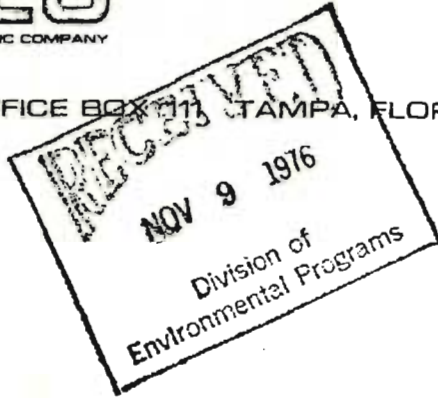


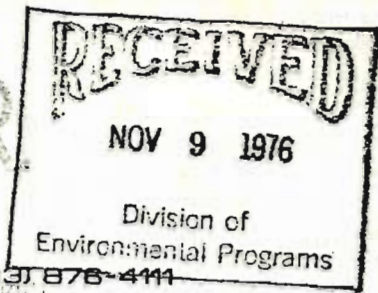
TECO
TAMPA ELECTRIC COMPANY

POST OFFICE BOX 711, TAMPA, FLORIDA 33601 TELEPHONE (813) 878-4444



D. E. R.

NOV 17



November 3, 1976



Mr. Paul J. Traina
Director, Enforcement Division
Environmental Protection Agency
345 Courtland Street
Atlanta, Georgia 30308

RE: Tampa Electric Company (TECO)
Administrative Order A0-75-39(a)

Dear Mr. Traina:

Enclosed are two copies of the results of the compliance test performed on Gannon Unit No. 1 on October 21 and 22, 1976 by Conservation Consultants, Inc. and observed by Mr. Jose Rodriguez of Hillsborough County Environmental Protection Commission and Mr. Roger Pfaff of Environmental Protection Agency, Region IV.

The results of the compliance test show that Gannon Unit No. 1 was emitting particulates at the rate of .07 pounds per million BTU which is within compliance of the state regulation of .1 pounds of particulates per million BTU. The results of the sulfur dioxide emission test indicated an emission rate of 1.33 pounds of sulfur dioxide per million BTU. However, an analysis of the oil being burned during the time of the test shows that the maximum possible emissions based on EPA emission factors would have been .9 pounds of sulfur dioxide per million BTU.

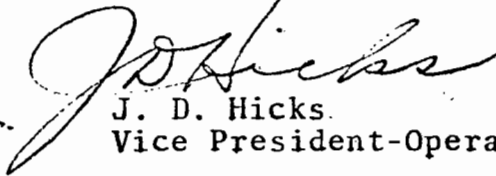
As fuel analysis is a far more accurate way to predict sulfur dioxide emissions than the presently accepted stack test methods, we believe that based on the results of the compliance test and the analysis of the fuel that Gannon Unit No. 1 is operating within compliance of the applicable emission regulations of the State of Florida.

TEST REJECTED BY HCEPC. RETEST ON 12-16-76

Mr. Paul J. Traina
November 3, 1976
Page 2

With this letter, all of the units listed in Part I of the above referenced Order have been proven in compliance with the applicable emission regulations of the State of Florida.

Sincerely,



J. D. Hicks
Vice President-Operations

Enclosures

cc: Mr. J. W. Landers THIS COPY FOR
Mr. R. P. Stewart
Mr. R. P. Murray

TAMPA ELECTRIC COMPANY

CANNON STATION

FUEL OIL ANALYSIS REPORT

DATE: 11-3-76

SAMPLE NUMBER: S-1083

DATE RECEIVED: 10-21-76

SAMPLE IDENTIFICATION: #1 UNIT SOURCE TEST EPA

SUMMARY

FLASH POINT:	Cleveland open cup	_____ °F
FIRE POINT:	Cleveland open cup	_____ °F
VISCOSITY:	Saybolt furol @ 122°F	_____ Seconds
WATER:	By distillation	_____ % by volume
SEDIMENT:	By extraction	_____ % by weight
WATER & SEDIMENT:	By centrifuge	_____ % by volume
GRAVITY:		
	SPECIFIC @ 60/60°F	<u>0.9135</u>
	POUNDS PER GALLON @ 60°F	<u>7.607</u>
	API	<u>23.4</u>
HEATING VALUE:		
	BTU PER POUND	<u>19,129</u>
	BTU PER GALLON @ 60°F	<u>145,514</u>
SULFUR CONTENT:	Bomb method	<u>.85</u> % by weight



C. M. Reynolds / C.M.F.
 C. M. REYNOLDS
 Plant Results Engr.

Table 1. Summary of Results

Run No.	Flowrate		SO ₂ Emission		Particulate Emission	
	ACFM	SCFM	Lb/Hr	Lb/MMBTU	Lb/Hr	Lb/MMBTU
1	446,100	300,400	1054	1.33	54.6	.069
2	434,900	308,200	1040	1.31	53.5	.067
3	432,200	301,900	1072	1.35	53.1	.067
Avg.	437,700	303,500	1056	1.33	53.7	.068

The sulfur content of the fuel was analyzed as 0.88%. Using the published EPA emission factor, the sulfur dioxide emission rate was calculated to be 755 pounds per hour.

III. SAMPLING PROCEDURES

III-1. Sample Train

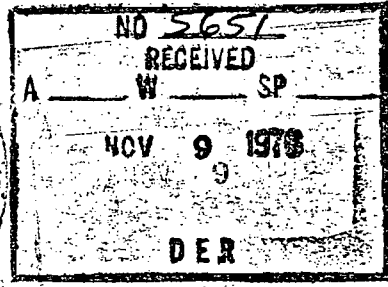
The sample train used for the series of testing at Gannon No. 1, on October 21st and 22nd, 1976, was of a modified EPA-type, using an in-stack alundum thimble rather than an out-stack heated filter and with flexible tubing connecting probe and impingers. The relatively large diameter (14' 6") of the stack made it necessary to use a twenty foot stainless steel probe with pitot attached.

The first two impingers of each set were charged with 250 ml of 3% hydrogen peroxide, the third served as a dry trap, and the fourth was charged with approximately 275 grams of silica

Bollner

BEST AVAILABLE COPY

NOV 4 1976



Mr. A. E. Morrison
 Gardiner, Inc.
 P. O. Box 3269
 Tampa, FL 33601

Dear Mr. Morrison:

In a conversation with you on November 1, 1976, a pre-test meeting was scheduled for November 23, 1976, prior to the performance tests which have been tentatively scheduled for the week of November 29, 1976.

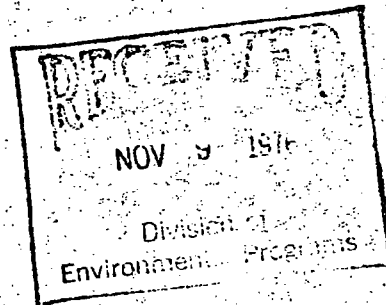
A pre-test meeting is held with all sources subject to 40 CFR 60 so that all process conditions for the test can be fully determined and so that the exact test procedures and test equipment to be used can be agreed upon. The test team leader that will be in charge of performing the emission tests will be expected to describe the test equipment and the exact test procedures to be used. These procedures have been published at 40 CFR 60 which we have previously supplied to you.

Before the actual test commences, the test team leader will be required to present the calibration records of the test equipment to be used to the EPA observer. The test equipment requiring calibration is listed below:

1. Probe tip diameter.
2. Pitot tubes.
3. Dry gas meter.
4. Orifice.
5. Temperature measuring devices.

The probe heater, filter heater, and vacuum pump should be checked and functioning properly.

All test equipment will be inspected prior to the test and must be adequate to perform a legitimate test or the test will be postponed.



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Mr. A. E. Morrison
Gardiner, Inc.
Page 2

To prove that your new sulfuric acid unit is in compliance with 40 CFR 60 requires the use of test methods 1, 2, 3, and 8 as published with the regulation. Some of the most commonly overlooked points in these procedures are pointed out below:

Method 1

1. The number of traverse points required is rigid.
2. The sampling site location is limited by Figure 1-1. Conditions shown are minimum requirements. Figure 1-1 is not to be extended.

Method 3

1. A continuous Orsat sample is required where regulations require adjustment to base percent CO₂ or percent excess air.

Method 8

1. Required Equipment:

- a. A heated glass probe capable of maintaining a minimum temperature of 250°F at the exit.
- b. Undamaged probe tips and pitot tubes.
- c. Clean glassware.
- d. Method of measuring stack temperature at each traverse point.

2. Reagents:

- a. 1106 BH filters.
- b. Indicating type silica gel.
- c. 80% Isopropanol.
- d. 3% Hydrogen peroxide.
- e. Distilled deionized water.
- f. Thorin indicator.
- g. 0.01 N Barium perchlorate.
- h. 0.01 N Sulfuric acid.

3. Sampling procedure:

- a. Leak check the sampling train at the sample site before testing and any time the sampling train is disturbed (i.e., changing filter, disconnecting and reconnecting vacuum line, etc.).
- b. Maintain outlet temperature from last impinger at 70°F or below.
- c. Record all required data at each point, in ink.

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Mr. A. E. Morrison
Gardiner, Inc.
Page 3

4. Sample Recovery:
 - a. Rinse probe, 1st impinger, front of filter holder, and connecting glassware with 80% isopropanol.
 - b. Rinse 2nd and 3rd impingers and connecting glassware with distilled, deionized water.
5. Analysis:

Make sure all volumes are recorded.
6. Copies of all raw data sheets are to be presented to the observer after each test. The test report must also contain all raw data.
7. Report:

Three (3) copies of the completed test report are to be submitted to EPA.

All parts of the sampling procedures must be carefully followed. It will be to your advantage to pass this information on to the test team you select for the emission tests.

Finally, as you may know, new sulfuric acid plants are subject to Federal continuous monitoring system requirements. Thus, as required under 40 CFR 60.13(c), the owner or operator of an affected facility shall conduct a continuous monitoring system performance evaluation. The continuous monitoring system performance evaluation is to be conducted during the performance tests required under 40 CFR 60.8 or within 30 days thereafter. At the pre-test meeting, or possibly at another meeting, you may want to discuss these monitoring requirements in more detail with us.

If you have any questions concerning information in this letter or if we can be of assistance to you, please do not hesitate to call Dr. James S. Wu or Mr. Jerome J. Rom at 404/526-5552.

Sincerely yours,

Tomnie A. Gibbs
Chief
Air Engineering Branch

cc: FL Dept. of Environmental Regulation