

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

October 1, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gregory M. Nelson, P.E.
Manager - Environmental Planning
Tampa Electric Company
6944 US Highway 41 North
Apollo Beach, Florida 33572-9200

Re: Request for Ambient Sulfur Dioxide Predictions in the Vicinity of F. J. Gannon Station
FDEP File Nos. 0570040-002-AV and 0570040-007-AC

Dear Mr. Nelson:

During our meeting of February 17, 1998 to discuss the Title V draft permits for the F.J. Gannon Station we discussed the likelihood of modeled exceedances of the ambient air quality standards for sulfur dioxide. We requested and believe TEC agreed to provide, more detailed modeling incorporating physical features (such as nearby buildings) capable of affecting the results.

The concern about the potential exceedances has increased because modeling performed for a project at the nearby Cargill Fertilizer Complex indicated modeled exceedances to which the Gannon Station contributes. Additionally the recent Big Bend scrubber and Gannon coalyard pollution control project (PCP) applications indicate that actual emissions at Gannon may increase. While these emissions increases appear to be within the permitted emission limits of the plant, the likelihood of actual (rather than modeled ambient exceedances) is increased.

The information needed is similar to what was submitted for the Big Bend Station in March. Please provide the requested information for the Gannon Station by October 30. If you are unable to provide it, please submit the data on the physical details of the plant in a format compatible with the Building Profile Input program (BPIP) to determine the appropriate downwash parameters for ISCST3. Please include a detailed map for the Gannon Station similar to the one provided for the Big Bend Station showing the location of all of the fence line receptors used in the air quality impact analysis.

If you should have any questions, please call me or Cleve Holladay (meteorologist) at 850/921-8986.

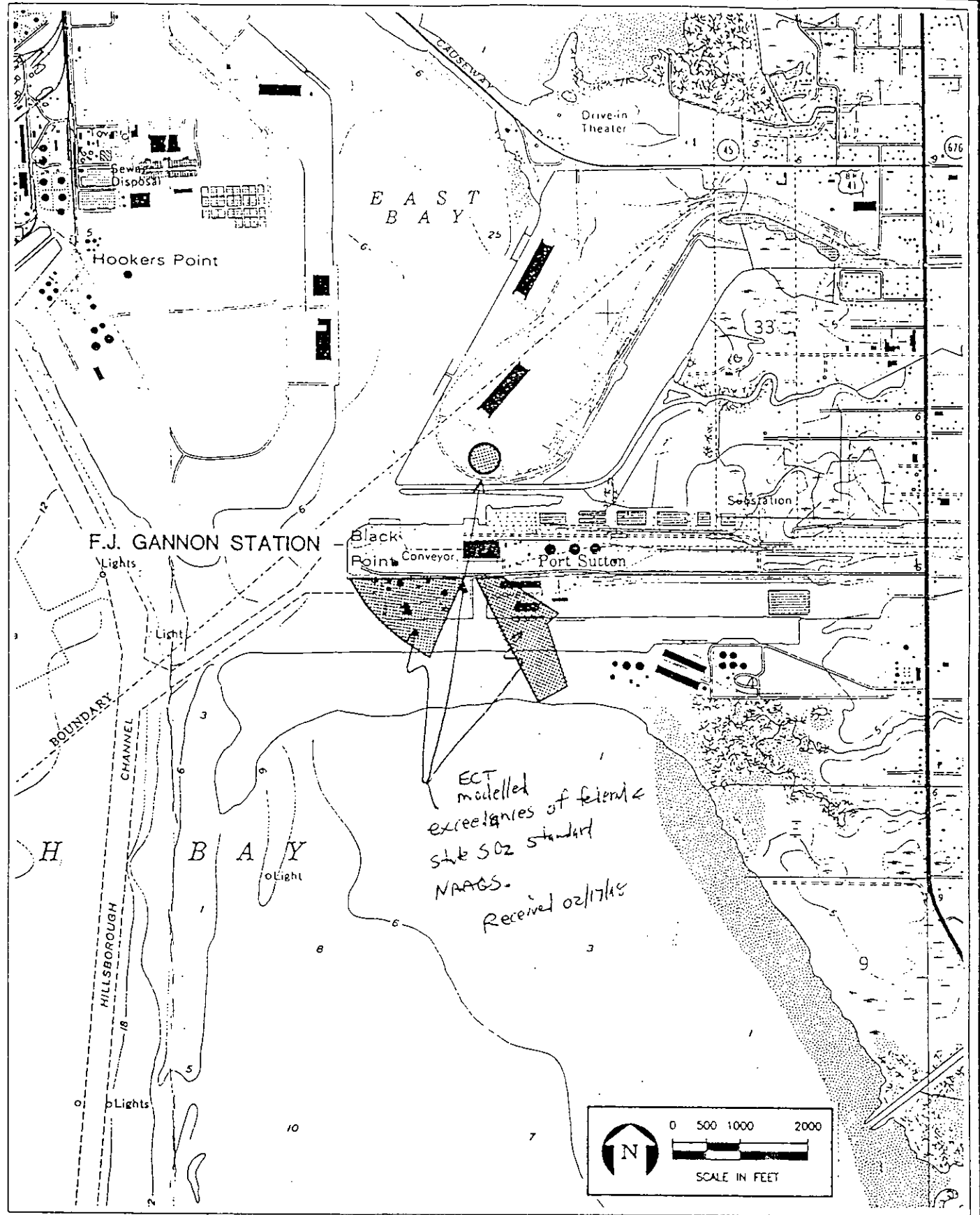
Sincerely,

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CHF/ch

Enclosure

cc: Doug Neeley, EPA
Iwan Choronenko, HCEPC
Howard Rhodes, DEP
Bill Thomas, DEP SWD



F.J. GANNON STATION IMPACT AREAS

Source: USGS Quod, Tampa, FL, 1981.





Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 25, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson, P.E.
Environmental Superintendent
Cargill Fertilizer, Inc.
8813 US Highway 41 South
Riverview, Florida 34221

Re: DEP File No. 0570008-025-AC (PSD-FL-250)
3,200 Tons Per day Sulfuric Acid Plant

Dear Mr. Jellerson:

Enclosed is one copy of the Draft Air Construction Permit for the project at the existing Sulfuric Acid Plant No. 7 located at Cargill Fertilizer, US Highway 41 South, in Riverview, Hillsborough County. The Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" must be published in the legal section of a newspaper of general circulation in Hillsborough County. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please note that *modeled* violations were predicted for sulfur dioxide (SO₂) with or without the production increase. According to Rule 62-212.400(5)(d), F.A.C., "*The owner shall demonstrate ... that the increase in emissions will not cause or contribute to a violation of any ambient air quality standard*" The Department has interpreted "contribute" to mean "significantly contribute" with respect to the "Significant Impact Levels" for SO₂ and intends to issue the permit. This interpretation is consistent with EPA Guidance. [Draft NSR Workshop Manual, Page C.52, 1990] Because of the modeled violations, the Department must consider remedial action through the applicable provisions of the state implementation plan. We are reviewing the matter in the course of Title V permitting for large sources in the area and will assess the possible benefits from Title IV, Acid Rain requirements. We recommend that Cargill consider emission reductions at the existing sulfuric acid plants as one other project was already approved at the facility under similar circumstances.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please call Mr. Linero at 850/921-9523.

Sincerely,

for C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/aal

Enclosures

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

COMMISSION

DOTTIE BERGER
JOE CHILLURA
CHRIS HART
JIM NORMAN
JAN PLATT
THOMAS SCOTT
ED TURANCHIK

EXECUTIVE DIRECTOR

ROGER P. STEWART



ADMINISTRATIVE OFFICES, LEGAL &
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960
FAX (813) 272-5157

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

MEMORANDUM

RECEIVED

MAY 22 1998

BUREAU OF
AIR REGULATION

DATE: May 20, 1998

TO: Lennon Anderson

FROM: Alice H. Harman, P.E. *AH*

THRU: *RK* Richard C. Kirby, IV, P.E.

SUBJECT: TECO Gannon - Follow-up to DEP's Response on Draft Title V

The following information was to be provided concerning comments from TECO. DEP requested EPC to research out a response.

1. Comment #26 (permit modification notifications to EPC): Pursuant to Rule 62-213.412(2), F.A.C., "...Title V source may immediately implement such changes after they...new or revised construction permit...after the source provides to EPC, the Department, each affected state and approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revisions....", EPC is entitled to receive a copy of all permit modifications. The rule is also paraphrased in Appendix TV-1, Title V Condition No. 39.
2. Comment #29 and #30 (description of fly ash handling): TECO requested additional wording be added for the material handling process flow. The additional wording requested was granted on September 18, 1996 as part of DEP File Processing No.: 0570040-003-AO issued by the SW District. (copy attached) EPC's review memorandum is also attached.

Due to numerous changes, revisions, and deletions of specific conditions, EPC request the opportunity to comment on the revised draft when issued.

Enclosures



JOY CHILDRS
CHRIS HART
JIM NORMAN
ED TURANCHIK
SANDRA WILSON

EXECUTIVE DIRECTOR

ROGER P. STEWART



AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-8838
WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788
WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

M E M O R A N D U M

DATE: August 21, 1996

TO: George Richardson

THRU: Jerry Kissel, P.E.

FROM: Leroy Shelton ^{LS}

THRU: ^{RK} Richard C. Kirby, IV, P.E.

SUBJECT: TECO Permit Amendments - Fly Ash Silo No. 1 - AO29-250137
Fly Ash Silo No. 2 - AO29-250140
(TECO Letter dated July 16, 1996)

1. TECO's letter of July 16, 1996, proposed changes to the existing fly ash silos 1 & 2 permits to allow the fly ash from silo No. 2 to be either gravity fed into closed trucks under silo No. 2, as it is now, or to be gravity fed into the existing pugmill under silo No. 1, conditioned with water, and fed into open bed trucks, as currently is the case with the fly ash from silo No. 1. There will be no change to the current emissions limitations.
2. Patrick Shell, EPC, inspected TECO Gannon August 15, 1996. He noted no problems with the proposed amendment concerning the fly ash silos.
3. As per our conversation August 20, 1996, I see no potential adverse impact with the proposed amendment. Based on my engineering judgement, recommend approval of the amendment as proposed on page two of TECO's letter of July 16, 1996.



Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT AMENDMENT

CERTIFIED MAIL

Mr. Patrick A. Ho, P.E.
Manager, Environmental Planning
Tampa Electric Company
Post Office Box 111
Tampa, FL 33601-0111

RECEIVED

SEP 23 1996

Dear Mr. Ho:

**EPC of HC
AIR MANAGEMENT**

Re: Permit Amendment
F.J. Gannon Station
Fly Ash Silos No. 1 and 2
DEP File Processing No.: 0570040-003-AO
Current DEP File No.: AO29-250137 & AO29-250140

These permit amendments are at the request of Ms. Laura A. Rector, Engineer, Environmental Planning, Tampa Electric Company. The amendments are as follows:

Permit Number AO29-250137, Silo No. 1

Change description from:

For the operation of F.J. Gannon Station Units 5 and 6 Fly Ash Silo No. 1 (silo No. 1) with baghouse and pugmill. Fly ash that is collected in the hoppers of the electrostatic precipitators of Units 5 and 6 is pneumatically conveyed to a 25 foot diameter, 50 foot high silo. The fly ash in the silo is gravity fed by chute into enclosed tanker trucks or to a pugmill where it is "conditioned" by wetting with water and gravity fed by chute into open bed trucks. The fly ash is then transported to an off-site consumer.

Change description to:

For the operation of F.J. Gannon Station Units 5 and 6 Fly Ash Silo No. 1 (silo No. 1) with baghouse and pugmill. Fly ash that is collected in the hoppers of the electrostatic precipitators of Units 5 and 6 is pneumatically conveyed to a 25 foot diameter, 50 foot high silo. The fly ash in the silo is gravity fed by chute into enclosed tanker trucks or to a pugmill where it is "conditioned" by wetting with water and gravity fed by chute into open bed trucks. 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.

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Permit Number AO29-250140, Silo No. 2

Change description from:

For the operation of F.J. Gannon Station Units 1-4 Fly Ash Silo No. 2 (silo No. 2) with baghouse. Fly ash that is collected in the hoppers of the electrostatic precipitators of Units 1-4 is pneumatically conveyed to a 30 foot diameter, 45.5 foot high silo. The fly ash in the silo is gravity fed by tubing into enclosed tanker trucks for transport to an off-site consumer.

Change description to:

For the operation of F.J. Gannon Station Units 1-4 Fly Ash Silo No. 2 (silo No. 2) with baghouse. Fly ash that is collected in the hoppers of the electrostatic precipitators of Units 1-4 is pneumatically conveyed to a 30 foot diameter, 45.5 foot high silo. The fly ash in the silo is gravity fed by tubing into enclosed tanker trucks for transport to an off-site consumer. 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.

A person whose substantial interests are affected by this permit amendment may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel, Douglas Building, Mail Station 35, 3900 Commonwealth Blvd., Tallahassee, Florida 32399-3000; within 14 days of receipt of this permit amendment.

Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative proceeding (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department's Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's subsequent interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by petitioner, if any;

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit amendment have a right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this permit amendment, in the Office of General Counsel at the above address of the Department. Failure to petition within the allotted time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 62-5.207, Florida Administrative Code.

This permit amendment is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for an extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, Florida Administrative Code.

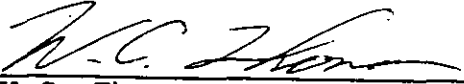
Upon timely filling of a petition or a request for an extension of time this permit amendment will not be effective until further Order of the Department. When the Order (Permit Amendment) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellant Procedure, with the Clerk of the Department in the Office of General Counsel, Douglas Building, Mail Station 35, 3900 Commonwealth Blvd., Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Mr. Patrick A. Ho
Tampa, FL 33601-0111

Page Four

This amendment letter or a copy of this amendment letter must be attached to and becomes a part of air operating permits number AO29-250137 & AO29-250140. If you have any questions, please contact George Richardson in the Air Permitting Section at (813)744-6100, Ext. 105.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


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

cc: Environmental Protection Commission of
Hillsborough County

CERTIFICATE OF SERVICE

The undersigned duly designated Deputy Department Clerk hereby certifies that this Notice of Permit Amendment and all copies were mailed by certified mail before the close of business on 9-18-96 to the listed persons.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to Paragraph 120.52(11), Florida Statutes, with the designated Deputy Department Clerk, receipt of which is hereby acknowledged.


Clerk

9-18-96
Date



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 SO₂ 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:

<u>Emission Unit</u>	<u>Annual Date</u>	<u>Frequency</u>
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/UJKT830

Enclosure

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

RECEIVED

MAR 20 1998

BUREAU OF
AIR REGULATION

**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~~ Fuel ~~Coal~~ Yard. . .
- 013 Unit No. 1 ~~Fuel~~ Fuel ~~Coal~~ Bunker with Roto-Clone
- 014 Unit No. 2 ~~Fuel~~ Fuel ~~Coal~~ Bunker with Roto-Clone
- 015 Unit No. 3 ~~Fuel~~ Fuel ~~Coal~~ Bunker with Roto-Clone
- 016 Unit No. 4 ~~Fuel~~ Fuel ~~Coal~~ Bunker with Roto-Clone
- 017 Unit No. 5 ~~Fuel~~ Fuel ~~Coal~~ Bunker with Roto-Clone
- 018 Unit No. 6 ~~Fuel~~ 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	<u>12,570</u>
2	51	<u>12,570</u>
3	65	<u>12,300</u>
4	80	<u>11,699</u>

5	93.4	<u>12,227</u>
6	151.4	<u>12,543</u>

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 SO₂ generated from on-specification used oil combustion is negligible compared to the quantity of SO₂ generated from coal combustion. Segregating and determining the quantity of SO₂ 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. . . .~~

<u>Source Designator</u>	<u>Particulate Control Method</u>	<u>Efficiency Rating at Design Capacity</u>	<u>Maximum Design Material Handling Rate (TPH)</u>
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 West Hopper	Side Enclosure	25%	1500
...			
West Hopper to Feeder	-----	-----	1500
...			
Live Limestone <u>Fluxing</u> 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.

COMMISSION

DOTTIE BERGER
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CHRIS HART
JIM NORMAN
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MEMORANDUM

DATE: March 19, 1998

TO: Lennon Anderson

FROM:  Richard C. Kirby, P.E. THRU: Jerry Campbell, P.E.

SUBJECT: TECO Gannon Station 0570040-002-AV

This memo is written to summarize the remaining issues which EPC has with the referenced Title V permit. These issues have been discussed with representatives of TECO.

1. The EPC feels strongly that annual limits based on a calendar year are inappropriate. Permit limits should be based, at a maximum, on an annual limit rolled monthly. As back-up for this request, I have attached a copy of page 9 from EPA's guidance dated June 13, 1989, "Limiting Potential to Emit in New Source Permitting." Also:
2. TECO still has not provided information requested regarding their flue gas conditioning system. They should submit a compliance plan to be included in the permit which addresses the issue.
3. We fully support the DEP's requirement for testing during soot blowing and non-soot blowing conditions.
4. Emissions tests should be conducted while boilers are in the automatic mode as opposed to manually controlled to achieve steady state. Attached is a copy of EPA's "A Guideline for Evaluating Compliance Test Results". This document explains under which circumstances testing outside of the 90-110 percent isokinetic range is acceptable.
5. We request that issues provided in our previous comments (copy attached) be addressed by TECO. Perhaps a compliance plan included in the permit is appropriate.

Attachment

cag



1. **Specific Condition(s): A.2., B.2., C.2 (Methods of Operations Fuels):** . Under methods of operation in the draft permit, it states that the No. 2 fuel oil and the coal shall not be cofired. Our previous inspection of the facility along with the information contained in section III.I.6 of the application, "Procedures For Start-up and Shut Down", indicates Tampa Electric cofires No. 2 fuel oil **and** coal during start-up. Based on their current operation, it appears they would be in violation of this condition. Please revise that cofiring may occur during start-up. The rule quote should be Rule 62-210 (274) not Rule 62-210 (272). (See additional comments below concerning used oil.)

2. **Specific Condition(s): A.3., B.4., C.3. (Test Methods and Procedures):** These conditions require the Tampa Electric use EPA reference methods along with fuel analysis to demonstrate compliance with the visible emission and sulfur dioxide emission limits. However, the application (section III Part 9b-1), Tampa Electric has proposed the method of compliance for visible emissions and sulfur dioxide would be fuel sampling or CEM. EPC is in agreement with the use of CEMs but not the option to perform either. The conditions should be modified to require CEM as the method of compliance on a continuous frequency. In order to insure the accuracy of the data, the permit should also require that the CEMs be quality assured in accordance with 40CFR60 Appendix F.

3. **Specific Condition(s): A.4., B.5., C.4. (Monitoring of Operations):** In listing the operation and maintenance parameters for performance and particulate control, the conditions need to specify either maximum or minimum design parameters. For example, the more power delivered to the ESP in the form of higher voltages and currents results in higher removal efficiencies. Therefore, these parameters need to state minimum design settings. In order to ensure proper operation of the boilers and in order to reduce the boiler tube failure rates, the maximum steam pressure and temperature should be specified. The following clarification needs to be added (additional wording underlined) based on Rule 62-296.700(6)(a), F.A.C.:
 - Maximum Design Operating Pressure
 - Maximum Design Operating Temperature
 - Minimum Design Primary Voltage
 - Minimum Design Primary Current
 - Minimum Design Secondary Voltage
 - Minimum Design Secondary Current
 - Specific Collection Area for ESP

- 3a. If CEMs are accepted as the method of compliance, the following observations need to be added (underlined) based on Rules 62-213.440(1) and 62-296.700(6)(d):
 - Continuously Monitored and Recorded:
 - NO_x (lb/MMbtu)
 - SO₂ (lb/MMbtu)

- CO₂ (lb/MMbtu)
 - Gas Flow (ACFM)
 - Heat Input (MMbtu/hr)
 - Daily Recorded and Monitored:
 - Check Hoppers
 - Flue Gas condition system sulfur usage (Unit #6 only)
4. **Specific Condition B.2. (Methods of Operation - Fuels), B.5. (Monitoring of Operation):** Permit AO29-255208 (Unit 4) includes the burning of “on-specification” used oil at a maximum firing of 48 gal/min. What is the reference for the 1,000,000 gal/yr maximum usage? According to the attached memorandum dated 12/15/93, the DEP encourages the burning of “on-specification” used oil. Based on our inspections, Tampa Electric is burning “on-specification” used oil in all of the boilers at the facility. Therefore, the allowable fuels (Specific Conditions A.2., B.2., C.2.) and the conditions for the “on-specification” used oil (Specific Condition B.6) needs to be referenced for all boiler units.
 5. **Subsection E (Description):** There appears to be some transfer points missing from the coal yard: D1 to G1, D2 to G2, all points associated with flux handling (tab 14 of application). Please include all transfer/handling units as required under Rule 62-210.300 and Rule 296-700, F.A.C..
 6. **Specific Condition E.3. (Visible Emissions):** Rule quote should be “62-296.711(2)(a), F.A.C.”.
 7. **Specific Condition E.4. (Particulate Matter), Table 1-1:** The PM standard as listed appears to apply to the entire yard while moving 2.85 million tons of coal. Our reading of AC29-152987 sets the 1.43 pounds per hour and 0.51 tons per year limitation to a single piece of equipment, the west coal unloading station. We recommend you delete the Specific Condition altogether, since the equations used to calculate it are highly subjective. The 5% standard under E.3. is verifiable and sufficient to ensure reasonable handling. If you feel compelled to leave it in, then add that it only applies to the west end unloading station.
 8. **Specific Condition F.4., G.4., H.4., I.3., I.4., Table 2-1 (pg. 7 of 7): (Test Methods and Procedures):** Either clarify here that the particulate matter test is not required if they accept a 5% visible emission under the exemption Rule 62-297.310(7)(c) or add a note to see Subsection K. Common Conditions for further information. **For Specific Conditions I.3. and I.4.:** If they chose not to accept 5%, then they should be required to test at least one cyclone for PM under Rule 62-296.700(2)(c) to show compliance with the 0.19 pound per hour standard. At a flow rate of 9600 acfm, the 0.19 pounds per hour equates to 0.002 gr/dscf. That is a very tight standard and 20% opacity readings would not provide assurance the roto-clones are meeting the

standard. In fact, we suspect they would have to add baghouses to meet that level of PM standard.

9. **Subsection J. Common Conditions: J.12. (Sulfur Dioxide), Table 2-1 (pg. 1 of 7):** Test Methods and Procedures for sulfur dioxide list methods described in Rule 62-296.405(1)(e)3. If CEMs are accepted for demonstration of compliance, this conditions needs to be adjusted accordingly to include the quality assurance requirements of 40CFR60 Appendix F.
10. **Subsection J. Common Conditions: J.17. (Operating Rate During Testing):** , During normal operating, the boiler conditions are controlled by placing the system in an “automatic” mode, which monitors the demand for power and automatically adjust the fuel and air flow rates accordingly. These fluctuations are usually not large enough to be considered a load change as defined in Rule 62-210.700(3), however they do result in increases in particulate matter emissions. Based upon our inspections and knowledge of Tampa Electric’s boiler operations, we have found that during testing, Tampa Electric manually controls the boiler conditions which is not normal operating conditions. We suggest that the condition be revised to include the following language to insure that all testing is conducted under normal conditions based on Rule 62-4.07(3) and 62-297.310(2), F.A.C. As follows, additional wording (underlined): “...at permitted capacity, under normal conditions...allowed by the permit. Each emission unit should be tested with the station master and boiler master in the automatic mode in order to insure the emissions are representative of normal conditions.”
11. **Subsection J. Common Conditions: J.24.(Continuous Monitoring Requirements):** Additional wording needs to be included as follows: Tampa Electric Company shall perform quality assurance on the SO₂, Nox, and Opacity monitors in accordance with 40 CFR60 Appendix F.
12. **Subsection J. Common Conditions: J.27.:** Additional wording needs to be included as follows: “... compliance test or quarterly CEM audit is to begin...” per Rule 62-297.310(7)(a)9, F.A.C.
13. **Subsection J. Common Conditions: J.29. (Test Reports):** In order to better correlate the particulate matter emissions with the visible emissions from each boiler, CEM readings shall be submitted for the period during particulate matter testing.
14. **Subsection J. Common Conditions: J.33.(Boiler Cleaning Waste):** Previous permits do not discuss the addition of boiler cleaner waste being injected into the boiler. Is this condition federally enforceable? EPC is uncertain of the impact this waste will have on fuel usage, emissions, etc. What are the combustion by products speciated by type and amount and the method of material introduction into the boiler per Rule 62-210.300(2)(a)1.

15. **Subsection J. Common Conditions: Add (Quarterly Reporting):** An additional condition should be included for the CEM audits that are required under 40CFR60 Appendix F. “Quarterly reports for CEM audits performed in accordance with 40 CFR60 Appendix F shall be submitted within 45 days to the Environmental Protection Commission of Hillsborough County following a calendar quarter.
16. **Subsection J: Common Conditions: Add:** EPC requests that a condition be included in the Title V draft permit for all units that burn liquid fuel as follows:
- Sulfur dioxide emissions shall be limited to 1.1 pounds per million Btu heat input when liquid fuel is burned. [Rule 1-3.63c., Environmental Protection Commission of Hillsborough County Chapter 1-3, Air Pollution]
17. **Appendix E-1:**
- **Nos. 6, 8, and 10:** Since Tampa Electric did not provide information regarding the type and amount of paint, blasting abrasives used on site, permit conditions should state that only coal slag be used and limit the amount. Also, Tampa Electric states that unconfined abrasives blasting is an unregulated activity. This is not correct. Pursuant to Rules 62-210 and 62-296, F.A.C, EPC has permitted several grit blasting and painting operations in Hillsborough County.
 - **No. 9:** It is unclear for the application and permit what belt conveyors are requested for exemption. All conveyors in the fuel handling area should be included under Subsection E are subject to Rule 62-296.711, F.A.C. and should not be exempt. Is this supposed to be a belt sander?
 - **No. 12:** If they are conditioning the flue gas of any of the boilers (Unit 6 permitted) with SO^3 , the permit will need to address compliance with Rule 62-296.411, F.A.C., for the liquid sulfur handling on the front end. The conditioning is probably a function of the fuel type (pet coke or coal) and the characteristics of the regional coal which they are firing. The permit should require accurate recordkeeping on the amount of sulfur consumed (see Specific Condition C.4. note) and the SO^3 concentration in the condition boiler exhaust. If they are exempt from any standards in Rule 62-296.411 based on storage capacity or usage, there should be a specific condition stating it.
18. **Appendix F: SO_2 Compliance Plan:** If CEMs are accepted as the method of compliance for SO_2 , then the compliance plan needs to be revised.

Overall Notes to be included:

1. Tampa Electric has calculated particulate matter emissions (PME) from the fuel yard using the AP-42 drop equation. This is the least conservative method of estimating emissions from coal handling and does not account for PM as captured by a Method 5 sampling train. It arbitrarily excludes all particles greater than 30um and thus

underestimates PM emissions. In order to use these equations correctly, the surface moisture needs to be plugged in. Because of their subjectivity and their common misuse, we are very cautious about any figures derived from the infamous drop equation. The 5% visible emission standard is verifiable and reasonable.

IV. Time Periods For Limiting Production and Operation

As discussed above, a limitation specifically recognized by the regulations as reducing potential to emit is a limitation on production or operation. However, for these limitations to be enforceable as a practical matter, the time over which they extend should be as short term as possible and should generally not exceed one month. This policy was explained in a March 13, 1987 memorandum from John Seitz to Bruce Miller, Region IV. The requirement for a monthly limit prevents the enforcing agency from having to wait for long periods of time to establish a continuing violation before initiating an enforcement action.

EPA recognizes that in some rare situations, it is not reasonable to hold a source to a one month limit. In these cases, a limit spanning a longer time is appropriate if it is a rolling limit. However, the limit should not exceed an annual limit rolled on a monthly basis. EPA cannot now set out all-inclusive categories of sources where a production limit longer than a month will be acceptable because every situation that may arise in the future cannot now be anticipated. However, permits where longer rolling limits are used to restrict production should be issued only to sources with substantial and unpredictable annual variation in production, such as emergency

A GUIDELINE FOR EVALUATING COMPLIANCE TEST RESULTS
(Isokinetic Sampling Rate Criterion)

R. T. Shigehara
Emission Measurement Branch, ESED, OAQPS, EPA

Introduction

The sampling rate used in extracting a particulate matter sample is important because anisokinetic conditions can cause sample concentrations to be positively or negatively biased due to the inertial effects of the particulate matter. Hence, the calculation of percent isokinetic (I) is a useful tool for validating particulate test results. Section 6.12 of the recently revised Method 5¹ states, "If 90 percent $\leq I \leq$ 110 percent, the results are acceptable. If the results are low in comparison to the standard and I is beyond the acceptable range, or, if I is less than 90 percent, the Administrator may opt to accept the results."

This guideline provides a more detailed procedure on how to use percent isokinetic to accept or reject test results when the sampling rate is beyond the acceptable range. The basic approach of the procedure is to account for the inertial effects of particulate matter and to make a maximum adjustment on the measured particulate matter concentration.² Then, after comparison with the emission standard, the measured particulate matter concentration is categorized (1) as clearly meeting or exceeding the emission standard or (2) as being in a "gray area" zone. In the former category, the test report is accepted; in the latter, a retest should be done because of anisokinetic sampling conditions.

Procedure

1. Check or calculate the percent isokinetic (I) and the particulate

matter concentration (c_s) according to the procedure outlined in Method 5. Note that c_s must be calculated using the volume of effluent gas actually sampled (in units of dry standard cubic feet, corrected for leakage). Calculate the emission rate (E), i.e. convert c_s to the units of the standard. For the purposes of this guideline, it is assumed that all inputs for calculating E are correct and other specifications of Method 5 are met.

2. Compare E to the standard. Then accept or reject c_s using the criteria outlined below. (A summary is given in Table I):

a. Case 1 - I is between 90 and 110 percent. The concentration c_s must be considered acceptable. A variation of ± 10 percent from 100 percent isokinetic is permitted by Method 5.

b. Case 2 - I is less than 90 percent.

(1) If E meets the standard, c_s should be accepted, since c_s can either be correct (if all particulate matter are less than about 5 micrometers in diameter) or it can be biased high (if larger than 5 micrometer particulate matter is present) relative to the true concentration; one has the assurance that c_s is yielding an E which is definitely below the standard.

(2) If E is above the standard, multiply c_s by the factor (I/100) and recalculate E. If, on the one hand, this adjusted E is still higher than the standard, the adjusted c_s should be accepted; a maximum adjustment which accounts for the inertial effects of particulate matter has been made and E still exceeds the standard. On the other hand, if the

adjusted E is lower than the standard, a retest should be done.

c. Case 3 - I is greater than 110 percent.

(1) If E exceeds the standard, c_s should be accepted, since c_s can either be equal to the true concentration or biased low relative to it; one has the assurance that E is definitely over the standard.

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Table I. Summary of Procedure

Case	I	Category	Decision
1	90 - 110		Accept
2	< 90	$E \leq \text{Em. Std.}$	Accept
		$c_s (I/100) \rightarrow E_{\text{adj}} > \text{Em. Std.}$	Accept
		$c_s (I/100) \rightarrow E_{\text{adj}} \leq \text{Em. Std.}$	Retest
3	> 110	$E > \text{Em. Std.}$	Accept
		$c_s (I/100) \rightarrow E_{\text{adj}} \leq \text{Em. Std.}$	Accept
		$c_s (I/100) \rightarrow E_{\text{adj}} > \text{Em. Std.}$	Retest

Summary

A procedure for accepting or rejecting particulate matter test results based on percent isokinetic has been outlined. It provides a mechanism for accepting all data except where anisokinetic sampling might affect the validity of the test results. This procedure is one of several useful tools for evaluating testing results.

References

1. Method 5 - Determination of Particulate Emissions from Stationary Sources. Federal Register. 42(160):41776-41782, August 18, 1977.
2. Smith, W. S., R. T. Shigehara, and W. F. Todd. A Method for Interpreting Stack Sampling Data. Stack Sampling News. 1(2):8-17, August 1973.

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