them from the provisions of this part. The definition used is that contained in the Federal Water Pollution Control Act, as amended. However, attention is invited to Executive Order 11507 signed February 4, 1970, which requires all Federal vessels and facilities to have programs completed or underway by December 31, 1972, which will bring such facilities and vessels into compliance with air and water quality standards. The Army, Navy, and the Coast Guard have comprehensive programs underway and their vessels will, in fact, meet generally more restrictive requirements. Coast Guard vessels will for example, when in the navigable waters and contiguous zone, retain all vessel-generated wastes (sewage, laundry drains, galley waste, bilge wastes, and slop oil) on board.

A new § 155.130, similar to proposed § 154.140, has been added to provide that the Captain of the Port or the Officer in Charge, Marine Inspection, may suspend oil transfer operations if he deems that a severe risk to the environment would otherwise exist.

The inland barge industry entered strong objection to the proposed requirements for double wall construction of inland tank barges. The basis of the objection is that the costs have neither been adequately investigated nor has a case been made that double wall construction would significantly reduce oil pollution. The Coast Guard has, in cooperation with the Maritime Administration, entered into a study of costs and alternatives, including complete double hull construction, which will be completed within 18 months. Therefore, implementation of proposed § 155.305 is being withheld pending the results of the study.

Proposed § 155.320 *Fuel oil discharge containment* has been extensively revised because of many problems which existing vessels would have in complying with the proposed regulation. Specifically, present fuel tank fill and vent lines on river towboats are so arranged as to make centralization economically impossible. As modified, the regulation requires all new construction to have an installed deck spill containment system to retain all small spills and overflows that occur during vessel fueling operations. For existing vessels, the use of small portable spill containment systems is allowed. Additionally, it was pointed out that many small river towboats are fueled with gas station type fuel hoses and have not been a pollution source. Therefore, for existing vessels, the proposed regulations have been modified to allow the use of flush deck fuel fittings when serviced by an automatic back pressure shut-off nozzle.

Sections 155.340 and 155.350, bilge slops, have been revised to clarify that these requirements apply only to vessels with machinery space bilges. Specifically, the requirements of these sections do not apply to the double bottoms of barges which would need pumping only in the event of a leak or casualty.

The applicability of §§ 155.340 and 155.350 has been clarified by substituting "Ocean or Coastwise service" for the proposed "international voyages." One purpose of this section is to provide and establish an internationally accepted standard fitting on all vessels using facilities that service both domestic and international vessels. The proposed fitting is one recognized by the Intergovernmental Maritime Consultative Organization (IMCO).

Section 155.350 has been modified to establish a 4-inch flange as the inland standard for oily waste discharge connections instead of the proposed large international standard fitting. This was done at the request of the inland industry which considers the international fitting unnecessarily large for small inland vessels.

Proposed §§ 155.400, 155.410, 155.420, and 155.430 concerning the sealing of vessel overboard discharge valves have been deleted. Most comments indicated that such system was an unnecessary redundancy in view of the other sections of the regulations; that sealing would not be effective and would not provide a significant deterrent to intentional discharges of oil or oily waste; and that it would not be enforceable. Note that proposed §§ 155.450 and 155.460 have been renumbered §§ 155.400 and 155.410 respectively. With the deletion of the valve sealing requirements the proposed § 155.440 Placard, has been made applicable to all domestic vessels over 26 feet in length to alert shipboard personnel of the consequences of an intentional or careless discharge of oil.

Section 151.470 *Prohibited oil spaces* has been modified to apply only to self-propelled vessels. Self-propelled vessels have been the major source of spills from oil in forward spaces. It was pointed out that coastwise barges presently carry oil in their very large forward compartments and the proposed regulation would reduce their capacity by approximately 20 percent until the vessels could be modified. Since many of the technical details of defining the prohibited spaces on a barge are dependent upon much of the same data to be developed by the inland barge study, adoption of this proposed section is being stayed.

Many comments interpreted § 155.470 (b) as prohibiting vessels from carrying oil in wing tanks adjacent to the hull plate. Paragraph (b) applies only to spaces forward of the collision bulkhead specified in § 155.470(a).

Comments from the inland barge industry stated that their methods of operation were such that the requirement of § 155.700 *Designation of person in charge* could not be accomplished. The Coast Guard feels it is essential that the owner, or an agent acting on behalf of the owner, recognize a responsibility for the conduct of operations on the vessel. Therefore, § 155.700 has been modified only to the extent of recognizing that an agent may act on behalf of the owner in designating persons in charge.

The major concern voiced about Part 156, Oil transfer operations, was that the Coast Guard did not assign an overall responsibility and therefore, liability for oil transfer operations. That is, the vessel and the facility presently share responsibility, each being responsible for his own area and jointly responsible for common areas (such as mooring lines, adequate freedom in hoses, etc.), and neither has overall responsibility for the entire operation. The Coast Guard feels it cannot go beyond the designation of responsibility which has been done in the proposed regulations. However, some wording changes have been included to recognize that a person in charge need not completely inspect both units and that he may accept the signature of the other unit's person in charge on the declaration of inspection as satisfactory evidence of the acceptable condition of the other unit.

In consideration of the foregoing, Subchapter O, Title 33, Code of Federal Regulations is amended to read as follows:

PART 151—OIL POLLUTION REGULATIONS

a. By revising § 151.35(b) of Part 151 to read as follows:

§ 151.35 Oil Record Book.

* * * * *

(b) The Oil Record Book maintained on a vessel when not engaged on a foreign voyage shall be submitted during the months of April and October with entries for the preceding 6 months to the Commander, 3d Coast Guard District (m), New York, if the homeport is located on the east or gulf coast; or to the Commander, 12th Coast Guard District (m), San Francisco, if the homeport of the vessel is located on the west coast.

(Sec. 311(j)(1)(C), Federal Water Pollution Control Act, 86 Stat. 816, 868; sec. 9, 75 Stat. 404, as amended; sec. 6(g)(5), 80 Stat. 937; 33 U.S.C. 1161(j)(1)(C), 33 U.S.C. 1008, 49 U.S.C. 1655(g)(5); E.O. 11548, 3 CFR, 1966–1970 COMP., p. 949; 49 CFR 1.46(c)(7) and (m))

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b. By adding new Parts 154, 155 and 156;

PART 154—LARGE OIL TRANSFER FACILITIES

Subpart A—General

Sec.
154.100 Applicability.
154.105 Definitions.
154.110 Letter of intent.
154.120 Facility inspection.
154.140 Suspension of oil transfer operations.

Subpart B—Operations Manual

154.300 Operations manual: General.
154.310 Operations manual: Contents.
154.320 Operations manual: Amendment.
154.330 Operations manual: Waivers.

Subpart C—Equipment Requirements

154.500 Hose assemblies.
154.510 Loading arms.
154.520 Closure devices.
154.530 Small discharge containment.
154.540 Discharge removal.
154.545 Discharge containment equipment.
154.550 Emergency shutdown.
154.560 Communications.
154.570 Lighting.

Subpart D—Facility Operations

154.700 General.
154.710 Persons in charge: Designation and qualification.
154.730 Persons in charge: Evidence of designation.
154.740 Records.
154.750 Compliance with operations manual.
154.760 Operations manual: Changes.
154.770 Operations manual: Availability.
154.780 Compliance with suspension order.

AUTHORITY: The provisions of this Part 154 issued under section 311(j)(1)(C) of the Federal Water Pollution Control Act (86 Stat. 816, 868); 33 U.S.C. 1161(j)(1)(C); E.O. 11548, 3 CFR, 1966–1970 COMP., p. 949; 49 CFR 1.46 (m).

Subpart A—General

§ 154.100 Applicability.

This part applies to each onshore and offshore facility, when it transfers oil in bulk to or from any vessel that has a capacity of 250 or more barrels of that oil except when it transfers—

(a) Lubricating oil for use on board a vessel; or

(b) Nonpetroleum based oil to or from a vessel other than a tank vessel.

§ 154.105 Definitions.

As used in this part:

(a) "Barrel" means that unit of liquid measure equivalent to 42 U.S. gallons at 60° Fahrenheit.

(b) "Commandant" means the Commandant of the Coast Guard or his authorized representative.

(c) "Captain of the Port" means a U.S. Coast Guard officer commanding a Captain of the Port Area described in Part 3 of this chapter, or his authorized representative or, where there is no Captain of the Port Area, a District Commander of a Coast Guard District described in Part 3 of this chapter, or his authorized representative.

(d) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

(e) "District Commander" as used in this part, means the officer of the Coast Guard designated by the Commandant to command a Coast Guard District, as described in Part 3 of this chapter or his authorized representative.

(f) "Facility" means either an onshore facility or an offshore facility.

(g) "Incompatible products" means products that, when mixed, create a hazard, such as spontaneous combustion, or energy release or form a product that is hazardous to health.

(h) "Officer in Charge, Marine Inspection" means a U.S. Coast Guard officer commanding a Marine Inspection Zone described in Part 3 of this chapter, or his authorized representative.

(i) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States other than a vessel or a public vessel.

(j) "Oil" means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. For the purposes of this part liquefied natural gas and liquefied petroleum gas (LNG and LPG) are excluded.

(k) "Onshore facility" means any facility (including, but not limited to motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

(l) "Person" includes an individual, firm, corporation, association and a partnership.

(m) "Person in charge" means a person designated as a person in charge of oil transfer operations under § 154.710 or § 155.700 of this chapter.

(n) "Public vessel" means a vessel owned or bare-boat chartered and operated by the United States, or by a State or political subdivision thereof, or by a foreign nation, except when such a vessel is engaged in commerce.

(o) "Tank vessel" means any vessel especially constructed or converted to carry liquid bulk cargo in tanks.

(p) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, other than a public vessel.

§ 154.110 Letter of intent.

(a) The operator of any facility to which this part applies shall submit a letter of intent to operate a facility or to conduct mobile facility operations to

the Captain of the Port not less than 60 days before the intended operations unless a shorter period is allowed by the Captain of the Port; and, for facilities in operation on January 30, 1973, that are intended to be in operation on July 1, 1974, shall submit a letter of intent to operate before July 1, 1973.

(b) The letter of intent required by paragraph (a) of this section may be in any form but must contain—

(1) The name, address, and telephone number of the operator;

(2) The name, address, and telephone number of the facility or, in the case of a mobile facility, the dispatching office; and

(3) Except for mobile facility operations, the geographical location of the facility with respect to the associated body of navigable waters. The operator of a mobile facility shall advise the Captain of the Port of the location of each transfer operation at least 4 hours prior to each operation.

(c) The facility operator of any facility for which a letter of intent has been submitted shall immediately advise the Captain of the Port in writing of any changes of information in the letter and shall cancel, in writing, the letter for any facility at which oil transfer operations are no longer conducted.

§ 154.120 Facility inspections.

(a) The facility operator shall allow the Commandant, at any time, to make any inspection and shall perform, upon request, any test to determine compliance with the Federal Water Pollution Control Act and this part. All required testing of facility equipment must be conducted by the facility operator in a manner acceptable to the Commandant.

(b) The Captain of the Port records the date, scope, and results of each facility inspection in the facility's inspection record required by § 154.740(c) and lists the deficiencies in the inspection record when the facility is not in compliance with the regulations in this part.

§ 154.140 Suspension of oil transfer operations.

The Captain of the Port may issue an order to suspend oil transfer operations to the operator of a facility if he finds that there is a condition requiring immediate action to prevent the discharge or threat of discharge of oil.

(a) An order of suspension may be effective immediately.

(b) An order of suspension includes a statement of each condition requiring immediate action to prevent the discharge of oil.

(c) The facility operator may petition the District Commander in writing, or in any manner when the order is effective immediately, to reconsider the issuance of the order of suspension. The decision of the District Commander is the final administrative decision.

Subpart B—Operations Manuals

§ 154.300 Operations manual: General.

(a) The facility operator of each facility to which this part applies must prepare and submit with his letter of intent to operate an operations manual that describes—

(1) The means and procedures that the applicant uses to meet the operating rules and equipment requirements prescribed by this part; and

(2) The duties and responsibilities of operations personnel in conducting oil transfer operations under this part.

(b) In determining whether the manual meets the requirements of this part, the Captain of the Port considers the size, complexity and capacity of the facility.

§ 154.310 Operations manual: Contents.

Each operations manual required by § 154.300 must contain—

(a) The geographic location of the facility;

(b) A physical description of the facility including a plan of the facility showing mooring areas, transfer locations, control stations, and locations of safety equipment;

(c) The hours of operation of the facility;

(d) The sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously;

(e) The grade and trade name of each product transferred at the facility that is incompatible with oil;

(f) The minimum number of personnel on duty during transfer operations and their duties;

(g) The names and telephone numbers of facility, Coast Guard, and other personnel who may be called by the employees of the facility in an emergency;

(h) The duties and responsibilities of watchmen required by § 155.810 of this chapter and 46 CFR 35.05-15 for unmanned vessels moored at the facility;

(i) A description of each communication system required by this part;

(j) The location and facilities of each personnel shelter, if any;

(k) A description and instructions for use of drip and discharge collection and vessel slop reception facilities if any;

(l) A description and the location of each emergency shutdown system;

(m) Quantity, type, location and instructions for use of the containment equipment required by § 154.545;

(n) The maximum relief valve setting (or maximum system pressure when relief valves are not provided) for each oil transfer system;

(o) Procedures for—

(1) Operating each loading arm including the limitations of each loading arm;

(2) Transferring oil;

(3) Completion of pumping;

(4) Emergencies;

(p) A contingency plan for reporting and containing oil discharges; and

(q) A brief summary of applicable Federal, State, and local oil pollution laws and regulations.

(r) A description of the training and qualification program for persons in charge.

(s) Any other item the Captain of the Port requires, under § 154.320 to cover a particular condition at the facility.

§ 154.320 Operations manual: Amendment.

(a) The Captain of the Port may require the facility operator to amend the operations manual if he finds that the operations manual does not meet the requirements of this part. See § 154.760 (a).

(b) When the Captain of the Port determines to require an amendment of an operations manual he notifies the facility operator in writing of a date not less than 14 days from the date of the notice, on or before which the facility operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Captain of the Port notifies the facility operator of any amendment required or adopted or he rescinds the notice. The amendment becomes effective not less than 30 days after the facility operator receives the notice unless the facility operator petitions the Commandment to reconsider the notice, in which case its effective date is stayed pending a decision by the Commandant. Petitions to the Commandant must be submitted in writing to the Captain of the Port.

(c) If the Captain of the Port finds that there is a condition requiring immediate action to prevent the discharge or risk of discharge of oil that makes the procedure in paragraph (a) of this section impracticable or contrary to the public interest, he may issue an amendment effective, without stay, on the date the facility operator receives notice of it. In such a case, the Captain of the Port includes a brief statement of the reasons for his finding in the notice, and the owner or operator may petition the District Commander, in any manner, to reconsider the amendment.

§ 154.330 Operations manual: Waivers.

The Captain of the Port may, by an appropriate amendment to the operations manual, waive, in whole or in part, compliance with any requirement in this part if—

(a) Application for the waiver is submitted to the Captain of the Port at least 30 days before operations under the waiver are proposed unless a shorter time is authorized by the Captain of the Port; and

(b) The Captain of the Port finds that an equivalent level of protection of the navigable waters from pollution by oil will be provided by the alternative procedures, methods, or equipment standards to be used by the applicant.

Subpart C—Equipment Requirements

§ 154.500 Hose assemblies.

(a) Each hose assembly, consisting of a hose that is larger than 3 inches inside diameter and couplings, that is manufactured after June 30, 1973, and used for transferring oil, must meet the requirements of this section.

(b) The pressure, which the manufacturer represents to be the minimum bursting pressure, for each hose assembly must be—

(1) 600 pounds per square inch or more; and

(2) At least four times the pressure of the relief valve setting (or four times the maximum pump pressure when no relief valve is installed) plus the static head pressure of the oil transfer system at the point where the hose is installed.

(c) The pressure that the manufacturer represents to be the recommended working pressure for each hose assembly must be—

(1) 150 pounds per square inch or more; and

(2) More than the pressure of the relief valve setting (or the maximum pump pressure when no valve is installed) plus the static head pressure of the oil transfer system at the point where the hose is installed.

(d) Each nonmetallic hose must be specified for oil service by its manufacturer.

(e) Each hose assembly must have—

(1) Full threaded connections;

(2) Flanges that meet standard B16.5, Steel Pipe Flanges and Flanges Fittings, or standard B16.31, Nonferrous Pipe Flanges, of the American National Standards Institute; or

(3) Quick-connect couplings that are acceptable to the Commandant.

(f) Except as provided in paragraph (g) of this section, each hose must be marked with—

(1) The products for which the hose may be used or the words "oil service;"

(2) Date of manufacture;

(3) Burst pressure;

(4) Manufacturer's recommended working pressure;

(5) Date of the last test required by § 156.170 of this chapter; and

(6) The pressure used for that test.

(g) The information required by paragraph (f) of this section need not be marked on a hose if it is recorded elsewhere at the facility and the hose is marked so as to identify it with the information in the record.

§ 154.510 Loading arms.

(a) Each mechanical loading arm used for transferring oil and placed into service after June 30, 1973, must meet the design, fabrication, material, inspection, and testing requirements in Standard B31.3, Petroleum Refinery Piping, of the American National Standards Institute.

(b) Each mechanical loading arm used for transferring oil must have a means of being drained or closed before disconnecting after transfer of oil.

§ 154.520 Closure devices.

The facility must have enough butterfly valves, wafer-type resilient seated valves, blank flanges, or other means acceptable to the Captain of the Port to blank off the end of each hose or loading arm that is disconnected after transfer of oil.

§ 154.530 Small discharge containment.

(a) Except as provided in paragraph (d) of this section, the facility must have fixed catchments, curbing, or other fixed means to contain oil discharged in at least—

(1) Each hose handling and loading arm area; and

(2) Each hose connection manifold area.

(b) "Hose handling and loading arm area" means that area on the facility which, with the loading arm or the hose attached to the facility discharge piping, is within the area traversed by the free end of the hose or loading arm when moved from its normal stowed or idle position into a position for connection to the vessel.

(c) The discharge containment means required by paragraph (a) of this section must hold at least—

(1) Three barrels if it serves one or more hoses of 6-inch inside diameter or smaller or loading arm connections of 6-inch nominal pipe size diameter or smaller;

(2) Four barrels if it serves one or more hoses larger than 6-inch inside diameter or loading arm connections larger than 6-inch nominal pipe size but less than 12 inches diameter; or

(3) Six barrels if it serves one or more hoses or a 12-inch inside diameter or larger or loading arm connections of 12-inch nominal pipe size diameter or larger.

(d) The facility may have portable means to meet the requirements of paragraph (a) of this section if the Captain of the Port finds that fixed means to contain discharges are not feasible for part or all of the facility.

§ 154.540 Discharge removal.

The facility must have a means to safely and quickly remove discharged oil from the containment means required by § 154.530 without mixing incompatible products or discharging it into the water.

§ 154.545 Discharge containment equipment.

(a) Each oil transfer facility must have ready access to oil containment material and equipment to contain oil discharged on the water considering—

(1) Oil handling rates;

(2) Oil capacity susceptible to being spilled;

(3) Frequency of facility operations;

(4) Tidal and current conditions;

(5) Facility age, capability, arrangement and past experience; and

(6) If the equipment is shared, the expected frequency of use and probability of availability.

(b) For the purpose of this section, "access" may be by direct ownership, joint ownership, cooperative venture, or contractual agreement.

§ 154.550 Emergency shutdown.

(a) The facility must have, in addition to the means of communication required by § 154.560, an emergency means to enable the person in charge of the transfer of oil on board the vessel at his usual operating station to stop the flow of oil to the vessel. This means must be an electrical, pneumatic, or mechanical linkage to the shore facility or a continuous dedicated communications system manned by a person ashore who can stop the flow of oil in an emergency.

(b) The point in the oil transfer system at which the emergency means stops the flow of oil must be located on the facility near the loading arm or transfer hose connection point so as to minimize the loss of oil in the event of hose rupture or loading arm failure.

§ 154.560 Communications.

(a) Each facility must have a means that enables two-way voice communication between the person in charge of the transfer operation on board the vessel and the person in charge of the facility transfer operation.

(b) Each facility must have a means, which may be the communications system itself, that enables a person on board a vessel or on the facility to effectively indicate his desire to use the means of communication required by paragraph (a) of this section.

§ 154.570 Lighting.

(a) For opertaions between sunset and sunrise, the facility must have fixed lighting that illuminates—

(1) Each transfer connection point on the facility with an average minimum lighting intensity of 5-foot candles;

(2) Each oil transfer operations work area on the facility with an average minimum lighting intensity of 1-foot candle;

(3) Each transfer connection point in use on any barge moored at the facility, to or from which oil is being transferred, with an average minimum lighting intensity of 5-foot candles; and

(4) Each oil transfer operations work area on any barge moored at the facility, to or from which oil is being transferred, with an average minimum lighting intensity of 1 foot candle.

(b) The lighting intensity must be measured on a horizontal plane 3 feet above the barge deck or walking surface.

(c) For small or remote facilities, the Captain of the Port may authorize operations with an equivalent intensity of lighting provided by the vessel or by portable means.

Subpart D—Facility Operations

§ 154.700 General.

No person may operate a facility to which this part applies unless the equipment, personnel, and operating procedures of that facility meet the requirements of this part.

§ 154.710 Persons in charge; designation and qualification.

No person may serve, and the facility operator may not use the services of a person, as person in charge of facility oil transfer operations unless—

(a) The facility operator has designated that person as a person in charge and has advised the Captain of the Port in writing of his designation;

(b) He has had at least 48 hours of experience in oil transfer operations at a facility in operations to which this part applies;

(c) He has enough experience at the facility for which qualification is desired to enable the facility operator to determine that his experience is adequate and that he can operate the oil transfer equipment of the facility, except that, for new facilities, the Captain of the Port may authorize alternative experience requirements; and

(d) The facility operator has determined that he knows—

(i) The hazards of each product to be transferred;

(ii) The rules in this part and in Part 156 of this chapter;

(iii) The facility operating procedures as described in the operations manual;

(iv) Vessel oil transfer systems, in general;

(v) Vessel oil transfer control systems, in general;

(vi) Each facility oil transfer control system to be used;

(vii) Local discharge reporting procedures; and

(viii) The facility's contingency plan for discharge reporting and containment.

§ 154.730 Person in charge: Evidence of designation.

Each person in charge shall carry evidence of his designation as a person in charge when he is engaged in transfer operations unless such evidence is immediately available at the facility.

§ 154.740 Records.

Each facility operator shall keep at the facility and make available for inspection by the Captain of the Port—

(a) A copy of the letter of intent for the facility;

(b) The name of each person currently designated as a person in charge of oil transfer operations;

(c) The date and result of the most recent test or inspection of each item tested or inspected under § 156.70 of this chapter;

(d) The hose information required by § 154.500(f) unless that information is marked on the hose; and

(e) The record of each inspection of the facility by the Captain of the Port.

§ 154.750 Compliance with operations manual.

The facility operator shall use and require its personnel to use the procedures in the operations manual prescribed by § 154.300 for operations under this part.

§ 154.760 Operations manual: Changes.

(a) Each facility operator shall keep the operations manual current so that at all times it meets the requirements in §§ 154.300 and 154.310.

(b) The facility operator shall provide a copy of each change to the operations manual to the Captain of the Port before transferring oil in operations to which this part applies.

§ 154.770 Operations manual: Availability.

Each facility operator shall keep an operations manual at the facility and shall make it readily available to the operating personnel, vessel personnel and, upon request, to the Captain of the Port.

§ 154.780 Compliance with suspension order.

No facility operator to whom an order of suspension has been issued under § 154.140 may conduct oil transfer operations until that order is withdrawn by the Captain of the Port or the District Commander.

PART 155—VESSEL DESIGN AND OPERATIONS

Subpart A—General

Sec.

Subpart B—Vessel Design and Equipment

Subpart C—Oil Transfer Personnel, Procedures, Equipment, and Records

AUTHORITY: The provisions of this Part 155 issued under section 311(j)(1)(C) and (D) of the Federal Water Pollution Control Act (86 Stat. 816, 868); 33 U.S.C. 1161(j)(1)(C) and (D); E.O. 11548, 3 CFR, 1966–1970 COMP. p. 949; 49 CFR 1.46(m).

Subpart A—General

§ 155.100 Applicability.

This part prescribes rules that apply to the operation of vessels on the navigable waters and contiguous zone of the United States for the purpose of preventing the discharge of oil into or upon the navigable waters or contiguous zone of the United States after June 30, 1974. U.S. vessels must meet the vessel design and equipment requirements in this part to be eligible for the issuance of a Certificate of Inspection under 46 CFR Ch. I.

§ 155.105 Definitions.

(a) "Barrel" means that unit of liquid measure equivalent to 42 U.S. gallons at 60° Fahrenheit.

(b) "Commandant" means the Commandant of the U.S. Coast Guard or his authorized representative.

(c) "Captain of the Port" means a U.S. Coast Guard officer commanding a Captain of the Port area described in Part 3 of this chapter or his authorized representative or, where there is no Captain of the Port area, a District Commander of a Coast Guard District described in Part 3 of this chapter or his authorized representative.

(d) "Contiguous zone" means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

(e) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

(f) "District Commander" as used in this part means the officer of the Coast Guard designated by the Commandant to command a Coast Guard district as described in Part 3, of this chapter or his authorized representative.

(g) "Facility" means either an onshore facility or an offshore facility.

(h) "Incompatible products" means products that, when mixed, create a hazard such as spontaneous combustion or energy release or form a product that is hazardous to health.

(i) "Officer in Charge, Marine Inspection" means a U.S. Coast Guard officer commanding a Marine inspection zone described in Part 3 of this chapter or his authorized representative.

(j) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States other than a vessel or a public vessel.

(k) "Oil" means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. For the purpose of this part liquefied natural gas and liquefied petroleum gas (LNG and LPG) are excluded.

(l) "Onshore facility" means any facility (including, but not limited to motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

(k) Procedures for reporting oil discharges on the water.

§ 155.760 Amendment of oil transfer procedures.

(a) The Captain of the Port or Officer in Charge, Marine Inspection may require the operator of any vessel that is required to have oil transfer procedures to amend those procedures if, after inspection, he finds that the oil transfer procedures are not adequate to meet the requirements of Part 156 of this chapter. See § 155.730.

(b) When the Captain of the Port or Officer in Charge, Marine Inspection determines to require an amendment of an oil transfer procedure, he notifies the operator, in writing, of a date not less than 14 days from the date of the notice on or before which the operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Captain of the Port or Officer in Charge, Marine Inspection notifies the operator of any amendment required or of his decision to rescind the notice. The amendment becomes effective not less than 30 days after the operator receives the notice, unless the operator petitions the Commandant to reconsider the notice, in which case its effective date is stayed pending a decision by the Commandant. Petitions to the Commandant must be submitted in writing to the Captain of the Port or Officer in Charge, Marine Inspection who issued the requirement to amend.

(c) If the Captain of the Port or Officer in Charge, Marine Inspection finds that there is a condition requiring immediate action to prevent the discharge or risk of discharge of oil that makes the procedure in paragraph (b) of this section impractical or contrary to the public interest, he may issue an amendment effective, without stay, on the date the operator receives notice of it. In such a case, the Captain of the Port or Officer in Charge, Marine Inspection includes a brief statement of the reasons for his finding in the notice, and the operator may petition the District Commander, in any manner, to reconsider the amendment.

§ 155.770 Machinery oil drains: U.S. vessels.

No person may drain the sumps of oil lubricated machinery or the contents of oil filters, strainers, or purifiers into the bilge of any U.S. vessel.

§ 155.780 Emergency shutdown.

(a) No person may operate a tank vessel carrying oil that has a capacity for 250 or more barrels of cargo oil unless it has on board an emergency means to enable the person in charge of the transfer of oil to stop the flow of oil to the facility or other vessel.

(b) The emergency means must be a pump control or a quick-acting, power actuated valve. If an emergency pump control is used, it must stop the flow of oil if oil could siphon through the stopped pump.

(c) The emergency means must be operable from the cargo deck, cargo control room, or the usual operating station of the person in charge of the transfer of oil.

§ 155.790 Deck lighting.

(a) No person may operate a self-propelled vessel that has a capacity for 250 or more barrels of oil that is transferring oil to or from the vessel between sunset and sunrise unless that self-propelled vessel has installed deck lighting that illuminates—

(1) Each oil transfer connection point in use with an average minimum lighting intensity of 5 foot-candles; and

(2) Each oil transfer operations work area with an average minimum lighting intensity of 1 foot-candle.

(b) The lighting intensity must be measured on a horizontal plane 3 feet above the deck or walking surface.

§ 155.800 Oil transfer hose.

No person operating any vessel may use, and no person may operate a U.S. vessel that carries an oil transfer hose that is larger than 3 inches inside diameter unless it meets the requirements of § 154.500 of this chapter.

§ 155.810 Tank vessel security.

The owner or operator or person having custody of each tank vessel that contains more oil than the normal slingage and unpumpable bilge or sump residues in any cargo tank shall maintain surveillance of that vessel by a person who is responsible for the security of the vessel and for keeping unauthorized persons off the vessel.

§ 155.820 Records.

The owner or operator of each vessel subject to the following referenced regulations shall keep a written record available for inspection by the Commandant of—

(a) The name of each person currently designated as a person in charge of oil transfer operations as required by § 155.700;

(b) The date and result of the most recent test or inspection of each item tested or inspected as required by § 156.170 of this chapter;

(c) The hose information required by § 154.500(f) of this chapter unless that information is marked on the hose; and

(d) The date and location of each valve inspection required by § 155.480.

APPENDIX A

SPECIFICATIONS FOR SHORE CONNECTION

[See §§ 310, 350, 370, and 380 of this part]

Item	Description	Dimension
1	Outside diameter	215 mm. (8½ in.).
2	Inside diameter	According to pipe outside diameter.
3	Bolt circle diameter	183 mm. (7 2/16 in.).
4	Slots in flange	6 holes 22 mm. (⅞ in.) in diameter shall be equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery. The slot width is to be 22 mm. (⅞ in.).
5	Flange thickness	20 mm. (¹⁵⁄₁₆ in.).
6	Bolts and nuts	6, each of 20 mm. (¾ in.) in diameter and of suitable length.

The flange shall be of steel having a flat face, with a gasket of oil-proof material, and both shall be suitable for a service pressure of 6 kg./cm.² (85 p.s.i.).

The steel materials used shall meet the material specifications of standard B16.5, Steel Pipe Flanges and Flanged Fittings of the American National Standards Institute (ANSI).

PART 156—OIL TRANSFER OPERATIONS

Sec.

AUTHORITY: The provisions of this Part 156 issued under section 311(j)(1)(C) and (D) of the Federal Water Pollution Control Act (86 Stat. 816, 868); 33 U.S.C. 1161(j)(1)(C) and (D); E.O. 11548, 3 CFR, 1966–1970 Comp., p. 949; 49 CFR 1.46(m).

§ 156.100 Applicability.

This part applies to the transfer of oil to or from any vessel with a capacity of 250 or more barrels for that oil on the navigable waters or contiguous zone of the United States, except the transfer of—

(a) Lubricating oil for use on board the vessel; and

(b) Non-petroleum-based oil that is transferred to or from a vessel other than a tank vessel.

§ 156.105 Definitions.

As used in this part:

(a) "Barrel" means that unit of liquid measure equivalent to 42 U.S. gallons at 60° F.

(b) "Captain of the Port" means a U.S. Coast Guard officer commanding a Captain of the Port area described in Part 3 of this chapter or his authorized representative or, where there is no Captain of the Port area, a District Commander of a Coast Guard district described in Part 3 of this chapter or his authorized representative.

(c) "District Commander" as used in this part means the officer of the Coast Guard designated by the Commandant to command a Coast Guard District as described in Part 3 of this chapter or his authorized representative.

(d) "Facility" means either an onshore facility or an offshore facility.

(e) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States other than a vessel or a public vessel.

(f) "Oil" means oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. For the purpose of this part lique-

fied petroleum gas (LNG and LPG) are excluded.

(g) "Onshore facility" means any facility (including, but not limited to motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

(h) "Person in charge" means a person designated as a person in charge of oil transfer operations under § 154.710 or § 155.700 of this chapter.

(i) "Public vessel" means a vessel owned or bare-boat chartered and operated by the United States, or by a State or political subdivision thereof, or by a foreign nation, except when such a vessel is engaged in commerce.

(j) "Tank vessel" means any vessel especially constructed or converted to carry liquid bulk cargo in tanks.

(k) "Tank barge" means any tank vessel not equipped with a means of self propulsion.

(l) "Vessel" means every description of watercraft, or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.

§ 156.107 Waivers.

The Captain of the Port may waive, in whole or in part, compliance with any requirement in this part if—

(a) Application for the waiver is submitted to the Captain of the Port 30 days before operations under the waiver are proposed unless a shorter time is authorized by the Captain of the Port; and

(b) The Captain of the Port finds that an equivalent level of protection of the navigable waters and contiguous zone from pollution by oil will be provided by the alternative procedures, methods or equipment standards to be used.

§ 156.110 Person in charge: Limitations.

(a) No person may serve as the person in charge of oil transfer operations on more than one vessel at a time unless—

(1) The vessels are immediately adjacent;

(2) There is a ready means of access between vessels; and

(3) The person in charge is not also the person in charge of the facility.

(b) No person may serve as the person in charge of both the vessel and the facility during oil transfer operations except when the Captain of the Port authorizes such procedure.

§ 156.120 Requirements for oil transfer.

No person may transfer oil to or from a vessel unless—

(a) The vessel's moorings are strong enough to hold in all expected conditions of surge, current, and weather and are long enough to allow adjustment for changes in draft, drift, and tide during the transfer operation;

(b) Oil transfer hoses or loading arms are long enough to allow the vessel to move to the limits of its moorings without placing strain on the hose, loading arm, or transfer piping system;

(c) Each hose is supported in a manner that prevents strain on its coupling;

(d) Each part of the transfer system necessary to allow flow of oil is lined up for the transfer;

(e) Each part of the transfer system not necessary for the transfer operation is securely blanked or shut off;

(f) The transfer system is connected to a fixed piping system on the receiving vessel or facility except that when receiving fuel for the vessel an automatic back pressure shutoff nozzle may be used;

(g) Except when used to receive or discharge ballast, each overboard discharge or sea suction valve that is connected to the vessel's oil transfer, ballast, or cargo tank systems is sealed, lashed, or locked in the closed position;

(h) Each oil transfer hose has no loose covers, kinks, bulges, soft spots, and no gouges, cuts, or slashes that penetrate the hose reinforcement;

(i) Each coupling meets the requirement of § 156.130;

(j) The discharge containment required by §§ 154.530, 155.310, and 155.320 of this chapter, as appropriate, is in place;

(k) Each scupper or drain in a discharge containment system is closed;

(l) Any continuing loss of oil from any transfer component is at a rate that will not exceed the capacity of the containment system;

(m) The communications required by § 154.560 of this chapter are operable for the transfer operation;

(n) The emergency means of shutdown required by §§ 154.550 and 155.780 of this chapter, as appropriate, is in position and operable;

(o) The designated personnel are on duty to conduct the transfer operations in accordance with the facility operations manual and vessel oil transfer procedures that apply to the transfer operation;

(p) At least one person is present who fluently speaks the language spoken by each person in charge;

(q) The person in charge of oil transfer operations on the transferring vessel or facility and the person in charge of oil transfer operations on the receiving vessel or facility have held a conference, to assure that each person in charge understands the following details of the transfer operations—

(1) The identity of the product to be transferred.

(2) The sequence of transfer operations.

(3) The transfer rate.

(4) The name or title and location of each person participating in the transfer operation.

(5) Particulars of the transferring and receiving systems.

(6) Critical stages of the transfer operation.

(7) Federal, State, and local rules that apply to the transfer of oil.

(8) Emergency procedures.

(9) Discharge containment procedures.

(10) Discharge reporting procedures.

(11) Watch or shift arrangement.

(12) Transfer shutdown procedures.

(r) The person in charge of oil transfer operations on the transferring vessel or facility and the person in charge of oil transfer operations on the receiving vessel or facility agree to begin the transfer operation;

(s) Each person in charge required by this part is present;

(t) Between sunset and sunrise the lighting required by §§ 154.570 and 155.790 of this chapter is provided; and

(u) For vessel to vessel transfer operations involving a tank barge between sunset and sunrise, lighting of the intensity specified in § 155.790 of this chapter is provided on the barge.

§ 156.130 Connections.

(a) Each person who makes a connection for oil transfer operations shall—

(1) Use suitable material in joints and couplings to make a tight seal;

(2) Use a bolt in at least every other hole and in no case less than four bolts in each temporary connection utilizing an American National Standards Institute (ANSI) standard flange coupling;

(3) Use a bolt in each hole of couplings other than ANSI standard flange couplings;

(4) Use a bolt in each hole of each permanently connected flange coupling;

(5) Use bolts of the same size in each bolted coupling; and

(6) Tighten each bolt and nut uniformly to distribute the load.

(b) No person who makes a connection for oil transfer operations may use any bolt that shows signs of strain or is elongated or deteriorated.

(c) No person may use a connection for oil transfer operations unless it is—

(1) A bolted or full threaded connection; or

(2) A quick-connect coupling approved by the Commandant; or

(3) An automatic back pressure shutoff nozzle used to fuel the vessel.

§ 156.150 Declaration of inspection.

(a) No person may transfer oil to or from a vessel unless each person in charge, designated under §§ 154.710 and 155.700 of this chapter, has signed the declaration of inspection form prescribed in paragraph (c) of this section.

(b) No person in charge may sign the declaration of inspection unless he or the other person in charge has determined by inspection that the facility and vessel meets the requirements in § 156.120.

(c) The declaration of inspection required to be signed in paragraph (a) of this section may be in any form but must contain at least—

(1) The name or other identification of the transferring vessel or facility and the receiving vessel or facility;

(2) The address of the facility or location of the transfer operation if not at a facility;

(3) The date the transfer operation is started;

(4) A list of the requirements in § 156.120 of this chapter with spaces on the form following each requirement for the person in charge of the vessel or facility to indicate whether the requirement is met for the transfer operation; and

(5) A space for the date, time of signing, signature, and title of each person in charge during oil transfer operations on the transferring vessel or facility and

a space for the date, time of signing, signature, and title of each person in charge during the oil transfer operations on the receiving facility or vessel.

(d) The form for the declaration of inspection required in paragraph (a) of this section may incorporate the declaration-of-inspection requirements of 46 CFR 35.35-30.

(e) The operator of each facility shall retain for at least 1 month from the date of signature, a signed copy of each declaration of inspection required for that facility.

(f) The operator of each vessel engaged in vessel-to-vessel transfers shall retain for at least 1 month from the date of signature a signed copy of each declaration of inspection for such vessel-to-vessel transfers.

§ 156.160 Supervision by person in charge.

(a) No person may connect, top off, disconnect, or engage in any other critical oil transfer operation unless the person in charge, designated under § 154.710 or § 155.700 of this chapter, personally supervises the operation.

(b) No person may start the flow of oil to or from a vessel unless instructed to do so by the person in charge.

(c) No person may transfer oil to or from a vessel unless the person in charge is in the immediate vicinity of the transfer operation and immediately available to the oil transfer personnel.

§ 156.170 Equipment tests and inspections.

(a) No person may use any item of equipment listed in paragraph (c) of this section, except hose used in underwater service, in oil transfer operations unless the operator of the vessel or facility has tested and inspected it annually in accordance with paragraphs (b) and (c) of this section and found that it is in the condition specified in paragraph (c) of this section.

(b) During any test or inspection required by this section, a hose must be in a straight and horizontal position and the entire external surface must be accessible.

(c) For the purpose of paragraph (a) of this section—

(1) Each nonmetallic oil transfer hose that is larger than 3 inches inside diameter must—

(i) Have no loose covers, kinks, bulges, soft spots, and no gouges, cuts, or slashes that penetrate the hose reinforcement;

(ii) Have no external and, to the extent internal inspection is possible with both ends of the hose open, no internal deterioration; and

(iii) Not burst, bulge, leak, or abnormally distort under static liquid pressure at least as great as the pressure of the relief valve setting (or maximum pump pressure when no relief valve is installed) plus any static head pressure of the system in which the hose is used;

(2) Each transfer system relief valve must open at or below the pressure at which it is set to open;

(3) Each pressure gage must show pressure within 10 percent of the actual pressure;

(4) Each loading arm and each oil transfer piping system, including each metallic hose must not leak under static liquid pressure at least as great as the pressur of the relief valve setting (or maximum pump pressure when no relief valve is installed) plus any static head pressure in the system; and

(5) Each item of remote operating or indicating equipment, such as a remotely operated valve, tank level alarm, or emergency shutdown device, must perform its intended function.

(d) No person may use any hose in underwater service for oil transfer operations unless the operator of the vessel or facility has tested and inspected it biennially in accordance with paragraph (c)(1) or (c)(4) of this section, as applicable.

Effective date. These amendments shall become effective on July 1, 1974, except § 154.110 shall become effective on January 30, 1973, and the revision of § 151.35 shall become effective on January 30, 1973.

Dated: December 14, 1972.

C. R. BENDER,
Admiral, U.S. Coast Guard,
Commandant.

[FR Doc.72-21816 Filed 12-20-72;8:45 am]

Title 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGD 71-161R]

PART 10—LICENSING OF OFFICERS AND MOTORBOAT OPERATORS AND REGISTRATION OF STAFF OFFICERS

PART 12—CERTIFICATION OF SEAMEN

PART 31—INSPECTION AND CERTIFICATION

PART 71—INSPECTION AND CERTIFICATION

PART 91—INSPECTION AND CERTIFICATION

PART 105—COMMERCIAL FISHING VESSELS DISPENSING PETROLEUM PRODUCTS

PART 175—GENERAL PROVISIONS

PART 176—INSPECTION AND CERTIFICATION

PART 187—LICENSING

PART 188—GENERAL PROVISIONS

PART 189—INSPECTION AND CERTIFICATION

Pollution Prevention Inspection of Vessels and Deck and Engineer Officers' Licenses

This amendment promulgates new regulations that require merchant marine officers and seamen to have additional knowledge of oil pollution and of laws, regulations, and procedures to prevent oil pollution; to require pollution prevention equipment for vessel certification; and to require more frequent hull inspection (drydocking) of tank barges in fresh water service.

A notice of proposed rule making (CGFR 71-161) with respect to these regulations was published in December 24, 1971, issue of the FEDERAL REGISTER (36 F.R. 24970). Subsequent thereto the Ports and Waterways Safety Act of 1972 (Public Law 92-340) was enacted and which requires regulations to be promulgated by the Coast Guard governing ship design and operation to prevent pollution from marine operations. It is emphasized that the regulations promulgated herein are not those required by the Ports and Waterways Safety Act but are issued under the Federal Water Pollution Control Act (86 Stat. 816; 33 U.S.C. 1151).

A public hearing on the proposed regulations was held on February 15, 1972, and the record remained open until April 21, 1972, for public comment. One hundred and eighty-five public comments were received on the two notices. The comments of record have been carefully reviewed and the following changes have been made to the regulations proposed in notice CGFR 71-161 amending Chapter I of Title 46 Code of Federal Regulations.

The majority of comments received as a result of CGFR 71-161 concerned the proposed changes to § 31.10-20, *Drydocking or hauling out TB/ALL.* The comments principally objected to the wording which could be read to mean vessels operating in salt water must be docked every 18 months; to the shortening of the fresh water service period between drydockings; and to the time allowed to bring vessels into compliance with the new schedule. The proposed wording has been revised to clarify that vessels regardless of service need not be docked more frequently than every 24 months.

The present drydocking schedule is based upon anticipated corrosion and deterioration. However, Coast Guard records and comments received indicate that the principal hull problem with barges is damage resulting from handling and operations rather than long-term corrosion. One comment received, which is supported by Coast Guard data, is that on the average a barge will suffer sufficient damage to cause a leak once a year. Another comment stated that, on the average, the bilge knuckles must be replaced every 6 or 7 years. The Coast Guard believes that the existing authorized interval of 5 years between required drydocking is excessive and is therefore retaining the proposed 3-year cycle for drydocking.

It is emphasized that the effective date of July 1, 1974, for this section means that by that date all tank vessels in fresh water service must be on the 3-year cycle for drydocking. Thus, on July 1, 1974, all U.S. tank vessels, except those double hulled vessels meeting the internal inspection exemption, must have been drydocked since June 30, 1971.

DIGEST OF

OIL SPILL PREVENTION AND POLLUTION CONTROL ACT

Laws of Florida - Ch. 70-244

Effective July 1, 1970

Section 3, Paragraph 9: "Terminal facility" means any water front facility of any kind and related appurtenances located on land, which facility is used for pumping, storage, handling, transferring, processing or refining oil or other pollutants.

Section 4: The discharge or spilling of oil petroleum products, their by-products and other pollutants into any costal water, reservoir, tidal flats, beaches and lands adjoining the seacoast of this State is prohibited.

Section 8: Any person discharging (spilling) any of the pollutants in Section 4 above shall immediately begin removing such spill to the satisfaction of the Department of Natural Resources. The person directly responsible for this removal is the person in charge of the terminal facility, and he shall immediately report the spill to the following:

1. U. S. Coast Guard
2. Florida Department of Natural Resources
3. Florida Air and Water Pollution Control Board (if a dispersant is used)

Failure to clean up and report immediately is punishable by a civil fine of $50,000 per day and such person is liable to the State for all costs of clean-up or other costs received by the State.

Section 12: In addition, for failure to report a spill, the person in charge of the terminal facility shall be liable, upon conviction, for not more than two (2) years in prison or a fine of $10,000. By law, the Company must designate to the Department of Natural Resources a person at the terminal who is in charge. (The penalty provisions do not apply if a spill is promptly reported.)

Section 14: Each owner of a terminal facility shall establish with the Department of Natural Resources evidence of financial responsibility by one or more of the following:

1. Evidence of insurance
2. Surety bonds payable to the Governor to pay costs of clean-up.
3. Qualification as a self-insurer
4. Other evidence of financial responsibility

Each owner shall designate a person in the State as its legal agent for service of process under the Act.

LICENSES

All terminal facilities shall apply for an annual license within three (3) months from July 1, 1970, which license will expire annually on December 31st. Licenses shall issue after satisfactory showing that operators of terminals can provide all necessary equipment to prevent and contain spills. Annual fee shall be $250 per terminal. Each terminal shall, when directed by the Department of Natural Resources, obtain a terminal facility inspection (probably additional fee involved to be determined by regulation up to $500) and shall submit the following information:

1. The bulk barrel measurement capacity of the terminal facility.

2. All containment and removal equipment.

REPORT SPILLS IMMEDIATELY TO THE
DEPARTMENT OF NATURAL RESOURCES

S E C T I O N I I

Training

A. The person in charge of oil transfer operations, is the Fuel Loader. In most instances each Fuel Loader has a minimum of 1-1/2 years experience in various areas of plant operations before coming to the Bartow terminal. His specific training consists of on-the-job experience in which he actively participates in loading barges and unloading tankers. He is also required to obtain a tankerman's license. If, in the opinion of his supervisor, he can competently perform the oil transfer operations, he is accorded the responsibility for fuel handling.

B. Florida Power Corporation is currently developing a formal training program which will fully meet the requirements of Section 154.710. The Coast Guard will be sent a copy of this program when it is completed. This program will include a day at the facility with a COTP representative.

SECTION III

OPERATIONS

A. Communication System - The dock has a complete communication system to include an intercom, PA and Bell telephone system. With the PA and intercom, anyone can be contacted at the plant or dock areas through the numerous phone stations. Outside calls can be made from the Bell phone. In addition, walkie-talkies and a voice gun are available during transfer operations.

B. Personnel Shelter - The dock service building provides shelter for transfer personnel. As previously described, the service building is provided with lighting, fire fighting equipment, oil containment apparatus and a first aid kit.

C. Drip and Discharge Facilities - There is a closed curbed area around each of the fuel loading and unloading areas. Any oil leaking from the loading arms will be contained in this area. Small amounts of oil can be wiped clean with rags and then placed in the trash designated for oily wastes. Large amounts of oil will be collected by utilizing a mobile vacuum pump and tank.

D. Emergency Shutdown System - There is a remote control pump shutoff at the barge loading arm which can be used by barge personnel to stop the flow of oil.

E. Relief Valves - Each of the transfer pumps used for barge loading is equipped with a relief valve on the discharge side of the pump. The setting is 150 psi. The tanker unloading system has a maximum operating pressure of 100 psi.

F. Oil Transfer - The Bartow facility is used to load barges and unload tankers. Each operation is separate and has its own procedures. In addition, this section includes specific instruction on the handling of barge and tanker loading arms.

TANKER UNLOADING

Prior to the arrival of the tanker:

1. Notify Saybolt as soon as a definite ETA has been established. Saybolt should be here one hour by ETA.

2. Notify proper personnel for line handling. This requires five people - two for Bow Lines, two for Stern Lines. The fifth man will spot tanker for manifold line up with Dock.

3. Notify Switchboard or Auxiliary Operator and Gate Guard of Tanker ETA.

4. Gage receiving tank or tanks with Saybolt and customs as soon as practical. Witness and advise sealing of necessary valves. Open overhead valve on receiving tank.

5. Launch Boston Whaler as soon as practical and move oil containment boom to northwest corner of tanker slip. This is to prevent damage to boom from tug prop wash.

6. Give Ship's Agent FPC passes and Captain's information sheet.

7. Person docking tanker gets information such as tide reading, forward and AFT Draft, Etc. See tanker unloading data sheet.

Upon Arrival of the Tanker:

1. Connect unloading lines when notified by tanker personnel or Pollution Agent. (See unloading arm handling instructions.)

2. Before oil transfer begins the person in charge of the facility and the person in charge of the barge, will make a joint inspection and then both will sign the "Declaration of Inspection". The document will include a checklist to insure that the requirements of Coast Guard regulations are met. The Declaration will be maintained in a separate folder for 30 days.

3. Dock-side shore valves are not to be opened until permission is given by Saybolt or other inspecting company personnel. This is done to make sure gaging of tanker is completed satisfactorily before discharging of the cargo begins.

4. Keep tanker unloading data sheet up for figuring unloading rates, line temp, line pressure, etc.

5. Oil containment boom should be put back in place as soon as practical after tanker docks, and before discharging of cargo begins. Boston Whaler should be placed back on davits. Johnson Fuel Tank and hose, life jackets, boat key and boat hook should be returned to proper storage places.

5. (continued)

   NOTE: Call out men (D.S.) should first complete all work necessary for operator on duty, then "check with operator before leaving for any unfinished operations."

6. Sampling of tanker from line consists of labeling (2) cans properly, flushing line each time to assure that a representative sample is taken. Usually a couple of gallons is sufficient flushing. The first sample should be taken a couple of hours after discharging begins. The second sample, after about one half of cargo has been discharged. The third sample about two hours before cargo discharge is completed. Each of the three samplings should be about 1/3 pint in each of two, one-pint cans. One pint is sent to plant lab as soon as possible and the other pint is retained in Dock Service locker room storage (for three months). Sampling times should be noted on T.U.D. Sheet.

7. Close attention to unloading operations. Tanker personnel dockside activity and frequent inspection of bay waters for oil and/or other pollution is responsibility of man on duty.

8. If tanker wants fresh water, see tanker water usage log sheet for further information.

9. Keep Bartow Plant-Oil Unloading Log Sheet current and signed. Any irregularities, generation information, etc., should be noted in Log under "Remarks".

10. It is ship's responsibility to notify the Dock one hour before discharging of cargo is finished; however, this time may vary depending on the circumstances.

11. Dock Personnel should make certain that proper tanker personnel are notified of this. Inspecting agents (Saybolt) and Pollution Agents should be notified as requested by them or one hour before.

12. When ship personnel are ready close shore side valves and disconnect unloading arm. (See unloading arm handling instructions).

13. Tanker sailing requires two line handlers. Low man on overtime should be called out if needed.

TANKER UNLOADING (continued)

14. Oil boom need not be moved for tanker sailings. However, attention should be given to boom during actual tug operations and tug Captains should be notified by megaphone, hand signals, etc., if possibility of damage to boom is apparent.

15. Foreign oil received by tankers must be released by customs before its available for FPC use. Customs should be notified to release oil as soon as Saybolt gauging oil is excluded.

16. Tanker paperwork should be completed and filed properly.

17. Tanker unloading data log sheet should be updated every two-four hours.

INSTRUCTIONS FOR USE OF TANKER UNLOADING ARMS AND AIR WINCH

The Terminal will be responsible for operating the air winch during hook up. The connecting lines are eight-inch aluminum Shiksans with a 4,000 lbs. capacity air winch.

The air winch is hand controlled and air operated for vertical movement of tanker unloading arms. The ship's crew will control lateral movement with the aid of handling lines spliced to the connecting end.

Open air supply valve to winch and release brake (left side of cable roll). The clutch (right side of cable roll) must be kept in closed position. If clutch is disengaged during operation, the loading arm will fall.

With brake control in right hand and air control in left hand, push air control lever forward to raise arm high enough to clear railing on ship. Ship's crew will pull arm over. Then lower (air control back and down) and hold, with brake, about one foot above drip buckets. When ship's crew remove blank flange, raise to slightly higher than hook-up position. Downward movement can be finely controlled with the use of brake above, whereas upward movement is more coarsely controlled by air. Ship's crew will guide movements.

After hookup is complete, release hand brake and close air supply.

INSTRUCTIONS FOR USE OF TANKER UNLOADING ARMS AND AIR WINCH (cont'd)

Maximum unloading pressure permitted is 100 lbs.

The unloading arms will reach a maximum of 40 feet. However, tides and ship height must be considered as they will change the effective length of the unloading arm.

BARGE LOADING

1. Gauge Tank to be used prior to barge arrival.

2. Before oil transfer begins the person in charge of the facility and the person in charge of the barge will make a joint inspection and then both will sign the "Declaration of Inspection". The document will include a checklist to insure that the requirements of Coast Guard regulations are met. The Declaration will be maintained in a separate folder for 30 days.

3. Close Valve #181.

4. Open Valve #178.

5. Help connect loading arm to barge (See loading arm instructions).

6. Open recirculation valves on #1, #2, and #4 fuel oil transfer pumps.

7. Make sure valve #448 (at barge dock) is open.

8. Make sure vent valve is closed on barge loading arm.

9. Open valve #155.

10. Put #1 pump in automatic position.

    a - Barge personnel will turn pump on from controls at barge loading station.

    b - Let pump run until warm.

    c - Check vacuum pressure gage. (If vacuum is noted, open valve #155 until pressure is indicated on gauge.)

BARGE LOADING (Cont'd)

10. d - Check pump pressure gauge. (If pressure rises above 120 psi, shut down and check all valves for proper position (including barge valves).

11. If all operations to this point are normal, put #2 transfer pump in auto position and follow procedures A through D in Item #10.

12. If all operations to this point are normal, start #4 transfer pump and follow procedures A through D in Item #10.

13. Slowly close recirculating valve on all three pumps to establish zero vacuum pressure on vacuum pressure gauge.

14. If vacuum is higher than 5 psig and valve #155 is wide open, shut down #4 pump to bring vacuum lower. (It is not recommended that pumps be run in a vacuum higher than 5 psig).

15. In normal operation, barge personnel will shut #1 and #2 pumps off from control panel at barge dock when barge is loaded. However, #4 pump must be shut down by Dock Service personnel since it is on manual control.

16. When all pumps have been shut down, close valve #155.

17. To relieve pressure off pumps and to clear barge loading line, turn pumps on for a few seconds (one at a time).

18. Signal barge personnel to close valve #448.

19. Close valve #178.

20. Disconnect hose (See loading arm instructions).

21. Gauge tank.

INSTRUCTIONS FOR THE USE OF BARGE DOCK LOADING ARM AND AIR WINCH

The Terminal will be responsible for operating the air winch during hook up. The connecting line is an eight-inch aluminum Chiksan with a 2,000 lbs. capacity air winch.

The air winch is hand controlled and air operated for vertical movement of Barge loading arm. Lateral movement is controlled by barge crew with the aid of handling line spliced to the connecting end of loading arm.

Be sure air vent is closed on top of loading arm. Then open air supply to winch and release brake. Clutch must remain in engaged position or Loading arm will fall.

Barge men will direct movement.

When hook up is complete, both brake and clutch must be released and air supply closed.

The loading arm will reach a maximum of 25 feet. However, tides and barge height must be considered as they will change the effective length of the loading arm.

S E C T I O N I V

Oil Pollution

A. The following oil pollution containment equipment is available at the Bartow facility.

Perelli oil boom - 300 feet.

Slick-bar oil boom - 450 feet, 200 feet, 400 feet.

Worthington oil boom - 280 feet.

Polyfoam - 16 bags.

Fiberpearl - 30 bags.

Shell oil herder - 20 gallons.

Collection nets - 4 each.

Oil worm - 4 sections, 60 feet long.

Boat - 16 feet/10 hp motor.

Boston Whaler/40 hp motor.

Work boat - 26 feet/55 hp motor.

Any of the above equipment which is not located at the place of use, is stored in the dock service building. It is readily accessible at all times.

B. In the event of a fuel oil spill the following general procedures will be carried out.

1. The employee discovering the spill will immediately notify the System Fuel Operations Supervisor. The System Fuel Operations Supervisor will determine the extent of the emergency and call for additional help, if needed.

2. The System Fuel Operations Supervisor should notify the Bartow Plant Superintendent and the General Plant Superintendent.

3. The System Fuel Operations Supervisor will be responsible for notifying the following individuals.

B. (continued)

THESE CALLS ARE MANDATORY

a. Production Department - (Mr. G. W. Marshall)
Office - 4420 - Home (813) 345-8857

b. Environmental Supervisor - (Mr. R. E. Parnelle)
Office - 4544 - Home (813) 526-2658

c. U. S. Coast Guard - (Port of Tampa)
(0800 - 1700) - (813) 228-2193
Night or Weekends - (813) 245-5891 or
(813) 896-6187

d. Department of Natural Resources
(0800 - 1700) - (813) 893-2221
Night or Weekends - (904) 488-5757

e. PIO - (Mr. W. Johnson)
Office - 4370 - Home (813) 894-3231

f. Department of Pollution Control
(Winter Haven Office) - (813) 299-1134

4. The following individuals may be called in an emergency situation.

Mr. D. Flynn (Gen. Plant Supt.) - 5703 (Office)
- 526-6400 (Home)

Mr. R. Schooley (Plant Supt.) - 5703 (Office)
- 522-6931 (Home)

Mr. D. Dingle (Plant Engineer) - 5700 (Office)
- 343-3976 (Home)

Mr. D. Turner (Operations Supervisor) - 5700 (Office)
- 898-2892 (Home)

Mr. D. Shantz (Environmental Engineer) - 4424 (Office)
- 581-6708 (Home)

B. (continued)

5. The Fuel Handling Supervisor or in his absence, the senior man on duty, will assume responsibility for directing the oil containment and cleanup operations. The following general procedures apply.

   a. An oil boom should be deployed to completely contain the discharged oil. Oil booms have been strategically located such that either the barge slip or the tanker slip can be isolated. In addition, a boom has been placed at the mouth of the channel in order that the entire terminal can be isolated from the bay.

   b. As soon as the oil is contained, the skimmer should be utilized to remove all traces of oil from the water.

   c. The Fiberpearl Absorbent may be used to aid in the cleanup operation. It will be retrieved from the water with long handled nets.

   d. Any oil spill in the plant area should be contained with sand bags.

   e. All collected oil will be utilized in the plant if possible. If the oil cannot be used at the plant, the county road department will be contacted, to determine if the oil can be used for road repair. The DPC will be contacted before any disposal of oil.

   f. NO DISPERSANTS WILL BE USED

6. A practice session will be held semi-annually, by fuel handling personnel, to insure familiarization with the use of oil booms, skimmer, absorbent materials and pumps.

7. Florida Power Corporation is self insured and a statement of financial responsibility will be made available upon request.

S E C T I O N V

Personnel

A. A list of qualified fuel handlers will be given to the Coast Guard and also kept in a separate folder with the Declaration of Inspection. Under normal circumstances, only one (1) man will be involved with the loading and unloading operations. During critical times of docking, hookup and unhooking, several individuals will be involved. Additional help is readily available in any emergency.

B. All required phone numbers have been included in Section IV of this manual.

C. Unmanned vessels are not permitted to moor at the Bartow Terminal.

SECTION VI

INSPECTIONS AND EQUIPMENT TESTING

FACILITY INSPECTION RECORD

TYPE OF INSPECTION	DATE	COMMENTS	INSPECTORS SIGNATURE

ANNUAL EQUIPMENT TESTS

No item of equipment will be used in oil transfer service unless it has been tested and inspected annually and properly tagged as specified below.

A. Loading Arms

1. Isolate loading arm.
2. Hydro to the maximum setting of the system relief valve.
3. Repair and replace equipment as required.
4. Bleed pressure from the system.
5. Drain the loading arm.
6. Clean loading arm and hydro pump.

B. Transfer Relief Valves

Relief valves must be pressure tested to assure that it opens below or at pressure setting. (Conduct during transfer piping test).

C. Pressure Gages

Must be pressure tested to insure that it reads within 10% of actual pressure (conduct during transfer piping test).

D. Transfer System Piping

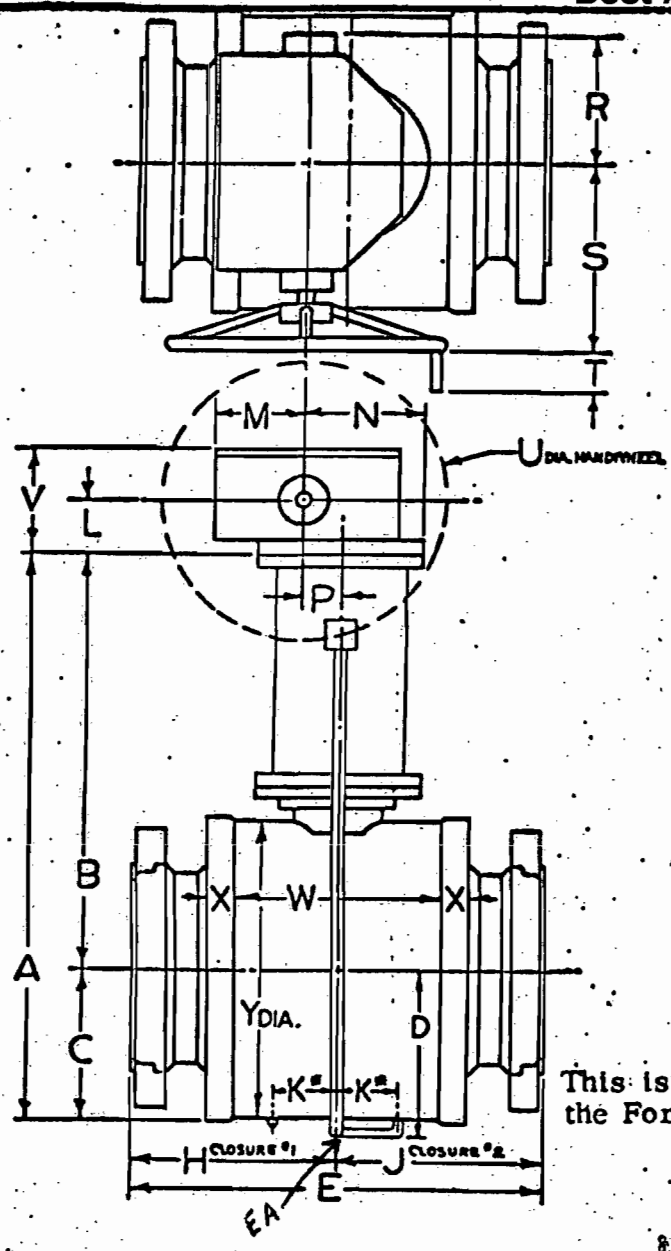
1. Fill the transfer line with fuel oil.
2. Isolate transfer line from transfer pump discharge to oil storage tank.
3. Pressurize to maximum pressure setting of relief valve.
4. Observe and record pressure drop over a 30 minute period. Conduct a visual inspection.
5. When test is completed system should be returned to normal operating status.

M-163C

B-5 BALL VALVE

ELEVATION GEAR OPERATOR (WITH CHAIN DOWN VALVE)

NOTE:
FOR VALVE SIZES 18" AND SMALLER - ONE DRAIN VALVE LOCATED ON VALVE ℄



VALVE SIZE & CLASS	24" CLASS 150	36"x30"x36" CLASS 150	24" CLASS 300	24" CLASS 300	10" CLASS 400	14" CLASS 600		
CLOSURE #1	24" WELD END	36" WELD END	24" WELD END	24" WELD END	10" WELD END	14" WELD END		
CLOSURE #2	24" WELD END	36" WELD END	24" WELD END	24" WELD END	10" WELD END	14" WELD END		
A	78 21/32	75 13/16	78 21/32	90 21/32	90 5/8	74 9/16		
B	58 13/32	51 3/16	58 13/32	70 13/32	80 11/16	62 1/4		
C	20 1/4	24 5/8	20 1/4	20 1/4	9 15/16	12 5/16		
D	22 1/2	27 1/4	22 1/2	22 1/2	11 5/8	14 5/8		
E	45	68	45	45	26 1/2	35		
H	22 1/2	34	22 1/2	22 1/2	13 1/4	17 1/2		
J	22 1/2	34	22 1/2	22 1/2	13 1/4	17 1/2		
K	9	12	9	9	–	–		
L	4 1/4	4 1/4	4 1/4	4 1/4	3	4 1/4		
M	5 7/8	5 7/8	5 7/8	5 7/8	4 3/16	5 7/8		
N	14 13/16	14 13/16	14 13/16	14 13/16	9 3/4	12 13/16		
P	7	7	7	7	4	5		
R	14 7/8	14 7/8	14 7/8	14 7/8	9 1/16	12 3/4		
S	19 1/8	19 1/8	19 1/8	19 1/8	13 1/16	16 15/16		
T	3	3	3	3	3 3/8	3 3/8		
U	32	32	32	32	16	24		
V	10 1/4	10 1/4	10 1/4	10 1/4	6 11/16	10 1/4		
W	28	34	28	28	11 1/2	16 5/8		
X	2 5/8	3 1/8	2 5/8	2 5/8	2 3/8	2 7/16		
Y	40 1/2	49 1/4	40 1/2	40 1/2	19 1/2	24 1/4		
OPER.	SY-150	SY-150	SY-150	SY-150	SY-25	SY-50		

This is to certify that this drawing represents the material as supplied the Ford, Bacon & Davis Construction Co. on their order number 1785-A.

OCT 1 1973 122729

MAY 21 1973

Engineering Dept.

DWG. NO. M-16308-735

GROVE VALVE & REGULATOR CO. OAKLAND

EQ. No. MLV-1, 2, 3, 4, 5, 6, 7, 8, 9, 9A, 10A, 11.

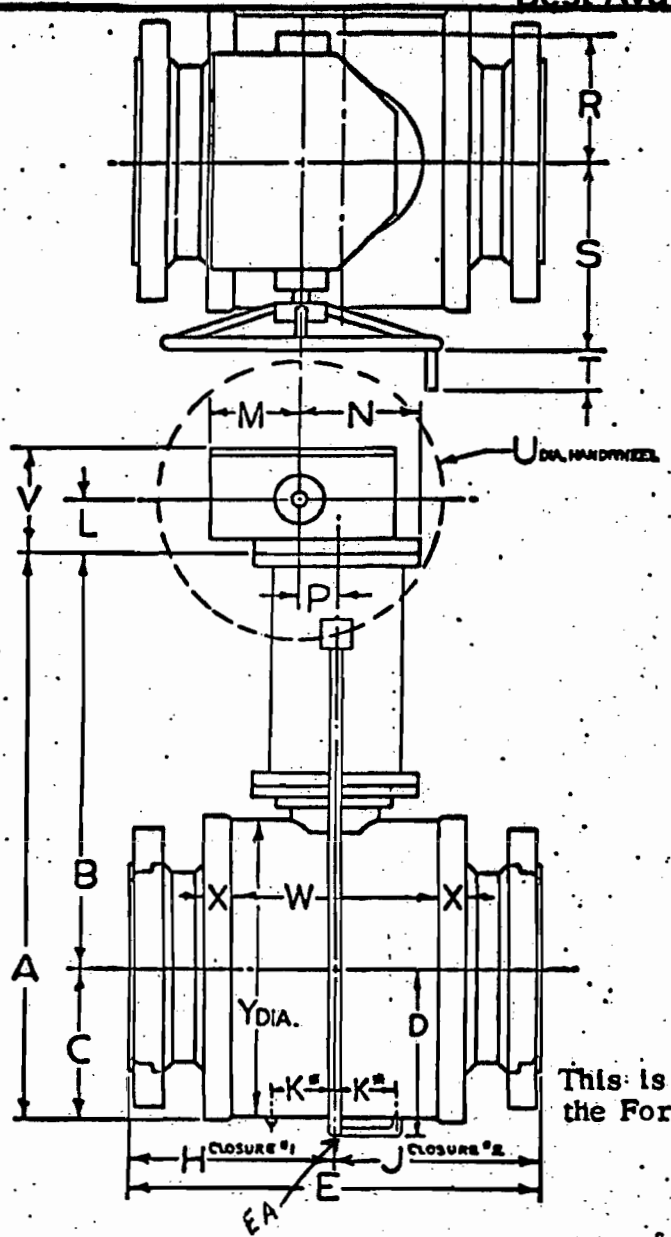
EXHIBIT # 2

M-163C

B-5 BALL VALVE

ELEVATED GEAR OPERATOR (WITH BLOW DOWN VALVE)

NOTE:
* FOR VALVE SIZES 18" AND SMALLER - ONE DRAIN VALVE LOCATED ON VALVE ℄



VALVE SIZE & CLASS	24" CLASS 150	36"x30"x36" CLASS 150	24" CLASS 300	24" CLASS 300	10" CLASS 400	14" CLASS 600		
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CLOSURE #2	24" WELD END	36" WELD END	24" WELD END	24" WELD END	10" WELD END	14" WELD END		
A	78 21/32	75 13/16	78 21/32	90 21/32	90 5/8	74 9/16		
B	58 13/32	51 9/16	58 13/32	70 13/32	80 11/16	62 1/4		
C	20 1/4	24 5/8	20 1/4	20 1/4	9 15/16	12 5/16		
D	22 1/2	27 1/4	22 1/2	22 1/2	11 5/8	14 5/8		
E	45	68	45	45	26 1/2	35		
H	22 1/2	34	22 1/2	22 1/2	13 1/4	17 1/2		
J	22 1/2	34	22 1/2	22 1/2	13 1/4	17 1/2		
K	9	12	9	9	–	–		
L	4 1/4	4 1/4	4 1/4	4 1/4	3	4 1/4		
M	5 7/8	5 7/8	5 7/8	5 7/8	4 3/16	5 7/8		
N	14 13/16	14 13/16	14 13/16	14 13/16	9 3/4	12 13/16		
P	7	7	7	7	4	5		
R	14 7/8	14 7/8	14 7/8	14 7/8	9 11/16	12 3/4		
S	19 1/8	19 1/8	19 1/8	19 1/8	13 11/16	16 15/16		
T	3	3	3	3	3 3/8	3 3/8		
U	32	32	32	32	16	24		
V	10 1/4	10 1/4	10 1/4	10 1/4	6 11/16	10 1/4		
W	28	34	28	28	11 1/2	16 5/8		
X	2 5/8	3 1/8	2 5/8	2 5/8	2 3/8	2 7/16		
Y	40 1/2	49 1/4	40 1/2	40 1/2	19 1/2	24 1/4		
OPER.	SY-150	SY-150	SY-150	SY-150	SY-25	SY-50		

This is to certify that this drawing represents the material as supplied the Ford, Bacon & Davis Construction Co. on their order number 1785-A.

OCT 1 1973 122729

Buck
Engineering Dept.

MAY 21 1973

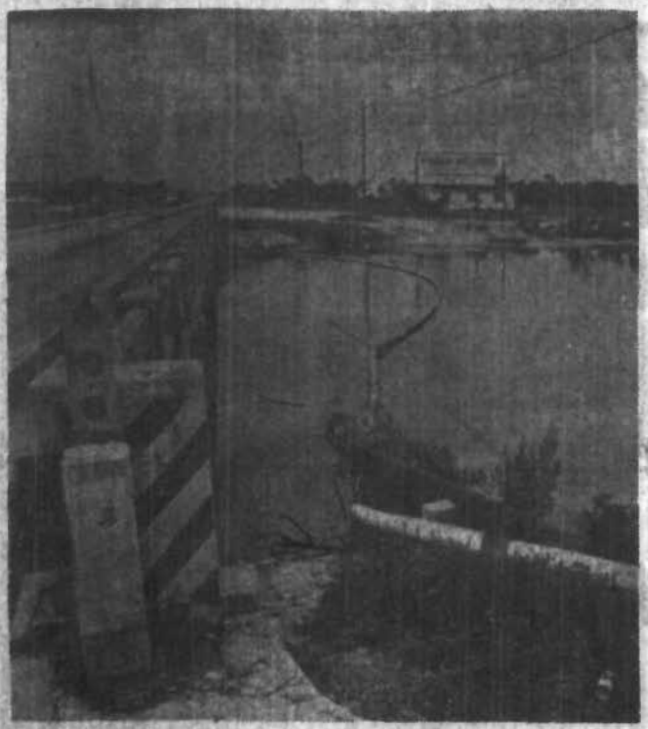
M-16308-735

GROVE VALVE & REGULATOR CO.

EQ. No. MLV-1. 2. 3. 4. 5. 6. 7. 8. 9. 9A, 10A, 11.

EXHIBIT # 2

St Petersburg Times 8/1/74



St. Petersburg Times Photo by Larry Alspaugh

Boom contains oil at U.S. 19 bridge

6,000 gallons of oil fouls Allen's creek

By LINDA CECIRO
St. Petersburg Times Staff Writer

CLEARWATER — About 6,000 gallons of fuel oil spilled into Allen's Creek Monday night, leaving blackened banks and oil-coated mangroves in its wake.

The spill apparently was caused when a valve malfunctioned in a high-pressure fuel line that Florida Power Corp. runs from its Bartow plant to a plant it is building on the Anclote River near Tarpon Springs.

Coast Guard Lt. Cmdr. Frank Harrell of the Tampa marine inspection office said about 5,000 gallons of residual oil has been picked up by vacuum suction at the scene of the spill.

to catch any residue oil that may wash out of the mangroves by tidal action.

When The St. Petersburg Times contacted Florida Power to get information about the spill, information officer Brock Lucas said he did not have any. He said he had just returned from vacation and had not had time to contact the press about the spill, even though the company had been aware of the problem for two days.

LUCAS at first said that only 600 to 800 gallons of oil had spilled, in contrast to the 6,000 gallon figure used by the Coast Guard. Workmen operating the suction hoses then confirmed the 6,000-gallon, or approximately 143-barrel, fig-

Coast Guard Lt. Cmdr. [redacted] Harrell of the Tampa [redacted] inspection office said about 5,000 gallons of residual oil has been picked up by vacuum suction at the scene of the spill.

OIL BOOMS were put in place about 7:30 a.m. Tuesday, Harrell said, and only isolated patches of film floated into Old Tampa Bay. He said the rest of the spill was contained to a three-mile area in the creek.

The Department of Natural Resources Marine Patrol has brought in a biologist from Tallahassee to measure environmental and property damage, but no reports have been issued.

A spokesman for the Florida Department of Pollution Control said his office had not been notified of the spill.

"We haven't received any information about the spill," he said, "although Florida Power should have come to us right away with this. We'll send an inspector out right away."

THERE WAS no immediate evidence of damage to wildlife. No oil-coated ducks, evident in other large oil spills in the bay area, were seen. Fish could be seen swimming in the creek.

Harrell said Florida Power secured pressure on the line as soon as it located the spill and had crews working all night Tuesday to clean up the oil. He said the booms will remain in place for several days only 600 to 800 gallons of oil had spilled, in contrast to the 6,000 gallon figure u[redacted] the Coast Guard. Workmen operating the suction hoses then confirmed the 6,000-gallon, or approximately 143-barrel, figure, and Lucas agreed that his original estimate was incorrect.

Allen's Creek is a tributary of Old Tampa Bay, which winds under U.S. 19 west to Belcher Road. It is a well-known fishing spot for blue crabs and saltwater fish, and both wild and domestic ducks nest there.

Dunedin environmental adviser Roger Stewart says that while anything in the immediate area of the spill will be coated by the oil the long-term environmental effects will not be great.

"THERE is a good chance the oil will destroy some shoreline vegetation and some larval stages of crab may be wiped out, but beyond the aesthetic problem the oil probably won't do much damage," he said.

He said fish taken from the creek are not harmful for human consumption.

Florida Power will remove the sand that has been saturated by the oil and has coated pockets of oil that floated west from the spill toward residential areas, which it is trying to catch with booms.

The Coast Guard is investigating to see why the valve malfunctioned.

Florida Power
CORPORATION

July 1, 1974

Mr. W. E. Linne, Administrator
Florida Department of Pollution Control
P. O. Box 9205
Winter Haven, Florida 33881

Dear Mr. Linne:

In accordance with FDPC Rule 17-2.04 (6) (e) 4., adopted January 22, 1974, Florida Power Corporation submits the following compliance schedules for our Bartow and Higgins Plants.

BARTOW PLANT

Sulfur Oxide - Units No. 1, 2, and 3

Fuel oil with sulfur content low enough to meet the sulfur oxide emission standard is scheduled to be burned commencing not later than July 1, 1975.

Particulate and Visible Emission - Units No. 1, 2, and 3

On Unit 1 modifications to existing burners will be made. This will include altering the air flow, increasing turbulence, increasing velocity, and shaping the flame, all of which, with the use of low sulfur fuel oil, will result in improved burner efficiency and reduced emissions. On Units 2 and 3, new type fuel oil burners will be installed which will accomplish the same as modifications to Unit 1.

	Unit 1	Unit 2	Unit 3
Date for initiation of construction	06-28-75	06-01-75	03-02-75
Date for completion of construction	07-28-75	06-29-75	03-30-75
Date of Final Compliance	07-01-75	07-01-75	07-01-75

HIGGINS PLANT

Sulfur Oxide - Units 1, 2, and 3

Fuel oil with sulfur content low enough to meet the sulfur oxide emission standard is scheduled to be burned commencing not later than July 1, 1975.

Particulate and Visible Emission - Units No. 1, 2, and 3

To control these emissions a new type fuel oil burner was installed and tested on Unit #3. Modifications to existing burners on Units 1 and 2 will be made. This will include altering the air flow, increasing turbulence, increasing velocity, and shaping the flame, all of which, with the use of low sulfur fuel oil, will result in improved burner efficiency and reduced emissions.

	Unit 1	Unit 2	Unit 3
Date for initiation of construction	02-01-75	02-16-75	N/A
Date for completion of construction	02-22-75	03-08-75	Completed
Date of Final Compliance	07-01-75	07-01-75	07-01-75

Should there be any questions concerning the information contained in this letter, please telephone me or Mr. R. E. Parnelle immediately at (813) 866-4544.

Very truly yours,

George W. Marshall

George W. Marshall
Production Superintendent

cb

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

3319 MAGUIRE AVENUE, SUITE 232
ORLANDO, FLORIDA 32801
DIVISION OF OPERATIONS

PETER P. BALJET
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

① Kerns ② Forehand

March 27, 1974

D.P.C.
APR 1 1974
WEST CENTRAL REGION

Mr. J. T. Rodgers
Assistant Vice President
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

File Pinellas Co

Dear Mr. Rodgers:

Pursuant to 32A C.F.R. Chapter XIII, Federal Energy Policy Regulation 2, switching from a higher sulfur petroleum product to a lower sulfur petroleum product is prohibited during the effective period of the regulation. As a result, this regulation has a great impact on the compliance schedule established by the Department for your facilities.

In order to accommodate this regulation, yet insure that Sections 17-2.04 (6) (e) 2.c and d. F.A.C. are met, a categorical compliance schedule change was adopted on January 22, 1974. This regulation requires the submittal of a compliance schedule by July 1, 1974.

You are hereby placed on Notice that the Department will enforce this regulation change under Florida Statute 403.161.

The Department recognizes the possible technical, legal and administrative problems that may occur involving the regulations of the E.P.A., E.P.O., and the D.P.C. Consequently, if difficulties arise, please advise this office so that a meeting can be established to formulate a position direction.

Very truly yours,

Alex Senkevich, P.E.
Director

AS:KK:en

cc: R. E. Parnelle, Jr.
W. E. Wood
P. Edwards
W. E. Linne ✓

JOHN R. MIDDLEMAS, BOARD MEMBER
GEORGE RUPPEL, BOARD MEMBER
ALICE C. WAINWRIGHT, BOARD MEMBER
W. D. FREDERICK, JR., BOARD MEMBER

File Pinellas Co.

Best Available Copy

Florida Power
CORPORATION

December 7, 1973

Mr. W. E. Linne
Regional Administrator
Florida Department of Pollution Control
P. O. Box 944
Winter Haven, FL 33881

Dear Mr. Linne:

A condition of our Operation Permits is as follows:

Plant	Permit No.	Burn Low Sulfur (1%) Fuel Oil
Bartow	A052-2037	January 5, 1974
Bartow	A052-2038	January 5, 1974
Bartow	A052-2039	January 5, 1974
Bayboro	A052-2044	February 15, 1974
Bayboro	A052-2045	February 15, 1974
Bayboro	A052-2046	February 15, 1974
Higgins	A052-2040	February 15, 1974
Higgins	A052-2041	February 15, 1974
Higgins	A052-2042	February 15, 1974

May I please call your attention to the November 27, 1973, Federal Register, Page 32577, Sec. 4(a)(1), (copy attached) in which the Energy Policy Office by regulation (EPO-Reg.2) prohibits power generators from burning "petroleum products having a lower sulfur content, by weight, than the average content of the petroleum products in use in such a power generator during the month preceding the date hereof". The effective date of this regulation is December 7, 1973, and it terminates one year following the effective date.

Please be advised that in compliance with this regulation, we are adjusting our contractual arrangements to continue burning the same sulfur content fuel oil at these Power Plants. Should there be any questions concerning the contents of this letter, please telephone me at (813) 866-4420 or Mr. Eustice Parnelle at (813) 866-4544.

Very truly yours,

G. W. Marshall

G. W. Marshall
Production Superintendent

GWM:rt
Atts.

for Report EEO–5 must be obtained remains unchanged. Signed at Washington, D.C., this 20th day of November 1973.

WILLIAM H. BROWN III,
Chairman, Equal Employment Opportunity Commission.

[FR Doc.73–25094 Filed 11–26–73;8:45 am]

Title 32A—National Defense, Appendix

CHAPTER XIII—ENERGY POLICY OFFICE

Notice of Change of Titles

Secretary's Order No. 2956, published in the FEDERAL REGISTER on November 13, 1973 (38 FR 31320), created the Office of Petroleum Allocation, to be headed by the Administrator.

Wherever the title "Office of Oil and Gas" or "Director, Office of Oil and Gas" appears in regulations in Chapter XIII relating to the mandatory program for the allocation of middle distillate fuels and propane, the term "Office of Petroleum Allocation" or "Administrator, Office of Petroleum Allocation" should be substituted.

Correspondence, reports, or inquiries should be addressed to the appropriate Regional Administrator or to the Administrator, Office of Petroleum Allocation, Department of the Interior, Washington, D.C. 20240.

Dated: November 16, 1973.

ELI T. REICH,
Administrator.

[FR Doc.73–25215 Filed 11–23–73;2:42 pm]

EPO REG. 2—PRIORITIES FOR USE OF CERTAIN LOW SULFUR PETROLEUM PRODUCTS

Concern over possible shortages of home heating oil and other low-sulfur petroleum products for the coming winter has prompted the Administration to consider a number of initiatives designed to ensure that the available supplies are directed to the end uses with highest priority from the standpoint of economic and social welfare and environmental quality.

These concerns began to take shape in hearings held June 11–14, 1973, concerning the voluntary allocation program and the need for a mandatory allocation program. The Energy Policy Office stated on August 9 that the Administration was considering action to limit switching by utilities to fuels with lower sulfur content. On August 27, the Energy Policy Office issued a notice of public hearing and proposed rulemaking, pursuant to section 203(a)(3) of the Economic Stabilization Act of 1970, as amended. The proposed regulations were designed to prevent coal-to-oil fuel conversions and to delay shifts to lower sulfur content fuel oils than were in use as of the effective date of the regulation, except where such actions would be required to achieve primary air quality standards.

As required by section 203(a)(3) of the Economic Stabilization Act, notice of public hearing and proposed rulemaking appeared in the FEDERAL REGISTER of August 27, 1973, and public hearings were held in Washington, D.C., September 6 and 7, 1973, for the purpose of receiving comments and testimony on all phases of the Proposed Program to Establish Priorities and Allocate Supply for Certain Low Sulfur Petroleum Products.

In addition, interested persons were invited to submit written comments on the proposal. Comments were due no later than September 7th; however, comments received through September 27 were considered in revising the proposed regulations. Finally, a draft environmental impact statement on the proposed regulations was issued by the Energy Policy Office September 7, 1973; comments on that statement were due September 21. All were considered in forming the revision of the proposed regulation.

The high level of general acceptance of the proposed regulations and the intractability of the short-term energy supply situation argued for adoption of the proposed regulations, subject to modifications suggested by respondents.

The modifications adopted are of two types, clarification and expansion of scope. Several modifications of detail suggested by respondents should clarify the regulations, and make them easier to administer and to comply with. Coverage under the regulation has been expanded in three ways: (1) The definition of "boiler" has been expanded to explicitly include combustion turbines, (2) the cut-off size of boilers has been reduced to 50 million B.t.u./hour from 250 million B.t.u./hour [to include significant industrial and commercial boilers], and (3) crude oil burned directly as boiler fuel has been included.

JOHN A. LOVE,
Director, Energy Policy Office.

A new chapter XIII is added to Title 32A CFR consisting of the following EPO–Reg. 2:

Sec.
1 Purpose and Intent.
2 Definitions.
3 Boilers not currently burning petroleum products.
4 Boilers currently burning petroleum products.
5 New boilers.
6 Exceptions to meet primary ambient air quality standards.
7 Other exceptions.
8 Termination.

AUTHORITY: Sec. 203(a)(3) of the Economic Stabilization Act as amended by Pub. L. 93–28; 12 U.S.C. 1904 (Note); EO 11695, 38 FR 1473; COLC Order 33, 38 FR 20960.

Section 1 Purpose and intent.

The purpose of the regulation is to assure the optimum use of the limited supplies of low sulfur petroleum products in a manner consistent with the provisions of the Clean Air Act, as amended, and the Clean Fuels Policy of the Environmental Protection Agency. This regulation is not intended to affect or preempt the development of individual source compliance schedules or other actions associated with implementation of the Clean Air Act, except with regard to the timing of actual shifts to burning lower sulfur oil during the period this regulation is in effect.

Sec. 2 Definitions.

(a) "Power generator" means any boiler, burner, or other combustor of fuel or any combination of boilers at a single site in any electric power generating plant or industrial or commercial plant having a total firing rate of 50 million B.t.u./hour or greater in commercial operation on or prior to the effective date of this regulation, and includes combustion turbines used in the generation of electrical energy.

(b) "Petroleum Product" means petroleum, distillate fuel, residual fuel oil, or any other petroleum product, and includes crude oil burned without prior refining.

(c) "Primary Ambient Air Quality Standards" means the national primary ambient air quality standards provided for in the Clean Air Act, as amended. (42 U.S.C. 1857 et seq.)

Sec. 3 Power generators not currently burning petroleum products.

No petroleum products shall be sold or otherwise provided to or accepted by any person for burning under power generators that were not using petroleum products on the effective date of this regulation. Automatic exception is granted for power generators converting from natural gas, provided that alternative fuels, such as coal, cannot practically be utilized.

Sec. 4 Power generators currently burning petroleum products.

(a) Petroleum products may continue to be purchased and utilized by persons using them in power generators burning petroleum products on the effective date of this regulation except that:

(1) No petroleum product having a lower specified sulfur content, by weight, than the average content of the petroleum products in use in such a power generator during the month preceding the date hereof, or during the last month in which the power generator consumed such products, shall be sold or otherwise provided or accepted by any person or firm for use in such power generator;

(2) The aggregate quantity of petroleum product utilized by such person in any month subsequent to the date of this regulation in any such power generator capable of burning coal and petroleum products shall not exceed the larger of the aggregate quantity of petroleum products consumed in the corresponding month of 1972 or in July 1973, except that the quantity of petroleum products burned may be increased in proportion to the increased output of energy, or increased need for startups.

(3) The quantity of distillate fuel oil utilized by such person in any month subsequent to the date of this regulation in any such power generator shall not

exceed the larger of the quantity of distillate fuel oil consumed in the corresponding month of 1972 or in July 1973, except that the quantity of distillate fuel oil burned may be increased in proportion to the increased output of energy, or increased need for startups.

(4) In order to discourage further increase in the indirect use of distillate fuels in the form of a mixture of distillate and residual fuel oils:

(i) No refiner, fuel dealer, or user, shall blend more distillate fuel oils into residual fuel oil than the greater of the quantities blended in the corresponding month of 1972, or in July 1973, except where essential to meeting Primary Ambient Air Quality Standards.

(ii) No person shall use under a power generator a blended fuel containing a greater proportion of distillate fuels from the larger of:

(A) The proportion included in the corresponding month of 1972, or

(B) The proportion included in July 1973, except where essential to meeting Primary Ambient Air Quality Standards.

(iii) Those quantities of fuels containing distillates that constitute plant or firm inventories as of the effective date of this regulation may be consumed by or sold for use in power generators until those quantities are depleted.

(5) Automatic exception is granted for power generators converting from natural gas, provided that alternative fuels, such as coal, cannot practically be utilized.

Sec. 5 New power generators.

(a) Any person with power generators which begin commercial operations after the effective date of this regulation shall not utilize any petroleum products with sulfur content by weight lower than that needed to meet Primary Ambient Air Quality Standards or to comply with EPA new source performance standards or for startup.

(b) This section is not intended to preempt the new source performance standards of the Clean Air Act, as amended. In the event this section conflicts with such standards, the provisions of the Clean Air Act prevail and the prohibitions in this section do not apply.

Sec. 6 Exceptions to meet primary ambient air quality standards.

(a) The Office of Oil and Gas in the Department of the Interior shall automatically grant exceptions to the prohibitions contained in these regulations when the use of petroleum products is properly certified by the appropriate State air pollution control agency to be essential to meeting the Primary Ambient Air Quality Standard of the air quality region in which the plant is located.

(b) With respect to § 3, the Office of Oil and Gas shall grant exceptions pursuant to this section only when suitable alternative fuels are not available.

Sec. 7 Other exceptions.

The Office of Oil and Gas may grant exceptions from the prohibitions of this regulation if:

(a) Any person subject to this regulation can demonstrate that compliance would cause an undue economic hardship; or

(b) Fuels necessary for compliance with this regulation are not available.

Sec. 8 Termination.

The provisions of this regulation shall be in effect not longer than one year following its effective date, or until the expiration of Section 203(a)(3) of the Economic Stabilization Act of 1970, whichever occurs first.

Sec. 9 Effective date.

The provisions of this regulation shall take effect on December 7, 1973.

[FR Doc.73-25241 Filed 11-23-73;3:48 pm]

Title 38—Pensions, Bonuses, and Veterans' Relief

CHAPTER I—VETERANS ADMINISTRATION

PART 21—VOCATIONAL REHABILITATION AND EDUCATION

Independent Study Program

On pages 26944, 26945, and 26946 of the FEDERAL REGISTER of September 27, 1973, there was published a notice of proposed regulatory development concerning the independent study program which leads to a standard college degree. Interested parties were given 30 days in which to submit comments, suggestions, or objections regarding the proposed regulations.

Pursuant to such notice, written comments were received from fifteen interested parties. Fourteen comments were favorable and of these one also requested a change in the law. The other comment was directed to changing the law. The proposed regulation is hereby adopted without change and is set forth below.

Effective date. These VA Regulations are effective November 19, 1973.

Approved: November 19, 1973.

By direction of the Administrator.

[SEAL] RUFUS H. WILSON,
Associate Deputy Administrator.

1. In § 21.201, paragraph (j) is added to read as follows:

§ 21.201 Types of courses.

* * * * *

(j) *Independent study course leading to a degree.* A course pursued by independent study under the following conditions:

(1) The course is offered by an accredited college or university.

(2) The course leads to or is fully creditable toward a standard college degree which may include external degree programs given by accredited colleges and universities.

(3) The college or university evaluates the course in semester or quarter hours, or the equivalent, and prescribes a period for completion.

(4) Subsistence allowance is payable at the institutional rates prescribed in § 21.133. (If independent study subjects and subjects requiring class attendance are pursued concurrently and both are measured on a credit hour basis, the allowable rate shall be determined on the basis of the combined training load.)

2. In § 21.226(a), subparagraph (1) is amended to read as follows:

§ 21.226 Training while a patient in a Veterans Administration hospital.

(a) Subject to the provisions of other applicable Veterans Administration regulations, an eligible veteran may be entered or reentered into training prior to release from a Veterans Administration hospital when all the following conditions are met:

(1) The Veterans Administration hospital has determined that the proposed training will not materially interfere with the veteran's regime of medical treatment nor delay hospital discharge and that the disabled veteran will be able to spend a significant part of the day away from the hospital at the proposed training facility or in a program of independent study.

* * * * *

3. In § 21.261(b), subparagraph (4) is added to read as follows:

§ 21.261 Ordinary leave.

* * * * *

(b) *Charging of ordinary leave.* * * *

(4) For veterans in programs of independent study which are not on a semester or quarter basis, leave between designated periods of study may be authorized and will be charged on same basis as leave between terms.

4. In § 21.4131, paragraph (b) is amended to read as follows:

§ 21.4131 Commencing dates.

* * * * *

(b) *Certification by school; course leads to standard college degree.* (1) The date of registration, or the date of reporting where the student is required by published standards of the school to report in advance of registration, but not later than the date the person first reports for classes.

(2) The date of enrollment in a subject or in an area of independent study.

* * * * *

5. In § 21.4136, paragraph (a) is amended to read as follows:

§ 21.4136 Rates; educational assistance allowance; 38 U.S.C. Ch. 34.

(a) *Rates.* Educational assistance allowance is payable at the following monthly rates:

SEPTEMBER 17, 1973
PINELLAS CO. AP
FLORIDA POWER CORP.

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

Dear Mr. Marshall,

Your September 12 letter concerning compliance schedules has been referred to me for reply.

According to the Department's attorney, the compliance schedules incorporation as a condition to the permits to operate are legally enforceable and the Department is committed to promptly seek civil penalties for any violation thereof. The Department has no plans to change section 17-2.04 (6)(e) which regulates the emissions from fossil fuel steam generators.

If Florida Power Corporation cannot meet the established compliance schedule, you should contact the Department's attorney.

Yours very truly,

W. M. Hanks
Engineer
West Central Region

WMH/pm
cc: Mr. John Bottcher/w 9/12/73 letter

FRED W. FILE

D. P. C.

SEP 15 1973

WEST CENTRAL REGION

Florida Power
CORPORATION

September 12, 1973

Mr. W. E. Linne,
Regional Administrator
Florida Department of Pollution Control
P. O. Box 944
Winter Haven, FL 33881

Dear Mr. Linne:

Operation Permit Conditions for our Bayboro, Bartow and Higgins Power Plants require that a final control plan, as of September 1, 1973, be submitted to the Regional Administrator, West Central Region.

May I please call your attention to the August 29, 1973, Federal Register Page 23339, which contains a proposal by the Energy Policy Office to establish priorities for use of low sulfur petroleum products. If this proposal is adopted, it will delay shifts to lower sulfur oil than that presently in use except where absolutely necessary to meet primary (health related) ambient air quality standards.

The compliance schedule for these plants, as stated in Public Hearing, established a date of January or February 1974 for conversion to 1% sulfur oil. Please be advised that this date is subject to change when and if these proposals by the Energy Policy Office are adopted.

Sincerely,

G. W. Marshall
Production Superintendent

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1,185
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Florida Power
CORPORATION

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

WILLARD, START A FILE ON EACH RESPONSE OF THIS NATURE FOR THE HEARINGS & PROCESSING THE PERMITS.

April 4, 1973

D. P. C.
APR 5 1973
WEST CENTRAL REGION

Mr. L. G. Kerner
Regional Engineer
Florida Department of Pollution Control
P. O. Box 944
Winter Haven, Florida 33881

Dear Mr. Kerner:

In anticipation of the Notice of Public Hearing for the West Central Region, Florida Power Corporation is pleased to submit the following information concerning compliance with sulfur oxide and particulate emission standards at our Bartow, Bayboro, and Higgins Power Plants.

BARTOW PLANT

Sulfur Oxide - Units No. 1, 2, and 3

Delivery of fuel oil with sulfur content low enough to meet the sulfur oxide emission standard is scheduled to commence January 5, 1974.

Particulate - Units No. 1, 2, and 3

An engineering program is under way to install and test a new type fuel oil burner on one of the units in our system. It is anticipated (guaranteed in writing by the manufacturer) that the particulate emission from these burners will be less than the State standard. Contractual arrangements have been completed and installation is scheduled for the first week of June, 1973. Tests will be performed immediately after installation is completed, and test results should be available in August, 1973. Assuming results indicate the particulate emission standard can be met by the use of these new type burners, the following is a schedule of compliance for particulate emission.

Bartow Plant
Particulate Compliance Schedule - Units No. 1, 2, and 3

	Unit 1	Unit 2	Unit 3
Date of submittal of final construction plan	09-01-73	09-01-73	09-01-73
Date contract will be awarded	03-01-74	10-01-74	12-01-74
Date for initiation of construction	06-22-75	01-05-75	03-02-75
Date for completion of construction	08-17-75	03-02-75	04-27-75
Date of Final Compliance	07-01-75	07-01-75	07-01-75

BAYBORO PLANT

Sulfur Oxide - Units No. 1, 2, and 3

Delivery of fuel oil with sulfur content low enough to meet the sulfur oxide emission standard is scheduled to commence February 15, 1974.

Particulate - Units No. 1, 2, and 3

These steam electric generating units are scheduled to be retired in April, 1975; therefore, no particulate control devices will be installed.

HIGGINS PLANT

Sulfur Oxide - Units No. 1, 2, and 3

Delivery of fuel oil with sulfur content low enough to meet the sulfur oxide emission standard is scheduled to commence February 15, 1974.

Particulate - Units No. 1, 2, and 3

An engineering program is under way to install and test a new type fuel oil burner on Higgins Unit No. 3. It is anticipated (guaranteed in writing by the manufacturer),

HIGGINS PLANT - continued

Particulate - Units No. 1, 2, and 3 - continued

that the particulate emission from these burners will be less than the State standard. Contractual arrangements have been completed and installation is scheduled for the first week of June, 1973. Tests will be performed immediately after installation is completed, and test results should be available in August, 1973. Assuming results indicate the the particulate emission standard can be met by the use of these new type burners, the following is a schedule of compliance for particulate emission.

	Unit 1	Unit 2	Unit 3
Date of submittal of final construction plan	09-01-73	09-01-73	09-01-73
Date contract will be awarded	02-01-74	04-01-74	Awarded
Date for initiation of construction	05-10-74	07-07-74	07-01-73
Date for completion of construction	07-07-74	09-01-74	08-01-73
Date of Final Compliance	07-01-75	07-01-75	07-01-75

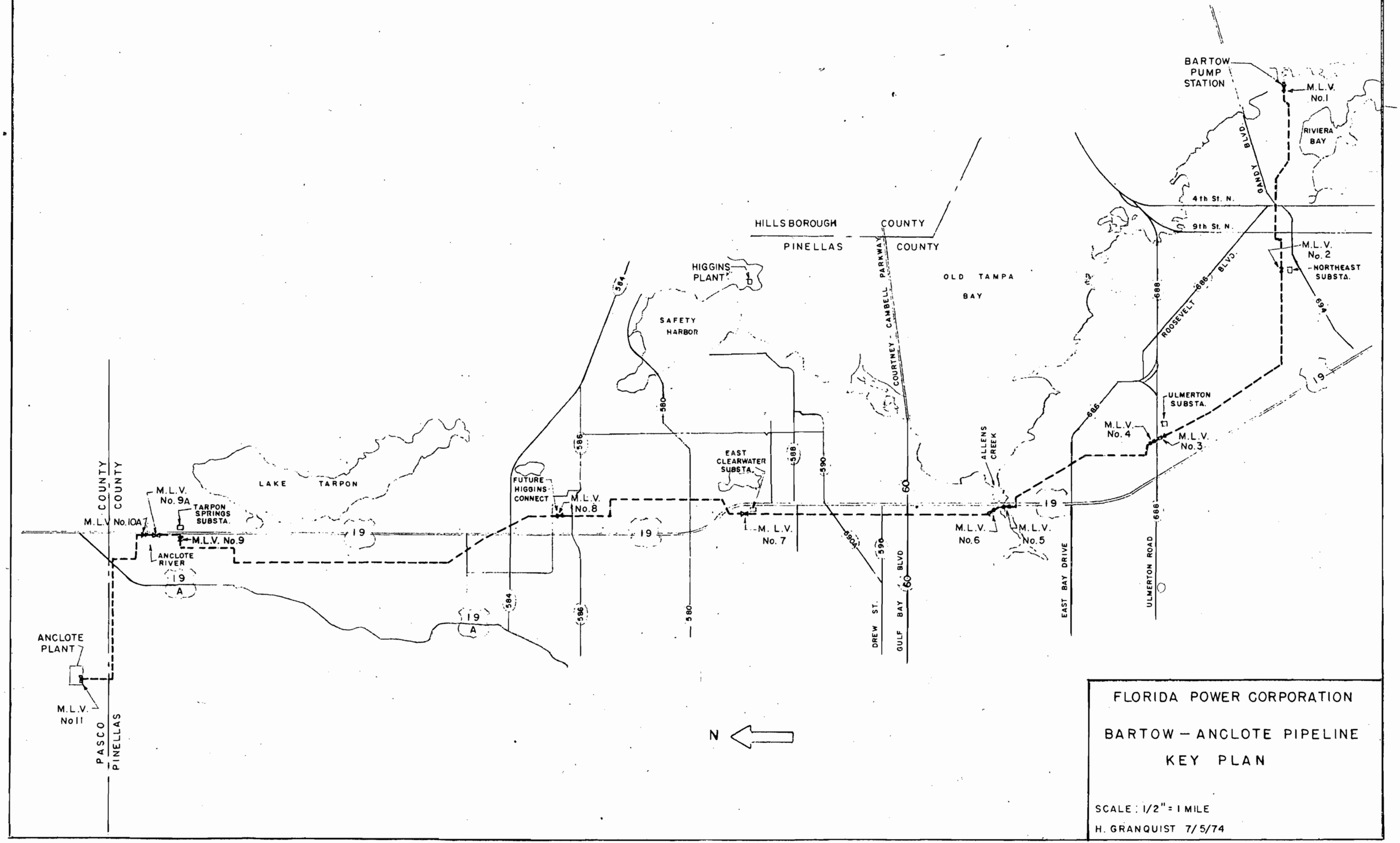
Should there be any questions concerning the information contained in this letter, or if the information will cause you to recommend to the Hearing Examiner anything other than approval of our compliance schedule, please telephone me immediately, (813) 866-4544.

Very truly yours,

George W. Marshall

George W. Marshall
Production Superintendent

GWM:Bjh



FLORIDA POWER CORPORATION

BARTOW – ANCLOTE PIPELINE

KEY PLAN

SCALE : 1/2" = 1 MILE

H. GRANQUIST 7/5/74

EXHIBIT #1