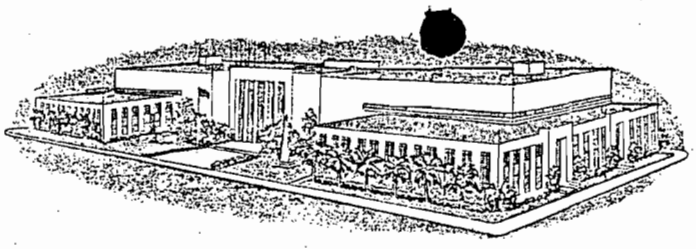
file: Hills. Co. -AP



COUNTY of HILLSBOROUGH

MEMORANDUM

Date 6/8/78

To TECO's & Gardinier, Inc. - General File

From Jose B. Rodriguez JBR

Subject: VISIBLE WHITE HAZE CONDITIONS FROM TECO'S GANNON PLANT

On June 7, 1978 at about 930 hrs, while driving by Ybor City, I noticed a white haze coming over from the direction of TECO's Gannon Plant. During my inspection I found Unit #6 down; it will stay in that condition for approximately two weeks. During that shutdown period of Unit #6, they will change their present Bolometer Opacity Monitor with a new Lear Siegler transmissometer.

From my observation, a good ninety percent of the haze condition was created by Unit #5. Its visibility started from about forty feet above the stack and for a distance of more than five miles.

In my opinion, based on the weather conditions at 1000 hrs, wind speed 8 mph, direction SE, temperature 84°F and after discussing the probable effects for this occurrence with TECO's Ron Boehm and information obtained from CF Industries's Jim Martin, this condition could be the reaction between the combination of two gases, Sulfur Dioxide and Ammonia.

TECO's Gannon Unit #5 alone emits around 2700 lbs/hr of Sulfur Dioxide and Gardinier, Inc. has four Ammonium Phosphate Manufacturing Plants emitting an average, during normal conditions, of approximately 850 lbs/hr of Ammonia. During the time of this incident, TECO's Gannon Unit #5 was operating at a normal average load of around 193 MW and all four Ammonium Phosphate Plants at Gardinier, Inc., were also operating at a normal load, feeding an average imput rate of 7900 lbs/hr of Ammonia.

JBR/rr

PERMIT WORKSHOP

SOURCE TECO - GANNON #6 DATE 10-10-78

COUNTY Hillsborough TYPE PERMIT AO29-12601

ACTION	INITIAL WHEN COMPLETED	DATE
Preliminary Review		
Assigned for Review to		
Review Comments	[signature]	10-10-78

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

Number Assigned		
Permit Issued & Signed		
Permit Logged		
Permit Mailed		
Data Forms Completed		
Permit Denied		

PERMIT WORK SHEET

NEDS PLANT ID. 0040

NEDS POINT ID. 06

REVIEWED BY: W. H. Brown DATE: 10-10-78

PERMIT NO. A029-12901

IS INFORMATION CONFIDENTIAL? YES _____ NO ✓

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

BRIEF DESCRIPTION OF PROCESS

235 MW Coal fired steam generator
With ESP

6084 HR/YR

OPERATING TIME: _____ HR/Da _____ Da/Wk _____ Wk/Yr

STACK DATA

Height (FT) 306

Diam. (FT.) 17.6

Temp. (°F) 292 F

Flow Rate (CFM) 838000 avg 1120000 MAX

Plume Height (FT) _____

Common Stack (Explain) _____

OPERATING DATA

Process Rate _____ #/H

Process Rate _____ TONS/Yr

Max Design Rate _____ #/Hr.

Combustion (Units) Gal ~~✓~~ TONS ✓ FT³ ____

Rate _____ Ton Unit/Hr 151.9 TD Unit/~~HR~~

Heat Content _____ BTU/Gal.

Boiler Capacity 3798 MMBTU/Hr.

Max Design Rate 11 Unit/Hr.

Fuel (Nmme) Coal %s 1.3 %A 9.6

COMMENTS: For $\frac{7410}{3900 \text{ MMBTU}}$ 1.9 #/MMBTU allow 2.4 #/MMBTU/hr

TSP $\frac{78}{3900} = 0.02$ #/MMBTU/hr .1 #/MMBTU/hr

CONTROL EQUIPMENT

Pollutant	Control Method	% EFF.
Particulates	ESP	99
SO_2		
NO_x		
HC		
CO		
F^-		

EMISSION ESTIMATE

POLLUTANT	LB/HR.	TONS/HR.	LB/TON (PROD.)	LB/10^6 BTU	TEST DATA
Particulates				.02	
SO_2				1.9	
NO_x					
HC					
CO					
F^-					

BASIS FOR ESTIMATE:

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

ALLOWABLE EMISSIONS

POLLUTANT	LBS/HR.	LBS/TON (PROD.)	LBS/10^6 BTU	APPLICABLE REGULATIONS
PARTICULATES			.01	
SO_2			2.4	
NO_x				
HC				
CO				
F^-				

FILE 70117

10-75 MOD. 2

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR PERMIT AND INVENTORY SYSTEM

POINT SOURCE CODING FORM

DATE W. H. BROWN

NAME OF PERSON COMPLETING FORM 10-10-78

ACTIONS

DELETE	1
ADD	2
CHANGE	3 ✓

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

YEAR OF RECORD	COMPANY NAME	COMPANY MAILING ADDRESS	COMPANY CITY	ZIP CODE	ACTION
16 17	18 ... 41	42 ... 57	58 ... 72	73 ... 77	78 79 80
					0 7

YEAR OF RECORD	CONSTRUCTION PERMIT	ISSUE DATE (M M D D Y Y)	EXPIRATION DATE (M M D D Y Y)	OPERATING PERMIT	ISSUE DATE (M M D D Y Y)	EXPIRATION DATE (M M D D Y Y)	LATITUDE	LONGITUDE	PERMIT TYPE	SOURCE TYPE	ACTION
16 17	18 ... 27	28 ... 33	34 ... 39	40 ... 49	50 ... 55	56 ... 61	62 ... 68	69 ... 75	76	77	78 79 80
7 8	C —			A 0 2 9 — 1 2 6 0 1	1 0 2 3 7 8	1 0 1 5 8 3					3 0 8

YEAR OF RECORD	FINAL CONTROL PLAN DATE (M M Y Y)	SUB. OF CONTRACTS TO BE LET (M M D D Y Y)	START CONSTRUCTION (M M D D Y Y)	END CONSTRUCTION (M M D D Y Y)	FINAL COMPLIANCE (M M D D Y Y)	TESTING DATE (M M D D Y Y)	INSPECTION SCHEDULE (J F M A M J J A S O N D)	POLLUTANT (IF APP)	ACTION
16 17	18 ... 21	26 ... 31	32 ... 37	38 ... 43	44 ... 49	50 ... 55	56 ... 67	68 ... 77	78 79 80
									0 9

YEAR OF RECORD	DESCRIPTION OF POINT SOURCE	ACTION
16 17	18 ... 77	78 79 80
		1 0

YEAR OF RECORD	MOST RECENT DATE OF EMISSIONS TESTING FOR PARTICULATES (M M D D Y Y)	MOST RECENT DATE OF EMISSIONS TESTING FOR SO_2 (M M D D Y Y)	DUE DATE FOR PARTICULATE EMISSIONS TEST RESULTS (M M D D Y Y)	DUE DATE FOR SO_2 EMISSIONS TEST RESULTS (M M D D Y Y)	STATUS CODE	DATE OF RECORDING OF STATUS CODE (M M D D Y Y)	TSP FREQ. (CODE)	SO_2 FREQ. (CODE)	MOST RECENT DATE OF INSPECTION BY DEPARTMENT (M M D D Y Y)	VE FREQ. (CODE)	MOST RECENT DATE OF VISIBLE EMISSIONS TEST (M M D D Y Y)	VE - PERM	SOURCE CATEGORY	VE - DER	ACTION
16 17	18 ... 25	26 ... 31	32 ... 37	38 ... 44	45	46 ... 53	54	55	56 ... 61	62 ... 64	65 ... 70	71	72	73	74 75 76 77 78 79 80
7 8	0 3 0 3 7 8	0 3 0 5 7 8	0 4 0 3 7 8	0 4 0 3 7 8	A	1 0 1 0 7 8	1	1			0 3 0 3 7 8	0			3 1 1

Revised 7/2/73

OPERATION PERMIT CONDITION
FOR AIR POLLUTION SOURCES

(An "X" indicates applicable conditions)

DATE: 5/25/73 | TECO, Gannon Station | AO29-2191 PERMIT NO. Unit #6

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

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

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

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

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

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

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

(D) Construction and/or modifications toward compliance must be completed by 11/30/73. Submit no later than 12/14/73 confirmation of this condition.

(E) Submit on or before 5/30/74 proof of compliance. This must include any changes in the construction permit application as submitted, and a final engineering report and stack samples (test results and/or calculations) to prove compliance.

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

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

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

(B) Annual emissions.

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

* These requirements have been complied with previously.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

ANNUAL OPERATIONS REPORT FORM FOR AIR EMISSIONS SOURCES

D.E.R.
MAR 13 1978
SOUTHWEST DISTRICT
TAMPA

For each permitted emission point, please submit a separate report for calendar year 1977 prior to March 1st of the following year.

I GENERAL INFORMATION:

1. Source Name: Tampa Electric Company (Gannon Station Boiler #6)
2. Permit Number: AO 29-2470
3. Source Address: P. O. Box 111
   Tampa, Florida 33601
4. Description of Source: Fossil fuel steam generator

II OPERATING SCHEDULE:

24 hrs/day 7 days/wk 52 wks/yr
actual hours of operation 6084

III RAW MATERIAL INPUT PROCESS WEIGHT:

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

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

	10^6 cubic feet Natural Gas		10^3 gallons No. ___ Oil, ___ %S
	10^3 gallons Propane		10^3 gallons Kerosene
700,600	tons Coal		10^6 lb Black Liquor Solids
	tons Carbonaceous		tons Refuse

Other (Specify type and units)

V EMISSION LEVEL (tons/yr):

A.

169.6	Particulates		Carbon Monoxide
	Nitrogen Oxide		Total Reduced Sulfur
	Hydrocarbon		Flouride
16,110.8	Sulfur Dioxide		

Other (Specify type and units)

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

VI CERTIFICATION:

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

W.J. Johnson
Signature of Owner or Authorized Representative

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

3/8/78
Date

DER Form PERM 12-15 (Jan 78)

L/e: Hills. Co. AP
B. Kerns

TECO
TAMPA ELECTRIC COMPANY

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

January 16, 1978

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

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

Dear Mr. Griffiths:

This letter is to confirm my understanding of the agreements made on Thursday, January 12, 1978 at our meeting at Big Bend Station regarding particulate emissions testing.

Tampa Electric Company will delay the following stack tests scheduled in January for thirty days: Gannon 1, Gannon 5 and Gannon 6. Since Big Bend No. 3 had already been scheduled by an outside contractor, that test will still be held on January 25 and 26, 1978 using medium porosity thimbles. Not correct.

Also after the statewide meeting in Tampa on January 31, 1978, I will submit a schedule for completing the delayed tests.

We look forward to working with you in developing a practical test method for measuring particulate emissions.

If you have any questions, please call.

Sincerely,

William N. Cantrell

William N. Cantrell
Engineer
Environmental Planning

WNC:sac
cc: Mr. David Puchaty, FDER THIS COPY FOR

Joe Griffith to respond.

ANNUAL OPERATING REPORT
Calendar year 1976

D. E. R.

Submit a separate report for each permitted source by FEBRUARY 28, 1977

APR 15 19

SOUTH WEST DISTRICT
ST. PETERSBURG

SECTION 1: General

SOURCE NAME: Tampa Electric Company (Gannon Unit 6)

MAILING ADDRESS: P. O. Box 111 (Attention: Jeff Rankin)

Tampa, Florida 33601

TELEPHONE NO: 813/879-4111

OPERATING PERMIT NO: FDER AO29-2470

SOURCE DESCRIPTION: Fossil-fuel generating plant

SECTION 2: PROCESS OPERATIONS:

a. DURATION OF OPERATION AND FREQUENCY: 24 hrs/dy 7 dys/wk 52 wk/yr
e.g. 8 hrs perday, 5 dys per wk and 50 wk/yr. actual hours operation 4601

b. DESIGN CRITERIA: MAXIMUM OUTPUT 414.0 MW (from FPC-67 Form)
e.g. 850 MW, 750 tons/dy

c. ~~MAXIMUM~~(AVERAGE) OUTPUT 242.8 MW (during actual hours of operation)
e.g. 424 MW, 670 tons/dy.

d. MAXIMUM PEAK THAT OCCURED DURING ANY ONE DAY 360 MW
e.g. 910 MW, 810 tons/dy.

SECTION 3: TOTAL AMOUNT OF MATERIALS USED/PROCESSED, COMPUTED ON THE SAME BASIS AS PROCESS WEIGHT:

TYPE(MATERIAL)	INPUT PROCESS WEIGHT- DRY
	tons/yr
N.A.	N.A. tons/yr
	tons/yr
	tons/yr

SECTION 4: TOTAL AMOUNT OF FUEL USED. IF FUEL IS OIL, SPECIFY WEIGHT, e.g. NO 2, and % sulfur by weight. INCLUDE STANDBY FUELS.

-- 10^6 cu ft -- 10^3 gal NO. ___ OIL ___ %SULFUR

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

451,532 tons COAL -- 10^6 lb BLACK LIQUOR SOLIDS

-- OTHER, specify type and units

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

a. 117 tons of particulates 12,525 tons of sulfur dioxide

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

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

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

SO_2 - tons coal X $\frac{\text{tons S}}{\text{tons coal}}$ X $\frac{\text{tons } SO_2}{\text{tons S}}$ X .85 (EPA factor) = tons SO_2

Particulates - tons coal X $\frac{\text{BTU}}{\text{tons coal}}$ X $\frac{\text{tons part.}}{\text{BTU}}$ = tons particulate

ANNUAL OPERATING REPORT
calendar year 1976

SECTION 5(cont't)

c. STACK TESTED: Jan. 28, 1976 date

STACK TEST CONDITIONS: 350 MW PROCESS RATE DURING TEST

STACK TEST CONDUCTED BY: Conservation Consultants, Inc.

STACK TEST WITNESSED BY: Mr. Fred Warren, HCEPC

SECTION 6: OPERATIONAL PROBLEMS, IF ANY: Routine

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

b. TYPE OF MAINTENANCE PERFORMED: Routine

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

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

e. NUMBER OF UPSETS LASTING LESS THAN ONE HOUR: unknown

CERTIFICATION:

I HEREBY CERTIFY THAT THE INFORMATION GIVEN IN THIS REPORT IS CORRECT TO THE BEST OF MY KNOWLEDGE.

Signature of owner or authorized representative

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

April 5, 1977
Date

Jerry Cole
SS
JP

JUN 4 1976

Mrs. Lester A. Blake
1230 Fordham Drive
Sun City Center, Florida 33570

Dear Mrs. Blake:

Your letter of May 10, 1976, to Mr. Train concerning the Tampa Electric Company has been referred to this office for reply.

EPA has been aware of the situation at the Big Bend Station as well as the Gannon Station for quite some time. A brief summary of the recent actions and current status may be helpful to you.

On May 12, 1975, EPA issued an Administrative Order to the Tampa Electric Company containing schedules for the installation of pollution control equipment or process modification at the Big Bend and Gannon Stations.

On July 18, 1975, the Florida Department of Environmental Regulation submitted to EPA a revision to the SO_2 emission limitation for power plants.

On October 1, 1975, EPA stayed the portions of the Order which would be affected if the SO_2 revision was approved until such time as EPA acted on the SO_2 revision.

On April 19, 1976, EPA disapproved the SO_2 revision as it relates to the Gannon and Big Bend Stations. As a result of this action, the stay of the Order was terminated and the Big Bend Station must now comply with the previously approved emission limitation of 1.5 pounds of SO_2 per million BTU heat input instead of the proposed revision of 6.5 pounds of SO_2 per million BTU heat input. This disapproval resulted from the failure of the Florida Department of Environmental Regulation to demonstrate that ambient Air Quality Standards would be protected if the proposed revision was approved.

Your concern in this matter is appreciated. If you have any questions please write or call Mr. Richard Schutt of my staff whose number is 404/526-5291.

Sincerely yours,

Original Signed By
Paul J. Traina
Director
Enforcement Division

cc: Mr. J. W. Landers, Jr.
Mr. R. P. Stewart

TECO
TAMPA ELECTRIC COMPANY

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

June 1, 1976

Gannon 6

Mr. C. Steelman
Engineer, Air Permitting
Department of Environmental Regulation
9721 Executive Center Drive, North
Suite 200
St. Petersburg, Florida 33702

RE: AO29-2456 Issued December 8, 1975
Gannon Station No. 4

Dear Mr. Steelman:

Enclosed are copies of the operation permit with provisos and a typical quarterly report on our SO_2 emissions at Gannon Station. I hope you find this information useful.

In our meeting Monday, May 24, 1976, we established that semi-annual testing for particulates on our coal fired units at Gannon Station (Nos. 5 and 6) and annual testing for particulates on all of our oil fired units at Gannon Station and Hookers Point would be required. The Big Bend Station is to be evaluated and annual or semi-annual testing requirements will be assessed on a unit-by-unit basis.

It is also our understanding that this data is necessary for a two-year period and that at the end of that period a decision will be made as to what requirements will be placed on these units in the future.

Again, let me state that our company does not feel that it will be in the best interest of our customers

to source test at semi-annual frequencies. Therefore, we strongly urge close examination of the data submitted so that the best and accurate testing frequency be set.

If there are any points that I have not understood and which need clarification, please do not hesitate to call on me.

Sincerely,

Dorian K. Valdés

Dorian K. Valdes
Environmental Engineer
Environmental Planning

DKV:sac

Enclosures

Mr. H. L. Culbreath
President
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

RE: Administrative Order
AO-75-39(a)

Dear Mr. Culbreath:

On April 12, 1976, the Administrator approved the proposed revision to the Florida Implementation Plan except as it related to: (1) Escambia County, (2) Duval County and (3) Hillsborough County. This action was published in the Federal Register on April 19, 1976, at page 16461.

By virtue of this action, the Administrator disapproved the proposed revised solid fuel emission limitations as they applied to Tampa Electric Company's Big Bend and Gannon Stations, thereby leaving in force the previously approved emission limit of 1.5 lbs. $SO_2/10^6$ BTU for solid fuel at these two facilities.

On October 1, 1975, the Regional Administrator issued a partial stay and conditional termination of the Order issued to Tampa Electric Company on May 12, 1975. The effect of this action was to temporarily relieve the Company of complying with: (1) increment numbers 2, 3, 4 and 5 in Appendices E and F, (2) part B in Appendix G and (3) Appendix H to the May 12, 1975, Order until EPA published in the Federal Register a notification of final rulemaking action regarding the proposed Florida plan revision.

The Order provided that, in the event that the proposed plan revision was disapproved as it applied to Tampa Electric Company, the partial stay was to terminate. The Order required the Company to

submit to the Regional Administrator evidence of compliance with the actions previously stayed within 60 days after publication of said disapproval.

Therefore, under the terms of the October 1, 1975 Order, you are required to submit to this office by June 18, 1976, evidence of compliance with the increments in the May 12, 1975 Order which were stayed and which have already become due. In the event that these increments have not been met, further enforcement action by this agency will be required.

In addition, on the basis of an evaluation of the information considered with regard to the disapproval action by the Administrator, a more restrictive interim emission limitation appears to be appropriate. Therefore, the previously issued Administrative Orders must be revised to reflect these findings and interim emission limitations. A draft of the Order will be provided for your review in order for you to determine whether you wish to consent to its terms. Prior to the issuance of the revised Order, you will be afforded the opportunity for a formal transcribed conference. Of course, we would be glad to confer with you informally at any time.

If you have any questions in this regard, please call Mr. Paul J. Traina whose phone number is 404/526-2211.

Sincerely yours,

Original Signed By:

Jack E. Ravan
Regional Administrator

cc: Mr. J. W. Landers, Jr.
Mr. Terry Cole
Mr. Robert Murray
Mr. Roger P. Stewart

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
9721 EXECUTIVE CENTER DRIVE, NORTH, SUITE 200
~~P.O. BOX 2038~~
ST. PETERSBURG, FLORIDA ~~33731~~ 33702

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS, JR.
SECRETARY

May 17, 1976
Hillsborough County AP
Tampa Electric Company

Mr. Alex Kaiser
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

Subject: AO 29-2470 Unit #6, Gannon Station - Your letter of April 23, 1976.

Dear Mr. Kaiser:

In reply to your letter of April 23, 1976 pertaining to the Provisos for the above subject operating permit, we would like to explain that the Hillsborough County Environmental Protection Commission functions as an adjunct to the State Department of Environmental Regulation. Your primary responsibility for compliance is to the State.

Proviso #3, Upset Reporting:

We agree that you should continue to report all malfunctions and major upsets to Hillsborough County Environmental Protection Commission. We would also appreciate your sending a copy of all written malfunction or upset reports to this office. Hillsborough County will immediately motify this office of any verbal notifications of major upsets of prolonged duration.

Proviso #6, Emission Testing:

We ask that you continue to comply with Proviso #6 as written; that is: Particulate sampling at least every six months, plume density at least every six months, sulfur oxides reporting at least every six months. Proviso #6 states that fuel analysis is acceptable in lieu of SO_2 stack sampling.

Thank you for your continued cooperation in helping to improve our air quality standards.

CS/smw

cc: Central Files
Hillsborough County Environmental Protection Commission

Very truly yours,

C. Steelman

C. Steelman
Engineer, Air Permitting

4.27.76
CS. 5/4/76

TECO
TAMPA ELECTRIC COMPANY

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

April 23, 1976

Mr. B. B. Vest
District Manager
Southwest District
Department of Environmental Regulation
P. O. Box 20350
St. Petersburg, Florida 33742

RE: Operation Permit
Unit No. 6 - Gannon Station
AO-29-2470
Received April 14, 1976

Dear Mr. Vest:

Tampa Electric Company would like to exercise its right to appeal for review of certain conditions and requirements contained in the above-mentioned permit.

Condition and Requirement No. 3 (Upset Reporting)

There is presently established a formal reporting system with the Hillsborough County Environmental Protection Commission. The system works as follows: if any unit has a malfunction, it is reported to the Hillsborough County Environmental Protection Commission on their approved form. If the event is such that a "major" upset occurs, TECO immediately informs the Hillsborough County Environmental Protection Commission of the episode, its cause, its possible remedy and its duration. This close reporting has been required since 1972 by the Hillsborough County Environmental Protection Commission.

It is our opinion that we need not have a duplication of effort since all upsets are being reported to the Hillsborough County Environmental Protection Commission now and they will continue to be reported in the future. Therefore, we request that this requirement be deleted.

Condition and Requirement No. 6 (Source Sampling)

Our request is for a modification of the semi-annual testing requirement for particulate emissions (source sampling) to annual testing.

Visual observation of Unit No. 6's stack throughout the year indicates that the emissions obtained during a source test are representative of yearly emissions. Stack appearance has not varied significantly except during upset conditions or equipment malfunction and these events are being reported to the Hillsborough County Environmental Protection Commission when they occur and the problems are remedied immediately.

Stack appearance is related to particulate emissions and since stack appearance has not significantly changed throughout the year, it becomes obvious that additional emission testing will provide no benefits for the large expenditures incurred. We have clearly demonstrated through previous test results that Unit No. 6 is well in compliance with the regulation, and we trust you will agree that annual testing will meet your requirements.

The other testing requirements under this proviso are for sulfur dioxide (SO_2) and plume density. These requirements are redundant since we are presently reporting fuel analyses to the Department of Environmental Regulation on a quarterly basis. These analyses then can be used to calculate the pounds of SO_2 per million BTU emission standard. Plume density as stated above is presently being reported to the Hillsborough County Environmental Protection Commission.

Therefore, these requirements should be deleted or adjusted to fit the manner in which they are presently being reported.

We hope that reasonable reporting requirements may be established so that proper determination of our continuing compliance with all applicable rules and regulations can be assessed.

If there are any questions, please do not hesitate to call me or Mr. Dorian K. Valdes. An early response would be appreciated.

Very truly yours,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: Mr. R. P. Stewart

cc Vest
Cole

MAR 31 1976

NO 15555
RECEIVED
A ___ W ___ SP ___
APR 2 1976
DER

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

Re: Administrative Order
Docket No. AO-75-39 (a)

D.E.R.
APR 12 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

Dear Mr. Culbreath:

I wish to acknowledge receipt of your March 16, 1976, letter transmitting a copy of the stack test report for Gannon Unit No. 6.

This report does verify that Gannon Unit No. 6 is operating within the applicable emission limitation included in the above referenced order.

Sincerely yours,

Original Signed By

Paul J. Traina
Director
Enforcement Division

cc: Mr. J. W. Landers, Jr.
Mr. R. P. Stewart

RECEIVED
APR 5 1976
BUREAU OF ENFORCEMENT

RECEIVED
APR 5 1976
PERMIT

DER MONTHLY EMISSION REPORT
As Required by Chapter 17-2.04(6)(e)2.f.

UNIT Gannon #6 MONTH Mar, 1976

Date	Fuel Analysis % sulfur	Fuel Analysis BTU/lb	Pounds SO_2* million BTU
1	0.80	12,247	1.24
2	0.80	12,247	1.24
3	0.80	12,247	1.24
4	0.80	12,247	1.24
5	0.80	12,247	1.24
6	--	--	--
7	--	--	--
8	1.18	11,789	1.90
9	1.18	11,789	1.90
10	1.18	11,789	1.90
11	1.18	11,789	1.90
12	--	--	--
13	--	--	--
14	--	--	--
15	--	--	--
16	1.29	11,055	2.22
17	1.29	11,055	2.22
18	1.29	11,055	2.22
19	1.29	11,055	2.22
20	1.29	11,055	2.22
21	1.40	11,610	2.29
22	1.40	11,610	2.29
23	1.40	11,610	2.29
24	1.40	11,610	2.29
25	1.40	11,610	2.29
26	1.40	11,610	2.29
27	1.40	11,610	2.29
28	1.50	11,805	2.41
29	1.50	11,805	2.41
30	1.50	11,805	2.41
31	1.50	11,805	2.41

*Pounds SO_2 per million BTU calculated assuming 95% conversion S to SO_2 (EPA "Compilation of Air Pollution Emission Factors" pp. 1-3)

DER MONTHLY EMISSION REPORT
As Required by Chapter 17-2.04(6)(e)2.f.

UNIT Gannon #6 MONTH Feb., 1976

Date	Fuel Analysis		Pounds SO_2*
	% sulfur	BTU/lb	million BTU
1	--	--	--
2	1.40	11,501	2.31
3	1.40	11,501	2.31
4	1.40	11,501	2.31
5	1.40	11,501	2.31
6	1.40	11,501	2.31
7	1.40	11,501	2.31
8	1.43	11,627	2.34
9	1.43	11,627	2.34
10	1.43	11,627	2.34
11	1.43	11,627	2.34
12	1.43	11,627	2.34
13	1.43	11,627	2.34
14	--	--	--
15	--	--	--
16	1.27	11,912	2.03
17	1.27	11,912	2.03
18	1.27	11,912	2.03
19	1.27	11,912	2.03
20	1.27	11,912	2.03
21	1.27	11,912	2.03
22	0.90	12,130	1.41
23	0.90	12,130	1.41
24	0.90	12,130	1.41
25	0.90	12,130	1.41
26	0.90	12,130	1.41
27	0.90	12,130	1.41
28	0.90	12,130	1.41
29	0.90	12,247	1.24
30			
31			

*Pounds SO_2 per million BTU calculated assuming 95% conversion S to SO_2 (EPA "Compilation of Air Pollution Emission Factors" pp. 1-3)

DER MONTHLY EMISSION REPORT
As Required by Chapter 17-2.04(6)(e)2.f.

UNIT Gannon #6 MONTH Jan.,1976

Date	Fuel Analysis		Pounds SO_2*
	% sulfur	BTU/lb	million BTU
1	1.23	11,981	1.95
2	1.23	11,981	1.95
3	1.23	11,981	1.95
4	1.34	11,937	2.13
5	1.34	11,937	2.13
6	1.34	11,937	2.13
7	1.34	11,937	2.13
8	1.34	11,937	2.13
9	1.34	11,937	2.13
10	1.34	11,937	2.13
11	1.17	12,299	1.81
12	1.17	12,299	1.81
13	1.17	12,299	1.81
14	1.17	12,299	1.81
15	1.17	12,299	1.81
16	--	--	--
17	--	--	--
18	--	--	--
19	--	--	--
20	--	--	--
21	--	--	--
22	--	--	--
23	1.31	12,483	1.99
24	1.31	12,483	1.99
25	1.29	11,624	2.11
26	1.29	11,624	2.11
27	1.29	11,624	2.11
28	1.29	11,624	2.11
29	1.29	11,624	2.11
30	1.29	11,624	2.11
31	1.29	11,624	2.11

*Pounds SO_2 per million BTU calculated assuming 95% conversion S to SO_2
(EPA "Compilation of Air Pollution Emission Factors" pp. 1-3)

TECO
TAMPA ELECTRIC COMPANY

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

March 17, 1976

D.E.R.
MAR 18 1976
SOUTH WEST DISTRICT
ST. PETERSBURG

Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
Sixth Floor, Stovall Prof. Bldg.
305 N. Morgan Street
Tampa, Florida 33602

RE: Operating Permit, Unit No. 6
Gannon Station - Compliance Test

Dear Mr. Stewart:

We are submitting to you enclosed with this letter the results of our Gannon Station Unit No. 6 emissions tests as required by our operating permit.

The particulate emissions results are an average of 0.022 pounds particulates per million BTU, which are well within the allowable limits set by the Florida Administrative Code, Chapter 17-2.04(6)(e)2.a. The method of testing was determined by a meeting with the Hillsborough County Environmental Protection Commission, Conservation Consultants, Inc., and Tampa Electric Company on January 26, 1976.

The sulfur dioxide emissions are 1.82 pounds SO_2 per million BTU assuming a 95% conversion factor of S to SO_2. These results also meet the Florida Administrative Code, Chapter 17-2.04(6)(e) 2.d.(i), which allows up to 2.4 pounds SO_2 per million BTU. These values were obtained by fuel analyses.

The results submitted prove compliance of Unit No. 6, Gannon Station with all applicable rules and regulations. We, therefore, request an operating permit be issued.

Sincerely,

Dorian K. Valdés

Dorian K. Valdes
Environmental Engineer

DKV:sac
Enclosure
cc: Mr. Banks Vest (FDER) ◁ THIS COPY FOR

(1 Fwd
(2/ File

TECO
TAMPA ELECTRIC COMPANY

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

March 16, 1976

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

RE: Administrative Order
AO-75-39(a)

Dear Mr. Traina:

Enclosed for your information is a copy of the emission testing results on our Francis J. Gannon Station Unit No. 6. The tests performed by Conservation Consultants, Inc. show that the precipitator on Gannon Unit No. 6 is operating well within the emission regulations of .1 pounds of particulates per million BTU of heat input while burning low sulfur coal. The sulfur dioxide emission rate during this test was 1.82 pounds per million BTU.

We trust that this emissions test is sufficient proof that Gannon Unit No. 6 is operating within the applicable emission limitations included in the Administrative Order.

Sincerely,

H. L. Culbreath
President

Enclosure
cc: Mr. J. W. Landers, w/o enclosure
Mr. R. P. Stewart, w/o enclosure
Mr. R. P. Murray, w/o enclosure

TECO
TAMPA ELECTRIC COMPANY

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

July 18, 1975

Mr. Bennie Caramella
Hillsborough County Environmental
Protection Commission
305 N. Morgan Street
Stovall Prof. Bldg., Sixth Floor
Tampa, Florida 33602

Dear Mr. Caramella:

As we discussed on July 7, 1975 we have had some difficulty with precipitation of the fly ash generated from the combustion of low sulfur coal in Gannon Unit No. 6, and found it necessary in order to keep Gannon Unit No. 6 operating without excessive particulate emissions to cease burning low sulfur coal and resume burning 3.2% sulfur coal on July 4, 1975. We lost several sections of the precipitator on Gannon Unit No. 6 due to excessive sparking and the resultant burned and shorted wires. Our initial approach to the problem was to call in precipitator consultants to determine if the precipitator could be adjusted to collect the low sulfur coal ash without the excessive sparking and wire burnout.

We were forced to curtail load on Gannon Unit No. 6 to keep particulate emissions at an acceptable level from July 3 until July 11, 1975, when we were able to remove the unit from service for precipitator repair. During the outage we found shorted sections due to broken wires and evidence of sparking throughout the precipitator. We repaired the precipitator and installed spark suppressant devices. We then, on July 14, 1975, started Unit No. 6 up on a mixture of coal estimated to contain between 2% and 2.5% sulfur. Gannon Unit No. 5 was started up on July 17, 1975 and is burning the same coal mixture.

To enable us to burn the low sulfur coal and maintain precipitator efficiency, we have authorized Apollo Chemical Corp. to install an additive system for flue gas conditioning which will make the low sulfur coal ash collectable in our precipitators. Installation of this equipment should take approximately three weeks, at which time we expect to be able to return to burning 1.3% sulfur coal in both Gannon Units 5 and 6. In the meantime, we will blend low sulfur and high sulfur coal to the lowest sulfur content possible without experiencing precipitator problems on Gannon Units 5 and 6.

If I may be of further assistance or give you further information, please feel free to contact me.

Sincerely,

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

cc: Mr. J. H. Kerns, DER ◁ THIS COPY FOR
Mr. J. W. Landers, Jr., DER

JUNE 23, 1975

M E M O R A N D U M

TO: R. L. CALEEN, JR.
ENVIRONMENTAL LAW SECTION

THRU: HARRY KERNS

THRU: W. E. LINNE

THRU: MARTIN KAHEL

FROM: J. L. TESSITORE

SUBJECT: TAMPA ELECTRIC
GANNON STATION UNIT NO. 6
RAPID TAX AMORTIZATION

The above subject has been reviewed by this office. All data presented appears to be in order and consistent with operating reports. We recommend approval.

JLT/JHK/WEL/MK/DAT/pm

VISIBLE EMISSIONS REPORT

observation date 6-23-75 distance to stack 400 ft

time 2:30 wind direction/speed S / 0-5

stack location - GANNON STATION - STACK #6 (UNIT #6)

UTM coordinates 360000mE 3,087,500mN

process description Fossil Fuel STEAM GENERATOR

Load 315 MW

observer Mike Opalinski

opacity observations in percent

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

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

opacity observations in percent

sec / min	0	15	30	45
31	5	10	5	5
32	5	10	5	5
33	5	5	5	10
34	5	5	10	5
35	5	5	5	10
36	5	5	5	5
37	5	5	5	10
38	10	10	5	5
39	5	5	10	10
40	10	10	10	5
41	5	5	10	5
42	10	10	5	10
43	5	5	10	10
44	10	5	5	5
45	5	10	5	5

sec / min	0	15	30	45
46	5	5	5	10
47	5	5	5	5
48	10	10	5	5
49	5	10	10	5
50	10	10	5	5
51	10	5	5	10
52	5	10	5	5
53	10	5	10	10
54	5	5	5	10
55	5	5	10	5
56	10	10	5	10
57	5	10	5	5
58	5	5	10	5
59	10	10	5	5
60	5	10	10	5

sum of readings recorded 1620

total number of readings 244

opacity % $\frac{\text{sum}}{\text{total}} = \frac{1620}{244} = 13.3$

comments:

Cloudy BACKGROUND

observer certification card

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

Orlando
Location of School

7 May 1975
Date

This is to Certify That

MIKE OPALINSKY

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

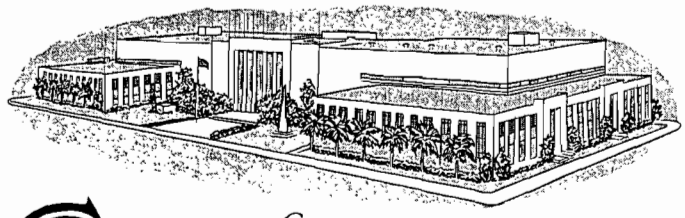
Certifying Official

Training Officer
Title

Form 1-8 (3/73)

ENVIRONMENTAL PROTECTION
COMMISSION

BOB BONDI, CHAIRMAN
ROBERT E. CURRY, VICE CHAIRMAN
ELIZABETH B. CASTOR
FRANCES M. DAVIN
BOB LESTER



ROGER P. STEWART
DIRECTOR

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

TELEPHONE (813) 223-1311
EXT. 643

COUNTY of HILLSBOROUGH
Tampa, Florida 33601

D. P. C.

MAY 6 1975

WEST CENTRAL REGION
WINTER HAVEN

J.L.T
File

May 5, 1975

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

Re: TECO Application for certification of Pollution Control Facility, Gannon Unit # 6 precipitator upgrade.

Dear Harry:

According to our records, I conducted an inspection of the referenced facility on April 25, 1974, at which time Unit #6 was NOT in service. This unit was being brought up to operating temperatures and projected to be in service within the next few days.

In a letter from Alex Kaiser dated October 10, 1974 (copy enclosed) he indicated that this unit was placed in service on April 30, 1974 and stack tests were conducted on July 10, 1974.

I hope these dates further aid your Agency in properly assessing the referenced application. I for one am slightly puzzled by the letters dated December 18, 1974 in which Mr. Kaiser stated that the unit was put into operation on April 7, 1974.

Also enclosed is our evaluation of the stack test conducted on Unit # 6.

Sincerely,

Bennie Caramella

Bennie J. Caramella
Environmental Engineer
Hillsborough County Environmental
Protection Commission

BJC/fd

w/enclosures

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

AIR EMISSION REPORTS

October 10, 1974

Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
305 Morgan Street
Sixth Floor, Stovall Professional Bldg.
Tampa, Florida 33602

RE: Tampa Electric Company Compliance Schedule
Gannon Station Unit No. 6
Particulate Control
Permit No. A029-2191

Dear Mr. Stewart:

The upgraded particulate removal equipment on Unit No. 6, Gannon Station, was placed in service on April 30, 1974.

Emission tests for proof of compliance as required by the Fifth Increment of Progress were performed by Technical Services, Inc. of Jacksonville, Florida on July 10, 1974. Emissions of particulates were determined to be .0941 pounds per million BTU of heat input. Four copies of the test results are enclosed.

Sincerely,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: Mr. W. E. Linne
Florida Department of Pollution Control

Enclosures

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION

PARTICULATES SOURCE TEST RESULTS

COMPANY NAME: TAMPA ELECTRIC COMPANY

COMPANY CONDUCTING TEST: TECHNICAL SERVICES, INC.

SOURCE IDENTIFICATION: GANNON UNIT #6

DATE: 7-10-74

RUN	MOLECULAR WEIGHT	SCF	ACFM	SCFM	%H_2O	TEMP °F	PERCENT ISOKINETIC	GRAINS/ SCF	EMISSIONS lbs/hr	ALLOWABLE lbs/hr
#1	29.89	44.55	1120137	739902	4.8	305.0	106.8	.0644	408.48**	340.00
#2	29.58	31.06	1081274	704109	6.8	300.0	104.4	.0383	231.69	340.00
MEAN	29.74		1100706	722006	5.8	302.5		.0514	320.09	

STANDARD CONDITIONS = Dry, 70°F, 29.92 in. Hg.

ALLOWABLE EMISSIONS based on Chapter 1-3.03 of the Rules of H.C.E.P.C.

DRY MOLECULAR WEIGHT of gas assumed to be 28.85 when gas composition data not available.

** VIOLATION!! Chapter 1-3.03 of the Rules of H.C.E.P.C.

SOURCE TEST DATA SUMMATION

COMPANY NAME: TAMPA ELECTRIC COMPANY

SOURCE IDENTIFICATION: GANNON UNIT #6

DATE: 7-10-74

RUN	#1	#2
VW = volume of moisture collected, ml	48.0	48.0
TM = average meter temperature, °F	100.2	95.1
VM = actual sample volume metered, cu. ft.	46.77	32.32
GC = dry gas meter coefficient	1.000	1.000
PB = barometric pressure, in. Hg.	30.04	30.04
PM = average meter vacuum, in. Hg.	-.089	-.083
As = stack area, square feet	242.820	242.820
An = probe nozzle tip area, square feet	.00019	.00019
TS'= avg stack temp during pitot reading, °F	305.0	300.0
TS = average stack temperature, °F	305.0	300.0
mg = milligrams, amount of contaminant in sample	186.000	77.300
T = net sampling time, minutes	72	54
HS = avg square root of velocity head, in. H20	1.173	1.130
PS = average stack pressure, in. Hg.	29.98	29.98
FS = pitot coefficient	.830	.830
%CO2= percent carbon dioxide by volume, dry basis	14.10	13.90
%O2 = percent oxygen by volume, dry basis	6.20	5.10
%CO= percent carbon monoxide by volume, dry basis		
%N2 = percent nitrogen by volume, dry basis	79.70	81.00

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

SOURCE SAMPLING CALCULATIONS
PARTICULATE EMISSIONS

PLANT- TECO COMMON STATION *DATE- 7/10/74*
STACK- UNIT 6 *RUN 2 FROM 20:08-21:06*
WEATHER CONDITIONS- CLOUDY *PB- 30.04 IN HG* *PS- 29.98 IN HG*
AS'- 242.82 SQ. FEET *TS- 760 DEGREES R* *TM- 555.1 DEGREES R* *H- 1.13 IN H2O*
ΔH- 1.14 IN H2O *AN- 0.000192 SQ FT* *CP- 0.83* *VM- 32.32 CF* *VC- 48 ML*
TOTAL TIME- 54 MIN *NPTS- 18* *ORSAT: CO2-13.90* *O2- 5.10* *CO- 0* *N2- 81*

1.	Volume Water Vapor	1. 2.275	SCF
2.	Stack Gas Volume - STPD	2. 31.069	SCFD
3.	Total Volume	3. 33.344	SCF
4.	Moisture in Stack Gas - Volume Fraction	4. 0.068	
5.	Dry Stack Gas - Volume Fraction	5. 0.932	
6.	Assumed Moisture in Stack Gas - Volume Fraction	6. 0.05	
7.	Molecular Weight of Stack Gas - Dry Basis	7. 30.43	
8.	Molecular Weight of Stack Gas - Stack Conditions	8. 29.58	
9.	Specific Gravity of Stack Gas Relative to Air	9. 1.02	
10.	Excess Air - Percent	10. 31.	%
11.	Average of Factor ($\sqrt{H} \times TS$)	11. 31.15	
12.	Average Stack Velocity	12. 4449.1	FPM
13.	Actual Stack Gas Flow Rate	13. 1080332	ACFM
14.	Actual Stack Gas Flow Rate Dry	14. 1006617	CFMD
15.	Stack Gas Flow Rate - STPD	15. 703391	SCFM
16.	Percent Isokinetic	16. 103.6	%

MG			GR/SCF	GR/ACF	MG/SCF	MG/ACF	LBS/HR
PART.	-	77.3	0.0383	0.0250	87.85	57.18	231.53
TOTALS	-	77.3	0.0383	0.0250	87.85	57.18	231.53

Comments: Operating at maximum attainable load of 335 MW
3,400 X 10^6 BTU/hr heat input

Test Conducted By: A. E. Henderson & H. C. Gray, Jr.

.07

3400 | 231.53
20400
2753

SOURCE SAMPLING FIELD DATA SHEET

Plant TECO Gannon Station

Sampling Location Unit 6 Stack

Date 7/10/74 Run No. 2

Time Start 2008 Time End 2106

Sampling Time/Point 3 min.

DB ____ °F, WB ____ °F, VF @ DP ____ "Hg

Moisture 5 %, FDA ____, Gas Density Factor ____

Barometric Press 30.04 "Hg Stack Press 29.98 "Hg

Weather Partly cloudy & hot

Temp. 90 °F, W/D ____, W/S ____

Sample Box No. 1 Meter Box No. 1

Meter ΔH@ ____ Pitot Corr. Factor .83

Nozzle Dia. 3/16 in., Probe Length 10 ft

Probe Heater Setting ____

Stack Dimensions: Inside Diameter 17'7 in
Inside Area 242.82 ft²
Height ____ ft

Mat'l Processing Rate ____

Final Gas Meter Reading 297.75 ft³

Initial Gas Meter Reading 265.43 ft³

Total Condensate in Impingers 40 ml

Moisture in Silica Gel 8 gm

Silica Gel Container No. 4 Filter No. 4

Orsat: CO_2 13.9%
O_2 5.1%
CO --
N_2 81.0%

Excess Air ____

Test Conducted by: A. E. Henderson, Jr.
H. C. Gray, Jr.

Remarks: ____

Port and Traverse Point No.	Distance from End of Port (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O)		Stack Gas Temp. (°F)	Gas Sample Temp.@ Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impinger Test (°F)	Vacuum on Sample Train ("Hg)
					Calc.	Actual		In	Out			
		2008	265.43									
4-1		2011	266.9	.90	.71	.71	305	94	94			
4-2		2014	268.7	1.30	1.10	1.10		95	95			
4-3		2017	270.6	1.40	1.18	1.18		95	95			
4-4		2020	272.6	1.5	1.27	1.27		96	95			
4-5		2023	274.5	1.5	1.27	1.27		98	95			
4-6		2026	276.3	1.3	1.10	1.10		99	95			
3-1		2036	277.4	.48	.41	.41	310	97	95			

Port and Traverse Point No.	Distance from End of Port (in)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H_2O)	Meter Orifice Press.Diff. ("H_2O)		Stack Gas Temp. (°F)	Gas Sample Temp.@ Dry Gas Meter (°F)		Sample Box Temp. (°F)	Last Impinger Temp. (°F)	Vaccum on Sample Train
					Calc.	Actual		In	Out			
3-2		2039	278.6	.65	.55	.55		96	95			
3-3		2042	280.0	.75	.65	.65		96	95			
3-4		2045	281.4	.75	.65	.65		97	95			
3-5		2048	282.7	.70	.60	.60		97	95			
3-6		2051	284.1	.85	.73	.73	309	98	95			
1-1		2106	286.0	1.3	1.10	1.10		98	95			
2-2		2109	288.2	2.0	1.72	1.72	290	98	95			
2-3		2112	290.6	2.2	1.87	1.87		98	95			
2-4		2115	293.0	2.2	1.87	1.87	295	98	95			
2-5		2118	295.4	2.25	1.90	1.90		98	95			
2-6		2121	297.750	2.15	1.85	1.85	300	98	95			

SOURCE EMISSION TEST DATA

Test Number -
Plant Name -
Source Tested -
Type of Plant -
Control Equipment -
Pollutant Sampled -

		1	2	
1.	Run Number	1	2	
2.	Date	7/10/74	7/10/74	
3.	Time Began	17:26	20:08	
4.	Time End	19:21	21:06	
5.	T - Net Time of Test, Minutes	72	54	
6.	PB - Barometric Pressure, Inches Hg	30.04	30.04	
7.	PS - Stack Pressure, Inches Hg	29.98	29.98	
8.	Δ H - Gas Meter Orifice Pressure Drop, Inches H_2O	1.22	1.14	
9.	$\overline{TM}$ - Gas Meter Average Temperature, ^oF	100.2	95.1	
10.	$\overline{VC}$ - Total H_2O Collected, ml	48	48	
11.	VWV - Volume H_2O Vapor Collected, cubic ft., STP	2.28	2.28	
12.	VM - Volume Dry Gas Sampled, cu. ft., Meter Cond.	46.77	32.32	
13.	VSTPD - Volume Dry Gas Sampled, cu. ft, STP	44.559	31.069	
14.	W(PCT) - Stack Gas Moisture, PCT Volume	4.9	6.8	
15.	$\overline{TS}$ - Average Stack Gas Temperature, ^oF	305	300	
16.	$\overline{CO_2}$ - Stack Gas CO_2, PCT Volume	14.1	13.9	
17.	O_2 - Stack Gas O_2, PCT Volume	6.2	5.1	
18.	CO - Stack Gas CO, PCT Volume	0	0	
19.	N_2 - Stack Gas N_2, PCT Volume	79.7	81	
20.	EA - Stack Gas Excess Air, PCT Volume	41.	31.	
21.	MD - Stack Gas Molecular Weight, Dry	30.5	30.43	
22.	MS - Stack Gas Molecular Weight, Stack Cond.	29.9	29.58	
23.	GS - Stack Gas Specific Gravity, Ref Air	1.03	1.02	
24.	H - Average Square Root Velocity Head, Inches H_2O	1.173	1.13	
25.	Average Square Root (Stk Temp x Vel Head)	32.452	31.15	
26.	CP - Pitot Tube Correction Factor	0.83	0.83	
27.	U - Stack Gas Velocity, Feet/Minute	4610.5	4449.1	
28.	$\overline{AS}$ - Stack Area, Square Feet	242.82	242.82	
29.	AS' - Effective Stack Area, Square Feet	242.82	242.82	
30.	QS - Stack Gas Flow Rate, cu.ft/min., Stk Cond.	1119515	1080332	
31.	QSTPD - Stack Gas Flow Rate, cu.ft./min. STP	739413	703391	
32.	DN - Sampling Nozzle Diameter, inches	0.1875	0.1875	
33.	AN - Sampling Nozzle Area, Square Feet	0.00019	0.00019	
34.	PCT ISO - Isokinetic Sampling, Percent	106	103.5	

*** STP - Dry, 70 Degrees F, 29.92 Inches Hg

TECO Z-9

TAMPA ELECTRIC COMPANY

D.P.C.

October 10, 1974 OCT 15

WEST CENTRAL REGION

Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
305 Morgan Street
Sixth Floor, Stovall Professional Bldg.
Tampa, Florida 33602

RE: Tampa Electric Company Compliance Schedule
Gannon Station Unit No. 6
Particulate Control
Permit No. A029-2191

Dear Mr. Stewart:

The upgraded particulate removal equipment on Unit No. 6, Gannon Station, was placed in service on April 30, 1974.

Emission tests for proof of compliance as required by the Fifth Increment of Progress were performed by Technical Services, Inc. of Jacksonville, Florida on July 10, 1974. Emissions of particulates were determined to be .0341 pounds per million BTU of heat input. Four copies of the test results are enclosed.

Sincerely,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

cc: Mr. W. E. Linne
Florida Department of Pollution Control

Enclosures

FW
File Hills. Co AP

Tampa Electric Company

TECO

P. O. BOX 111, TAMPA, FLORIDA 33601

March 1, 1974

D. P. C.

MAR 4 1974

WEST CENTRAL REGION

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

RE: Compliance Schedule, Tampa Electric Company
Gannon Station Unit No. 6
~~Particulate~~ Control
Permit No. A029-2191

Dear Mr. Stewart:

This is to inform you that the final tie-in of the new precipitator to the boiler has been completed, and it is anticipated that test results which will prove compliance will be forwarded to you prior to the May 30, 1974 final compliance date.

If you have any questions, please don't hesitate to contact us.

Yours very truly,

Alex Kaiser

Alex Kaiser, Director sc
Power Plant Engineering &
Environmental Planning

cc: Mr. W. E. Linne, Regional Administrator
Florida Department of Pollution Control

TECO.Z.9

TAMPA ELECTRIC COMPANY

FRED WARREN

D. P. C.

November 30, 1973

DEC 3 1973

WEST CENTRAL REGIO

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

File

RE: Compliance Schedule, Tampa Electric Company
Gannon Station Unit No. 6
Particulate Control
Permit No. A029-2191

Dear Mr. Stewart:

The fourth increment of progress (construction completion) for upgrading the particulate removal equipment on Unit No. 6 Gannon Station is presently set for November 30, 1973. Due to construction delays and the inability to remove this unit from service and still maintain a reliable electric supply, we have been unable to make the final tie-in between the new precipitator (which is essentially complete) and the boiler.

We now plan to remove this unit from service on December 8, 1973 to make the final tie-in. This shutdown will last for approximately twelve weeks, with the new precipitator being operational when the boiler comes back on-line.

In light of this, we would respectfully request that the date of the fourth increment of progress be moved to March 1, 1974. We anticipate that this schedule will still allow the present final compliance date of May 30, 1974 to be met.

If you have any questions, please don't hesitate to contact us.

Yours very truly,

Alex Kaiser, Director
Power Plant Engineering &
Environmental Planning

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

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

Fleming

8-23

August 11, 1972

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

Mr. W. E. Linne
Acting Chief, Bureau of Permitting
Florida Department of Pollution Control
Suite 300
Tallahassee Bank Building
Tallahassee, Florida 32301

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

Gentlemen:

Re: Construction Permit No. AC-419
Gannon Station Unit No. 6 Electrostatic Precipitator Upgrading

As requested by proviso 9 of the subject construction permit, a "statement . . . which explains the use, necessity, and expected frequency and duration of flyash reinjection" follows:

The heat energy that is required to generate electricity at our Gannon Station Unit No. 6 is obtained from the combustion of coal. This coal contains approximately 12 percent ash (mineral constituents that are not combustible). A portion of this ash is fused at the high temperatures in the bottom of the boiler and is tapped out the floor as a molten liquid which is called bottom slag. The rest passes out of the high temperature zone before it can be fused and is carried out the top of the boiler by the hot flue gases. This portion is called flyash.

Each of Tampa Electric Company's coal fired boilers is equipped with an electrostatic precipitator to capture the flyash and prevent its release to the atmosphere. The flyash that is collected must continually be removed from the precipitator.

Until recently, there was no market or use for the collected flyash in our area. This meant that the light, fluffy flyash would have to be stored in either slurry form in a pond or in some completely enclosed area such as a silo or building. With over 300 million pounds of flyash being collected each year and with no market or way to dispose of it, the problems are obvious.

An alternative is to reinject the collected flyash back into the hottest portion of the boiler where it fuses to become slag.

The molten slag is tapped out of the bottom of the boiler and falls into a large tank of water where it cools, solidifies and shatters into small pieces (approximately 1/4" diameter). This solid slag is hard, glassy in appearance, insoluble in water, chemically inert, and marketable.

Recently, Tampa Electric Company developed a market for flyash and has constructed silos which are used for storage and transfer of the flyash that is collected in the precipitators. The market is not capable of accepting all the flyash that is produced at this time but appears to be growing rapidly. However, until the demand is equal to or greater than the supply, it will be necessary to reinject the flyash when the limits of our storage capacity are reached. There will also be times when the breakdown of the mechanical equipment that conveys the flyash from the precipitator to the silo or from the silo to the trucks and railroad cars necessitates temporary reinjection of the flyash.

It is Tampa Electric Company's intention to divert the flyash to the storage silos whenever practical. However, there

are, and will continue to be, times when it will be necessary to reinject some of the flyash back into the boiler if continuous, reliable electric service is to be maintained. The frequency and duration of these periods cannot be predicted by Tampa Electric Company, but both should diminish as the market continues to grow.

If you have any further questions, please contact us.

Yours very truly,

R. D. Welch, Director
Power Plant Engineering & Construction

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

RECEIVED
APR 10 1972
DEPT. OF A.W.P.C.
WEST CENTRAL REGION
WINTER HAVEN

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

April 6, 1972

Hillsborough County AP
Tampa Electric Company
F. J. Gannon Station
Unit No. 6

Permit AC-419
Expires Nov. 15, 1973

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

Mr. R. D. Welch, Director
Power Plant Engineering
and Construction
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Mr. Welch:

This will acknowledge receipt of ~~construction~~ permit applications and other applicable documents covering ~~the proposed~~ upgrading of the electrostatic precipitator which serves Unit No. 6 at the F. J. Gannon Station, Tampa Electric Company, Port Sutton Road, Tampa, Hillsborough County, Florida.

These documents have been reviewed and the attached construction permit No. AC-419 dated April 5, 1972, has been issued subject to the attached standard provisos 1 through 6 and the following:

7. Unit No. 6, following electrostatic precipator upgrading, shall be tested for total particulate and sulfur oxide emissions, and the test results submitted in duplicate to the DPC West Central Florida Regional Office, P. O. Box 944, Winter Haven, Florida 33881, with copies to be sent to the Hillsborough County Pollution Control Office, 906 Jackson Street, Tampa, Florida 33602. These test results accompanied by a completed operation permit application are required prior to our issuance of an operation permit.

8. Satisfactory ladders, platforms, and other safety devices shall be provided as well as necessary ports to facilitate the carrying out of an adequate sampling program.

9. A statement shall be provided both this Department and the Hillsborough County Pollution Control Office, which explains the use, necessity, and expected frequency and duration of fly ash reinjection.

Your cooperation in this matter will be appreciated.

Sincerely,

W. E. Linne, Acting Chief
Bureau of Permitting

WEL/wcb

att.

cc: West Central Region
Hillsborough Co. Pol. Con. Off.
Bd. of Co. Comm.
Mr. William E. Hopkins, P. E.

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

STANDARD PROVISOS

1. Construction of this installation shall be completed by May 15, 1973.

2. This installation shall be operated by a competent and qualified person. Operations shall be conducted according to the best accepted practices and the recommendations of the Department of Air and Water Pollution Control.

3. This construction permit is issued with the understanding that the owner may need to comply with county, municipal, or other local regulations prior to construction.

4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Air and Water Pollution Control for consideration toward the issuance of an operation permit. Notification of the pending completion of this project shall be transmitted in writing to the Department by the engineer approximately two week before the completion of construction.

5. This construction permit expires on Nov. 15, 1973 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Air and Water Pollution Control Board.

6. Detailed plans and specifications for this report shall be available upon request by the Department of Air and Water Pollution Control.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

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

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

TO: The Files

Cover for

THRU: Dan Williams

FROM: Bob Garrett

DATE: January 25, 1982

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

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

	Unit	Old Permit	New Permit
1.	No. 1*	AO29-7136	AO29-47731
2.	No. 2*	AO29-15953	AO29-47730
3.	No. 3*	AO29-12940	AO29-47729
4.	No. 4*	AO29-27657	AO29-47735
5.	No. 5	AO29-7102	AO29-47728
6.	No. 6	AO29-12601	AO29-47727

*Being converted to coal fired - operation permit is for present oil fired.

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

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

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

Permit File Scanning Request from Lynn

Priority: ☐-ASAP (Public Records Request, etc.) ☑-Place in Normal Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
0570040	001	AO			

☑ File Approved For Disposal ☑ Correspondence ☐ Intent ☐ Permit ☐ Draft (Title V)
☐ Return File to BAR ☐ Amendment ☐ Application ☐ OGC ☐ Proposed (Title V)

Document Date 1-25-82, 3-11-82, 10-23-78, 10-11-78
7-16-99, 7-1-99, 3-19-96, 3-1-96, 9-2-94, 12-15-93, 1-31-91, 4-13-93,
11-5-91, 1-2-87, 12-04-86, 10-13-86, 10-10-86, 10-10-86, 6-4-86, 5-22-85
6-25-82, 3-12-81, 12-12-79, 10-5-79, 11-28-79, 7-23-80, 1-7-80, 8-25-78

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#000000047727 COE# DER PROCESSOR:GARRETT DER OFFICE:TPA
FILE NAME:TAMPA ELECTRIC CO. DATE FIRST REC: 09/15/81 APPLICATION TYPE:AO
APPL NAME:TAMPA ELECTRIC CO. APPL PHONE:(813)228-4111 PROJECT COUNTY:29
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601
AGNT NAME:WILLIAM CANTRELL AGNT PHONE:(813)228-4111
ADDR:P.O. BOX 111 CITY:TAMPA ST:FLZIP:33601

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

HEARING REQUEST DATES: / / / / / /
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N
*** RECORD HAS BEEN SUCCESSFULLY UPDATED *** 01/29/82 10:59:36
FEE PD DATE#1:09/17/81 $0020 RECEIPT#00054851 REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:IS DATE:01/27/82
REMARKS:TECO
GANNON STATION UNIT 6

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR
~~VICTORIA TSCHINKEL~~
SECRETARY
Vicki Tschinkel
WILLIAM K. HENNESSEY
DISTRICT MANAGER

Hillsborough County AP

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

Dear Mr. Williams:

Enclosed is Permit Number AO29-47727, dated Jan. 27, 1982, to operate the subject air pollution source issued pursuant to Section 403, Florida Statutes.

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

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

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

Sincerely,

W.K. Hennessey
District Manager

cc: HCEPC
William N. Cantrell

Enclosure

DER Form 17-1.122(66) 1/2

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

PART II
FORMAL PROCEEDINGS

28-5.201 Initiation of Formal Proceedings.

(1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.

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

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

(b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination;

(c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;

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

(g) Other information which the petitioner contends is material.

****

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

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

March 11, 1982

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

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

Dear Mr. Williams:

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

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

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

Sincerely,

William K. Hennessey
District Manager
Southwest District

WKH/rkt

cc: HCEPC

State of Florida
Department of Environmental Regulation

OPERATION PERMIT CONDITIONS
FOR AIR POLLUTION SOURCES

Permit No.: A029-12601 Date: October 23, 1978

An (X) indicates applicable conditions

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

(X) 2. Test the emissions for the following pollutant(s) at intervals of 12 months from the date May 3, 1978 and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing (Chapter 17-2.07(1), Florida Administrative Code (F.A.C.)).

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

*Fuel analysis is accepted in lieu of SO_2 stack sampling.

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

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

(X) 5. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.

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

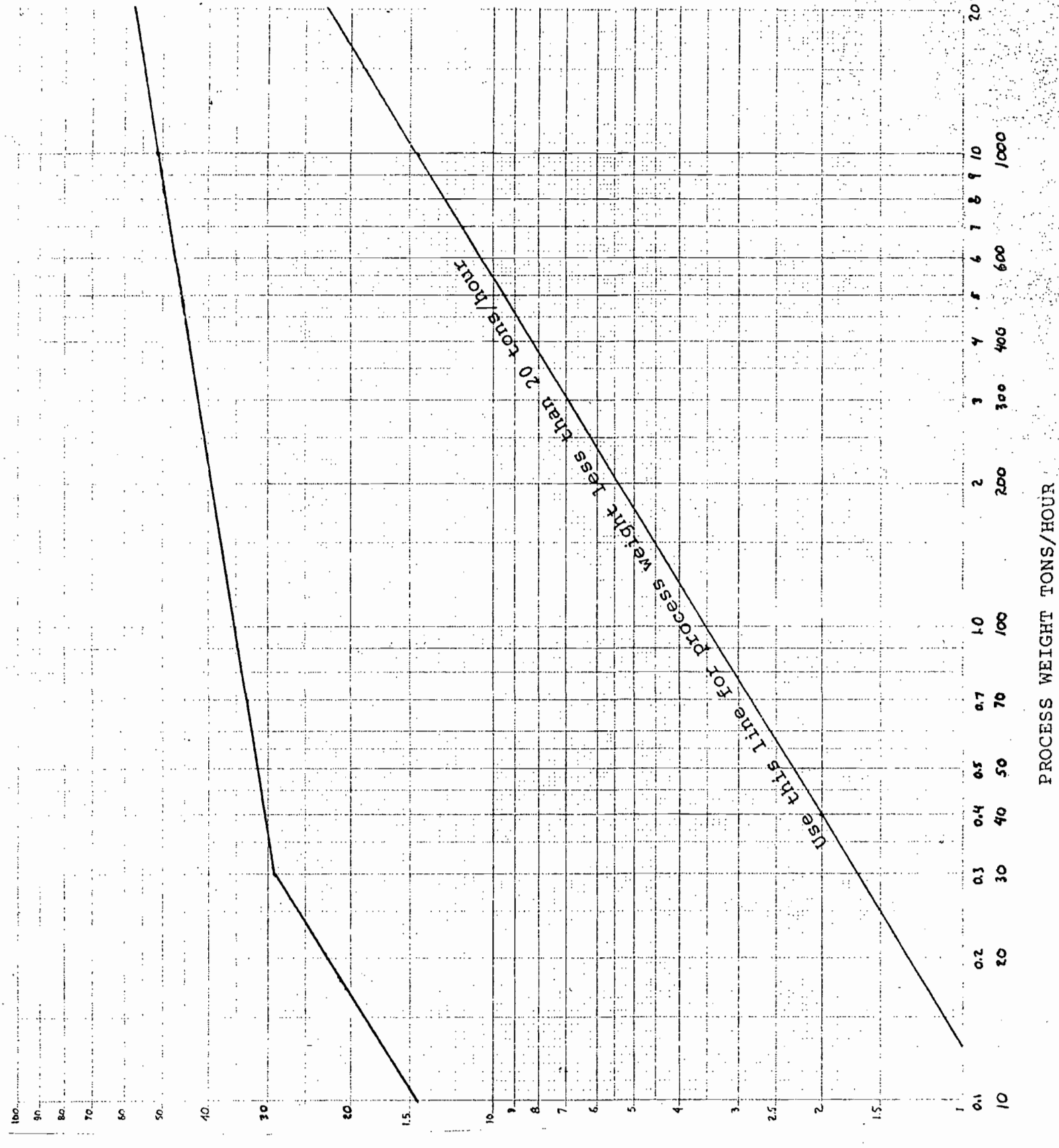
(X) 6. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the District Office of the D.E.R. as per Chapter 17-4.13, F.A.C. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement actions by the Department.

( ) 7. According to the Process Weight Table within Chapter 17-2.04(2), F.A.C., the maximum allowable emission rate of particulate matter for a process rate of _____ tons/hour is _____ pounds/hour. At lesser process rates, the allowable emission rates can be determined from the graph.

( ) 8. This permit is associated with a Development of Regional Impact (D.R.I.). It does not waive any other permits that may be required from this or any other state, federal, or local agency.

*Fuel analysis is accepted in lieu of SO_2 stack sampling.

PROCESS WEIGHT TABLE



State of Florida

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee	
To:	Loctn.:
To:	Loctn.:
To:	Loctn.:
From:	Date:

TO: P. David Puchaty

THRU: Dan Williams

FROM: W. H. Brown

DATE: October 11, 1978

SUBJECT: TECO Gannon #6 A029-12601

Gannon #6 is a 235 MW coal fired steam generator using low sulfur coal 1.3% sulfur.

The emission rates are as follows:

	Actual	Allowable
TSP lb/MMBTU/hr	0.02	0.1
SO_2 lb/MMBTU/hr	1.9	2.4

HCEPC has approved this project with Stewart's signature.

My review shows G #6 to be in compliance with TSP & SO_2 emission standards.

I recommend this permit be approved.

WHB/rkt

TAMPA ELECTRIC

D.E.R.
JUL 16 1999
Southwest District Tampa

July 13, 1999

Mr. Gerald Kissell
Air Permitting Supervisor
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Via Facsimile and
U.S. Mail

RE: Tampa Electric Company (TEC) - F.J. Gannon Station
Slag Tank Emergency Venting Vessel Entry Procedure
FDEP Permit Nos. AO29-204434, AO29-189206, AO29-172179
AO29-255208, AO29-203511, AO29-203512

Dear Mr. Kissell:

In accordance with the Department's letter (dated July 9, 1997) which authorizes emergency atmospheric venting of the Gannon Units 1- 6 slag tanks, TEC provides the following vessel entry procedures:

This document is prepared and provided in accordance with Specific Condition 3 of the FDEP letter authorizing emergency venting of slag tanks dated 7/7/97.

In general, emergency venting of the slag tanks will occur when there is a need to open the slag tank neck and the main vent is plugged or appears to be plugged. For clarification purposes, the main vent is the vent which exhausts combustible gases into the precipitator. As stated in the TEC request, plugging of the main vent line can lead to seriously dangerous situations.

To open a slag tank neck safely, it will first be ensured that the slag tap opening from the boiler is closed. Then, the tank's recently installed purge vent may be opened. Air or another suitable inert gas will then be applied to a nearby access port to allow venting of any combustible gases through the new purge vent. Upon venting completion, the purge vent will immediately be returned to the closed position. The unit, date of, and duration of purging will be recorded. All records will be available for inspection.

TAMPA ELECTRIC COMPANY
P. O. BOX 111 TAMPA, FL 33601-0111

AN EQUAL OPPORTUNITY COMPANY
HTTP://WWW.TAMPAELECTRIC.COM

(813) 228-4111

CUSTOMER SERVICE:
HILLSBOROUGH COUNTY (813) 223-0800
OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

If you have any questions regarding this procedure, please feel free to call James Hunter at (813) 641-5033.

Sincerely,

Theresa J.L. Watley
Consulting Engineer
Environmental Planning

EP\gm\TJLW654

c: Mr. Rick Kirby, EPCHC

7-1-99

Appendix H-1, Permit History/ID Number Changes

Tampa Electric Company
F. J. Gannon

[DRAFT/PROPOSED/FINAL]Permit No.: 0570040-002-AV
Facility ID No.: 0570040

Permit History (for tracking purposes):

E.U. ID No	Description	Permit No.	Issue Date	Expiration Date	Extended Date	Revised Date(s)
-001	Steam Generator	AO29-204434	1/31/92	1/31/97		10/11/94
-002	Boiler	AO29-189206	2/7/91	2/6/96	8/14/96	
-003	Coal Fired Boiler	AO29-172179	4/26/90	4/19/95	8/14/96	10/11/94
-004	Coal Fired Boiler	AO29-255208	12/2/94	10/14/99		
-005	Coal Fired Boiler	AO29-203511	1/1/92	1/1/97		
-006	Coal Fired Boiler	AO29-203512	2/15/92	2/15/97		
-007	Gas Turbine	AO29-252615	8/31/94	8/31/99		
-008	Boiler	AO29-216480	4/23/93	9/12/97		
-009	Economizer Ash Silo	AO29-218858	8/29/89	11/6/97		
-010	Fly Ash Silo	AO29-250137	7/20/94	7/12/99		2/6/95
-011	Fly Ash Silo	AO29-250140	7/20/94	7/12/99		2/6/95
-012	Pug Mill & Truck Loading	AO29-250137	7/20/94	7/12/99		2/6/95
-013	Unit 1 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95
-014	Unit 2 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95
-015	Unit 3 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95
-016	Unit 4 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95
-017	Unit 5 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95
-018	Unit 6 Coal Bunker w/Rotoclone	AO29-250139	7/20/94	7/12/99		2/6/95

(if applicable) ID Number Changes (for tracking purposes):

From: **Facility ID No.:** 40HIL290040

To: **Facility ID No.:** 0570040

[electronic file name: 0570040h.doc]

3-1996

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  perMits |  Events |  Payment |  Facility |  partY |  Reports |  Help |  eXit
áááááááááááááááááááááááááá   Permitting Application   áááááááááááááááááááááááááá
Öááááááááááááááááááááááááááááááá ARMS Facility áááááááááááááááááááááááááááááááá¢
° Facility Name: GANNON STATION                          AIRS ID: 0570040        °
° County: HILLSBOROUGH         Owner: TECO                                       °
° Office: SW: HILLSBOROUGH                                                       °
Ûáááááááááááááááááááááááááááááááááá Project áááááááááááááááááááááááááááááááááááÇ
°AIR Permit #: 0570040-001-AO      Project #: 001  CRA Reference #:              °
°Permit Office: SWD (DISTRICT)                     Agency Action: Issue          °
°Project Name: GANNON 6; CHANGE TEST DATE     Desc:                              °
°Type/Sub/Req: AO  /MM  Minor Modification                 Logged: 11-MAR-1996°
°    Received: 01-MAR-1996       Issued: 20-MAR-1996      Expires: 15-FEB-1997 °
°Fee:       0.00 Realized:           Dele:           Override: PATS HISTORY    °
Ûááááááááááááááááááááááááááááááá Related Party áááááááááááááááááááááááááááááááááÇ
°Role: APPLICANT            Begin: 11-MAR-1996   End:                            °
°Name: TAMPA ELECTRIC COMPANY (TECO)                      SSN/FEID: Unavailable°
°Addr: P.O. BOX 111                                                              °
°City: TAMPA                          State: FL Zip: 33601-0111 Country:         °
°Phone: 813-228-4844   Fax: 813-228-4881                                         °
Ûááááááááááááááááááááááááááááááááááá Processors ááááááááááááááááááááááááááááááááÇ
°Processor: ZELL_D                     Y Active: 14-MAR-1996 Inactive:           °
âááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááá¹
Enter Project Name.
Count: *1                                                              <Replace>


  Help |  Reports |  eXit
áááááááááááááááááááááááááá   Permitting Application   áááááááááááááááááááááááááá
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°                                                                  77    of 90   °
°  AIRS ID: 0570040     Facility: GANNON STATION                                 °
° Permit #: 0570040-001-AO  Type/Subtype: AO/MM     Received: 01-MAR-1996        °
°Project #: 001         Name: (GANNON 6; CHANGE TEST DATE)                       °
°áááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááááá °
°> Receive Request: Done                                                         °
°Event               °Begin Date °Prd°Due Date   °Rmn  °Status    °End Date      °
°Receive Request     °01-MAR-1996°1  °02-MAR-1996°     °Done      °01-MAR-1996 °
° Fee Verification   °01-MAR-1996°2  °03-MAR-1996°     °Sufficient°03-MAR-1996 °
°  Completeness Revie°01-MAR-1996°30 °31-MAR-1996°     °Complete  °01-MAR-1996 °
°   Determine Agency °01-MAR-1996°90 °30-MAY-1996°     °Issue     °14-MAR-1996 °
°    STOP CLOCK      °14-MAR-1996°1  °15-MAR-1996°     °Done      °14-MAR-1996 °
°    Issue Final Perm°14-MAR-1996°14 °28-MAR-1996°     °Issued    °20-MAR-1996 °
°     ISSUE PERMIT   °20-MAR-1996°1  °21-MAR-1996°     °Done      °20-MAR-1996 °
°                    °           °   °           °     °          °              °
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Enter Event Name. Press [LIST] for valid values.
Count: *7                                                        <List><Replace>
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PERMIT APPLICATION FEE/ASSIGNMENT SHEET

Update | Emission unit | perMit | prOject | Pollutant | reLated party | >
ARMS Facility
° Office County AIRS ID
° Owner TECO Name
°Directions
° Street
° City ZIP -
° UTM Zone East North Latitude : :00 Longitude : :00°
° Status Maj Group SIC
° Reloc N Shtdwn Dt Strt Dt Final Shutdown Dt
°Gov Fac
°AOR Req Ozone SIP Facility N Type

Help | Events | Payment | Facility | proJect | cOmment | partY | >
Permitting Application
ARMS Facility
° Facility Name: AIRS ID: 0570040
° County: Owner:
° Office:
Project
°AIR Permit #: - - Project #: 001 CRA Reference #:
°Permit Office: Agency Action:
°Project Name: GANNON 6; CHANGE TEST DATE Desc:
°Type/Sub/Req: AOMM 30 CHARACTERS MAX Logged:
° Received: 3/1/96 Issued: Expires:
°Fee: Realized: Dele: Override:
Related Party
°Role: Begin: End:
°Name: SSN/FEID:
°Addr:
°City: State: Zip: - Country:
°Phone: Fax:
Processors
°Processor: Active: Inactive:

FEE SUBMITTED: (✓) correct ( ) incorrect - Should Be $ 0
Submitted $ 0
FEE CHECKED BY: JR DATE: 3/6/96 Needed/Refund $
APPLICATION ASSIGNED TO: D. Zell DATE: 3/12/96

	Completed	Initials
Initial Entry in Arms:	3-11	BC
Permit Engineer Submit Permit Package to District Air Engineer:	3/19/96	DRG
Permit Package to District Air Administrator:		
Permit Package to Director of District Management:		
Permit Package Mailed Out:	MAR 20 1996	mq/crk
Issue Date Updated in ARMS:	MAR 20 1996	mq/crk

ARMS DATA ENTRY WORKSHEET

Facility Name _____ Facility ID No. _ _ _ _ _ _ _ _

Permit No. _____ Emission Unit ID Nos. _ _ _/_ _ _/_ _ _

Project _ _ _ _ _ _ _ - _ _ _ - _ _

(Check)

- ☐ Construction Permit - AC Subtype _ _
- ☐ FESOP - AF Subtype _ _
- ☐ Operation Permit - AO Subtype _ _
- ☐ Title V Permit AV Subtype _ _
- ☐ Other(describe)_____

_____

Data Required

New Facility (not in ARMS)

- ☐ Facility Data & Emission Unit Data

Existing Facility (existing ARMS)

- ☐ Facility Data
- ☐ Emission Unit Data
- ☐ Point Data

(Check)
Changes to Existing Facility

- ___ hours of operation
- ___ process rate\production rate
- ___ allowable emission limit(s). pollutant(s):_____
- ___ new pollutant(s): _____
- ___ HAPs emission rate\utilization rate
- ___ fuel type\%S content\fuel usage\MMBtu/Hr.
- ___ emission unit point(s): _____
- ___ compliance test frequency\due date\test method
- ___ Delete (describe) _____
- ___ Other (describe) _____

_____

PERMIT PROCESSOR:_____ Date:_____

COMMENTS_____

_____

_____

TAMPA ELECTRIC
A TECO ENERGY COMPANY

February 28, 1996

D.E.P.
MAR - 1 1996
TAMPA

Mr. Jerry Kissell, P.E.
Air Permitting Supervisor
Florida Department of
Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Tampa Electric Company
F.J. Gannon Station - Unit 6
Permit #A029-203512
Permit Amendment Request

Dear Mr. Kissell:

Tampa Electric Company (TEC) requests an amendment to Specific Condition #6 of the above referenced permit. This amendment request is to change the stack test window to be concurrent with the Relative Accuracy Testing (RATA) requirements under the Acid Rain Program. Below is suggested language for this amendment:

Change Specific Condition #6 From:

"6. This source shall be stack tested for particulate matter and visible emissions under both sootblowing and non-sootblowing operating conditions, and for sulfur dioxide emissions, annually, within 90 days prior to the date of June 19. A test under sootblowing conditions which demonstrates compliance with non-sootblowing emission limitation will be accepted. . . ."

To:

"6. This source shall be stack tested for particulate matter and visible emissions under both sootblowing and non-sootblowing operating conditions, and for sulfur dioxide emissions, annually, within 90 days prior to the date of May 29. A test under sootblowing conditions which demonstrates compliance with non-sootblowing emission limitation will be accepted. . . ."

Thank you in advance for your attention in this matter. If you have any questions, or need further information, please contact Jamie Woodlee or me at (813) 228-4860.

Sincerely,

Patrick A. Ho, P.E.
Manager
Environmental Planning

EP\gm\JTW478

c: Mr. Rick Kirby, EPCHC

TAMPA ELECTRIC
A TECO ENERGY COMPANY

September 1, 1994

Mr. Jerry Kessel
Florida Department of
Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33605

Facsimile Transmission
Certified Mail # P 278 133 799
Return Receipt Requested

Re: Tampa Electric Company (TEC)
F.J. Gannon Station
Permit Amendment Request for Units 1, 3-6

Dear Mr. Kessel:

Pursuant to your conversation with Janice Taylor on August 31, 1994, TEC requests Air Operating Permits No. AO29-204434, AO29-172179, AO29-160269, AO29-203511 and AO29-203512 be amended to be consistent with all of TEC's Air Operating Permits.

Change Specific Condition from:

This source shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emissions at intervals of 12 months from the date of **(Insert Source's Test Window)** or within a ninety (90) day period prior to this date. All testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C. (as applicable to fossil fuel steam generators under Rule 17-2.600(5) (a), F.A.C. in Table 700-1, F.A.C.). The DER Method 9 observation period shall be at least 60 minutes in duration and concucted during sootblowing conditions. In situations where DER Method No.9 visible emissions testing is not possible during particulate matter testing, such as under overcast days, independent visible emissions testing may be performed up to 5 days later. Reasons for non-simultanious testing must be provided in the test report. Testing procedures shall be consistent with the requirements of Rule 17.2.700, F.A.C. A copy of the test data shall be submitted to both the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Protection within 45 days of such testing. [Rules 17-2.700(2) (a)2. and 17-2.700(2) (a)4., F.A.C.]

OKAY - JANICE TAYLOR 9/12/94

To:

This source shall be stack tested for particulate matter and visible emissions, under both sootblowing and non-sootblowing operation conditions, at intervals of 12 months from the date of **(Insert Source's Test Window)**, or within a 90 day period prior to that

AND SO_2

annual date. **A test under sootblowing conditions which demonstrates compliance with a non-sootblowing emission limitation will be accepted as proof of compliancee with that non-sootblowing emission limitation.** The visible emissions DER Method No. 9 test period for this source shall be at least 60 minutes in duration. Visible emissions testing shall be conducted simultaneously with particulate matter testing unless visible emissions testing is not required. In situations where DER Method No. 9 visible emissions testing is not possible during particulate matter testing, such as under overcast days, independent visible emissions testing may be performed at a later date within but not more than 5 days. Reasons for non-simultaneous testing must be provided in the test report. Testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C. A copy of the test data shall be submitted to both the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Protection within 45 days of such testing.

The following table lists each unit, the corresponding permit no. and applicable specific condition for your use.

Unit No.	Permit No.	Specific Condition No.
1	AO29-204434	6
3	AO29-172179	5
4	AO29-160269	5
5	AO29-203511	6
6	AO29-203512	6

As discussed, Gannon Unit 3 is currently scheduled for its annual stack test on September 20, 1994. It is TEC's understanding, that provided the Department has no objection to these amendments, the Department would allow Unit 3 to follow the proposed testing conditions prior to final permit amendment.

Should you require further information, please feel to call me or Ms. Taylor at 228-4839. TEC appreciates your expeditious review.

Sincerely,

Patrick A. Ho, P.E.
Manager
Environmental Planning

cc/QQ666
c: Richard Kirby, EPC-Tampa

Florida Department of
Environmental Protection

Memorandum

TO: File

FROM: Robert Soich RS

Date: 12/15/93

SUBJECT: Burning of on-spec used oil at TECO Gannon electric generating facility.

As a result of hazardous waste inspections and warning letters WL93-0065HW29SWD and WL93-0066HW29SWD the air section has been informed that burning of on-spec used oil has been, and continues to be an on-going practice at Gannon Station. The existing air operating permits do not mention this activity nor is there correspondence in the permit file. At this time, this does not appear to be in conflict with air regulations.

Originally, the inspectors thought that on-spec used oil was burned in the turbine but, TECO personnel clarified that it was burned in the boilers. Approximately 94,000 gallons of on-spec used oil was burned in 1992. This represents 4.82% of the fuel oil burned at Gannon when compared to fuel oil burned, at the facility, as reported on their 1992 AORs.

The State of Florida promotes the burning of both off-spec and on-spec used oil. Burning of off-spec used oil is subject to all the notification and permitting requirements. The burning of on-spec used oil is subject as follows:

" If your current air pollution operation permit, construction permit, or BACT determination does not specifically prohibit the burning of used oil, then you may responsibly burn (on-specification) used oil without any permit modification until the Department notifies you that your permit needs to be revised." (Victoria J. Tschinkel, used oil as a fuel, 1/5/87 memorandum.).

Upon renewal of Gannon Units 1 thru 6 air operating permits, the permit engineer may want to address the burning of on-spec used oil. Are sampling and analysis requirements needed in the specific conditions of the permit to ensure that used oil specifications are adhered to? It should be noted that from the inspection, it appears that TECO does sample the oil to verify that it meets the definition (specifications) of on-spec used oil.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

MEMORANDUM

TO: Managers of Electric Utilities, Asphalt Plants, and Other Industrial Burners

FROM: Victoria J. Tschinkel

DATE: January 5, 1987

RE: Used Oil as a Fuel

On April 28, 1986, I issued a memorandum to inform you of recently promulgated federal rules on the burning of used oil. Because some recipients of that memorandum have voiced concerns about the Department's interpretation of certain provisions of the regulations, this memorandum supersedes all previous communication on the subject of used oil as a fuel.

On November 29, 1985, the U.S. EPA promulgated final RCRA regulations on the burning of used oil fuel. The Department has adopted these regulations by reference. The EPA regulations establish specifications for used oil fuel that may be burned in nonindustrial boilers.

Used Oil Specifications

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	4,000 ppm maximum
Flash Point	100 degrees Fahrenheit minimum

Burning of off-specification used oil and hazardous waste fuels in non-industrial boilers is prohibited by the RCRA rules. The April 28 memorandum may have left some readers with the impression that industrial burners were also restricted by these rules to burning fuel that met specifications; however,

industrial boilers and furnaces may burn hazardous waste fuel and used oil fuel, regardless of whether the fuels meet specifications. It should be noted, however, that facilities that burn hazardous waste fuel and off-specification used oil fuel are still subject to administrative requirements such as notification, receipt of an identification number, compliance with the manifest or invoice systems, and, for hazardous waste fuels, compliance with hazardous waste storage standards for hazardous waste fuels.

No level for PCBs is included in the used oil specifications, since the use, including burning for energy recovery, of used oil containing any concentrations of PCBs is prohibited under current federal regulations. Some readers of the April 28 memorandum expressed concern about this statement, asserting that 40 CFR §761.1 makes federal PCB regulations applicable only to substances containing more than 50 ppm PCBs. I have conferred with EPA headquarters concerning the federal position on the issue of burning used oil contaminated with less than 50 ppm PCBs. It is EPA's position that the burning for energy recovery of used oils containing any concentration of PCBs was prohibited as of October 1, 1984. This conclusion is based on 40 CFR §761.20(a), which prohibits use of PCBs in any concentration unless it is specifically authorized under 40 CFR §761.30. Although EPA has authorized the processing and distribution in commerce of PCBs in concentrations of less than 50 PPM for purposes of disposal, 40 CFR §761.20(c)(4), that agency has taken the position that burning for energy recovery is "use" rather than "disposal" and is, therefore, prohibited. Note, however, that PCBs in concentrations of less than 50 ppm may be burned in a high efficiency boiler as an approved PCB disposal method pursuant to 40 CFR §761.60, provided that state air permitting requirements have also been satisfied.

Ms. Jane Kim of the Office of Toxic Substances at EPA headquarters (202/382-3991) has indicated to Department staff that EPA is considering amending federal PCB regulations to allow the burning for energy recovery of used oil containing less than 50 ppm PCBs. Until then, she suggests that companies wishing to burn these oils submit a request to EPA Region IV for authorization with respect to the federal rules. I suggest that interested parties direct any comments on the federal regulation or the anticipated amendment directly to EPA.*

* Since the state PCB rule, Rule 17-34, Florida Administrative Code, only regulates the storage for disposal of PCBs, the use of PCBs is not regulated by the Department. However, Department air rules 17-2, F.A.C., and the basic permitting requirement of Chapter 403 F.S. must be complied with.

Although the specification for total halogens (chemicals containing chlorine, bromine, iodine, or fluorine) is 4,000 ppm, used oil containing over 1,000 ppm will be presumed to have been mixed with a halogenated hazardous waste. In the April 28 memorandum, I stated that used oil fuels with more than 1,000 ppm total halogens should not be burned in boilers unless the marketer can show that the used oil does not contain any halogenated hazardous wastes. To clarify any confusion that this statement may have caused, I would like to make the following points:

1. As noted above, hazardous waste fuel and off-specification used oil fuel may be burned for energy recovery in industrial boilers. We did not intend to suggest that such use is prohibited by the RCRA rule.

2. Also, as previously noted, persons may rebut the presumption that used oil containing more than 1,000 ppm total halogens has been mixed with hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents). The use of the word "any" may have caused some confusion in our cautionary statement; however, since the management and storage standards for used oil and hazardous waste fuels differ, the Department felt that a strong caution was in order.

Finally, I would like to clarify the discussion in my April 28, 1986, memorandum regarding air permitting considerations for the burning of used oil. In that memorandum I stated that the authorization to burn used oil requires that air construction permits be modified to insure that any changes to permit conditions will be federally enforceable. Upon reconsideration on this point, I am now revising the guidance in the previous memorandum as follows:

1. If your current air pollution operation permit, construction permit, or BACT determination does not specifically prohibit the burning of used oil, then you may responsibly burn "on-specification" used oil without any permit modification until the Department notifies you that your permit needs to be revised.

2. If your air permit or BACT determination specifically prohibits the burning of used oil, or if you are burning "off-specification" used oil, you will need to contact the appropriate Department district office within the next 90 days to discuss what type of authorization is needed.

In addition to the air permitting considerations, facilities that burn more than 10,000 gallons of used oil annually must register with the Department as use oil recyclers in accordance with Florida Administrative Code Rule 17-7, Part V, unless specifically exempted under the provisions of that rule.

By burning used oil in an approved manner, you will help Florida recycle a valuable resource, to cut down on its energy dependence, and to protect our fragile environment. You also will be saving money on your fuel bill. We will all benefit by efforts to properly recycle used oil through its use as a fuel.

If you have any questions or comments, please refer them to David Kelley at (904)488-0300 in the Bureau of Waste Management or Barry Andrews at (904)488-1344 in the Bureau of Air Quality Management.

VJT/ks

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: District Managers
District Air Engineers
District Air Permitting Engineers
Local Program Air Directors

THRU: Randy Armstrong
Howard Rhodes
Richard Wilkins

FROM: Clair Fancy

DATE: October 22, 1987

SUBJ: Policy to Regulate Used Oil Burning

On November 29, 1985, the U.S. EPA promulgated final regulations on the burning of used oil fuel. These regulations establish specifications for used oil fuel that may be burned in non-industrial boilers. The Department has adopted the rule by reference and has communicated its position on used oil burning by means of a memorandum sent to managers of electric utilities, asphalt plants, and other industrial burners on January 5, 1987.

At the time that the January 5, 1987 memorandum was distributed, the Department was uncertain how used oil fuel which did not meet the specifications established by the EPA rule should be handled. Since that time, the Bureau of Air Quality Management (BAQM) has been actively involved in developing guidelines to regulate the burning of used oil fuel which does not meet EPA specifications. This memorandum provides a summary of the specification limits established by the EPA for burning used oil in non-industrial boilers as well as presenting the BAQM's policy for regulating the emissions from burning off-specification used oil in industrial furnaces and boilers. The policy to regulate off-specification used oil is based on a paper which was presented at the 1987 Annual Conference of the Florida Section's Air Pollution Control Association by Barry Andrews. A copy of the paper is attached. In addition, this memorandum will address how sources burning either specification or off-specification used oil should be permitted.

D. E. R.

NOV 2 0 1987

DRAFT

Specification Used Oil Burning

Emission Limitations

Non-industrial boilers may only burn oil which is in compliance with the following limitations:

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	4,000 ppm maximum *
Flash Point	100 degrees Fahrenheit minimum

* It is presummed that used oil containing greater than 1,000 ppm total halogens has been mixed with a halogenated hazardous waste. Used oil fuels that contain more than 1,000 ppm total halogens should not be burned in non-industrial boilers unless the marketer can show that the used oil does not contain any halogenated hazardous waste.

Industrial boilers and furnaces may also burn specification used oil.

Permitting Guidelines

Specification used oil will be considered to be equivalent to virgin oil. Only in the case that an air permit or BACT determination does specifically prohibit the burning of used oil, will it be necessary to contact the appropriate district or local office to obtain authorizations.

Off-Specification Used Oil Burning

Emission Limitations

Non-industrial boilers may not burn used oil which exceeds the previously mentioned specification levels.

Industrial boilers and furnaces may only burn used oil which complies with the following limitations. These emission limitations are based on the type of fuel burning equipment used as follows:

Asphaltic Concrete Kilns, Light-Weight Aggregate Kilns, Lime Kilns, and Industrial Boilers

Arsenic, Cadmium, and Chromium:

$$\frac{(As)}{3.9 \times 10^{-4}} + \frac{(Cd)}{9.8 \times 10^{-4}} + \frac{(Cr)}{1.4 \times 10^{-3}} \leq 1.0$$

where (As), (Cd), and (Cr) defined by

$$MFR = \frac{(Mw \times Rw) + (M_F \times R_F)}{H_T} \times 10^{-6}$$

where:

MFR - individual metal feed rate in pounds per million Btu of total heat input

Mw - individual metal concentration in used oil (ppm)

Rw - used oil feed rate in pounds per hour

M_F - concentration of metal in the other fuel (ppm)

R_F - feed rate of other fuel in pounds per hour

H_T - total heat input to the device in million Btu/hour

Lead:

MFR shall not exceed 1.6×10^{-2} pounds per million Btu.

Hydrogen Chloride:

CFR shall not exceed 0.70 pounds per million Btu.

where CFR is defined by

$$CFR = \frac{(Cw \times Rw) + (C_F \times R_F)}{H_T} \times 10^{-6}$$

Where:

CFR - total chlorine feed rate in pounds per million Btu

Cw - Chlorine concentration in the used oil (ppm)

C_F - Chlorine concentration in the other fuel (ppm)

DRAFT

Cement Kilns (Wet & Dry)

Arsenic, Cadmium, and Chromium:

$$\frac{(As)}{1.7 \times 10^{-3}} + \frac{(Cd)}{4.3 \times 10^{-3}} + \frac{(Cr)}{6.3 \times 10^{-3}} \leq 1.0$$

Lead:

MFR shall not exceed 6.7×10^{-2} pounds per million Btu.

Hydrogen Chloride:

CFR shall not exceed 1.8 pounds per million Btu.

Permitting Guidelines

For facilities presently burning or planning to burn off-specification used oil it will be necessary to contact the appropriate district or local program office to obtain authorization (permit revision). It is expected that the majority of the requests to burn off-specification used oil will be in compliance with the emission limitation equations presented herein. To expedite approval, the various districts will be provided with worksheets and detailed instructions to quickly determine if an off-specification used oil burner will be in compliance.

Exemptions

Exemptions will be granted to facilities which generate and burn small quantities of off-specification used oil on site. To qualify for this exemption a burner must only burn off-specification used oil fuel that is generated on-site and is burned in quantities that do not exceed one percent of a particular fuel burning equipment's total volume consumption or heat input. On-site burners will be characterized as "small quantity" burners by the following criteria:

Equipment	Size (MMBtu/hr)	Quantity limit/device (gallon/month)
Boilers (1)	0.4 to 1.5	7
	>1.5 to 10	13
	>10 to 50	26
	>50 to 150	55
	>150 to 400	100
	>400	300
Asphaltic Concrete kilns (2)	>18	110
Lime kilns (3)	>60	200
Light-Weight Aggregate kilns (4)	>45	110
Wet Cement kilns (5)	90 to 200	170
	>200	420
Dry Cement kilns (5)	60 to 160	140
	>160	280

(1) No more than two boilers at a time
(2) No more than one asphaltic concrete kiln at a time
(3) No more than two lime kilns at a time
(4) No more than three light-weight aggregate kilns at a time
(5) No more than three cement kilns at a time

Conclusion

The Bureau of Air Quality Management believes that the policy outlined in the memorandum will accomplish the Department's goal to encourage the burning of used oil, yet provide assurance that the public's health and environment will not be threatened.

As with any regulation or policy development, it is difficult to address all the situations and problems that could occur when writing proposals for regulating sources. Any questions regarding the content of this memorandum should be directed to Barry Andrews, Project Engineer, Bureau of Air Quality Management, at (904)488-1344.

CF/plm

TRANSMISSOMETER PERFORMANCE SPECIFICATION TESTS

PER

FEDERAL REGISTER, TITLE 40

PART 60, APPENDIX B

AND

CERTIFICATE OF CONFORMANCE

OF IN-HOUSE FACTORY CERTIFICATION OF CONFORMANCE

TAMPA ELECTRIC ENERGY COMPANY
GANNON STATION 6
PORT SUTTON ROAD
HILLSBORO COUNTY
TAMPA, FL 33619

PURCHASE ORDER: N23802 P-1
THERMO ENVIRONMENTAL PA NO. 49589

TRANSMISSOMETER SERIAL NUMBER

400-29003-233/B32

THIS SIGNED DOCUMENT
CERTIFIES THAT THE MODEL 400 TRANSMISSOMETER
HAS BEEN TESTED AND DOES MEET THE EPA
CERTIFICATION TESTS HEREIN.

JANUARY 31, 1991
DATE

CERTIFICATE OF CONFORMANCE

CERTIFIED TRANSMISSOMETER SERIAL NUMBER: 400-29003-233/B32

THERMO ENVIRONMENTAL INSTRUMENTS, INC. CERTIFIES THE CONFORMANCE OF THIS INSTRUMENT TO THE REQUIREMENTS OF PERFORMANCE SPECIFICATION 1, SECTION 5, APPENDIX B, 40 FEDERAL REGISTER PART 60, VOLUME 48, NO. 62, PAGE 13322, DATED MARCH 30, 1983.

AT LEAST ONE RANDOMLY SELECTED TRANSMISSOMETER SYSTEM FROM THIS MONTH'S PRODUCTION WAS TESTED ACCORDING TO SECTION 6.1 THROUGH 6.4 AND SATISFACTORILY MET ALL REQUIREMENTS OF SPECIFICATION 1, SECTION 5. IF ANY OF THE REQUIREMENTS WERE NOT MET, THE ENTIRE MONTH'S PRODUCTION WAS RESAMPLED ACCORDING TO THE MILITARY STANDARD 105 D SAMPLING PROCEDURE (MIL-STD-105D) INSPECTION LEVEL II; WAS RETESTED FOR EACH OF THE APPLICABLE REQUIREMENTS UNDER SPECIFICATION 1, PARAGRAPH 6, APPENDIX B, AND WAS DETERMINED TO BE ACCEPTABLE UNDER MIL-STD-105D PROCEDURES.

SERIAL NUMBER OF TESTED TRANSMISSOMETER: 400-29003-233/B32

DATE TESTED: 5/1/90 TESTED BY: C. DRESSER

MONTH OF PRODUCTION: FEBRUARY, 1990

TRANSMISSOMETER SERIAL NUMBERS: 400-25743

SUMMARY:

ANGLE OF VIEW: 3^0

ANGLE OF PROJECTION: 3.5^0

IN ADDITION, INDIVIDUAL TESTING WAS PERFORMED ON THIS UNIT:

* CALIBRATION ERROR: .466% .344%, .531%

SYSTEM RESPONSE TIME IS LESS THAN 10 SECONDS.

TESTED AND APPROVED BY: JAMES E. DUNN DATE: 5/17/90

SUMMARY OF TRANSMISSOMETER PERFORMANCE TESTING

RESULTS ARE IN % OPACITY

PARAMETER	ACTUAL PERFORMANCE	EPA SPECIFICATION
ZERO DRIFT (24-HR.)	.0996	2%
CAL DRIFT (24-HR.)	.323	2%
CAL ERROR, ZERO	0	3%
CAL ERROR, LOW	.466	3%
CAL ERROR, MID	.344	3%
CAL ERROR, HIGH	.531	3%
CAL ERROR, 100 %	0	3%
RESPONSE TIME	5.3 SECONDS	10 SEC.
OPER. TEST PERIOD	168	168-HOUR

FIELD TEST FOR ZERO DRIFT AND CALIBRATION DRIFT
OPERATIONAL TEST PERIOD

A 168-HOUR OPERATIONAL FIELD TEST FOR ZERO AND CALIBRATION DRIFT WAS CONDUCTED ON ONE MODEL 400 TRANSMISSOMETER **INSTALLED AT THE FOLLOWING PLANT:**

TAMPA ELECTRIC ENERGY COMPANY
GANNON STATION 6
PORT SUTTON ROAD
HILLSBORO COUNTY
TAMPA, FL 33619

THESE TESTS COVERED A **SEVEN DAY OPERATIONAL PERIOD FROM:**

1/11/91 TO 1/18/91

PRIOR TO THE TESTS THE UNIT SUCCESSFULLY COMPLETED A MINIMUM OF 168-HOUR PRECONDITIONING.

UNIT SERIAL NUMBER: 400-29003-233/B32

TEST PROCEDURES AND CALCULATIONS ARE CONTAINED AT THE END OF THIS REPORT. A SUMMARY OF THESE FIELD TESTS ARE GIVEN BELOW (FOR A COMPLETE SUMMARY OF ALL CERTIFICATION RESULTS, PLEASE SEE THE FRONT OF THIS REPORT).

ZERO DRIFT:	**.0996**
CALIBRATION DRIFT:	**.323**

THE RESULTS SHOW THAT THE TRANSMISSOMETER SATISIFIES THE **FEDERAL REGULATIONS, TITLE 40, PART 60, APPENDIX B OPERATIONAL TEST REQUIREMENT.**

Data set no.	Date	Time		Zero Rdg		Zero drift C	Hi-Range Rdg		Span drift F	Calib. drift
		Begin	End	Init.	Fin.		Init.	Fin.		
				A	B	C=B-A	D	E	F=E-D	G=F-C
1	1-12	12:30		0	-.2	-.2	35.8	35.8	0	.2
2	1-13	12:30		-.2	-.2	0	35.8	34.8	-1.0	-1.0
3	1-14	12:30		-.2	-.2	0	34.8	34.8	0	0
4	1-15	12:30		-.2	-.2	0	34.8	34.8	0	0
5	1-16	12:30		-.2	-.2	0	34.8	35.5	.7	.7
6	1-17	12:30		-.2	-.2	0	35.5	34.8	-.7	-.7
7	1-18	12:30		-.2	-.2	0	34.8	34.5	-.3	-.3
Arithmetic Mean (Eq. 2-1)[a]						.0286				.157
Confidence Interval (Eq. 2-2)[a]						.071				.166
Zero drift [b]						.0996	Calibration drift [b]			.323

[a] From Performance Specification 2.

[b] Use Equation 2-3 of Performance Specification 2, with 1.0 for R. V.

Figure 3-7. Zero and Calibration Drift (24-hour)

BILLING CODE 6560-01-C

TAMPA Elect
GANNON #6
TEST DATES JAN 11 1990 thru JAN 18, 1990

SERIAL # 400-29003-233/832

CERTIFICATE OF CONFORMANCE

Certified Transmissometer Serial Number 400/500-29003-233/B32

Thermo Electron Corporation certifies the conformance of this instrument t the requirements of Performance Specification 1, Section 5, Appendix B, 4 Federal Register Part 60, Volume 48, No. 62, Page 13322, dated March 30 1983.

At least one randomly selected transmissometer syster fror this month's production was tested according to Sections 6.1 through 6.4anc satisfactorily met all applicable requirements of Specification 1, Sectior 5. If any of the requirements were not met, the entire month's productior was resampled according to the Military Standard 105 D Sampling Procedure (MIL-STD-105D) Inspection Level II; was retested for each of the applicable requirements under Specification 1, Paragraph 6, Appendix B, and was determined to be acceptable under MIL-STD-105D Procedures.

Serial Number of Tested Transmissometer 400 / 29003 -233 / B32

Date Tested 5-1-90 Tested By C. Dresser

Month of Production APRIL (B32)

Transmissometer Serial Numbers 29003 to 29012

Summary:

Angle of View 3.0°

Angle of Projection 3.5°

In addition, individual testing was performed on this unit:

Calibration Error .46%, .34%, .53%

System Response Time is less than 10 seconds.

Approved by: Jane E Dean Date: 5-17-90

ANGLE OF PROJECTION

Definition

The Angle of Projection is the maximum angle that contains all of the radiation projected from the Transmissometer toward the Retroreflector Assembly at a level of greater than 2.5% of the peal illuminance.

Procedure

1. Notification of the Customer's Quality Control Department and the Environmental Protection Agency's appropriate representatives sufficiently in advance of the test as to the date, time and place of the test, may be necessary. Consult with Thermo Electron's contract management on this point for each customer.

2. Set up and calibrate the transmissometer system as specified by Thermo Electron Corporation's written instructions in the service manual or the operations and maintenance manual with the corner cube at a distance of 3 meters from the instrument slider window.

3. Remove the corner cube from the light path.

4. Draw an arc with a radius of 3 meters (± 1 CM) from the analyzer slider window. Use a non-directional, sensitive, small (less than 3 CM diameter) photo electric detector. Measure the response of this detector as it is removed from the center point to distances of 5.0, 10.0, 15.0, 20.0, 25 and 26 CM on the four sides along the horizontal and vertical planes. Record this data on the angle of projection form. In the event that there is background radiation which cannot be blocked or eliminated, it should be measured and subtracted from the detector readings.

5. Plot the data on the angle of projection form.

6. Measure the maximum angle of projection at the 6% illumination level on the horizontal and vertical plots.

7. Enter the larger angular measurement on the "Angle of Projection" form and the "Certificate of Conformance".

Requirement

The Total Angle of Projection shall not exceed 5 degrees maximum.

ANGLE OF VIEW

DEFINITION

The Angle of View is the angle that contains all the radiation detected by the photodectector assembly of the transceiver at a level greater than 2.5% of the peak detector response.

PROCEDURE

1. Notification of the Customer's Quality Control Department and the Environmental Protection Agency's appropriate representatives sufficiently in advance of the test as to the date, time and place of the test, may be necessary. Consult with Thermo Electron contract management on this point for each customer.

2. Set up and calibrate the transmissometer system as specified by Thermo Electron Corporation's written instructions in the service manual or the operations and maintenance manual with the corner cube at a distance of 3 meters from the instrument slider window. The span value is 100%. A linear board is not required.

3. Remove the corner cube from the light path.

4. Draw an arc with a radius of 3 meters (± 1 CM) from the analyzer slider window. Use a non-directional, sensitive, small (less than 3 CM diameter) light source, chopped at 800 Hz. Measure the response to this source as it is removed from the center point to distances of 5.0, 10.0, 15.0, 20.0, 25 and 26 CM on the four sides along the horizontal and vertical planes. (Zero output occurs when the light source is 100% within the field of view. One volt is the output when the light source is outside the field of view.) Record this data on the angle of view form.

5. Plot the data on the angle view form.

6. Measure the maximum angle of view at the 2.5% illumination level on the vertical and horizontal plots.

7. Enter the larger angular measurement on the "Angle of View" form and the "Certificate of Conformance".

REQUIREMENT

The Total Angle of View shall not exceed 5 degress maximum.

Angle of Projection

Lateral

Angle		Voltage w/o Light	Voltage w/ Light
0°	Center	61.8	156
.5°	Right of Center	60.5	157.6
1.0°	Right of Center	60.3	157.3
1.5°	Right of Center	60.5	61.6
.5°	left of Center	56.5	149
1.0°	left of Center	57.6	130.7
1.5°	left of Center	56.5	57.6

Longitudinal

0°	Center	60.2	155.3
.5°	Above Center	56.8	148.0
1.0°	Above Center	56.1	140.0
1.5°	Above Center	56.3	57.0
.5°	below Center	60.1	154.2
1.0°	below Center	60.1	151.8
1.5°	below Center	60.0	64.2
2.0°	below Center	59.6	60.1

Angle of View

Lateral

Angle		Voltage w/o Light	Voltage w/ light
0°	Center	10.0	0.0
.5°	Right of Center	10.0	1.75
1.0°	Right of Center	10.0	3.25
1.5°	Right of Center	10.0	10.06
.5°	left of Center	10.0	1.52
1.0°	left of Center	10.0	3.40
1.5°	left of Center	10.0	10.10

Longitudinal

0°	Center	10.0	0.0
.5°	Above Center	10.0	1.83
1.0°	Above Center	10.0	6.68
1.5°	Above Center	10.0	10.07
.5°	below Center	10.0	1.70
1.0°	below Center	10.0	3.22
1.5°	below Center	10.0	10.12

TRANSMISSOMETER SERIAL NO.'S 400-29003-233/B32

ANGLE OF PROJECTION

DEGREES FROM CTR	LIGHT INTENSITY RIGHT	LEFT	UP	DOWN
0.0	97.0	97.0	100.0	100.0
0.5	100.0	95.3	95.9	98.9
1.0	99.9	75.3	88.2	96.4
1.5	1.1	1.1	0.7	4.4
2.0	0.0	0.0	0.0	0.5
2.5	0.0	0.0	0.0	0.0

MAX ANGLE OF PROJECTION 3.5

ANGLE OF VIEW

DEGREES FROM CTR	LIGHT INTENSITY RIGHT	LEFT	UP	DOWN
0.0	100.0	100.0	100.0	100.0
0.5	82.5	84.8	81.7	83.0
1.0	67.5	66.0	33.2	67.8
1.5	0.0	0.0	0.0	0.0
2.0	0.0	0.0	0.0	0.0
2.5	0.0	0.0	0.0	0.0

MAX ANGLE OF VIEW 3.0

OPTICAL ALIGNMENT SIGHT TEST

Setup and calibrate the transmissometer system as specified by Thermo Electron Corporation's written instructions in the operation and maintenance manual with the corner cube at a distance of 8 meters from the transceiver window. Insert an attenuator of 10 percent (nominal opacity) into the instrument pathlength. Slowly misalign the transceiver by rotating it until a positive or negative of 2 percent opacity is obtained by the data recorder. Then check the alignment. The alignment procedure must indicate that the instrument is misaligned. Repeat this test for lateral misalignment of the transceiver. Realign the instrument and follow the same procedure for checking misalignment of the retroreflector (for lateral misalignment only).

Requirement: The instrument must indicate a misalignment of a 2 percent deviation.

OPTICAL ALIGNMENT SIGHT

CERTIFICATE OF CONFORMANCE

Misaligned to 2 percent Opacity deviation.

Transceiver Misalignment	Misalignment Indicated
Rotational	YES
Lateral	YES

Reflector Misalignment	Misalignment Indicated
Lateral	YES

CALIBRATION ERROR TEST

Definition

Calibration error is the difference between the opacity reading indicated by the total Transmissometer Syster and the known values of a series of calibrated test standards.

Procedures

1. Notify the customer's Quality Control Department and the appropriate respresentatives of the Environmental Protection Agency sufficiently in advance of the test as to the date, place and time the test will be made. They have the option of monitoring the test.

2. Set up and calibrate the Transmissometer Syster as specified by Thermo Electron Corporation's written instructions in the service manual or the operations and maintenance manual at the flange-to-flange pathlength that will be used at the installation. The system must be complete with all the components, including the linear board. Collect the instrument output data on a recorder.

3. Three calibrated filters as specified in the table in Paragraph 4 will be used in the sequence listed on the calibration error report form. Insert the calibration filters in the transmissometer light path at the mid-point directly in front of the retro reflector. Record and identify the data on the recorder.

4. Filters required include a low, a mid, and a high range filter. The optical density values depend upon the instrument span value and the monitor path length. The monitor path length is two times the total slot length. The filter values required to test a dual pass instrument are different from the values used with a single pass instrument. The equivalent opacity percentage value of filters calibrated in optical density was calculated for a dual pass instrument using this formula.

Eq. 4 $\quad \text{OPACITY \% VALUE} = (1 - 10^{(-2 \times \text{O.D.})})(100)$

Person Conducting Test John Aubin Instrument Serial No. 500-29003-233

Date MAY 16, 1990 Transmissometer Serial No. 400-29003-232/E3

Location FRANKLIN

Monitoring System Outlet Pathlength Corrected? Yes ____ No ✓

Emission Outlet Pathlength = L_1 Monitor Pathlength = L_2

CALIBRATED NEUTRAL DENSITY FILTER VALUES

Actual Optical Density (Monitor Pathlength Opacity		Path Adjusted % Opacity	
Low Range	(15.68)	Low Range	15.68
Mid Range	(59.72)	Mid Range	59.72
High Range	(88.68)	High Range	88.68

Run No.	Calibration Filter Value (Path Adjusted % Opacity)	Instrument Reading (Path Adjusted)	Arithmetic Difference (% Opacity) Low	Mid	High
1-low	15.68	15.6	-.08		
2-mid	59.72	59.4		-.32	
3-high	88.68	88.2			-.48
4-low	15.68	15.3	-.38		
5-mid	59.72	59.4		-.32	
6-high	88.68	88.2			-.48
7-low	15.68	15.3	-.38		
8-mid	59.72	59.5		-.22	
9-high	88.68	88.2			-.48
10-low	15.68	15.3	-.38		
11-mid	59.72	59.6		-.12	
12-high	88.68	88.3			-.38
13-low	15.68	15.4	-.28		
14-mid	59.72	59.5		-.22	
15-high	88.68	88.4			-.28
Arithmetic Mean (Equation 7): A			.304	.240	.420
Confidence Interval (Equation 8): B			.162	.104	.111
Calibration Error (A) + (B)			.466%	.344%	.531%

SPECTRAL RESPONSE

Transmissometer No. 400-29003-233/B32

The source lamp is manufactured by General Electric Corporation (GE #1974) and the manufacturer's curve is furnished.

Two detectors with integral photopic filters are used interchangeably in Thermo Electron's transmissometers. One detector is manufactured by United Detector Technology (UDT PIN 10 AP) and the other detector is manufactured by Silicon Detector Corporation (SD 444-31-22-173). A combined filter and detector spectral response curve applicable to both detector assemblies is furnished. The transmissometer response curve is the sum of the source lamp response with the filter/detector response. This is also furnished.

Results

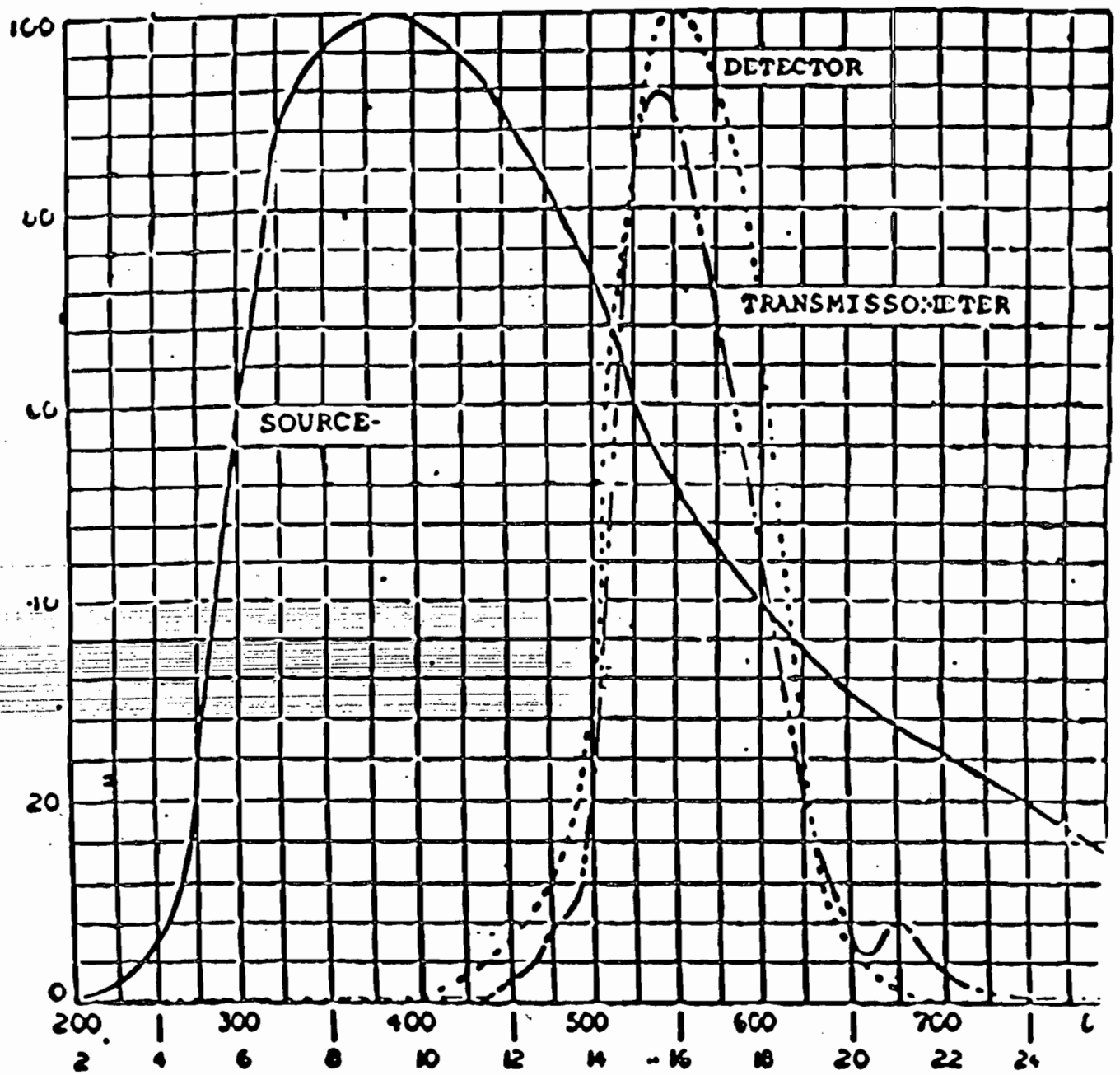
The Peak Spectral Response is at 545 NM.

The Mean Spectral Response is at 563 NM.

Spectral Response below 400 NM and above 700 NM is less than 5% of the Peak Response of the continuous monitoring system.

SPECTRAL RESPONSE CURVES

TRANSMISSOMETER NO. 400-29003-233/B32



Source Curve, 200-2600 nanometer scale

Combined Filter and Detector Curve, 200-800 nanometer s

Transmissometer Response Curve, 200-800 nanometer scal

o n e l Forge Parkway
Franklin, MA 02038
(617) 520-0430 Telex 200206

BEST AVAILABLE COPY

DATE	CUST. ORDER NO.	T.E. NO.	SN#	SHIPPING DATE
5/16/90	N23802 P-1	49589	400/500-29003-233/832	

FL TO FL	EXIT ID.	I.D.	STACK TAPER RATIO = EXT.I.D./I.D.
$19'5\frac{3}{4}''$	18'	18'	1

OP e=1-(1-.)^{STR}= 15.68 %

OP e=1-(1-.)^{STR}= 59.72 %

OP e=1-(1-.)^{STR}= 88.68 %

CZ= 0%

CS= 24.3 %

FS= 100%

CZ= 0%

LOW	15.6	15.3	15.3	15.3	15.4
MID	59.4	59.4	59.5	59.6	59.5
HIGH	88.2	88.2	88.2	88.3	88.4

LOW		MID		HIGH	
15.6	243.36	59.4	3528.36	88.2	7779.24
15.3	234.09	59.4	3528.36	88.2	7779.24
15.3	234.09	59.5	3540.25	88.2	7779.24
15.3	234.09	59.6	3552.16	88.3	7796.89
15.4	237.16	59.5	3540.25	88.4	7814.56
x^1= 76.9	x^2= 1182.79	x^1= 297.4	x^2= 17689.38	x^1= 441.3	x^2= 38949.17

CONFIDENCE INTERVAL: $CI = .2776\sqrt{(5)(x^2)-(x^1)^2}$

$CI = .2776\sqrt{(5)(1182.79)-(76.9)^2} = .162$

$CI = .2776\sqrt{(5)(17689.38)-(297.4)^2} = .104$

$CI = .2776\sqrt{(5)(38949.17)-(441.3)^2} = .111$

COMMENTS

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

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

April 13, 1993

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

Dear Permittee:

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

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

For information purposes only please note the following:

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

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

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

Sincerely,

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

WCT/HK/ss

cc: Read file
EPCHC

permitx.ltr

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

FAX (813) 272-5157

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

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

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

November 5, 1991

CERTIFIED MAIL # 648 519 625

Mr. Lynn F. Robinson
Manager, Environmental Planning
Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

Re: Hillsborough County - AP
DER File No. AO29-203512
(Gannon Unit No. 6)

Dear Mr. Robinson:

Please be advised that the Environmental Protection Commission of Hillsborough County (EPCHC) and the Florida Department of Environmental Regulation (FDER) have completed their initial review of the above application and found it to be incomplete. In order to complete the review process two copies of the following additional information is being requested pursuant to Chapter 17-4.070, F.A.C.:

1. During an inspection on November 4, 1991, a significant gas leak was found near the southeast corner of the boiler in the above referenced unit.

Pursuant to Rule 17-2.650(2)(g), F.A.C. (Operation and Maintenance Plan), we are requesting that you submit the inspection and maintenance records for this unit. Upon receipt of your response, it is our intent to include a mutually agreeable maintenance schedule for the boiler and duct work associated with this operation in the renewed permit. We do not currently have that information and will need it to complete our review. The EPC regards the observation of the leak on November 4 a compliance issue, which would only affect the permit renewal if we were not provided assurance that it was going to be corrected.

"NOTICE! Pursuant to the provisions of Section 120.600 F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department will issue a final order denying your application. You need to respond within 30 days after your receive this letter, Mr.

responding to as many of the information requests as possible and indicating when a response to any unanswered question will be submitted. If the response will require longer than 90 days to develop, an application for new construction should be withdrawn and resubmitted when completed information is available. Or for operating permits, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

In your response, please submit the original to the undersigned and a copy to the Southwest District of the FDER.

If you have any questions or wish to arrange for a meeting on this matter, please feel free to contact me at (813) 272-5530.

Sincerely,

Carlos C. Gonzalez
Air Permit Engineer

bm

cc: J. Harry Kerns, P.E., FDER, SW-District

TO: TECO - Gannon Station Unit #6

THRU: W.C. Thomas

THRU: J. Estler 1-6-87

FROM: Tom John

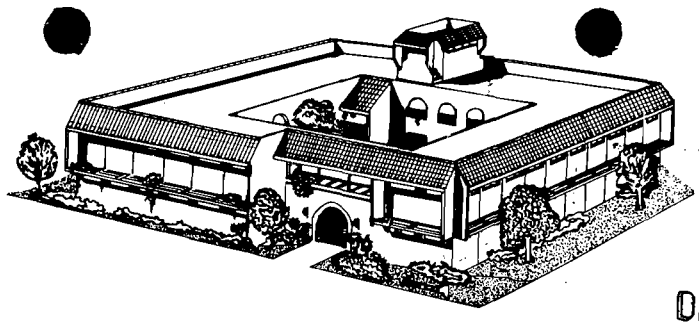
DATE: January 2, 1987

SUBJECT: Recommend that permit No.AO29-125992 be issued to TECO Gannon Station Unit #6.

Based on information received, both HCEPC and I recommend that permit No. AO29-125992 be issued to TECO for the Gannon Station Unit #6 power plant. The source, located on Port Sutton Road, Tampa, is a 3798 MMBTU/hr coal fired steam generator, controlled by a Research Cottrell, Inc., electrostatic precipitator. Tests show Unit #6 to be in compliance.

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

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



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

D. E. R.

DEC 0 4 1986

SOUTH WEST DISTRICT
TAMPA

MEMORANDUM

Date November 14, 1986

To Tom John thru Bill Thomas, DER

From Victor San Agustin VSA thru Jerry Campbell, EPC JC

Subject: Permit Renewal for TECO Gannon Unit No. 6

Compliance tests performed on Unit #6 show the following actual emissions. Furthermore, sulfur variability studies performed in Quarter IV, 1985 and Quarter III, 1986 showed $S^2/0.10^2$ were no greater than half of 1.6 for these two periods. Quarterly SO2 reports show Gannon Station's actual emissions were no greater than 6.6 TPH in 1986 and no greater than 7.8 TPH in 1985.

PM (Sootblowing) Lbs/MMBTU		PM (Non-sootblowing) Lbs/MMBTU		SO2 Lbs/MMBTU		Opacity %	
Actual	Allowable	Actual	Allowable	Actual	Allowable	Actual	Allowable
0.08	0.1	0.08	0.3	1.9	2.4	1%	20%

I recommend approval to issue a permit renewal with the following conditions:

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

2. The maximum opacity from this source shall be 20 percent [Section 17-2.650 (2)(c)2.b.(ii), F.A.C.] except for: any 2 minutes during a 60 minute period in which the opacity shall not exceed 40 percent [Section 17-2.600 (5), F.A.C.]; any 3 hours during a 24 hour period of excess emissions in which the boiler is being cleaned by soot blowing or experiencing a load change the opacity shall not exceed 60%; ~~and allowing four six minute periods during the 3 hour period of unlimited opacity, providing best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized [Section 17-2.250(3), F.A.C.]~~.

and excess emissions otherwise allowed under Sections 17-2.250(1) through (3), F.A.C.

3. The maximum allowable SO2 emission rate from this unit shall be 2.4 pounds of SO2 per MMBTU heat input on a weekly average. In addition, Units 1 through 6 at the Gannon Station shall not emit more than a combined total of 10.6 tons of SO2 per hour on a weekly average [Section 17-2.600(5)(b) 3.b.(i), F.A.C.].

4. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emisisons at intervals of 12 months from the date of June 19, 1986 or with in a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. ~~Two~~ 1 copy ~~copies~~ of test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of such testing. and a copy to the Southwest District Dept of Envir Reg,

5. Compliance with the SO2 emission standards set for the Gannon Station shall be achieved in part by adhering to the Francis J. Gannon Sulfur Dioxide Regulatory Compliance Plan submitted previously. A quarterly report summarizing the information necessary to determine compliance with the SO2 standards for this unit and the facility shall be submitted within 45 days following a calendar quarter. The sulfur variability study will be performed on the facility during the last quarter of each year. The results shall be submitted with the quarterly report for that period. The Hillsborough County Environmental Protection Commission and the Department of Environmental REgulation shall each receive a copy of this report.

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

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

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

A copy of the report
~~Two copies of all reports~~ shall be submitted ~~only to the Hillsborough~~ to the Southwest District Dept of Envir Reg, and a copy to the Hillsboro... County Environmental Protection Commission.

8. Operation and Maintenance for Particulate Control [Section 17-2.650(2), FAC]

A. Process System Performance Parameters:
(1) Source Designator: Gannon Unit No. 6
(2) Design Fuel Consumption Rate at Maximum Continuous Rating: 151.4 tons coal/hour
(3) Operating Pressure: 2600 psi
(4) Operating Temperature: 1000°F
(5) Maximum Design Steam Capacity: 2,700,000 pounds per hour

B. Particulate Control Equipment Data:
(1) Control Equipment Desginator: Electrostatic Precipitator
(2) Electrostatic Precipitators Manufacturer: Reasearch Cottrell, Inc.
(3) Model Numbers: G.O. 3118
(4) Design Flow Rates: 1,350,000 ACFM
(5) Primary Voltage: 430-480 volts
(6) Primary Current: 241 amps
(7) Secondary Voltage: 53.5 kilovolts
(8) Secondary Current: 1500 milliamps
(9) Design Efficiency: 98.5%
(10) Pressure Drop: 0.5 inches of H20(ave)
(11) Static Pressure: +15 inches of H20(ave)
(12) Rapper Frequency: 1/2.0 minutes(ave)
(13) Rapper Duration: Impact
(14) Gas Temperature: 290°F

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

Continuously Monitored and Recorded:
Visible emissions
Steam Pressure
Steam Temperature
Steam Flow

Daily:
Fuel input
Primary voltage
Primary current
~~Secondary voltage~~
Secondary current
Inspect system controls. Make minor adjustments as needed.

~~Weekly~~:
Inspect penthouse pressurizing fan filters. Replace as needed.
Observe operation of all rappers ~~and vibrators. Check rapper~~ and transformer/rectifier controls.

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

9. A continuous emission monitoring system to determine in-stack opacity from this source shall be calibrated, operated and maintained in accordance with Section 17-2.710(1), F.A.C.

10. ~~Four applications~~ to renew this operating permit shall be submitted to the Hillsborough County Environmental Protection Commission at least 60 days prior to the expiration date of this permit.

An application...

Southwest District Dept. of Envir Reg, and a copy, with original seals and signatures, shall be submitted to the

PLANT 0040 TECO GANNON PLANT PRIVATE FILE STATUS NEW ADD
PORT SUTTON ROAD POWER PLANT
TAMPA FL. 33601
A.S. AUTRY AQCR=052 SIC=4911
P O BOX 111 LAT=28:02:31N LON=82:25:31W
TAMPA . 33601 UTM ZONE 17 360.0KM E. 3087.5KM N.
6 COAL FIRED BOILS, 2 GAS TURB.,COAL YARD & FLYASH S

POINT 06 CONST PATS# OPER PATS# A029-47727
ISS= / / EXP= / / ISS=01/27/82 EXP=01/25/87
UNIT #6 - COAL FIRED BOILER WITH ESP
SOURCE= IPP= COMM.PNTS.00-00
STACK HT= 306FT DIAM=17.6FT TEMP= 320F FLOW=1184700CFM PLUME= OFT
BOILER CAP= 3798MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=85 RAW MATERIAL= 0 OTHER
PRODUCT 0 OTHER FUEL 154 TN/BRN
NORMAL COND. DEC-FEB=23% MAR-MAY=27% JUN-AUG=30% SEP-NOV=20%
PERMIT SCHEDULE 24HRS/DAY 7DAYS/WK 52WKS/YR
AOR FOR 04/01/86 17HRS/DAY 5DAYS/WK 38WKS/YR
RACT
COMPLIANCE NEDS=1 QRC=1 UPDATE11/86 SCHED. / / UPDATED / /
PERMIT=1 YOR=86 INSPECTED 02/27/86 NEXT DUE 02/27/87

/

SCC'S

1-01-002-01 YOR=85 SOURCE=B RATE= 729221 MAX= 154.000 TN/BRN
FUEL CONT SO2=1.76% ASH= 7.2% 149MBTU FYOR=85 CONFID=2
TONS OF COAL BURNED

POLLUTANTS MONITORED

TSP 11101 NORM= 380.00 EST/METH= 270/1 MAX.ALW= 1664 TNS/YR.
CTLS.PRI= 10 SEC= 0 EFF=99.5% NEXT DUE 06/30/87 TEST/FREQ=1
TESTED 06/19/86 AGENCY=2 REG=650(2)(C) COMPLIANCE=1
EMITTED= 301.95 ALLOWED= 360.60LBS/HR OP-RATE= 3606 MBTU/P
VE 11204 NORM= . EST/METH= / MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 06/30/87 TEST/FREQ=1
TESTED 06/19/86 AGENCY=3 REG=600(5)(B) COMPLIANCE=1
EMITTED= 600.02 ALLOWED= 600.20LBS/HR OP-RATE= 3606 MBTU/P
CO 42101 NORM= . EST/METH= 219/3 MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=0
SO2 42401 NORM= 9115.00 EST/METH= 15823/4 MAX.ALW= 39924 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 06/30/87 TEST/FREQ=1
TESTED 06/19/86 AGENCY=2 REG=600(5)(B) COMPLIANCE=1
EMITTED= 6851.21 ALLOWED= 8654.16LBS/HR OP-RATE= 3606 MBTU/P
NOX 42603 NORM= . EST/METH= 12397/3 MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=0
NCH 43102 NORM= . EST/METH= 26/3 MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE / / TEST/FREQ=0

TAMPA ELECTRIC
A TECO ENERGY COMPANY

To: Lee
The file

#029-47727

November 18, 1986

Mr. Iwan Choronenko
Hillsborough County Environmental
Protection Commission
1900 - 9th Avenue
Tampa, Florida 33605

D. E. R.

NOV 2 0 1986

SOUTH WEST DISTRICT
TAMPA

Re: Tampa Electric Company Francis J. Gannon
Generating Station Unit No. 6-Warning Notice

Dear Mr. Choronenko:

This letter is in response to the Hillsborough County Environmental Protection Commission (HCEPC) Warning Notice No. 61105WES04006 of November 11, 1986. The warning notice concerns alleged excess visible emissions from the Gannon generating Station No. 6 electrostatic precipitator. Although the warning notice indicates that such emissions were observed on November 11, 1986, we have assumed the the reference is intended to be November 5, 1986.

The matter was discussed on November 5, 1986, by Mr. Robert Stafford of my staff with Mr. Mike Silcott of HCEPC. This converation took place at approximately 3:45 p.m. Mr. Stafford advised at that time that he would provide a further explanation of any plant problems as quickly as possible. On November 7, 1986, a further explanation was provided to Mr. Bill Schroeder and Mr. Silcott of HCEPC during an enforcement inspection of the Gannon Station.

The incident that was observed by your staff on November 5, 1986 originated with a clinker that obstructed the fly ash transport line that transports ash from the Unit No. 6 electrostatic precipitator hopper to its associated silo. Once the problem was recognized, plant personnel opened an inspection valve to investigate the situation. During this process, the clinker fell into the valve thereby preventing it from being closed. As efforts were made to correct the problem by clearing the obstruction, intermittent emissions occurred from the open valve. Once the clinker was removed from the valve opening and the inspection valve reclosed, fly ash emissions ceased.

We have reviewed the provisions of the rules that were cited in your November 11, 1986, letter and we do not believe that the November 5, 1986, incident constitutes a violation of these rules. Moreover, the circumstances surrounding the intermittent emissions from the precipitator area were

in the nature of emission resulting from an equipment malfunction, which, if considered to be in violation of applicable rules, would be excused under the provisions of Chapter 17-2.250, Florida Administrative Code, and 1-3.25 of the HCEPC rules. As you know, this is the section that authorizes excess emissions of limited duration.

An incident of the type described above is a rarity and it is impossible to prevent it from occurring. As is our practice, we will continue to make efforts to minimize any emissions when this type of event occurs until the problem has been corrected.

Should you have any questions concerning the foregoing, please do not hesitate to contact us.

Sincerely,

A. Spencer Autry
Manager
Environmental Planning

ASA/jst/052/JS

cc: Beth Knauss, FDER
Bill Thomas, FDER

TAMPA ELECTRIC
A TECO ENERGY COMPANY

October 8, 1986

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

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

Re: Tampa Electric Company
Air Operations Permit
Renewal Application
Gannon Station Unit #6

Gentlemen:

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

The application package, together with a check for $345.00 to the Hillsborough County Board of County Commissioners and a check for $500.00 to the Florida Department of Environmental Regulation, are included with Mr. Stewart's copy.

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

Sincerely,

A. Spencer Autry
Manager
Environmental Planning

ASA/jst/020/EE1

D.E.R.
OCT 14 1986
SOUTH WEST DISTRICT
TAMPA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

PERMITTEE

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

PERMIT/CERTIFICATION

Permit No.: A029-125992
County: Hillsborough
Expiration Date:
Project: Gannon Station
Unit No. 6

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of a 3798 MMBTU/hr coal fired steam generator designated as Unit No. 6. This "wet" bottom boiler was manufactured by Riley Stoker Corporation and is of the opposed firing type. The generator has a nameplate capacity of 414 MW. Particulate emissions are controlled by a Research Cottrell, Inc. Electrostatic Precipitator.

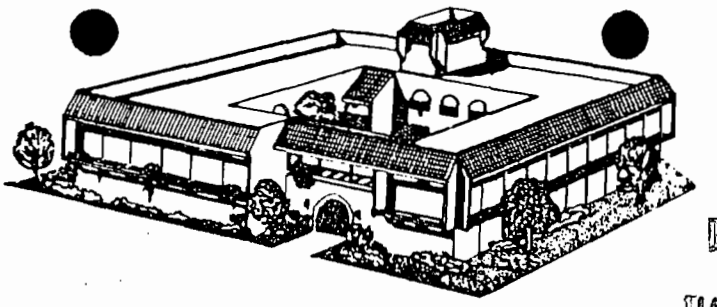
Location: Port Sutton Rd., Tampa

UTM: 17-360.1E 3087.5N NEDS NO: 0040 Point ID: 06

Replaces Permit No.: AO29-47727

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

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



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

D.E.R.

JAN 0 2 1987

SOUTH WEST DISTRICT
TAMPA

MEMORANDUM

Date November 14, 1986

To Tom John thru Bill Thomas, DER

From Victor San Agustin (VSA) thru Jerry Campbell, EPC (JC)

Subject: Permit Renewal for TECO Gannon Unit No. 6

Compliance tests performed on Unit #6 show the following actual emissions. Furthermore, sulfur variability studies performed in Quarter IV, 1985 and Quarter III, 1986 showed $S^2/0.10^2$ were no greater than half of 1.6 for these two periods. Quarterly SO2 reports show Gannon Station's actual emissions were no greater than 6.6 TPH in 1986 and no greater than 7.8 TPH in 1985.

Non- PM (Sootblowing) Lbs/MMBTU		PM (Non-sootblowing) Lbs/MMBTU		SO2 Lbs/MMBTU		Opacity %	
Actual	Allowable	Actual	Allowable	Actual	Allowable	Actual	Allowable
0.08	0.1	0.08	0.3	1.9	2.4	1%	20%

I recommend approval to issue a permit renewal with the following conditions:

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

2. The maximum opacity from this source shall be 20 percent [Section 17-2.650 (2)(c)2.b.(ii), F.A.C.] except for: any 2 minutes during a 60 minute period in which the opacity shall not exceed 40 percent [Section 17-2.600 (5), F.A.C.]; any 3 hours during a 24 hour period of excess emissions in which the boiler is being cleaned by soot blowing or experiencing a load change the opacity shall not exceed 60%; and allowing four six minute periods during the 3 hour period of unlimited opacity, providing best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized [Section 17-2.250(3), F.A.C.]; and excess emissions otherwise allowed under Section 17-2.250(1)-(3), F.A.C.

3. The maximum allowable SO2 emission rate from this unit shall be 2.4 pounds of SO2 per MMBTU heat input on a weekly average. In addition, Units 1 through 6 at the Gannon Station shall not emit more than a combined total of 10.6 tons of SO2 per hour on a weekly average [Section 17-2.600(5)(b) 3.b.(i), F.A.C.].

4. This unit shall be stack tested for particulate matter (under both soot blowing and non soot blowing operating conditions), sulfur dioxide and visible emisisons at intervals of 12 months from the date of June 19, 1986 or with in a ninety (90) day period prior to this date. The Method 9 Test period on this source shall be sixty (60) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of test data shall be submitted to the Air Section of the Hillsborough County Environmental Protection Commission within 45 days of such testing.

1 copy to each agency

5. Compliance with the SO2 emission standards set for the Gannon Station shall be achieved in part by adhering to the Francis J. Gannon Sulfur Dioxide Regulatory Compliance Plan submitted previously. A quarterly report summarizing the information necessary to determine compliance with the SO2 standards for this unit and the facility shall be submitted within 45 days following a calendar quarter. The sulfur variability study will be performed on the facility during the last quarter of each year. The results shall be submitted with the quarterly report for that period. The Hillsborough County Environmental Protection Commission and the Department of Environmental REgulation shall each receive a copy of this report.

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

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

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

1 copy to each agency

Two copies of all reports shall be submitted only to the Hillsborough County Environmental Protection Commission.

8. Operation and Maintenance for Particulate Control [Section 17-2.650(2), FAC]

A. Process System Performance Parameters:
(1) Source Designator: Gannon Unit No. 6
(2) Design Fuel Consumption Rate at Maximum Continuous Rating: 151.4 tons coal/hour
(3) Operating Pressure: 2600 psi
(4) Operating Temperature: 1000°F
(5) Maximum Design Steam Capacity: 2,700,000 pounds per hour

B. Particulate Control Equipment Data:
(1) Control Equipment Desginator: Electrostatic Precipitator
(2) Electrostatic Precipitators Manufacturer: Reasearch Cottrell, Inc.
(3) Model Numbers: G.O. 3118
(4) Design Flow Rates: 1,350,000 ACFM
(5) Primary Voltage: 430-480 volts
(6) Primary Current: 241 amps
(7) Secondary Voltage: 53.5 kilovolts
(8) Secondary Current: 1500 milliamps
(9) Design Efficiency: 98.5%
(10) Pressure Drop: 0.5 inches of H20(ave)
(11) Static Pressure: +15 inches of H20(ave)
(12) Rapper Frequency: 1/2.0 minutes(ave)
(13) Rapper Duration: Impact
(14) Gas Temperature: 290°F

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

Continuously Monitored and Recorded:
Visible emissions
steam Pressure
steam Temperature
Steam Flow

Daily:
Fuel input
Primary voltage
Primary current
~~Secondary voltage~~ not required
Secondary current
Inspect system controls. Make minor adjustments as needed.

Monthly ~~Weekly~~:
Inspect penthouse pressurizing fan filters. Replace as needed. Observe operation of all rappers and vibrators. Check rapper and transformer/rectifier controls.

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

9. A continuous emission monitoring system to determine in-stack opacity from this source shall be calibrated, operated and maintained in accordance with Section 17-2.710(1), F.A.C.

10. Four copies of the ~~applications~~ to renew this operating permit shall be submitted to the Hillsborough County Environmental Protection Commission at least 60 days prior to the expiration date of this permit.

→ an original + 3 copies

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

PERMITTEE

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

PERMIT/CERTIFICATION

Permit No.:
County: Hillsborough
Expiration Date:
Project: Gannon Station
Unit No. 6

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of a 3798 MMBTU/hr coal fired steam generator designated as Unit No. 6. This "wet" bottom boiler was manufactured by Riley Stoker Corporation and is of the opposed firing type. The generator has a nameplate capacity of 414 MW. Particulate emissions are controlled by a Research Cottrell, Inc. Electrostatic Precipitator.

Location: Port Sutton Rd., Tampa

UTM: 17-360.1E 3087.5N NEDS NO: 0040 Point ID: 06

Replaces Permit No.: AO29-47727

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

PERMITTEE

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

PERMIT/CERTIFICATION

Permit No.:
County: Hillsborough
Expiration Date:
Project: Gannon Station
Unit No. 5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of a 2284 MMBTU/hr coal fired steam generator designated as Unit No. 5. This "wet" bottom boiler was manufactured by Riley Stoker Corporation and is of the opposed firing type. The generator has a nameplate capacity of 239.4 MW. Particulate emissions are controlled by two Research-Cottrell, Inc. Electrostatic Precipitators operating in parallel.

Location: Port Sutton Rd., Tampa

UTM: 17-360.1E 3087.5N NEDS NO: 0040 Point ID: 05

Replaces Permit No.: A029-47728

APPLICATION TRACKING SYSTEM 10/13/86

APPL NO:123992
APPL RECVD:10/10/86 TYPE CODE:AC SUBCODE:06 LAST UPDATE:10/13/86
DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:__/__/__
DER PROCESSOR:~~SITLER~~ JOHN JOE
APPL STATUS:AC DATE:10/10/86 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:__ (SSAC/EXEMPTIONS/VARIANCE)
(Y/N) N MANUAL TRACKING DISTRICT:40 COUNTY:29
(Y/N) N DNR REVIEW REQD? LAT/LONG:27.54.25/82.25.21
(Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:__.___
(Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:__________
(Y/N) Y LETTER OF INTENT REQD? _ (I/ISSUE D/DENY) ALT#:___-__________

PROJECT SOURCE NAME:TAMPA ELECTRIC CO.
STREET:PORT SUTTON ROAD CITY:TAMPA
STATE:FL ZIP:_____ PHONE:___-___-____
APPLICATION NAME:TAMPA ELECTRIC CO.
STREET:P.O. BOX 111 CITY:TAMPA
STATE:FL ZIP:33601 PHONE:813-228-4111
AGENT NAME:A.SPENCER AUTRY
STREET:P.O. BOX 111 CITY:TAMPA
STATE:FL ZIP:33601 PHONE:813-228-4111
FEE #1 DATE PAID:10/13/86 AMOUNT PAID:30500 RECEIPT NUMBER:00105610

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - __/__/__
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - __/__/__--__/__/__
D DATE DER REC. COMMENTS FROM GOV. BODY FOR LOCAL APP. -. __/__/__
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
F DATE GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS - - __/__/__
G DATE FIELD REPORT WAS REQ--REC - - - - - - - - - - - - __/__/__--__/__/__
H DATE DNR REVIEW WAS COMPLETED - - - - - - - - - - - - __/__/__

I DATE APPLICATION WAS COMPLETE - - - - - - - - - - - - __/__/__
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - __/__/__
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - __/__/__--__/__/__
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - - - __/__/__
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - __/__/__
N WAIVER DATE BEGIN--END (DAY 90) - - - - - - - - - - - __/__/__--__/__/__

COMMENTS:

Jc

TAMPA ELECTRIC
A TECO ENERGY COMPANY

CERTIFIED MAIL P 334 919 188
RETURN RECEIPT REQUESTED

October 8, 1986

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

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

Re: Tampa Electric Company
Air Operations Permit
Renewal Application
Gannon Station Unit #6

Gentlemen:

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

The application package, together with a check for $345.00 to the Hillsborough County Board of County Commissioners and a check for $500.00 to the Florida Department of Environmental Regulation, are included with Mr. Stewart's copy.

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

Sincerely,

A. Spencer Autry
Manager
Environmental Planning

ASA/jst/020/EE1

Enclosures

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 105610

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from T.E.C.O. Date 10-10-86

Address P.O. Box 111 Tampa Dollars $ 500.00

Applicant Name & Address same

Source of Revenue Renewal of permit #029-47727

Revenue Code 001032 Application Number #029-125992

ck 67724

By Alvina Krug

GANNON A029-47727

TAMPA ELECTRIC
A TECO ENERGY COMPANY

June 2, 1986

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

Re: Tampa Electric Company
Administrative Changes to
Air Permits

Dear Mr. Thomas:

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

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

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

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

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

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

Sincerely,

A. Spencer Autry
Manager
Environmental Planning

ASA/jst/004/EE1

Attachment

cc: Jim Estler, FDER
Jerry Campbell, HCEPC

INCONSISTENCIES IN ADMINISTRATIVE PROCEDURES

DER AIR PERMITS
TAMPA ELECTRIC COMPANY (TEC)

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

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

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

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

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

The permits below contain a written notification requirement:

Source	Permit Number	Specific Condition
F.J. Gannon		
Combustion Turbine 1	A029-85099	4
Fly Ash Silo 1	A029-80048	5
Fly Ash Silo 2	A029-80046	3
Economiser Ash Silo	A029-87409	3
Big Bend		
Combustion Turbine 1	A029-85100	5

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

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

Source	Permit Number	Specific Condition
Hookers Point		
Unit 1	A029-47726	1
Unit 2	A029-47725	1
Unit 3	A029-47724	1
Unit 4	A029-47723	1
Unit 5	A029-47722	1
Unit 6	A029-47721	1
F.J. Gannon		
Unit 5	A029-47728	1
Unit 6	A029-47727	1

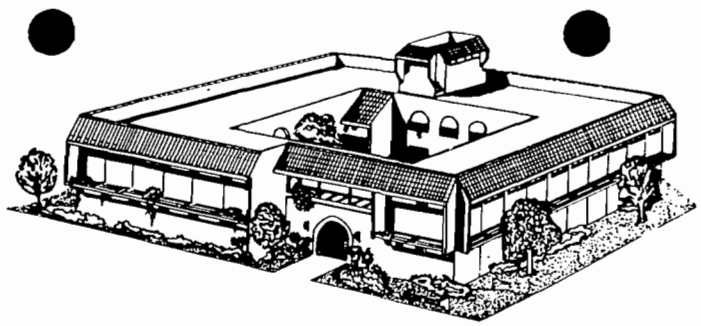
4. Specify that excess emissions refer to 6-minute average opacity.

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

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

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

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



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

D. E. R.

Date June 12, 1986

To Jim Estler

JUN 16 1986

From Jerry Campbell JC

SOUTH WEST DISTRICT
TAMPA

Subject: TECO Permit Amendments

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

Gannon Unit 4 (A029-80043)
Change Specific condition #4 to read:

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

Change specific condition #7 to read:

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

Gannon Unit 5 (A029-47728)
Change specific condtiion #1 to read:

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

Gannon Unit #6 (A029-47727)
Change Specific condition #1 to read:

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

Hookers Point Unit #1 (A029-47726)
Change specific condition #1 to read:

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

Hookers Point Unit #2 (A029-47725)
Change specific condition #1 to read:

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

Hookers Point Unit #3 (A029-47724)
Change specific condition #1 to read:

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

Hookers Point Unit #4 (A029-47723)
Change specific condition #1 to read:

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

Hookers Point Unit #5 (A029-47722)
Change specific condition #1 to read:

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

Hookers Point Unit #6 (A029-47721)
Change specific condition #1 to read:

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

Gannon Combustion Turbine #1 (A029-85099)
Change specific condition #1 to read:

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

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

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

Change specific condition #4 to read:

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

Gannon Fly Ash Silo #1 - 4 (AO29-80048)
Change specific condition #1 to read:

1. Compliance with the opacity standard set forth below shall be demonstrated by conducting 30 minute visible emission tests as units #3, #2 & #1 are converted to coal and begin utilizing this silo. By November 15, 1984, 60 days prior to the expiration of construction permit #AC29-41941, a visible emission test shall be submitted while loading the silo from Units #3 & #4. By January 15, 1986, 60 days prior to the expiration of construction permit AO 29-41942, a visible emission test shall be submitted while loading the silo from Units #2, #3 & #4. By January 15, 1987, 60 days prior to the expiration of construction permit AC29-41943, a visible emission test shall be submitted while loading the silo from Unit #1 and two of the remaining 3 units. Thereafter, visible emissions tests shall be conducted while loading the silo from 3 of the 4 units at 12 month intervals. Tests can be conducted within a ninety (90) day period prior to the dates specified above.

Change specific condition #5 to read:

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

Gannon Fly Ash Silo #5-6 (AO29-80046)
Change specific condition #1 to read:

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

Change specific condition #3 to read:

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

Gannon Economiser Silo (AO29-87409)
Change specific condition #1 to read:

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

Change spcific condition #2 to read:

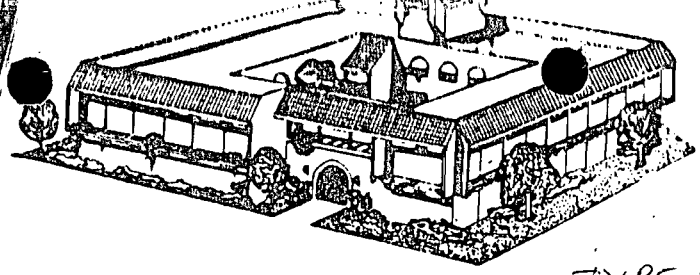
2. The Hillsborough County Environmental Protection Commission shall be notified 15 days prior to compliance testing.

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

JC/ch

CH2/16

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTI
COMMISSION
E. L. BING
RODNEY COLSON
MATT JETTON
JOHN R. PAULK
JAN KAMINIS PLATT



ROGER P. STEWART
DIRECTOR
1900 - 9th AVE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

Copies to Marshall

TYPE I AUDIT

AUDIT CHECK LIST (040-06)
TYPE I

COMPANY TECO UNIT: GANNON # 6 DATE: 5/22/85

Pollutant(s): TSP / SO_2 Method(s): 17 and / 6
UNIT # 6 also fuel analysis for part. 5 / 6

Modification of Standard Methods:

PLANT INFORMATION:

Plant Manager: DEAN BROOME Phone:

Plant Location: PORT SUTTON

Plant representative during test: NEIL OAKES, ENVIRO ENGR. / BOB STAFFORD

Test team company name: TECO's CTL

Address: Phone:

GARY Mc RAE Method 6 > Team Supervisor: GREG BENTON / MARTY DUFF (method 17)

Agency Observers	Affiliation
CARLOS C GONZALEZ	HCEPC
MICHAEL D. SILCOTT	HCEPC

PRODUCTION DATA: (SOOT-BLOWING THROUGH OUT ~~ENTIRE~~ FIRST THREE RUNS)

Normal operating hours, Hours/day: Days/Week: Wks/Year:

If intermittent, give average hour/week:

Comments:

Process flow diagram

Any variation from normal plant production?

SOURCE INSPECTION REPORT FORM
FOR AIR POLLUTANT EMISSION SOURCES

1. Facility Name	2. District	Office	County	Facility	Source
TECO - GANNON	1	1 1	219	00410	21

3. Source Description	4. Permit/PPS Number	5. Expiration Date
POWER PLANT		

6. Reason for Inspection	7. Current Audit Date	8. Current Audit Type	9. Reserved
COMPLAINT/COMPLIANCE	4-3-85	III	

10. Source Regulations	NSPS	NESHAP	111(d)	PSD	NAA NSR	RACT

11. Product/Production Information

UNIT #1 = DOWN JUNE / COAL CONVERSION
UNIT #2 = BEING CONVERTED TO COAL
UNIT #3 = 120 MW
UNIT #4 = 165 MW
UNIT #5 = 220 MW
UNIT #6 = 380 MW

12. Operating/Process Parameters Data

UNIT #1 = DOWN
UNIT #2 = DOWN
UNIT #3 = 755K #/HR STEAM (FILE OUT)
UNIT #4 = 1.2M #S/HR STEAM
UNIT # 5 = 1.4M #S/HR STEAM
UNIT #6 = 2.5M #S/HR STEAM

13. Control Equipment Status

SOME LEAK IN #6 DUCT TO ESP FROM BOILER

14. Operation and Maintenance Conditions/Records

PLANT IN REASONABLE CONDITION

15. Compliance Test Information	15a. Samples Taken	15b. VE Avg. Normal	15b. VE Avg. Exception	15c. Mass Emissions Test
N/A				

15d. Test performed by:	15e. Test Team Type	15f. Other
CONTACT: NEIL OAKES JOE KOWALSKI (ESP SPECIALIST)		

16. Compliance Status Summary	16a. CMST	16b. Reserved
IN COMPLIANCE WITH RULES & REGULATIONS		

17. Applicable Regulations	17a. Regulations Violated

18. Attachments: NEDS 01, 02, 03, 04, 05, 06

19. DER/Local Representative's signature: Michael D. Pilcher / CARLOS GONZALEZ

20. Date: 4-3-85

OVER

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION
ANNUAL OPERATING REPORT

Representing Calendar Year 1984
Date Submitted: _____

SECTION I - GENERAL INFORMATION

Plant, Institution or Establishment Name: _____
Plant Address: _____
Street City State Zip
Telephone: ( ) _____

Person to Contact Regarding This Report _____ Title _____
Mailing Address: _____
Street City State Zip

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

SECTION II - FUEL COMBUSTION FOR GENERATION OF HEAT OR STEAM

Source Code	Type of Fuel a	Quantity c X 1,000	Annual Consumption b Percent Distribution by Season				Hourly Consumption		Heat Content BTU/Quan	Percent Sulfur d	Percent Ash d
			Spring March/ May	Summer June/ Aug	Fall Sept/ Nov	Winter Dec/ Feb	Maximum	Average			
Gan 5	Bitum Coal	501	30.13	30.25	15.98	23.64	93.4	75.7	12,325	1.24	7.75
Gan 6	Bitum. Coal	809	13.26	29.75	32.05	24.94	151.4	119.7	12,480	1.18	7.58
GT	No. 2 Oil	133	11.98	26.55	17.97	43.50	1,885	1,111	19,468	0.37	NA
			-								

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

b. Fuel Data Reported on 'as burned' Basis

c. Solid Fuel: Tons, Liquid Fuel: Gals.: Gaseous Fuel: 1000 ft^3

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

SECTION III - AIR CLEANING EQUIPMENT

Source Code	Type of Air Cleaning Equipment a,b	Pollutant Removed c	Inlet Gas Temp °F	Inlet Gas Flow Rate ACFM	Maximum Pressure Drop PSI d	Efficiency e	
						Design Percent	Operating Percent
Gan 5	Electrostatic Precipitator	Particulate	288	681,000	0.018	98.5/ 99.78	99.8(1)
Gan 6	Electrostatic Precipitator	Particulate	292	1,120,000	0.018	98.5/ 99.78	99.1(1)
GT	Not Applicable						

Wet scrubber, electrostatic precipitator, fabric filter, etc.

Please list future equipment separately

c. Pollutants to be covered in this survey are specified in the accompanying instructions.

d. Give maximum normal operating pressure drop across air cleaning system.

e. Give efficiency in terms of pollutant removed.

(1) Estimated

SECTION IV - STACK AND POLLUTANT EMISSIONS DATA

Stack Data					Estimate of Pollutant Emissions				
Source Code	Height Above Grade Ft.	Inside Diameter at top ft	Exit Gas Velocity ft/sec	Exit Gas Temp °F	Pollutant	Technique	Quantity tons/yr	Average lb/hr	Maximum lb/hr
Gan 5	306	14.6	54.55	288	Particulate Sulf.Dioxide	Stack Test Fuel Anal.	123.6 11,615.9	37.3 3,508.1	76.0 7,140.2
Gan 6	306	17.6	59.68	292	Particulate Sulf.Dioxide	Stack Test Fuel Anal.	302.9 18,678.4	89.6 5,527.2	113.9 7,026.3
GT	35	95.7(1)	16.40	1,010	Particulate Sulf.Dioxide	Fuel Anal. Fuel Anal.	0.92 3.3	15.4 55.6	26.1 94.4

(1) Exit Area (ft^2)

SECTION III - AIR CLEANING EQUIPMENT

(Not Applicable)

Source Code	Type of Air Cleaning Equipment a,b	Pollutant Removed c	Inlet Gas Temp °F	Inlet Gas Flow Rate ACFM	Maximum Pressure Drop PSI d	Efficiency e	
						Design Percent	Operating Percent

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

b. Please list future equipment separately

c. Pollutants to be covered in this survey are specified in the accompanying instructions.

d. Give maximum normal operating pressure drop across air cleaning system.

e. Give efficiency in terms of pollutant removed.

SECTION IV - STACK AND POLLUTANT EMISSIONS DATA

Stack Data					Estimate of Pollutant Emissions				
Source Code	Height Above Grade Ft.	Inside Diameter at top ft	Exit Gas Velocity ft/sec	Exit Gas Temp °F	Pollutant	Technique	Quantity tons/yr	Average lb/hr	Maximum lb/hr
1-4 Flyash Silo	107	3 @ 1 ea.	33	350	Particulate	Calculated	5.29	1.32	1.32
5-6 Flyash Silo	104	3.25(1)	58	350	Particulate	Calculated	8.58	2.07	2.07
Econo Ash Silo	72	0.67	21	350	Particulate	Calculated	0.50	0.14	0.14

(1) Exit Area (ft^2)

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION
ANNUAL OPERATING REPORT

D. E. R.

MAR 25 1985

SOUTH DISTRICT

Representing Calendar Year 1984
Date Submitted: _____

SECTION I - GENERAL INFORMATION

Plant, Institution or Establishment Name: _____
Plant Address: _____
Street City State Zip
Telephone: ( ) _____

Person to Contact Regarding This Report _____ Title _____
Mailing Address: _____
Street City State Zip

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

SECTION II - FUEL COMBUSTION FOR GENERATION OF HEAT OR STEAM

Source Code	Type of Fuel a	Quantity c X 1,000	Annual Consumption b Percent Distribution by Season				Hourly Consumption		Heat Content BTU/Quan	Percent Sulfur d	Percent Ash d
			Spring March/ May	Summer June/ Aug	Fall Sept/ Nov	Winter Dec/ Feb	Maximum	Average			
Gan 5	Bitum Coal	501	30.13	30.25	15.98	23.64	93.4	75.7	12,325	1.24	7.75
Gan 6	Bitum. Coal	809	13.26	29.75	32.05	24.94	151.4	119.7	12,480	1.18	7.58
GT	No. 2 Oil	133	11.98	26.55	17.97	43.50	1,885	1,111	19,468	0.37	NA
			-								

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

b. Fuel Data Reported on 'as burned' Basis

c. Solid Fuel: Tons, Liquid Fuel: Gals.: Gaseous Fuel: 1000 ft^3

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

HILLSBOROUGH COUNTY ENVIRONMENTAL
PROTECTION COMMISSION

File

INSPECTION REPORT
EXECUTIVE SUMMARY

PLANT NAME TECO - GANNON NEDS 040 DATE/TIME 7/25/84 3:00 - 4:15

PLANT LOCATION U.S. 41 South # OF NEDS POINTS 11.

PROCESS DESCRIPTION Barker Unit 1-6 including precipitators and other operations such fly ash handling/storage, coal yard an economizer ash silo, and fly ash silos (all under permits)

COMPLIANCE VERIFICATION (X) PERMIT REVIEW ( )
ENFORCEMENT ( ) OTHER (X) Type II on 03

PERSONS CONTACTED-TITLE

NEDS POINTS CHECKED 01 - 11 NEDS POINTS IN COMPLIANCE 01 - 11 NEDS POINTS IN VIOLATION

SUMMARY OF FINDINGS Barker units 1 thru 5 was audited by visual and collection various operating parameter data (see attachment). Unit #6 was down and recycled by injection. The load on unit #3 was being gradually increased for testing (precipitator efficiency by Combustion Engineering). Precipitator #4 was inspected with voltages ranging from 210 - 350 volt AC. Due to time constraints the remaining precipitators were not inspected. Mr. Smith indicated the new precipitators are to be installed on #1 and #2 during their conversion to coal fuel.

Mr. Williams data on #2 unit was used as a guideline for inspection

125 MW => 1257 MMBTU/HR

Fuel - #6 fuel oil Steam flow 950K #/HR

Steam temp - 1000°F

press - 1580 psig

D.E.R.

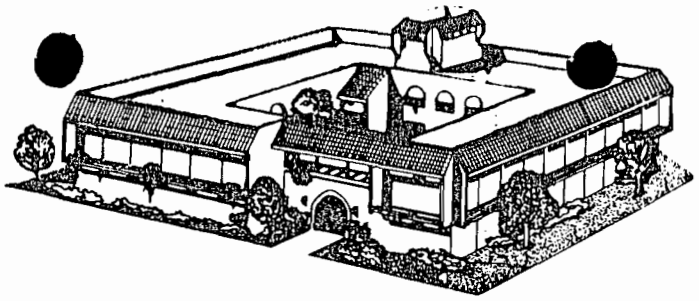
AUG 30 1984

SOUTH WEST DISTRICT
TAMPA

INSPECTION COMMENTS FOR APIS (LIMIT 50 SPACES)

INSPECTOR'S SIGNATURE A L Cody.

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION
E. L. BING
RODNEY COLSON
MATT JETTON
JOHN R. PAULK
JAN KAMINIS PLATT



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5980

D. E. R.

JUN 5 1985

SOUTH WEST DISTRICT
TAMPA

June 4, 1985

Tampa Electric Company
P. O. Box 111
Tampa, FL 33601
Attention: Mr. A. Spence Autry, Manager
Environmental Planning

Dear Mr. Autry:

As you may be aware, the Hillsborough County Environmental Protection Commission visited TECO's Gannon Station on May 22, 1985. The purpose of that visit was to monitor the performance of TECO's source test team while conducting a stack test on #6 Boiler Unit.

While conducting this audit, it was evidenced that a series of holes on the precipitator duct, upstream of the stack, were discharging fumes to the surrounding area. This condition was discussed with TECO's escorts, Mr. Bob Stafford and Mr. Neil Oakes, at the time; and both indicated that the faulty duct work will be fixed during the next outage on #6 Boiler Unit.

While it is of concern to the Hillsborough County Environmental Protection Commission that this precipitator leakage could significantly affect the representativeness of the test results, and continue to present a nuisance to adjacent areas; it is the primary purpose of this letter to request a written response from TECO as to when this condition will be remedied.

Please direct any questions or response to myself or to Mr. Jerry Campbell.

Sincerely,

Carlos Gonzalez
Air Compliance Section
Hillsborough County Environmental
Protection Commission

CG/ch

PLANT 0040 TECO GANNON PLANT PRIVATE FILE STATUS NEW ADD
PORT SUTTON ROAD POWER PLANT
TAMPA FL. 33601
W JOHNSON AQCR=052 SIC=4911
P O BOX 111 LAT=28:02:32N LON=82:25:31W
TAMPA . 33601 UTM ZONE 17 .0KM E. .0KM N.

POINT 06 CONST PATS# OPER PATS# A029-12601
TSS= / / EXP= / / TSS=10/23/78 EXP=10/15/83
STEAM GENERATOR WITH ELECTROSTATIC PRECIPITATOR
SOURCE= IPP= ECAP=? COMM.PNTS. -
STACK HT= 300FT DIAM=17.6FT TEMP= 291F FLOW=1320000CFM PLUME= 0FT
BOILER CAP= 0MBTU/HR FUEL FOR SPACE HEAT= .0%
OPERATING PROCESS RATES YOR=78 RAW MATERIAL= 329000 OTHER
PRODUCT 0 OTHER FUEL 329000 OTHER
NORMAL COND. DEC-FEB=25% MAR-MAY=25% JUN-AUG=25% SEP-NOV=25%
PERMIT SCHEDULE HRS/DAY DAYS/WK WKS/YR
AOR FOR / / HRS/DAY DAYS/WK WKS/YR

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

/

SCC'S H

POLLUTANTS MONITORED

TSP 11101 NORM= 436.10 EST/METH= 350/1 MAX.ALW= 1590 TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF=99.8% NEXT DUE 02/24/83 TEST/FREQ=1
TESTED 02/24/82 AGENCY=3 REG=250(3) COMPLIANCE=1
EMITTED= 179.30 ALLOWED= 1144.50LBS/HR OP-RATE= 3815 MBTU/P
VE 11204 NORM= . EST/METH= / MAX.ALW= TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 00/00/76 TEST/FREQ=
TESTED 03/03/78 AGENCY= REG= COMPLIANCE=
EMITTED= . ALLOWED= 0.00LBS/HR OP-RATE= 0 OTHER
SO2 42401 NORM= 119.92 EST/METH= 2893772 MAX.ALW= 3845R TNS/YR.
CTLS.PRI= 0 SEC= 0 EFF= 0.0% NEXT DUE 02/24/83 TEST/FREQ=1
TESTED 02/24/82 AGENCY=3 REG=A00([illegible]R) COMPLIANCE=1
EMITTED= 7A30.00 ALLOWED= 920[illegible].00LBS/HR OP-RATE= 3834 MBTU/P
T

RRG ~~Lutz~~
Processor

COMPANY NAME Tampa Electric Company

Gannon - Boiler # 6

File Number A029-47727

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Hillsborough

Date Recieved 9/15/81

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

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	9/21/81	RK
5	Review by Sec. head and transfer to permitting Engineer		
28	Completeness Review	11-3-81	
	request additional info *		
	information received *		
	Public Notice Published * (for Air Construction only)		
55	Letter of Intent sent to * Supervisor		
60	Letter of Intent submitted * to District Manager		
75	Intent to issue/deny mailed *		
80	Permitting Eng'r submit finished permit package & recommendations to supervisor		
83	Permit Package to Dist. Engr.		
85	Permit Package to Dist. Manager		
90	Final Issuance/denial	1-27-82	

*If needed, If not indicate by N/A

TECO - Gannon #6

File Number A029-12601

PERMIT APPLICATION STATUS SHEET

Type of permit applied for Air Operation

County Hillsborough

Date Recieved 8-29-78 DER
8-28-78 HCEPC

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

CLOCK DAYS		DATE TASK COMPLETED	INITIALS
3	Logging by Sec'y	8-30-78	ff
5	Review by Sec. head and transfer to permitting Engineer	9-11-78	DW
28	Completeness Review		
	request additiona info *		
	information received *		
	Public Notice Published * (for Air Construction only)		
55	Letter of Intent sent to * Supervisor		
60	Letter of Intent submitted * to District Manager		
75	Intent to issue/deny mailed *		
80	Permitting Eng'r submit finished permit package & recommendations to supervisor		
83	Permit Package to Dist. Engr.	10-19-78	DW
85	Permit Package to Dist. Manager	10-23-78	JHL
90	Final Issuance/denial	10-23-78	ff

*If needed, If not indicate by N/A

File: Hills 6-HP

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

June 22, 1982

Mr. Hugh Smith
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

Subject: Opacity Monitor Certification: Gannon Station, Unit 6,
Lear Siegler RM41 Transmissometer, Serial Number 957

Dear Mr. Smith:

This letter acknowledges that the above named monitor and associated equipment identified below conforms with EPA performance requirements described in 40 CFR 60, Appendix B, Specification 1 revised July 1, 1981, as specified by DER requirements FAC 17-2.710(1). Modification to or replacement of this equipment beyond normal maintenance and repair procedures may render the monitor's acceptable status void.

Monitor: Lear Siegler Transmissometer RM41, Ser. No. 957
Converter Model 611, Ser. No. 28957
Recorder Model LSI-II, Ser. No. C75-69818-5-28
Factory Test 2-20-78 Field Test 9-8-81

Sincerely,

David P. Harlos

David P. Harlos
Engineer I
Bureau of Air Quality Management

DPH/dt

cc: Mr. Robert Garrett (FDER) ✓
Mr. Anthony Jones (HCEPC)

D.E.R.
JUN 25 1982
SOUTHWEST DISTRICT
TAMPA

File: Hill Co-AP

TECO
TAMPA ELECTRIC COMPANY

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

March 9, 1981

D.E.R.
MAR 12 1981
SOUTHWEST DISTRICT
TAMPA

Air Engineering Department
Hillsborough County Environmental
Protection Commission
1900 9th Avenue
Tampa, Florida 33605

RE: Stack Emissions Test
Gannon No. 6
Tampa Electric Company

Gentlemen:

Enclosed please find two (2) copies of a stack test report for an emissions compliance test performed on February 4, 1981.

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

Included in the Summary of Results, the average sulfur dioxide emission rate, based on fuel analysis, was 2.18 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05(6)(e)(1)(b) 2.b of 2.4 lbs. per million BTU.

Also included is a process statement and visible emission report.

If you have any questions, please call.

Yours truly,

J. L. Williams, P.E.
Manager
Environmental Planning

Enclosures

cc: D. Williams, FDER COPY FOR

File: Hills G-AP Dam

TECO
TAMPA ELECTRIC COMPANY

D.E.R.
DEC 12 1979
SOUTHWEST DISTRICT
TAMPA

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

December 10, 1979

Mr. Steve Smallwood, P.E.
Acting Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Steve:

Pursuant to our phone conversation of December 10, 1979, this is to acknowledge your approval to grant us a time extension up to December 22, 1979 in order to conduct EPRI's Flue Gas/Conditioning Study at our Gannon Station's Unit 6.

As stated during our conversation, the unit was finally brought on line on December 9, 1979 and SRI and APT (EPA's consultant) started testing this morning. Testing is scheduled to finalize on December 22, 1979.

Thank you for your cooperation.

Sincerely,

Vilma Brueggemeyer

Vilma Brueggemeyer
Engineer

cc: James Wilburn, EPA
Archie Lee, EPA
Dave Puchaty, FDER COPY FOR
Roger Stewart, HCEPC
Jim Estler, FDER
Vicki Tschinkel, FDER

Brown Thru File: Hills Co-HRG

TECO
TAMPA ELECTRIC COMPANY

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

November 30, 1979

Mr. Steve Smallwood, P.E.
Acting Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Talahassee, Florida 32301

Dear Steve:

Pursuant to our phone conversation of November 29, 1979, this is to acknowledge your approval to grant us a one week extension of the testing period for EPRI's Flue Gas Conditioning Study to be conducted at Gannon Station's Unit 6.

As stated during our phone conversation, equipment malfunctions which prompted Unit 6's shutdown on Monday November 26, 1979 have delayed the testing of this unit one week. Testing has been rescheduled to start on Wednesday, December 5, 1979 and to conclude on December 15, 1979.

If you should have any further questions, please call me.

Sincerely,

Vilma Brueggemeyer

Vilma Brueggemeyer
Engineer
Environmental Planning

cc: James Wilburn, EPA
Archie Lee, EPA
Dave Puchaty, FDER COPY FOR
Roger Stewart, HCEPC
Jim Estler, FDER
Vicki Tschinkel, FDER

File: Hills. Co AP Brown TP 12-13-79

Gannon Unit No. 6 - RP

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

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

November 21, 1979

D.E.R.
NOV 28 1979
SOUTHWEST DISTRICT
TAMPA

Ms. Velma Brueggemeyer
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Dear Velma:

Tampa Electric Company (TECO) has been approached by the Electric Power Research Institute (EPRI) about the possibility of conducting a short term test program at its Gannon Unit No. 6 power plant in order to test the impact of a chemical additive used by TECO in its precipitator to reduce emissions of particulate matter.

The proposed test program would call for TECO to discontinue use of the additive for a period of three weeks beginning approximately November 20, 1979. The Department has reviewed the test program and ambient air quality modeling data submitted by TECO and EPRI, and finds the test program approvable. No ambient air quality standards may be violated as a result of the test program. During the duration of the test, particulate matter emissions from Unit 6 shall be limited as follows:

changed to 12/5/79

Monday through Saturday

5:00 a.m. - 7:00 p.m.	-	880 pounds per hour
7:00 p.m. - 5:00 a.m.	-	140 pounds per hour

Sunday through Monday - 140 pounds per hour

By copy of this letter, we are notifying the Environmental Protection Agency that we have approved the proposed test program

with the conditions specified herein. It is my understanding that EPA will then be in contact with you.

If you have any questions in this matter, please feel free to call.

Sincerely,

Stephen Smallwood
Acting Chief
Bureau of Air Quality
Management

cc: James Wilburn, EPA, Atlanta
Archie Lee, EPA
Dave Puchaty
Roger Stewart
Jim Estler
Vicki Tschinkel

File: Hills Co-AP
DS

TECO
TAMPA ELECTRIC COMPANY

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

July 21, 1980

D.E.R.
JUL 23 1980
SOUTHWEST DISTRICT
TAMPA

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

RE: Stack Emissions Test
Gannon No. 6
Tampa Electric Company

Dear Joe:

Enclosed please find two (2) copies of a stack test report for an emissions compliance test performed on April 22, 1980.

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

Included in the Summary of Results, the average sulfur dioxide emission rate, based on fuel analysis, was 2.14 lbs. per million BTU which is in compliance with Florida Administrative Code, Chapter 17-2.05(6)(e)(1)(b)2.b of 2.4 lbs. per million BTU.

Also included is the nitrogen dioxide emission rate of 0.94 lbs. per million BTU and a process statement and visible emission report.

If you have any questions, please call.

Yours truly,

William N. Cantrell

W.N. Cantrell
Senior Engineer

WNC:mo
Encls.
cc: D. Williams, FDER COPY FOR

File: Hills 6-AP
Gannon Unit No. 6
B.B. WA

TECO
TAMPA ELECTRIC COMPANY

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

January 7, 1980

Mr. Steve Smallwood, P.E.
Acting Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Steve:

This is to inform you that on December 21, 1979 the baseline test series (without flue gas conditioning agent) of EPRI's Fuel Gas Conditioning Study conducted at Gannon Unit 6 were completed. As of the above stated date, Gannon Unit 6 has returned to normal operating conditions.

If you should have any questions, please let me know. Thank you for your efforts and cooperation in this matter.

Sincerely,

Vilma Brueggemeyer

Vilma Brueggemeyer
Engineer

cc: James Wilburn, EPA
Archie Lee, EPA
Dave Puchaty, FDER
Roger Stewart, HCEPC
Jim Estler, FDER
Vicki Tschinkel, FDER

TECO
TAMPA ELECTRIC COMPANY

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

August 25, 1978

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

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

D.E.R.
OCT 6 1978
SOUTHWEST DISTRICT
TAMPA

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

RE: Operating Permit Application
Gannon Station No. 6
Tampa Electric Company

Gentlemen:

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

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

If you have any questions, please call.

Yours very truly,

William J. Johnson

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

WJJ:sac
Enclosures
cc: Mr. Jose Rodriguez, HCEPC
Mr. Dan Williams, FDER