INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 08-Feb-1999 11:53am
From: Mary Fillingim TAL
FILLINGIM_M
Dept: Air Resources Management
Tel No: 850/488-0114

To: See Below
Subject: FWD: Title V Permit Withdrawal - 0570040

I am sending this again.

Thanks,
Mary

Distribution:

To:	pierce carla	(pierce.carla@epa.gov@in)
To:	Barbara Boutwell TAL	(BOUTWELL_B)
To:	Scott Sheplak TAL	(SHEPLAK_S)
To:	Terry Knowles TAL	(KNOWLES_T)
To:	danois gracy	(danois.gracy@epa.gov@in)
To:	Elizabeth Walker TAL	(WALKER_E)
To:	huey.joel@epa.gov@in	
To:	BARTLETT.ELIZABETH@EPA.GOV@IN	

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 04-Feb-1999 03:45pm
From: Mary Fillingim TAL
FILLINGIM_M
Dept: Air Resources Management
Tel No: 850/488-0114

To: See Below
Subject: Title V Permit Withdrawal - 0570040

The withdrawal of the TECO-Gannon permit has been posted to the Florida Title V Website. If you have any questions, feel free to call us.

TECO - Gannon
0570040
Withdrawn

Distribution:

To:	pierce carla	(pierce.carla@epa.gov@in)
To:	Barbara Boutwell TAL	(BOUTWELL_B)
To:	Scott Sheplak TAL	(SHEPLAK_S)
To:	Terry Knowles TAL	(KNOWLES_T)
To:	danois gracy	(danois.gracy@epa.gov@in)
To:	Elizabeth Walker TAL	(WALKER_E)
To:	huey.joel@epa.gov@in	
To:	BARTLETT.ELIZABETH@EPA.GOV@IN	
CC:	Lennon Anderson WPB	(ANDERSON_L @ A1 @ WPB1)

File

Date: 10/23/98 9:16:49 AM
From: Scott Sheplak TAL
Subject: Media Hot Sheet - Tampa Electric Company Gannon
To: Kristine Roselius TAL
To: Howard Rhodes TAL
To: Dotty Diltz TAL
CC: Clair Fancy TAL

Attached is a media hot sheet based upon last night's telephone interview.

E-MAIL

TO: KRISTINE ROSELIUS, OFFICE OF COMMUNICATIONS
HOWARD L. RHODES, DIRECTOR, DARM
CLAIR FANCY, BUREAU CHIEF

TOPIC: Tampa Electric Company (TEC) Gannon plant's Title V permit

DATE: October 22, 1998 **REPORTERS NAME:** Ameet Sachdev

FROM: St. Petersburg Times **TELEPHONE:** 813/893-8751
(Newspaper, TV Station, Radio, etc.)

PERSON INTERVIEWED: Clair Fancy and Scott Sheplak
TELEPHONE: 850/921-9503 and 850/921-9532
DIVISION/BUREAU/OFFICE: Air Resources Management/Air Regulation/Title V Section

DATE OF INTERVIEW: October 22, 1998 **ACTION TIME NEEDED:**

QUESTIONS ASKED:
1. What is the status of the Gannon plant's Title V permit? What is the deadline to issue the permit?
2. Is a modeled exceedence of ambient air quality standards serious? Should the people that live near the plants be concerned? Are the ambient air quality standards (AAQS) being met? How does the state test emissions?
3. What are the SO_2 ambient air quality standards?

SUMMARY OF CONVERSATION (Use additional pages if necessary)

FOLLOW-UP NEEDED? No. **DEADLINE:**

Jerry Campbell with the Environmental Protection Commission of Hillsborough County referred Mr. Sachdev to us on the subject matter.

1. Based on recent modeling analyses performed by the department, the department withdrew the draft Title V permit issued August 26, 1997. The modeled sulfur dioxide (SO_2) emissions from the Gannon plant exceeded the USEPA and DEP ambient air quality standards (AAQS) for sulfur dioxide. The department asked TEC to submit modeling that would show compliance with the AAQS. Due to the lack of information, the department has been unable to complete the modeling. The department has asked TEC to submit the necessary information, i.e. building geometry, etc. TEC has yet to submit additional information to complete the modeling.

The deadline to issue the Title V permit is October 2000. The Title V permit program is a federal permitting program that essentially consolidates existing applicable air pollution requirements into one permit. Approximately 500 Title V sources are located in Florida and over half of those sources have draft Title V permits.

Mr. Sachdev asked questions about the relationship between stack emission limits and the AAQS. We explained that the modeling utilizes complex mathematical relationships to predict the ground level concentration of an air pollutant.

Mr. Sachdev was informed that the Gannon plant SO_2 emission limits for the six boilers are 2.4 lb/mmBTU heat input on a weekly average and 10.6 tons per hour of sulfur dioxide on a weekly average.

Mr. Sachdev also asked if modeling was a routine activity. We informed him that we are not required to model sources under the Title V permitting process. However, a few of the large SO_2 emitters were modeled. Modeled emissions from the TEC-Big Bend and Gulf Power plants exceeded the AAQS for SO_2. TEC was issued a draft Title V permit for the Big Bend plant. The Big Bend plant allowable SO_2 emissions were reduced by approximately 25% due to the department's modeling results. Completion of the Big Bend modeling is pending.

2. The AAQS are designed to protect the public's health, safety, and welfare. Ensuring compliance with the AAQS is a high priority in the division. Modeling predicts the ground level concentration from the plant's stacks. We informed him that a modeled exceedence does not necessarily mean that there is an actual exceedence of the AAQS. The department has a statewide ambient air monitoring network. The current monitoring network indicates compliance with the AAQS for SO_2.

3. The USEPA (federal) SO_2 AAQS are: 1,300 ug/m^3 3-hour maximum; 365 ug/m^3 24-hour maximum; and, 80 ug/m^3 annual arithmetic mean. The state of Florida standards are: 1,300 ug/m^3 3-hour maximum; 260 ug/m^3 24-hour maximum; and, 60 ug/m^3 annual arithmetic mean.

-6(1-

{ Cleve Holladay has complete submittal these are excerpts }

TECO SM

TAMPA ELECTRIC

October 15, 1998

Mr. Cleve Holladay
Meteorologist - Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Via Hand Delivery

Re: Tampa Electric Company
F. J. Gannon Station
Ambient Sulfur Dioxide (SO_2) Modeling
Draft Title V Air Operation Permit
FDEP File No. 0570040-002-AV

Dear Mr. Holladay:

As requested in the Department's correspondence dated October 1, 1998, and as previously discussed in conjunction with the issuance of a Title V draft permit, please find enclosed TEC's detailed SO_2 modeling analysis for the F.J. Gannon Station. The enclosed analysis reveals that no modeled exceedances of the Florida or National Ambient Air Quality Standards are recorded for any of the selected emission scenarios when using maximum SO_2 emissions of 11.5 tons per hour as a Station cap. The dispersion modeling does assume that Unit 5 and Unit 6 stacks at F.J. Gannon Station will be extended to 110 meters. An aerial photograph describing the nearby receptors is also provided.

Please feel free to telephone me at (813) 641-5034, if you have any questions.

Sincerely,

Theresa J.L. Watley
Consulting Engineer
Environmental Planning

EP\gm\TJLW

Enclosure

c/enc: Mr. Scott Sheplak, FDEP-Tallahassee
Mr. Jerry Kissel, FDEP-SW District
Mr. Lenon Anderson, FDEP-Tallahassee
Mr. Richard Kirby, EPCHC

TAMPA ELECTRIC COMPANY
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F.J. GANNON STATION

TITLE V SO_2 AIR DISPERSION MODELING

Prepared for:

TECO
TAMPA ELECTRIC

Prepared by:

ECT
Environmental Consulting & Technology, Inc.
3701 Northwest 98th Street
Gainesville, Florida 32606

ECT No. 98010-0200

October 1998

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1.0 DISPERSION MODELING TECHNIQUES, INPUTS, AND RESULTS

1.1 MODEL SELECTION

The most recent regulatory version of the Industrial Source Complex Short-Term (ISCST3 Version 97363) dispersion model was used in the analyses of ambient sulfur dioxide (SO_2) impacts caused by emissions from F.J. Gannon Station. ISCST3 is a refined model appropriate for use under the following conditions:

- Industrial source complexes (i.e., multiple emission sources).
- Rural or urban areas.
- Flat or rolling terrain.
- Pollutant transport distances less than 50 kilometers (km).
- Multiple averaging periods (i.e., 3-hour, 24-hour, and annual).

ISCST3 was selected because:

- The F.J. Gannon Station analysis falls within the ISCST3 applicability criteria.
- Per Chapter 40, Code of Federal Regulation (CFR), Part 51, Appendix W, the U.S. Environmental Protection Agency (EPA) has designated ISCST3 a preferred model. This designation means that EPA has determined that ISCST3 performs better under the criteria stated above than any other dispersion model.
- The Florida Department of Environmental Protection (FDEP) is also using ISCST3 to model ambient SO_2 levels from F.J. Gannon Station.

Previous dispersion modeling of F.J. Gannon Station has been conducted using other models. For example, SO_2 emissions from F.J. Gannon Station were modeled in 1980 to demonstrate compliance for the reconversion of Units 1 through 4 to coal. This modeling was conducted using the single source (CRSTER) model. Several versions of the SCREEN model have also been applied to F.J. Gannon Station emissions. However,

these older models were not used for this SO_2 ambient impact analysis because EPA and FDEP do not recognize superseded models as valid analytical tools.

1.2 SO_2 EMISSION RATES

The SO_2 emission rates used in the modeling analysis for F.J. Gannon Station are presented in Table 1-1. Because the modeling analysis must evaluate the potential worst-case conditions, four emission rate scenarios were modeled based on the maximum permitted rates that will become applicable per F.J. Gannon Station's Phase II Acid Rain Compliance plan.

1.3 STACK PARAMETERS

The stack parameters used in the modeling analysis for F.J. Gannon Station are presented in Table 1-2. The stack heights and exit temperatures of the boilers were obtained from the appropriate Title V Air Operation Permit application. The dispersion modeling assumes the Unit 5 and Unit 6 stacks will be extended to 110 meters. The stack exit diameters were obtained from the design drawings of each stack. Stack exit velocities for the boilers were calculated from continuous emissions monitoring system (CEMS) volumetric flow measurements, as summarized in Table 1-3.

The combustion turbine stack parameters were obtained from F.J. Gannon Station.

1.4 GOOD ENGINEERING PRACTICE/DOWNWASH CONSIDERATIONS

The 1977 Clean Air Act Amendments (CAAA) require that the degree of emission limitation required for control of any pollutant not be affected by a stack height that exceeds good engineering practice (GEP) or any other dispersion technique. On July 8, 1985, EPA promulgated final stack height regulations (40 CFR 51), in which GEP stack height is defined as the higher of 65 meters, or a height established by applying the formula:

Table 1-1. F. J. Gannon Station Title V - Selected SO_2 Emission Sets

Emissions Unit	Maximum Heat Input	SO_2 Emission Rate											
		Emission Set G			Emission Set F			Emission Set D			Emission Set J		
	(MMBtu/hr)	(lb/MMBtu)	(lb/hr)	(tph)**	(lb/MMBtu)	(lb/hr)	(tph)**	(lb/MMBtu)	(lb/hr)	(tph)**	(lb/MMBtu)	(lb/hr)	(tph)**
Boiler 1	1,257	1.9	2,388.3	1.19	2.20	2,765.4	1.38	2.00	2,514.0	1.26	1.9	2,388.3	1.19
Boiler 2	1,257	1.9	2,388.3	1.19	2.20	2,765.4	1.38	2.00	2,514.0	1.26	1.9	2,388.3	1.19
Boiler 3	1,599	1.9	3,038.1	1.52	1.07	1,710.9	0.86	1.07	1,710.9	0.86	1.6	2,558.4	1.28
Boiler 4, Stack 4E*	1,876	1.9	1,782.2	0.89	1.07	1,003.7	0.50	1.07	1,003.7	0.50	1.6	1,500.8	0.75
Boiler 4, Stack 4W*	1,876	1.9	1,782.2	0.89	1.07	1,003.7	0.50	1.07	1,003.7	0.50	1.6	1,500.8	0.75
Boiler 5	2,284	1.9	4,339.6	2.17	2.00	4,568.0	2.28	2.19	5,002.0	2.50	2.0	4,568.0	2.28
Boiler 6	3,798	1.9	7,216.2	3.61	2.00	7,596.0	3.80	2.19	8,317.6	4.16	2.0	7,596.0	3.80
Total	13,947	N/A	22,934.9	11.47	N/A	21,413.1	10.71	N/A	22,065.8	11.03	N/A	22,500.6	11.25

*Assumes Boiler 4 emissions are equally divided between the two Boiler 4 stacks.
**tons per hour, 24-hour average.

SIP limit is 10.6 TPH

Table 1-2. F.J. Gannon Station Stack Parameters for ISCST3 Dispersion Modeling

Emissions Unit	Stack Height		Stack Gas Temperature		Stack Gas Velocity		Stack Daimeter	
	(ft)	(m)	(°F)	(K)	(ft/min)	(m/sec)	(ft)	(m)
Boiler 1	315	96.0	276	409	7,464	37.93	9.92	3.02
Boiler 2	315	96.0	336	442	7,576	38.50	9.92	3.02
Boiler 3	315	96.0	290	416	6,810	34.60	10.50	3.20
Boiler 4, Stack 4E	315	96.0	277	409	5,824	29.59	9.45	2.88
Boiler 4, Stack 4W	315	96.0	277	409	5,934	30.15	9.45	2.88
Boiler 5	315	96.0	276	409	9,985	50.74	10.33	3.15
Boiler 6	315	96.0	286	414	6,550	33.28	17.46	5.32

Table 1-3. F.J. Gannon Station Stack Exit Velocity Determination

Stack	Diameter		Area		Standard (68 °F) Flow Rate		Temperature		Actual Flow Rate		Velocity	
	(ft)	(m)	(ft^2)	(m^2)	(scf/hr)*	(scm/hr)	(°F)	(K)	(acf/min)	(acm/min)	(fps)	(m/s)
GB1	9.92	3.02	77.29	7.18	24,822,000	702,881	276.60	409.04	577,143	16,343	124.46	37.93
GB2	9.92	3.02	77.29	7.18	24,006,000	679,774	313.00	429.26	585,752	16,587	126.31	38.50
GB3	10.50	3.20	86.59	8.04	25,548,120	723,442	271.40	406.15	589,833	16,702	113.53	34.60
GB4E	9.45	2.88	70.14	6.52	17,288,640	489,560	288.60	415.71	408,531	11,568	97.08	29.59
GB4W	9.45	2.88	70.14	6.52	16,536,420	468,259	337.60	442.93	416,334	11,789	98.93	30.15
GB5	10.33	3.15	83.81	7.79	35,197,578	996,685	293.40	418.37	837,054	23,703	166.46	50.74
GB6	17.46	5.32	239.43	22.24	69,009,840	1,954,141	260.00	399.82	1,568,405	44,412	109.18	33.28

$$Hg = H + 1.5\ L$$

where: Hg = GEP stack height.
H = height of the structure or nearby structure.
L = lesser dimension (height or projected width)of the nearby structure.

Nearby is defined as a distance up to five times the lesser of the height or width dimension of a structure or terrain feature, but not greater than 800 meters. While GEP stack height regulations require that a stack height used in modeling for determining compliance with ambient air quality standards (AAQS) and prevention of significant deterioration (PSD) increments not exceed the GEP stack height, the actual stack height may be greater.

The EPA guidelines for application of the stack height regulations were followed in determining the GEP stack height for each stack.

The complex downwash analysis was performed using the Building Profile Input program (BPIP, version 95086) to determine the appropriate downwash parameters for ISCST3. The F.J. Gannon Station structure locations and heights are provided in Table 1-4 and are presented in Figure 1-1. Stack locations and heights are also provided in the table and figure.

1.5 RECEPTOR LOCATIONS

Receptors were placed at locations considered to be ambient air, which is defined at 40 CFR 50.1(e) as that portion of the atmosphere, external to buildings, to which the general public has access. Those portions of F.J. Gannon Station with restricted access were not considered ambient air.

Receptor locations were selected consistent with the definition of ambient air. Discrete receptors were placed on the restricted area boundaries. Additional discrete receptors were placed at 10 degree (°) increments, beginning at 10° on rings at 250 and 500 meters

Table 1-4. F.J. Gannon Station Stack and Structure Heights and Locations

Stack/Structure Name	Height	Stack /Structure Location*		Stack/ Structure Name	Height	Stack /Structure Location*	
		East/West	North/South			East/West	North/South
	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)
Unit 1 Stack	315	-499	3	Boiler 3 Structure	148	-341	52
Unit 2 Stack	315	-407	3			-341	108
Unit 3 Stack	315	-308	3			-266	108
Unit 4 East Stack	315	-233	26			-266	92
Unit 4 West Stack	315	-213	26			-285	92
Unit 5 Stack	315	-131	3			-285	52
Unit 6 Stack	315	0	0	Boiler 4 Structure	160	-262	52
CT 1 Stack	35	374	200			-262	108
Steam Turbine Structure	95	-548	164			-190	108
		-548	253			-190	52
		79	253	Boiler 5 Structure	174	-164	52
		79	220			-164	108
		43	220			-102	108
		43	164			-102	52
Tripper Structure	165	-508	108	Boiler 6 Structure	204	-39	52
		-508	141			-39	108
		-548	141			39	108
		-548	164			39	52
		43	164				
		43	141				
		59	141				
		59	108				
Boiler 1 Structure	147	-525	52				
		-525	108				
		-456	108				
		-456	95				
		-469	95				
		-469	75				
		-476	75				
		-476	52				
Boiler 2 Structure	148	-433	52				
		-433	75				
		-436	75				
		-436	108				
		-384	108				
		-384	75				
		-387	75				
		-387	52				

*Locations are relative to the Unit 6 stack. Positive directions are east and north. Negative directions are west and south.

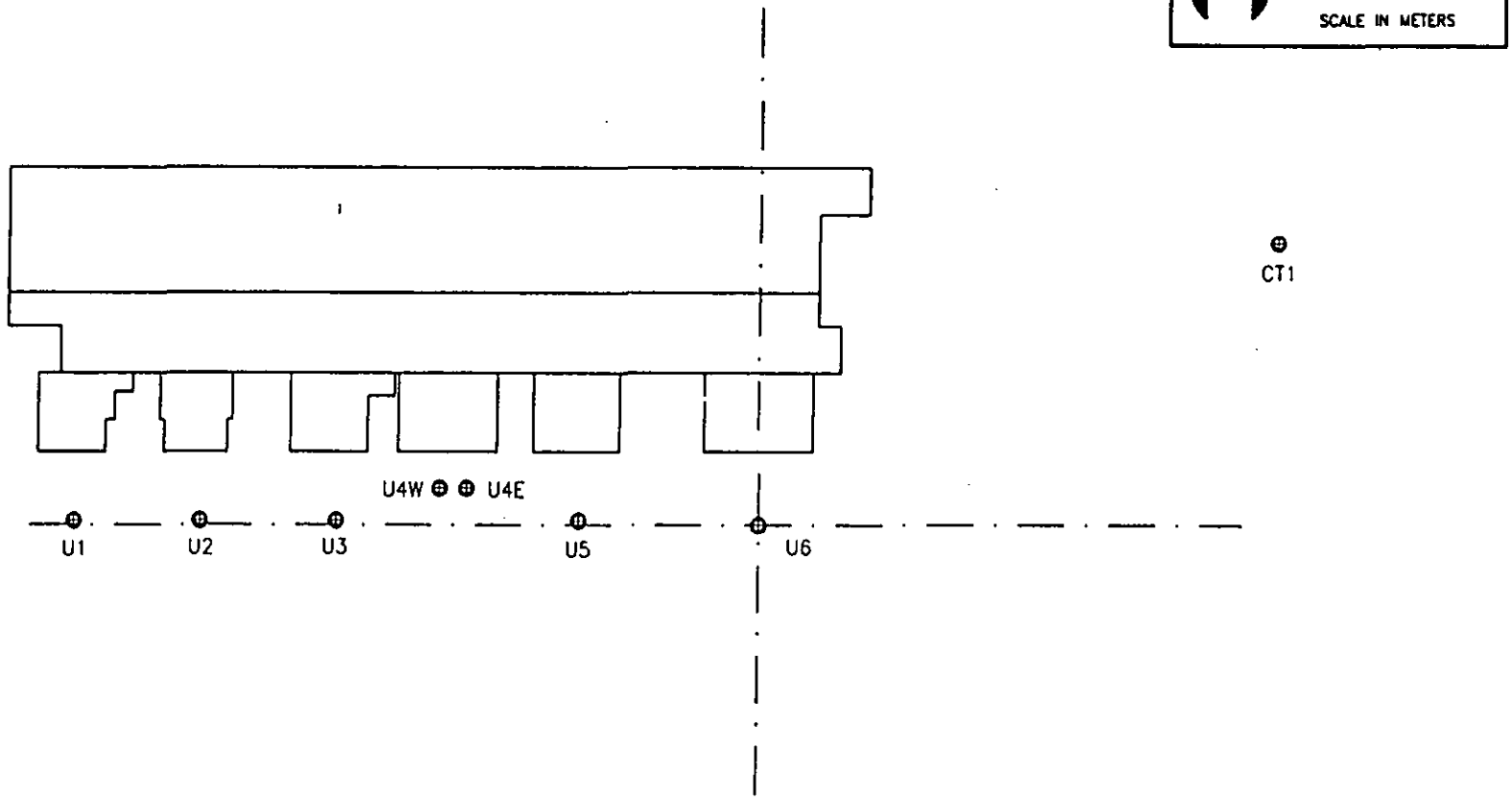

FIGURE 1-1.

F.J. GANNON STATION STRUCTURE LOCATIONS
FOR DOWNWASH ANALYSIS

Source: ECT, 1998.

ECT
Environmental Consulting & Technology, Inc.

if the specific point was an ambient air location. Complete rings with receptors located at 10° increments, beginning at 10°, were located at 250 meter increments from 750 to 7,000 meters, and at 8,000, 9,000, 10,000, and 12,000 meters. This receptor grid was selected to be consistent with the grid used in the FDEP dispersion modeling. An aerial photograph describing the nearby receptors is provided in Figure 1-2.

1.6 METEOROLOGICAL DATA

EPA dispersion modeling guidance recommends that modeling be conducted using one year of onsite meteorological, if available. Otherwise, the guidance recommends that modeling be conducted using the most recently available 5 years of meteorological data collected at a nearby observation station. Following this guidance, the selected meteorological data set included St. Petersburg/Clearwater International Airport (SPG) surface observations and mixing heights derived from SPG surface data and Ruskin (RUS) upper air observations. These data were obtained from the National Climatic Data Center (NCDC) for January 1, 1992, through December 31, 1996. Completeness information for the data as received from NCDC is presented in Table 1-5. Missing data were replaced following EPA guidance. The data were then prepared for use in ISCST3 using the RAMMET preprocessor.

Two other surface weather observation stations were evaluated for possible use in ISCST but were subsequently rejected. Surface data from Tampa International Airport (TPA) are available through 1994. In 1995, the TPA observation station was automated and sky cover observations were terminated. Because sky cover is a required element for ISCST3, the post-1994 TPA data is unsuitable for use. Surface data from McDill Air Force Base is available through 1992. After 1992, surface observations become more sporadic and no longer meet EPA criteria for data recovery. Because SPG appropriate data are available through 1996, SPG surface data were selected for use over TPA and MAC surface data, consistent with EPA guidance.

Table 1-5. St. Petersburg/Ruskin, Florida (Station Nos. 72211/12842) - Data Recovery - January 1, 1992 through December 31, 1996

Year	Data Element									
	Dry-Bulb Temperature		Wind Direction		Wind Speed		Ceiling Height/Sky Cover		Mixing Height	
	Number of Observations	Recovery (pct)	Number of Observations	Recovery (pct)	Number of Observations	Recovery (pct)	Number of Observations	Recovery (pct)	Number of Observations	Recovery (pct)
1992	8,489	96.6	8,522	97.0	8,522	97.0	8,543	97.3	728	99.5
1993	8,407	96.0	8,430	96.2	8,430	96.2	8,433	96.3	721	98.8
1994	8,304	94.8	8,356	95.4	8,356	95.4	8,359	95.4	714	97.8
1995	8,103	92.5	8,161	93.2	8,161	93.2	8,174	93.3	712	97.5
1996	8,365	95.2	8,375	95.3	8,412	95.8	8,385	95.5	714	97.5

1.7 DISPERSION MODELING RESULTS

The F.J. Gannon Station dispersion modeling results are presented in Tables 1-6 through 1-9. During the period January 1, 1992, through December 31, 1996, no modeled exceedances of the Florida or national AAQS were recorded for any of the four emissions scenarios. The dispersion model input and output files are provided in electronic format on a floppy disk.

Table 1-6. F.J. Gannon Station SO_2 Dispersion Modeling Results - Emission Set G - Units 5 and 6 Stacks at 110 m

Averaging Period	Modeled Ambient Impact (µg/m^3) - St. Petersburg International Airport Met Data					Ambient Air Quality Standard (µg/m^3)	
	1992	1993	1994	1995	1996	National	Florida
Annual	16.1	15.8	14.3	16.8	15.7	80	60
Highest 24-Hr	288.0	356.6	287.0	262.8	369.5	None	None
Highest 2nd-Highest 24-Hr	244.5	245.1	219.0	250.2	253.5	365	260
Highest 3-Hr	948.4	763.4	636.1	640.8	833.0	None	None
Highest 2nd Highest 3-Hr	700.2	657.0	575.6	581.0	694.4	1,300	1,300

Table 1-7. F.J. Gannon Station SO_2 Dispersion Modeling Results - Emission Set F - Units 5 and 6 Stacks at 110 m

Averaging Period	Modeled Ambient Impact ($\mu g/m^3$) - St. Petersburg International Airport Met Data					Ambient Air Quality Standard ($\mu g/m^3$)	
	1992	1993	1994	1995	1996	National	Florida
Annual	15.3	11.0	14.3	16.8	15.7	80	60
Highest 24-Hr	229.6	308.3	247.7	220.3	292.5	None	None
Highest 2nd-Highest 24-Hr	193.6	201.0	191.8	215.5	210.4	365	260
Highest 3-Hr	647.4	680.6	566.0	531.6	628.2	None	None
Highest 2nd Highest 3-Hr	575.6	552.4	496.7	487.5	575.8	1,300	1,300

Table 1-8. F.J. Gannon Station SO_2 Dispersion Modeling Results - Emission Set D - Units 5 and 6 Stacks at 110m

Averaging Period	Modeled Ambient Impact (ug/m^3) - St. Petersburg International Airport Met Data					Ambient Air Quality Standard (ug/m^3)	
	1992	1993	1994	1995	1996	National	Florida
Annual	15.3	10.7	14.3	16.8	15.7	80	60
Highest 24-Hr	215.6	289.6	235.9	214.5	279.1	None	None
Highest 2nd Highest 24-Hr	186.1	189.9	182.8	210.2	198.4	365	260
Highest 3-Hr	651.9	690.6	571.5	534.8	603.4	None	None
Highest 2nd Highest 3-Hr	548.4	523.3	477.5	475.0	547.1	1,300	1,300

Table 1-8. F.J. Gannon Station SO_2 Dispersion Modeling Results - Emission Set D - Units 5 and 6 Stacks at 110 m

Averaging Period	Modeled Ambient Impact ($\mu g/m^3$) - St. Petersburg International Airport Met Data					Ambient Air Quality Standard ($\mu g/m^3$)	
	1992	1993	1994	1995	1996	National	Florida
Annual	15.3	11.0	14.3	16.8	15.7	80	60
Highest 24-Hr	229.6	308.3	247.7	220.3	292.5	None	None
Highest 2nd Highest 24-Hr	193.6	201.0	191.8	215.5	210.4	365	260
Highest 3-Hr	647.4	680.6	566.0	531.6	628.2	None	None
Highest 2nd Highest 3-Hr	575.6	552.4	496.7	487.5	575.8	1,300	1,300

Table 1-9. F.J. Gannon Station SO_2 Dispersion Modeling Results - Emission Set J - Units 5 and 6 Stacks at 110 m

Averaging Period	Modeled Ambient Impact (µg/m^3) - St. Petersburg International Airport Met Data					Ambient Air Quality Standard (µg/m^3)	
	1992	1993	1994	1995	1996	National	Florida
Annual	15.3	13.8	14.3	16.8	15.7	80	60
Highest 24-Hr	254.2	[1] 328.5	284.3	244.0	333.8	None	None
Highest 2nd-Highest 24-Hr	222.6	222.7	219.6	234.3	228.0	365	260
Highest 3-Hr	752.5	728.0	616.0	582.3	743.9	None	None
Highest 2nd Highest 3-Hr	639.3	602.1	572.3	533.0	634.7	1,300	1,300

Post-it® Fax Note 7671	Date 10 | 12	# of pages ▶ 1
To B. Boutwell	From G. KAMARAS	
Co./Dept.	Co. LEAF	
Phone #	Phone # 681-2591	
Fax #	Fax #	

Florida Dept. of Environmental Protection
Div. of Air Resources Management
Magnolia Office Park
Magnolia Ave & Park Ave
Tallahassee, FL 32399

Re: Tampa Electric Co. - Information Request

Dear DEP Staff:

This is a formal request to review all documents, including applications and other filings, meeting notes and other records relating to Tampa Electric Co.'s compliance with nitrogen oxide, ozone and/or particulate matter requirements of federal and state law for 2000 and subsequent years.

It is my understanding that Tampa has filed a Phase II NOx compliance plan for Big Bend and Gannon plants and related documents (eg., evaluation of NOx controls for Tampa's group II wet bottom and cyclone boilers). I would also appreciate being able to review Tampa's Phase II acid rain application for Big Bend, Gannon and Hookers Point, filed Decembr 1995.

Please let me know when it would be convenient for me to review these documents.

Sincerely,

Gail Kamaras, Director
Energy Advocacy Program

TAMPA ELECTRIC

March 19, 1998

Mr. Lenon Anderson
Title V Section
Florida Department of Environmental Protection
Twin Towers Office Building
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 800926219607

Re: Tampa Electric Company
F. J. Gannon Station
Draft Title V Air Operation Permit
FDEP File No. 0570040-002-AV

Dear Mr. Anderson:

Please find enclosed TEC's detailed comments regarding the above referenced draft Title V permit. As we discussed, the SO_2 modeling analysis will be submitted under separate cover. In addition, TEC requests that all test windows be ninety (90) days and Gannon Units 1-6 test windows correspond with the Acid Rain RATA testing requirements as follows:

Emission Unit	Annual Date	Frequency
Gannon Unit 1	1st Quarter	Annually
Gannon Unit 2	3rd Quarter	Annually
Gannon Unit 3	4th Quarter	Annually
Gannon Unit 4	2nd Quarter	Annually
Gannon Unit 5	1st Quarter	Annually
Gannon Unit 6	1st Quarter	Annually

Please feel free to telephone me at (813) 641-5039, if you have any questions. Thank you.

Sincerely,

Janice K. Taylor
Senior Engineer
Environmental Planning

EP\gm\JKT830

Enclosure

RECEIVED
MAR 20 1998
BUREAU OF
AIR REGULATION

c/enc: Mr. Scott Sheplak, FDEP-Tallahassee
Mr. Jerry Kissel, FDEP-SW District
Mr. Richard Kirby, EPCHC -
Via FedEx Airbill No. 5060867851

xc: Al Linero — 3/26/98

TAMPA ELECTRIC COMPANY
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HTTP://WWW.TECOENERGY.COM

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HILLSBOROUGH COUNTY (813) 223-0800
OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

TAMPA ELECTRIC COMPANY
COMMENTS REGARDING THE TITLE V AIR OPERATION PERMIT FOR
F.J. GANNON STATION
FDEP FILE NO. 0570040-002-AV

Table of Contents

TEC Comment 1:

TEC requests the following change to the Table of Contents:

III. Emissions Units and Conditions

...

E. ~~Coal~~ Fuel Yard

Section I. Facility Information.

TEC Comment 2:

TEC requests the following changes to Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions:

-008 Fuel ~~Coal~~ Yard. . .
-013 Unit No. 1 Fuel ~~Coal~~ Bunker with Roto-Clone
-014 Unit No. 2 Fuel ~~Coal~~ Bunker with Roto-Clone
-015 Unit No. 3 Fuel ~~Coal~~ Bunker with Roto-Clone
-016 Unit No. 4 Fuel ~~Coal~~ Bunker with Roto-Clone
-017 Unit No. 5 Fuel ~~Coal~~ Bunker with Roto-Clone
-018 Unit No. 6 Fuel ~~Coal~~ Bunker with Roto-Clone

Section II. Facility-wide Conditions.

TEC Comment 3:

Consistent with the previously issued Title V Air Operations Permit for Hookers Point Station, TEC requests the Appendix E-1, List of Exempt Emissions Units and/or Activities, as cited in Condition 5, be modified as follows to include:

13. Storage tanks less with than 550 gallons capacity
14. Inorganic substance storage tanks with 550 gallon or greater capacity and not containing a hazardous air pollutant (HAP)
15. No. 2 fuel oil storage tanks
16. Equipment used for steam cleaning

17. Turbine vapor extractors

TEC Comment 4:

TEC requests Condition 7 be changed as follows:

(a) Attend to accidental spills (solid fuel ~~coal~~ and fly ash) promptly and effectively.

TEC Comment 5:

TEC requests Condition 7(b) be deleted. The specific conditions for each steam generator include required reasonable precautions to minimize particulate matter emissions. Condition 7(b) duplicates these requirements with less specific language that could cause confusion.

TEC also notes that the cited underlying rule for Condition 7(b), 62-296.320(4)(c)(2), F.A.C., applies to unconfined particulate matter emission sources. This rule is not applicable to the steam generators because these emissions units are confined particulate matter emission sources.

Section III. Regulated Emissions Units Conditions

TEC Comment 6:

TEC requests that Emission Unit 3 description be clarified as follows because the heat recovery system is no longer in service:

.... and is of the cyclone firing type~~, equipped with an optional flue gas recirculation (heat recovery) system to maintain steam temperature at low loads~~.

TEC Comment 7:

The subsection A permitting note references these units as Phase I Acid Rain units. These units are regulated under the Phase II Acid Rain rules only.

TEC Comment 8:

TEC requests that all emission units listed in Subsections A, B and C be combined into Subsection A. This consolidation will clarify the specific permit condition requirements for these emission units as well as streamline the permit. TEC believes this approach is appropriate because these units have the same basic method of operations.

TEC Comment 9:

TEC requests Condition A.1 be changed as follows:

The maximum permitted heat input rate on a monthly average basis for each unit is as follows: . . .

TEC Comment 10:

TEC requests Condition A.2 be changed to read as follows to recognize that coal and ignition oil are jointly burned, to allow for the injection of nonhazardous boiler cleaning waste, and to allow on-specification used oil (including oily soil) combustion during normal operations:

(a) Normal operation: The only fuels allowed to be burned are coal and on-specification used oil.

(b) Startup; shutdown; malfunctions: In addition to the fuels allowed to be burned during normal operations, each unit may also burn new No. 2 fuel oil during startup, shutdown and malfunctions. This includes but is not limited to the emission unit, a new cyclone/mill or combustion stabilization.

(c) The injection of nonhazardous boiler chemical cleaning waste is allowed in each unit.

TEC Comment 11:

Consistent with the existing operating permits for F.J. Gannon Station, TEC requests the following statement be added to Condition A.3:

A test under sootblowing conditions which demonstrates compliance with a non-sootblowing limitation will be accepted as proof of compliance with that non-sootblowing limitation.

In addition, TEC requests that only one visible emissions test be done under sootblowing conditions. TEC believes duplicate testing provides no environmental benefit.

TEC Comment 12:

TEC requests Condition A.4 be changed as follows to clarify design fuel consumption rates:

A. Process System Performance Parameters:

1. Source Designator: Units Nos. 1-6
2. Design Fuel Consumption Rate at Maximum Continuous Rating:

Unit	Tons/hr (fuel ~~coal~~)	Fuel Heat Content (Btu/lb)
1	50	12,570
2	51	12,570
3	65	12,300
4	80	11,699

5	93.4	12,227
6	151.4	12,543

All Units:

On-specification used oil - 48 gallons per minute/per boiler; Max 1,000,000 gal/yr per station

. . .

Monthly Recorded or Inspection/Maintenance

~~Inspect insulator compartment heaters/blowers.~~

Units 1-4 Inspect insulator compartment heaters/blowers.

Units 5-6 Inspect penthouse pressurizing fan filters.

TEC Comment 13:

TEC requests Condition B.3 be eliminated because enforcing this condition is neither necessary nor practical. The quantity of SO_2 generated from on-specification used oil combustion is negligible compared to the quantity of SO_2 generated from coal combustion. Segregating and determining the quantity of SO_2 generated from the combustion of each fuel is not possible.

TEC Comment 14:

TEC requests Condition B.6 be changed to Condition A.6 and amended as follows because we believe it will provide clarity and we know of no regulatory requirement mandating recordkeeping completion.:

b. Quantity Limitation: This emissions unit is permitted to burn "on-specification" used oil that is generated by TECO ~~the F.J. Gannon Station~~ in the production and distribution of electricity, not to exceed 1,000,000 gallons during any consecutive 12 month period.

. . .

e. Testing requirements*: The owner or operator shall sample and analyze each batch of used oil to be burned . . .

*Used oil parameters may be characterized by generator knowledge.

f. Record Keeping Requirements: The owner or operator....

(1) The gallons of on-specification used oil generated and burned each month. ~~(This record shall be completed no later than the fifteenth day of the succeeding month.)~~

(2) Consecutive 12-month period. ~~(This record shall be completed no later than the fifteenth day of the succeeding month.)~~

TEC Comment 15:

TEC requests the brief description of the combustion turbine in subsection D be clarified as follows:

This emissions unit is a simple cycle combustion turbine and is designated Combustion Turbine #1 ~~7~~. . . .

TEC Comment 16:

TEC recommends Condition D.7 be changed as follows to promote clarity:

Excess emissions from this ~~these~~ emissions units resulting from . . .

TEC Comment 17:

TEC requests this condition D.9 be changed as follows:

The permittee shall demonstrate compliance with the liquid fuel sulfur limit by means of a fuel analysis ~~provided by the vendor upon each fuel delivery~~ or by contract specifications.

TEC Comment 18

TEC requests Condition D.10 be deleted as unnecessary.

TEC Comment 19:

TEC recommends that Condition D.16 be changed as follows to promote clarity:

Visible Emissions Testing - Annual: By this permit, annual emissions compliance testing for visible emissions is not required ~~for those emissions units~~ while burning ~~e:~~ only liquid fuels for less than 400 hours per year.

TEC Comment 20:

TEC requests Condition D.22 be clarified as follows:

In order to document compliance with the visible emission testing exemption provided in Specific Condition No. D.16 ~~D.5~~, ...

TEC Comment 21:

TEC requests the brief description of the fuel yard in Subsection E be clarified as follows:

-008 F.J. Gannon Station Fuel ~~Coal~~ Yard

For the operation of a fuel ~~bituminous coal~~ yard serving the F.J. Gannon Station boiler units 1 through 6, yard activities including barge (east and west) and railcar unloading of coal, truck/barge unloading of flux ~~limestone or iron ore~~, and transfer and storage

of these materials. ~~The iron ore is shipped, stored, and handled in the same manner as limestone.~~ . . .

Source Designator	Particulate Control Method	Efficiency Rating at Design Capacity	Maximum Design Material Handling Rate (TPH)
Barge to ~~East~~ Grab Bucket	Grab Bucket	-----	1500
~~East~~ Grab Bucket to ~~East~~ Hopper	Side Enclosure	25%	1500
Barge to ~~West~~ Continuous Unloader	Enclosure	40%	1500
~~Barge to West Grab Bucket~~	~~Grab Bucket~~	~~-----~~	~~1500~~
~~West Grab Bucket to to West Hopper~~	~~Side Enclosure~~	~~25%~~	~~1500~~
. . .			
~~West Hopper to Feeder~~	~~-----~~	~~-----~~	~~1500~~
. . .			
Live ~~Limestone~~ Fluxing Stockpile			

TEC Comment 22:

TEC requests Condition E.1 be clarified as follows:

> Permitted Capacity: The maximum permitted process rate is 2.85 million tons/year of coal.

TEC Comment 23:

TEC requests Condition E.4 be deleted because demonstrating compliance with the stated condition is not possible.

TEC Comment 24:

TEC recommends specific Condition E.5., be deleted because the west grab bucket has been retired.

TEC Comment 25:

TEC requests Condition E.8 be clarified as follows:

B. Inspection and Maintenance Procedures:

The fuel ~~coal~~ yard particulate control equipment shall receive regular preventative maintenance as follows: . . .

TEC Comment 26:

TEC requests that Condition E.11 be deleted. All permit modification notifications will be submitted to FDEP, consistent with the Title V Air Operation Permit program.

TEC Comment 27:

TEC requests that Condition E.14 be deleted. This condition is no longer applicable to the fuel yard operations.

TEC Comment 28:

TEC requests that Condition E.15 be deleted. This condition is no longer applicable because the west grab bucket has been retired.

TEC Comment 29:

TEC requests the brief description of the Units 5-6 Fly Ash Silo (No. 1) in Subsection G be clarified as follows:

. . .In addition , fly ash from F.J. Gannon Station Units 1-4 Fly Ash Silo No. 2 (silo No. 2) may be routed via gravity flow to the pugmill where it is "conditioned" by wetting with water and gravity fed into open bed trucks. The fly ash is then transported to an off-site consumer. Fly ash may also be conveyed from tanker trucks to Fly Ash Silo No. 1 and from Fly Ash Silo No. 1 to Fly Ash Silo No. 2. . . .

TEC Comment 30:

TEC requests the brief description of the Units 1-4 Fly Ash Silo (No. 2) in Subsection H be clarified as follows:

. . . In addition, fly ash from silo No. 2 may be routed to the pugmill at F.J. Gannon Station Silo No. 1 where it is "conditioned" by wetting with water and gravity fed into open bed trucks. The fly ash is then transported to an off-site consumer. Fly ash may also be conveyed from tanker trucks to Fly Ash Silo No. 2 and from Fly Ash Silo No. 2 to Fly Ash Silo No. 1. . . .

TEC Comment 31:

TEC requests the brief description of the fuel bunkers with Roto-Clones in subsection I be clarified as follows:

> For the operation of F.J. Gannon station Units 1-6 fuel ~~coal~~ bunkers with exhaust fan/cyclone collector (Roto-Clone) controlling dust emissions from each unit's respective bunker, two moving transfer stations via their respective conveyor belts fuel ~~coal~~ through enclosed chutes to each of the six bunkers. Fuel ~~Coal~~ bunkers No. 1-4 and 6 are each equipped with a 9,600 ACFM American Air Filter Company Type D Roto-Clone to abate dust emissions during ventilation. Fuel ~~Coal~~ bunker No. 5 is equipped with a 5,400 ACFM Type D Roto-clone. A number of vent pipes convey air from each bunker to a Roto-Clone during particulate removal. Particulate matter removed by the Roto-Clones is returned to a fuel ~~coal~~ bunker via a hopper and return line. Units No. 1-6 fuel ~~coal~~ bunkers are situated in a west to east fashion. Unit No. 1 fuel ~~coal~~ bunker is located furthest west and Unit No. 6 fuel ~~coal~~ bunker is located furthest east.

TEC Comment 32:

TEC requests Condition I.2 be clarified as follows:

> . . . the maximum allowable particulate matter emission rate from each of the six fuel ~~coal~~ bunkers shall not exceed 0.99 ton/year.

TEC Comment 33:

TEC requests Condition I.3 be clarified as follows:

> Visible emissions from each of the six fuel ~~coal~~ bunkers shall not be equal to or greater than 20% opacity.

TEC Comment 34:

TEC requests that Condition I.4 be deleted to avoid confusion because this requirement is adequately addressed in Subsection K.

TEC Comment 35:

TEC requests Condition I.5 be deleted because each rotoclone emits less than 1 tn/yr and therefore by regulations are exempt from RACT requirements.

TEC Comment 36:

TEC requests Condition J.6 be changed as follows:

> Visible emissions shall not exceed 20 percent opacity, except for one six ~~two~~-minute period per hour during which the opacity shall not exceed 27 ~~40~~ percent.

TEC Comment 37:

TEC notes that Condition J.19.2 contains a requirement c., but does not have an a. nor b. TEC requests the opportunity to review any missing permit conditions prior to permit finalization.

TEC Comment 38:

TEC notes that Condition J.21(a) does not contain a requirement 1. but does contain requirements 2. and 3. TEC requests the opportunity to review any missing permit conditions prior to permit finalization.

TEC Comment 39:

TEC requests that Condition J.22 be modified as follows:

> The permittee shall demonstrate compliance with the liquid fuel sulfur limit by means of a fuel analysis provided by the vendor upon each fuel delivery or by contract specified.

TEC Comment 40:

TEC requests that Condition J.30 be deleted. New No. 2 oil, which is fired only during startup, makes a negligible contribution to emissions from these emissions units. the cost of installing and maintaining new flow monitoring equipment is not justified by the benefit received.

TEC Comment 41:

TEC requests the portion of Condition J.33.e (reporting requirements) requiring the quarterly reporting to EPC be deleted because this requirement is unnecessary.

TEC Comment 42:

TEC requests the following changes to Subsection K. Common Conditions:

-013 Unit No. 1 Fuel ~~Coal~~ Bunker with Roto-Clone
-014 Unit No. 2 Fuel ~~Coal~~ Bunker with Roto-Clone
-015 Unit No. 3 Fuel ~~Coal~~ Bunker with Roto-Clone
-016 Unit No. 4 Fuel ~~Coal~~ Bunker with Roto-Clone
-017 Unit No. 5 Fuel ~~Coal~~ Bunker with Roto-Clone
-018 Unit No. 6 Fuel ~~Coal~~ Bunker with Roto-Clone

TEC Comment 43:

TEC requests Condition K.2. be clarified to include the rotoclones.

TEC Comment 44:

TEC requests Condition K.3. be modified to allow for the testing of two (2) rotoclones annually.