

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Gregory N. Nelson, PE
 Manager - Eng. Planning
 Tampa Electric Co
 P O Box 111
 Tampa FL 33601-0111

4a. Article Number: 7-333 612 498

4b. Service Type:

- Registered
- Express Mail
- Return Receipt for Merchandise
- Certified
- Insured
- COD

5. Received By: (Print Name) / Signature: [Signature]
 Date of Delivery: 1-28-99

6. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

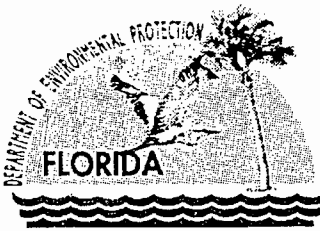
PS Form 3811, December 1994
 102595-97-B-0179 Domestic Return Receipt

8 9 9 2 1 9 E E E 7

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

PS Form 3800, April 1995

Sent to	Gregory Nelson
Street & Number	ECO
Post Office, State, & ZIP Code	Tampa FL
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	0570039-003-AC 1-26-99 11 -004-AC BB5 Units 1+2



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

January 26, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Gregory M. Nelson, P.E.
Manger--Environmental Planning
Tampa Electric Company
PO Box 111
Tampa, Florida 33601-0111

Re: DEP File No. 0570039-003-AC and 0570039-004-AC
Big Bend Station FGD System for Units 1 and 2

Dear Mr. Nelson:

Enclosed is one copy of the Draft air construction permit for the Big Bend Station FGD system located at 6944 US Highway 41 North, Apollo Beach, Florida 33572-9200, Hillsborough County. The Technical Evaluation and Preliminary Determination, 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 one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

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 contact Joseph Kahn, P.E. at 850/921-9519 or Mr. Linero at 850/488-0114.

Sincerely,

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

CHF/jk

Enclosures

In the Matter of an
Application for Permit by:

Gregory M. Nelson, P.E., Mgr.--Env. Planning
Tampa Electric Company
PO Box 111
Tampa, Florida 33601-0111

DEP File No. 0570039-003-AC and -004-AC
Big Bend Station FGD System for Units 1 and 2
Hillsborough County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft permit attached) for the proposed project, detailed in the application specified above and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Gregory M. Nelson, P.E., Mgr.--Env. Planning, applied on July 6, 1998, to the Department for an air construction permit for its Big Bend Station FGD system located at 6944 US Highway 41 North, Apollo Beach, Florida 33572-9200, Hillsborough County. The permit is to construct an FGD system and the related appurtenances including booster fans and a new stack to serve existing units 1 and 2, and to allow the use of petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal (by weight) in existing units 1 and 2. Included in this permitting action is the construction of new emission units associated with limestone handling. This permit also authorizes construction of the new equipment associated with gypsum handling (dewatering).

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to perform the proposed work.

The Department intends to issue this air construction permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of Public Notice of Intent to Issue Air Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written

comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The

name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.



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


CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit (including the Public Notice of Intent to Issue Air Construction Permit, Technical Evaluation and Preliminary Determination, and the Draft permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 1-26-99 to the person(s) listed:

Gregory M. Nelson, P.E., TEC *
Thomas W. Davis, P.E., ECT
Bill Thomas, P.E., DEP, SWD
Richard Kirby, P.E., Hillsborough County EPC
Mr. Gregg Worley, EPA

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.


(Clerk)

1-26-99
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570039-003-AC and -004-AC

Tampa Electric Company
Big Bend Station FGD System for Units 1 and 2
Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Gregory M. Nelson, P.E., Mgr.--Env. Planning, Tampa Electric Company, for the Big Bend Station located at 6944 US Highway 41 North, Apollo Beach, Florida 33572-9200, Hillsborough County. The permit is to construct a flue gas desulfurization (FGD) system and the related appurtenances including booster fans and a new 490 foot stack to serve existing units 1 and 2, and to allow the use of petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal (by weight) in existing units 1 and 2. Included in this permitting action is the construction of new emission units associated with limestone handling. This permit also authorizes construction of the new equipment associated with gypsum handling (dewatering). The applicant's mailing address is: PO Box 111, Tampa, Florida 33601-0111. This project qualifies as a pollution control project and is exempt from regulation under federal Prevention of Significant Deterioration (PSD) requirements of 40 CFR 52.21 pursuant to Rule 62-212.400(2)(a)2., F.A.C. A Best Available Control Technology (BACT) determination was not required pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

Emissions of sulfur dioxide will decrease by approximately 84% from uncontrolled levels firing the coal/petcoke mixture, or an approximate 83% reduction from uncontrolled levels firing coal alone, when the FGD systems is used. The equivalent full load controlled sulfur dioxide emission rate is 0.82 lb/mmBtu. Stack emissions of other pollutants are not expected to increase from units 1 and 2 as a result of this project. Particulate matter emissions from new limestone handling operations will be about 5.2 tons per year.

This project is not subject to review under Section 403.506 F.S. (Power Plant Siting Act), because it provides for no expansion in steam generating capacity.

The Department will issue the Final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection
Bureau of Air Regulation
Suite 4, 111 S. Magnolia Drive
Tallahassee, Florida, 32301
Telephone: 850/488-0114
Fax: 850/922-6979

Air Management Division
Hillsborough County Environmental
Protection Commission
1410 North 21 Street
Tampa, Florida 33605
Telephone: 813/272-5530

Dept. of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100

The complete project file includes the application, technical evaluations, Draft permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section, or the Department's reviewing engineer for this project, Joseph Kahn, P.E., at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION
POLLUTION CONTROL PROJECT AND PSD APPLICABILITY REVIEW

Tampa Electric Company
Big Bend Station
FGD System, Units 1 and 2
Hillsborough County

DEP File No. 0570039-003-AC and
DEP File No. 0570039-004-AC

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

January 26, 1999

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL INFORMATION

1.1 APPLICANT NAME AND ADDRESS

Tampa Electric Company
Big Bend Station
6944 US Highway 41 North
Apollo Beach, Florida 33572-9200

Authorized Representative: Gregory M. Nelson, P.E., Manger--Environmental Planning

1.2 REVIEWING AND PROCESS SCHEDULE

July 6, 1998	Receipt of application and fee
August 5, 1998	Department completeness request
November 11, 1998	Applicant's response to completeness request
November 11, 1998	Application complete
January 26, 1999	Intent issued

2. FACILITY INFORMATION

2.1 FACILITY LOCATION

The facility is located at Big Bend Station, 6944 US Highway 41 North, Apollo Beach, Hillsborough County. The UTM coordinates of this facility are Zone 17; 361.90 km E; 3075.00 km N.

2.2 STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)

Industry Group No.	49	Electric, Gas and Sanitary Services
Industry No.	4911	Electric Services

2.3 FACILITY CATEGORY

The Big Bend Station is an electric power generating plant with four fossil fired steam generating units.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

3. PROJECT DESCRIPTION

Tampa Electric Company (TEC) operates the Big Bend Station power plant in Apollo Beach, Hillsborough County. On July 6, 1998, TEC applied for an air construction permit to install a flue gas desulfurization (FGD) system at the Big Bend plant to control sulfur dioxide emissions from units 1 and 2. These are both coal fired steam boiler generating units rated at 4037 mmBtu/hr and 3996 mmBtu/hr (mo. avg. basis), respectively, with an electrical generating capacity of 445 MW each. Existing emission controls include an electrostatic precipitator (ESP) for each unit, with flue gas from each ESP ducted into a common stack. The proposed FGD system will receive flue gas from each ESP, with scrubbed flue gas discharged into a new 490 foot common stack. TEC submitted additional information in response to the Department's request and the application became complete on November 11, 1998.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

TEC desires the flexibility to bypass the FGD system at its option. The FGD system will allow TEC to operate the FGD system to reduce emissions of sulfur dioxide (SO₂) as part of a strategy to meet the requirements of the Title IV Acid Rain program of the Clean Air Act. Operation of the FGD system will allow TEC to reduce the number of SO₂ allowances required at Big Bend (perhaps allowing use of the Big Bend allowances at another TEC facility such as the Gannon plant). The application also included a request to permit the use of up to 20% (by weight) petroleum coke (petcoke) in a mixture with coal at units 1 and 2. TEC committed in its application to direct flue gas to the FGD system whenever any petcoke is fired in the unit(s) in any proportion up to the requested 20% petcoke/80% coal mixture.

The application also includes new emissions units associated with limestone handling related to operation of the proposed FGD system. Additional gypsum handling equipment will be installed to dewater gypsum from the proposed FGD system.

This project will require imposition of emission limitations for SO₂ for unit 3 under certain operating scenarios. (See Section 6. Emission Limitations for more information.) Unit 3 is a coal fired boiler generating unit rated at 4115 mmBtu/hr (mo. avg. basis), with an electrical generating capacity of 445 MW. This unit may be fired with coal or a coal/petcoke mixture consisting of a maximum of 20.0% petcoke by weight. Operation of this unit may include diverting all of the flue gas into the unit 4 FGD system for SO₂ emission reduction. Sulfur dioxide emissions that are generated and not diverted through the unit 4 FGD system are uncontrolled. Particulate matter emissions generated during the operation of the unit are controlled by a dry ESP.

4. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for the criteria pollutants ozone, PM₁₀, carbon monoxide, and nitrogen dioxide; designated as unclassifiable for lead and sulfur dioxide; and also designated as a maintenance area for ozone.

The proposed project is not subject to review under Rule 62-212.400., F.A.C., Prevention of Significant Deterioration (PSD) as discussed below.

The emissions units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules.

4.1 STATE REGULATIONS

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-214	Requirements For Sources Subject To The Federal Acid Rain Program
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.520	EPA Continuous Monitor Performance Specifications

4.2 FEDERAL RULES

40 CFR 60	NSPS Subpart(s) OOO
40 CFR 60	Applicable sections of Subpart A, General Requirements
40 CFR 75	Monitoring (applicable sections including applicable appendices)

4.3 RULE APPLICABILITY DISCUSSION

The major pollutant of concern for this project is SO₂. Stack emissions of other pollutants at units 1 and 2 are not expected to increase as a result of the proposed FGD system or the use of a petcoke/coal mixture. Note that stack emissions of pollutants related to the new use of petcoke are either not appreciably increased or are controlled by the FGD system, and since TEC has committed to the use of the FGD system whenever it uses petcoke, consideration of potential emissions from firing petcoke must include the effect of the FGD system.

Emissions of sulfur dioxide from units 1 and 2 are limited currently by Rule 62-296.405(1)(c)2.b., F.A.C. Each unit has an SO₂ limit of 6.5 lb/mmBtu, 2 hour average; Units 1, 2 and 3 are together limited by rule to 31.5 tons SO₂ per hour, 3 hour average, and 25 tons SO₂ per hour, 24-hour average period.

The addition of the FGD system will increase potential emissions of particulate matter (PM/PM₁₀) at Big Bend's limestone handling operations. Potential emissions of particulate matter are not expected to increase from the new gypsum handling facilities because they are principally related to the dewatering of gypsum crystals. The applicant, in its revised submittal, identified the drops from conveyors LE, LF and LG and silo C as subject to the Federal Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60 Subpart OOO. The drop from silo C to the new belt feeder through a rotary unloader and from the belt feeder to the new wet ball mill are enclosed, with emissions controlled by the baghouse that controls the conveyor drops. The new wet ball mill is not subject to NSPS Subpart OOO because it is a wet process.

The new gypsum handling facilities are not subject to a source-specific emission standard. The project includes the replacement of two existing vacuum drum filters with two new ones, each with a capacity to dewater the gypsum product of units 1 through 4. The gypsum is dewatered to about 90% solids and conveyed to either a stackout area where it is loaded into trucks or a storage area where it is stored in a pile. The existing gypsum conveying configuration is capable of handling the additional gypsum and is not proposed to be modified as part of this project.

The construction of the FGD system does not itself increase stack emissions, but operation of the associated limestone handling facilities may increase potential emissions of particulate matter, so the project as a whole constitutes a modification as defined at Rule 62-210.200(188), F.A.C. (2-5-98 version.) (The use of a petcoke/coal mixture would also increase potential emissions of SO₂ if TEC did not commit to operation of the FGD system when it burns petcoke in any proportion with coal in these units.) Rule 62-

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

4.030, F.A.C., prohibits modification of any existing emissions unit without first receiving a permit, and specifies that a permitted installation may only be modified in a manner that is consistent with the terms of such a permit. Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C., also reiterate the requirement for construction permits. The Department informed TEC by letter dated July 15, 1998 that it viewed the proposed project as a modification of the existing emissions units at Big Bend Station, and as such, the project required a construction permit.

To accommodate a request by the company (via a letter from its attorney dated August 19, 1998) that it be allowed to proceed with construction of the FGD system in order to allow it to become operational at the earliest possible date, the Department granted TEC authorization to install the FGD system as an amendment of its operation permits (AO 29-219924 (unit 1) and AO 29-179912 (unit 2)), pursuant to Department guidance memo DARM-PER/GEN-25. This authorization did not specifically include construction of the limestone and gypsum handling units, and it specifically excluded the use of petcoke at units 1 and 2. The Department allowed construction to begin under the provisions of its guidance memo because the project is not subject to PSD, as described below. The Department continued the review of the construction permit application, and administratively, issuance of the construction permit will supersede that authorization.

This project is not subject to the PSD requirements in Rule 62-212.400, F.A.C. because the installation of the FGD system, considered alone, is exempt from the PSD requirements as a pollution control project pursuant to Rule 62-212.400(2)(a)2., F.A.C., and the use of petcoke/coal mixture does not negate that exemption, as described below. Note also that, considering the FGD system and the related limestone and gypsum handling systems together with the use of petcoke/coal mixture, the project does not constitute a modification to a major facility under the PSD requirements, in that there is no *significant net emissions increase* as described in Rule 62-212.400(2)(d)4.a(ii), F.A.C. However, since the project is exempt from the PSD requirements there is no requirement to further evaluate the net emissions increase.

4.4 POLLUTION CONTROL PROJECT EXEMPTION

PSD is not applicable to the installation of the FGD system for Big Bend units 1 and 2, because the project qualifies for exclusion from PSD as a pollution control project. The use of up to 20% petcoke does not disqualify the project from the PSD exclusion. Nor does the increase in potential emissions of particulate matter from the associated limestone handling operations. The effect of this project on capacity utilization ("availability") of units 1 and 2 was considered, but the Department concluded that an increase in utilization of these units was unlikely. The ambient impact for SO₂ was modeled by the applicant and found to be acceptable. TEC has proposed to utilize CEMS for compliance which comports with EPA's requirement to document compliance with emission limitations on as frequent a basis as possible. Overall, the project is environmentally beneficial.

A pollution control project (PCP) is partly defined at 40 CFR 52.21(b)(32) as:

Any activity or project undertaken at an existing electric steam generating unit for purposes of reducing emissions from such unit. Such activities and projects are limited to:

(1) The installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide control and nitrogen oxides control and electrostatic precipitators;

The above definition is not specifically listed in the State Rules in Chapter 62, F.A.C. However it is obvious that it is the intent of the State to abide by the Federal definition. Per Rule 62-212.400(2)(a)2., F.A.C., Pollution Control Project Exemption:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.21(b)(2)(iii)(h) shall not be subject to the preconstruction requirements of this rule.

According to 40 CFR 52.21(b)(2)(iii)(h), one of the exemptions from review for PSD is:

The addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines such addition, replacement, or use renders the unit less environmentally beneficial, or except (1) When the Administrator has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I if any, and (2) The Administrator determines the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.

The preamble for the rule amendments for 40 CFR Parts 51, 52 and 60 of July 21, 1992 provide insight into EPA's approach to the pollution control project exemption at electric utilities. This information supports the designation of the FGD system at TEC's Big Bend Station as a pollution control project, and supports the Department's approach toward reviewing the project. The introduction to the rule amendments, FR Vol. 57, No. 140, page 32315, reads in part,

Title IV will force most electric utility steam generating units to undertake pollution control projects and provides full flexibility to achieve compliance without bias towards or against any particular pollution control method.

And,

[T]itle I and title IV are clearly intended to work in concert, not conflict, and today's ruling is intended to ensure that harmony.

Thus, EPA has identified that projects at electric utilities that are undertaken to reduce emissions of Title IV pollutants (acid gases) are intended to be treated as pollution control projects.

In Part II, Background, FR Vol. 57, No. 140, page 32318, EPA writes that the title IV acid rain SO₂ emissions allowance "program will provide powerful incentives to sources to undertake pollution control projects." This section further states,

NSR provisions should not inadvertently bias a utility towards or against any means of complying with the acid rain provisions. The EPA believes the amendments promulgated today ... provide adequate assurances that utilities can undertake title IV pollution control projects without uncertainty as to the applicability of the various title I new source requirements.

Part III, Discussion of Final Action on Proposal, FR Vol. 57, No. 140, page 32319, includes a discussion that pollution control projects are not subject to PSD. EPA writes,

The key to this addition to the list of exclusions from the term physical or operational change is EPA's judgment that Congress did not intend that pollution control projects be considered the type of activity that should trigger NSR.

And,

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The EPA expects that most, if not all, pollution control projects will reduce net actual emissions. Nevertheless, the Administrator's authority to consider individual pollution control projects provides an adequate opportunity to determine that a pollution control project would somehow result in an adverse environmental impact and thus conclude that the project renders the unit less environmentally beneficial, and is therefore a physical or operational change that may be subject to NSR.

This discussion includes a description of what constitutes a pollution control project that includes conventional and advanced flue gas desulfurization.

4.5 ENVIRONMENTALLY BENEFICIAL TEST

EPA continues its discussion in the rule preamble by stating that its experience with the utility industry "led EPA to conclude that pollution control projects in the utility industry are generally environmentally beneficial." [FR Vol. 57, No. 140, p. 32319.] EPA clarifies that the test of *environmentally beneficial* is an evaluation of a project's net emissions and overall environmental impact:

In making such assessments, ... consider the overall emissions before and after the project, as well as any other relevant environmental factors. As a result, no other single factor can be identified in advance for purposes of making this determination. [FR Vol. 57, No. 140, p. 32320.]

In analyzing comments on the pollution control project exclusion, EPA further clarified the test of *environmentally beneficial* to mean a case by case assessment of a project's net emissions, and to allow small collateral increases in emissions when large decreases in other emissions occur:

Although a pollution control project could theoretically cause a small collateral increase in some emissions, it will substantially reduce emissions of other pollutants. In recognition of this, the rule provides for a case-by-case assessment of the pollution control project's net emissions and overall impact on the environment. [FR Vol. 57, No. 140, p. 32321.]

Therefore, the criteria which the Department must follow are clear. The collateral increase in any PSD pollutant should be small and the decrease in one or more PSD pollutants should be substantial. The increases in any pollutant should not cause or contribute to violation of an ambient air quality standard or PSD increment. The Department should examine the cumulative effect of all of the proposed changes related to the project, including the use of a petcoke/coal mixture, the possible effect on capacity utilization of the units, and the sulfur dioxide ambient impact of the project. If it determines that the project is environmentally beneficial, the Department should consider the project exempt from PSD pursuant to the pollution control project exemption.

As discussed in the remainder of this evaluation, the Department, considering the large percentage reduction in SO₂ mass emissions, the minor collateral increase in PM emissions from new limestone handling facilities, and the ambient impact analysis, has determined that the installation of the FGD system is environmentally beneficial.

4.6 SELECTIVE OPERATION OF FGD SYSTEM

The applicant proposed to be allowed to selectively operate the FGD system so that it retains the flexibility to operate either or both units 1 and 2 without directing flue gas to the FGD system. Although it committed to use the FGD system when it burns petcoke, TEC otherwise desires the flexibility to bypass the FGD system at its option. TEC desires this flexibility in part to allow for operation of the units when the FGD system is not needed, or is not available because of scheduled maintenance or unscheduled breakdown,

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

although the system is not expected to be frequently unavailable. (To minimize the possibility of unexpected excess emissions from a breakdown of the FGD system, the permit for this project will allow the company to bunker no more than one day's amount of petcoke for units 1 and 2 at any given time. This is similar to a requirement already imposed on unit 3.) Presumably, TEC also desires this flexibility to allow it to operate the FGD system as part of a strategy to manage its SO₂ emissions, and the use of SO₂ allowances, as provided by EPA's Title IV acid rain program. Operation of the FGD system will allow TEC to reduce the number of SO₂ allowances required at Big Bend (perhaps allowing use of the Big Bend allowances at another TEC facility such as the Gannon plant). EPA has previously recognized that it is possible that utilities may want to selectively operate such emission control equipment. EPA has written about its desire to avoid conflict between the permitting and acid rain provisions of its rules in allowing electric utilities to install pollution control equipment such as FGD systems. [See for example FR Vol. 57, No. 140, p. 32333.]

It is evident that EPA envisaged installation of pollution control projects as one component of a comprehensive, flexible acid gas emission management strategy. For example, to manage its SO₂ emissions, a power producer can buy and sell emissions allowances and produce more or less SO₂ as a result of burning fossil fuels to generate electricity. Alternatively, the power producer could elect to install a pollution control project to reduce emissions, or could switch to a less polluting fuel, to reduce emissions of SO₂, and thus reduce the number of allowances the producer is required to hold. Certainly the flexibility exists for a utility to undertake a variety of options as part of a broad strategy to manage SO₂ emissions. Wheelabrator characterizes the proposed project as "the most cost-effective method of compliance with the U.S. Environmental Protection Agency's (EPA) Clean Air Act, Phase 2, regulations" referring to the acid rain requirements. [News release dated August 24, 1998 from Wheelabrator's Internet web site at www.wapc.com]

TEC obviously recognizes the value of its SO₂ emissions allowances. For example, the July 10, 1998 issue of the Air Daily newsletter [Vol. 5 No. 133] reported that TEC has been using the SO₂ Price Index (SOPI) published by Air Daily to value the power TEC sells on the wholesale market. The article describes that TEC uses the index to determine the cost of emissions allowances that are used to meet wholesale power demand. The generation of extra power for wholesale customers creates emissions of sulfur dioxide, and each ton of sulfur dioxide emitted consumes an allowance, which has a value. The article quotes a TEC source that the utility is trying to achieve a real-time estimate of the cost of the allowances used in order to include the cost into the power prices.

TEC will be permitted to bypass the FGD system while firing fuels other than petcoke. This type of flexibility was envisioned in the Title IV Acid Rain program that permits utilities to purchase or trade SO₂ allowances to cover emissions, as long as emissions do not exceed short term emission limitations established by rule or permit. An example of the flexibility of selectively operating desulfurization scrubbers was reported in the July 13, 1998 issue of the Air Daily newsletter [Vol. 5 No. 134]. Indianapolis Power & Light Co. temporarily turned off the scrubbers at its Petersburg plant to meet excess demand for power. Turning off the scrubber provided an additional 18 MW of power. The utility used SO₂ allowances to account for emissions from high sulfur coal during the event. TEC's desire to retain this type of flexibility does not disqualify this project from being exempted from PSD as a pollution control project.

4.7 USE OF PETCOKE MIXED WITH COAL

The request of TEC to burn up to 20% petcoke mixed with coal in units 1 and 2 does not, by itself, constitute a pollution control project because the definition of pollution control project is specific that for fuel switching projects, the fuel must be a "less polluting fuel." [40 CFR 52.21(b)(32)(ii), 7-1-97 edition.]

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

However, the use of up to 20% petcoke does not exclude consideration of the FGD installation as a pollution control project simply because the two projects are coincident in time. The test to determine if a project is environmentally beneficial requires that net emissions be considered. It is apparent that when a pollution control project is undertaken coincident with other projects, the Department has the authority, and is indeed required, to consider the net effect of all projects on emissions. Thus, all collateral emissions from all simultaneous projects must be considered when making the determination that a pollution control project is environmentally beneficial. Here the coincident projects are the installation of the FGD equipment, and the switch to up to 20% petcoke/80% coal.

TEC, in its application for construction permit has committed to using the FGD equipment any time it burns petcoke in any proportion up to 20% by weight, and has agreed to a federally enforceable requirement to do so. A simple stoichiometric analysis of the impact on SO₂ emissions before and after the use of petcoke, combined with the use of the FGD equipment, shows that emissions will decrease. It is appropriate to consider the reduction in emissions from the FGD equipment because its use will be required by a federally enforceable air construction permit condition. The definition of *Potential Emissions* (Rule 62-210.200(228), F.A.C., 2-5-98 edition) states that, "[a]ny enforceable physical or operational limitation on the capacity of the emissions unit or facility to emit a pollutant, including any air pollution control equipment and any restrictions ... on the type or amount of material combusted ... shall be treated as part of its design provided that, for any regulated air pollutant, such physical or operational limitation is federally enforceable." The limitation on the percentage of petcoke that may be burned and the requirement to utilize the FGD equipment while firing petcoke can thus be considered in estimating emissions from the facility.

Performing a simple stoichiometric calculation for SO₂ emissions, conservatively estimating that all fuel sulfur will be converted to SO₂ (which is not representative of actual conditions because some fuel sulfur will be converted to particulate forms and some will remain in the ash), one can illustrate the change in uncontrolled potential emissions from the use of the petcoke/coal mixture. This can be compared to the controlled potential emissions resulting from the requirement to utilize the FGD system when petcoke is burned.

Using average higher heating values reported by TEC in its original permit application document, section III.L.2 for coal (11575 Btu/lb) and petcoke (14063 Btu/lb), average reported values for sulfur content, a basis of 1.0 mmBtu heat input at 20% petcoke and 80% coal, and ignoring moisture content:

$$\text{average HHV fuel (80\% coal/20\% petcoke)} = 0.80 (11575) + 0.20 (14063) = 12072.6 \text{ Btu/lb}$$

$$\text{lb fuel mixture} = 1.0 \times 10^6 \text{ Btu} / 12072.6 \text{ Btu/lb} = 82.8 \text{ lb}$$

$$\text{lb coal in fuel mixture} = 0.80 (82.8) = 66.2 \text{ lb coal}$$

$$\text{lb petcoke in fuel mixture} = 0.20 (82.8) = 16.6 \text{ lb petcoke}$$

$$\text{lb SO}_2 \text{ from coal} = 66.2 \text{ lb coal} (0.028 \text{ lb S/lb coal}) (2 \text{ lb SO}_2/\text{lb S}) = 3.7 \text{ lb}$$

$$\text{lb SO}_2 \text{ from petcoke} = 16.6 \text{ lb petcoke} (0.0485 \text{ lb S/lb petcoke}) (2 \text{ lb SO}_2/\text{lb S}) = 1.6 \text{ lb}$$

$$\text{total lb SO}_2 \text{ from fuel mixture} = 3.7 + 1.6 = 5.3 \text{ lb}$$

$$\text{overall, potential SO}_2 \text{ emissions from petcoke/coal, uncontrolled} = 5.3 \text{ lb SO}_2 \text{ per mmBtu}$$

Similarly, potential sulfur dioxide emissions may be calculated with coal alone, with no FGD control, which result in potential emissions of 4.8 lb SO₂ per mmBtu.

Thus, estimated uncontrolled emissions of sulfur dioxide resulting from the use of up to 20% petcoke would increase by 10.4% above estimated uncontrolled emissions from coal. However, TEC has

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

committed to an equivalent full load controlled emission rate of 0.82 lb/mmBtu, which corresponds to an approximate reduction of 84% from uncontrolled levels firing the coal/petcoke mixture, or an approximate 83% reduction from uncontrolled levels firing coal alone. Wheelabrator estimates that at full load the percentage reduction in SO₂ emissions will be about 95% (see Section 5, below). [News release dated August 24, 1998 from Wheelabrator's Internet web site at www.wapc.com] The large percentage reduction in mass emissions of SO₂ that may be expected from the FGD system satisfies, in part, the environmentally beneficial test.

The sulfur content of petcoke will not be restricted in the permit because TEC can ensure compliance with the emission limit for SO₂ from the FGD system by adjusting the ratio of petcoke to coal, if necessary, when it fires petcoke with a higher than average sulfur content. TEC obtains sulfur content information on the petcoke it fires and blending can be done at the fuel yard to accommodate plant requirements and emission limitations. [Conversation with James Hunter on January 21, 1999] Permit conditions will be included to require records of petcoke sulfur content to ensure that the applicant has sufficient information available to alter the ratio of petcoke to coal, if necessary to ensure compliance with the emission limit for SO₂ from the FGD system.

4.8 EFFECT ON CAPACITY UTILIZATION

EPA's guidance on the pollution control project exemption clearly states that pollution control projects that alone or because of collateral or coincident changes will increase pollution via an increase in capacity utilization must be excluded from the exemption from PSD. [Seitz, John S., Pollution Control Projects and New Source Review (NSR) Applicability, EPA, July 1, 1994] For example, EPA wrote:

...[P]ermitting authorities should not exclude as pollution control projects any pollution prevention project that can be reasonably expected to result in an increase in the utilization of the affected emission unit(s). For example, projects which significantly increase capacity, decrease production costs, or improve product marketability can be expected to affect utilization patterns. ... Under this guidance, however, permitting authorities should carefully review proposed pollution prevention projects to evaluate whether utilization of the source will increase as a result of the project. [Seitz, p. 7]

EPA further clarified how the Department is to approach its review of projects for this issue:

The permitting authority may presume that projects meeting the definition outlined in section III(A)(1) will not change utilization patterns. However, the permitting authority is to reject this presumption where there is reason to believe that the project will result in debottlenecking, loadshifting to take advantage of the control equipment, or other meaningful increase in the use of the unit above current levels. Where the project will increase utilization and emissions, the associated emissions increases are calculated based on the post-modification potential to emit of the unit considering the application of the proposed controls. In such cases the permitting agency should consider the projected increase in emissions as collateral to the project and determine whether, notwithstanding the emissions increases, the project is still environmentally beneficial and meets all applicable safeguards. [Seitz, p. 11]

The Department considered that the use of petcoke might provide an incentive to increase the capacity utilization (availability) of Big Bend units 1 and 2 because petcoke is less expensive than coal. Another consideration was whether the utilization of these units will be increased in order to shift the generating load from more polluting units to Big Bend in order to free up SO₂ allowances. In terms of fuel

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

consumption (heat input) per hour of operation, availability for the past five years at units 1 and 2 has averaged 82% and 86% respectively. [ARMS AOR information, 1993-1997]

The Department considers increased availability solely from the use of petcoke at these units to be unlikely. The commitment to use the FGD system whenever petcoke is used in any proportion imposes an economic disincentive to increase availability from the use of petcoke. It could be argued that the fuel savings from petcoke only partly compensates for the increased expense of operating the FGD system, which includes not only direct operating costs but also a penalty on net MW capacity since the FGD system will have an electrical load of approximately 13 MVA. [August 10, 1998 response from TEC to DEP request for additional information] The company obviously obtains an economic benefit when it uses the FGD system that is roughly equal to the value of SO₂ allowances offset by emissions reductions minus the cost of operating the FGD system, but TEC gains this benefit regardless of whether it burns coal or a petcoke/coal mixture. The company is already permitted to burn a petcoke/coal mixture in its other units at Big Bend Station. However, the company's annual operating reports submitted to the Department show that the availability of unit 3 decreased in the year after TEC received authorization to fire petcoke in that unit. [ARMS AOR information, 1997 vs. 1996]

The use of the FGD system may allow for fewer SO₂ allowances to be utilized at Big Bend (resulting in excess allowances), and these allowances can be either utilized at other TEC plants or sold to other utilities. Since TEC regularly operates other units in its system that consume allowances (such as the Gannon plant), it is likely that TEC will utilize the excess Big Bend allowances at its other units. If TEC sold its excess Big Bend allowances to other utilities, allowances to operate its other units would have to be purchased, perhaps at a higher cost than those sold.

TEC does not anticipate any impact on availability as a result of the FGD system or the use of petcoke. The Big Bend units are base load units that operate as first on, last off, because they are some of the most economical units the company operates. Thus, they are already as available as they possibly can be, given they are more economical to operate than other units of the company. [Conversation with James Hunter of TEC on November 20, 1998] The Department believes it is unlikely that utilization of Big Bend units 1 and 2 will increase as a result of this project.

5. FGD CONTROL TECHNOLOGY

The proposed FGD system is a single spray tower SO₂ absorber with four spray banks with liquid spray nozzles. Flue gas from each unit's ESP will be directed through an inlet isolation damper to a booster fan, then through an outlet isolation damper into the absorber tower where the gases will be exposed to a spray of wet ground limestone. The gases will exit the tower through mist eliminators into a new stack where they will be exhausted to the atmosphere. The mist eliminators will be kept clean by periodic washing. Sulfur dioxide in the flue gases will combine with the calcium from the limestone to form calcium sulfite. The reacted limestone slurry will be maintained in a reaction tank at the bottom of the tower. Fresh limestone reagent is added to the reaction tank as a slurry to maintain the design pH, typically 4.5 to 5.5. Oxidation air will be introduced into the reaction tank to convert the calcium sulfite to hydrated calcium sulfate (gypsum). Residence time of solids in the reaction tank is generally 15 to 20 hours to provide for proper gypsum crystal growth.

Limestone reagent slurry will be prepared through a new wet grinding mill which will be fed limestone from a new silo via a weigh feeding system. The grinding water will be primarily makeup water from the plant service water system. The gypsum crystals will be removed from the reaction tank through a slurry bleed system, and will be concentrated in a series of hydroclones and vacuum drum filters. The dewatered gypsum will be removed from the site or stored for later removal.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Lime or limestone wet scrubbing is one of the preferred options for SO₂ removal for power producing facilities, and combination ESP/single-stage wet scrubber systems are the most common systems in use. This is the system proposed by TEC. The limestone chemistry is well understood, as are the effects of contaminants in the scrubbing slurry such as magnesium and chlorides, and the process of gypsum crystallization. The scrubbers can be successfully operated to minimize scale formation from gypsum crystallization. The process TEC proposes will use the gypsum (hydrated calcium sulfate) byproduct as a salable commodity, which, while not common, is a viable option that will minimize waste disposal. The limestone preparation system is typical for this type of control device. [Singer, Joseph G., P.E., ed., *Combustion Fossil Power*, Windsor, CT, Combustion Engineering, Inc., 1991, pp. 15-36 to 15-55 and 15-62 to 15-64]

Approximately 44% of the electric generating capacity of the United States was produced by coal-fired units in 1990, and 21.1% of the coal-fired capacity (9.3% of total capacity) was controlled by FGD equipment in 1989. Wet scrubbing FGD systems can be described as generating a disposable product or a salable product. TEC's proposed FGD process is a wet scrubber that produces salable gypsum. Wet scrubbing processes that produce a salable gypsum product represented 4.1% of FGD-controlled electrical generating capacity in 1989, or some 2.8 GW of capacity. [Air & Waste Management Association, *Air Pollution Engineering Manual*, New York, Van Nostrand Reinhold, 1992; pp. 222 and 232]

Thus, FGD control systems like the one proposed are not experimental or unproven.

The design and operating parameters for the proposed FGD system are an inlet temperature of approximately 300°F and outlet temperature of 127°F at saturated conditions; inlet air flow of 2,820,000 acfm and a liquid rate of 41,000 gpm in each of four spray heads, for a resulting liquid to gas ratio of 58.2 gpm/thousand acfm. The pressure drop will be 6 inches of water with a gas velocity of 14 feet per second. Materials of construction are A-36 carbon steel with C-276 alloy cladding for the shell, C-276 alloy for the spray piping and fiberglass reinforced pipe for the oxidation air piping. The design features are typical for this type of system. [Air & Waste Management Association, *Air Pollution Engineering Manual*, New York, Van Nostrand Reinhold, 1992; Table 9, p. 233]

Wheelabrator itself describes the project in a news release dated August 24, 1998 from Wheelabrator's Internet web site at www.wapc.com:

The scope of the turnkey contract includes the supply and installation of one Dual Flow Tray absorber using limestone forced oxidation chemistry with a dibasic acid additive. It will remove sulfur dioxide (SO₂) from the coal-fired boiler flue gas of Big Bend Units 1 and 2, rated at 440 megawatts each. The high velocity absorber will be one of the largest capacity absorbers installed at an electric power generation facility in the United States and will provide the most economical wet scrubbing technology. At full load operation, the FGD system will be capable of removing 95 percent of the SO₂. The treated effluent stream from the absorber will produce commercial grade gypsum that can be used in the manufacture of wallboard. The project is scheduled for completion early in the year 2000.

Units 1 and 2 currently have a flue gas conditioning system that includes injection of SO₃ in the boiler flue gas prior to the ESPs. This flue gas conditioning system will not be used for each unit when its flue gas is directed to the FGD system. The existing stack will be retained to allow for operation of each or both units in the bypass or unscrubbed mode.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

6. EMISSION LIMITATIONS

TEC has proposed new sulfur dioxide emission limitations to ensure that the project results in no predicted violation of the 24-hour SO₂ Florida AAQS. Some of these limits were proposed directly by the applicant in its application, while others--principally the limits on unit 3 in the unscrubbed mode--were relied upon by the applicant in its modeling. The "base case" operating scenario (units 1, 2 and 3 all operating in the unscrubbed mode--which would be scenario 7 in this action) will not specifically be addressed by this permit. The emission limitations on units 1, 2 and 3 for the base case scenario will be addressed in the pending Title V permit for Big Bend Station.

The existing emission limits for units 1, 2 and 3 from Rule 62-296.405(1)(c)2.b., F.A.C., will remain applicable. New limits in units of pounds per hour, 24-hour average, will be imposed on each unit, including unit 3, for a variety of operating scenarios. The permit will specify that the 24 hour average for the new emission limits is on a calendar day basis to equate the modeled emission scenarios to the 24-hour AAQS. The averaging period for the 24 hour 25 tons/hour emission limit of Rule 62-296.405(1)(c)2.b., F.A.C. is not specified by rule, but is assumed to also be on a calendar day basis. The proposed allowable limitations for sulfur dioxide are described in the following tables.

Operating Scenario	Operating Mode, Emission Limits			Emission Limit Units	Averaging Period ^a
	Unit 1	Unit 2	Unit 3		
1	Scrubbed, 3310	Scrubbed, 3277	Unscrubbed, 14814	lb/hour	24 hours
2	Scrubbed, 3310	Unscrubbed, 9590	Unscrubbed, 9876	lb/hour	24 hours
3	Scrubbed, 3310	Scrubbed, 3277	Scrubbed, 3374	lb/hour	24 hours
4	Scrubbed, 3310	Unscrubbed, 11588	Scrubbed, 3374	lb/hour	24 hours
5	Unscrubbed, 11707	Scrubbed, 3277	Scrubbed, 3374	lb/hour	24 hours
6	Unscrubbed, 9689	Scrubbed, 3277	Unscrubbed, 9876	lb/hour	24 hours

Emission Limitations for Unit 1

Emission Limit	Units	Averaging Period
6.5 ^b	lb/mmBtu	2 hours

Emission Limitations for Unit 2

Emission Limit	Units	Averaging Period
6.5 ^b	lb/mmBtu	2 hours

Emission Limitations for Units 1, 2 and 3

Emission Limit	Units	Averaging Period
25 ^{b c}	tons/hour	24 hours
31.5 ^{b c}	tons/hour	3 hours

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Notes for tables:

Emission limits are as proposed by the applicant in its application or modeling data except where noted. The "base case" operating scenario (units 1, 2 and 3 all operating in the unscrubbed mode) is not specifically addressed by this permit.

"Scrubbed" refers to operation while directing flue gas to the FGD system. "Unscrubbed" refers to operation while not directing flue gas to the FGD system.

a The 24-hour averaging period for these limits shall be calculated on a calendar day basis.

b Emission limit from Rule 62-296.405(1)(c)2.b., F.A.C.

c Total emissions from units 1, 2 & 3

Emissions of particulate matter from the new limestone handling operations will be controlled by two baghouses, as discussed in section 9.1 below. NSPS Subpart OOO limits particulate emissions from the baghouse that controls the conveyor drop points to 0.05 g/dscm and 7% opacity, although the applicant has requested a more stringent VE limit of 5% opacity. At the specified air/cloth ratio for this baghouse, annual emissions are estimated at 4.8 tons per year. The limit from Subpart OOO for the silo baghouse is 7% opacity, although the applicant has requested a more stringent VE limit of 5% opacity. At the specified air/cloth ratio for this baghouse, annual emissions are estimated at 0.4 tons per year. There is little collateral increase in emissions of PM expected as a result of this project. These minor collateral emission increases of PM, considered with the large percentage reduction in mass emissions of SO₂, satisfies, in part, the environmentally beneficial test.

7. AMBIENT IMPACT ANALYSIS

TEC provided ambient impact modeling using ISCST3 for criteria pollutants including SO₂ to support its application. The modeled operating scenarios were operation of all Big Bend units at maximum heat input rate, with one or more of units 1, 2 and 3 operated without flue gases controlled by FGD (in the "unscrubbed" mode). (Unit 3 can be operated with its flue gas directed to the FGD system that controls emissions from unit 4.) Four scenarios were modeled, and two more scenarios can be constructed from the modeled scenarios because they are similar to two of the modeled scenarios (reversing the status of units 1 and 2). The scenario of units 1, 2 and 3 all operating in the unscrubbed mode ("base case" scenario) was not modeled for this permit application because that is the operating scenario that is presently under review by the Department in TEC's pending Title V permitting action, and modeling submitted to support TEC's Title V permit application must indicate that this base case does not result in an exceedance of ambient impact standards before the Title V permit will be issued. As discussed in Section 6 above, the emission limitations on units 1, 2 and 3 for the base case scenario will be addressed in the pending Title V permit for Big Bend Station.

The modeling results presented in the original application showed that maximum predicted 24-hour SO₂ impacts for scenario 1 (units 1, 2, 4 scrubbed, 3 unscrubbed) and scenario 2 (units 1 and 4 scrubbed, units 2 and 3 unscrubbed) might result in predicted violations of the 24-hour SO₂ Florida AAQS of 260 ug/m³ (found at Rule 62-204.240(1)(b), F.A.C.) to which Big Bend Station would significantly contribute when other unmodeled sources in the area were included in the analyses. TEC addressed the Department's concern by performing additional modeling using the revised emission rates for units 1, 2 and 3. As discussed in Section 6 above, TEC has proposed new sulfur dioxide emission limitations to ensure that the project results in no predicted violation of the 24-hour SO₂ Florida AAQS. Some of these limits were proposed directly by the applicant in its application, while others—principally the limits on unit 3 in the unscrubbed mode—were relied upon by the applicant in its modeling. The revised modeled operating scenarios do not result in predicted violations of the 24-hour SO₂ Florida AAQS from Big Bend Station

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

alone, nor does the Big Bend Station significantly contribute to any predicted violations of the 24-hour SO₂ standard when off-site sources are included in the modeling analyses conducted for this permitting action.

Further, the revised modeled operating scenarios show no increase in predicted 24-hour SO₂ impact as compared to the base case scenario (submitted for the pending Title V permitting action) in 19 of 20 of the modeled results. (The modeled results are each of four modeled scenarios evaluated for five years of meteorological conditions.) The one result that showed a predicted increase in 24-hour SO₂ impact was for scenario 1 for the 1993 meteorological conditions, however, this result is well below the 24-hour SO₂ Florida AAQS. It is also notable that the five year highest second highest (H2H) results from each scenario are less than the five year H2H results of the base case. The preponderance of results that showed no increase in predicted 24-hour SO₂ impact satisfy, in part, the environmentally beneficial test.

8. CEMS FOR COMPLIANCE

In the rule preamble discussed above, EPA described that it will rely on continuous emission monitoring systems (CEMS) to track actual emissions because CEMS data is readily available for electric utilities. EPA writes, "In addition, the emissions monitoring provisions of title IV requires that continuous emissions monitoring data or other highly accurate methods for reporting actual emission will be used for all affected sources. This will assure that actual emissions data will be readily available for utility sources subject to today's rule." [FR Vol. 57, No. 140, p. 32333.] Although EPA discusses this in the context of the actual to future actual emissions test, it is clear that EPA believes that the requirements of the acid rain program will ensure that reliable emissions data is available from CEMS installed for acid rain compliance tracking.

Rule 62-296.405(1)(f)1 b., F.A.C., requires that emissions units with sulfur dioxide control equipment shall install sulfur dioxide continuous monitoring equipment. This equipment must conform to the requirements of Rule 62-296.405(1)(f), F.A.C., for location, data and reporting requirements. The applicant has proposed to utilize CEMS for determining compliance with the emission limitations for SO₂ for the proposed project. Given the complexity of the proposed emission limitations, the requirement in the Department's rules to install CEMS, and EPA's opinion that such systems are reliable and will be used to track emissions, it is reasonable to utilize CEMS for SO₂ compliance. The CEMS will be required to meet the QA requirements of the acid rain program.

9. ANCILLARY SYSTEMS

9.1 LIMESTONE HANDLING SYSTEM

New components of the limestone handling system will be added to provide limestone for the proposed FGD system. Baghouses will be installed on these components to control particulate emissions. New components are silo C and its related rotary unloader, belt feeder and wet ball mill, and reversible belt conveyors LF and LG. Conveyors LF and LG will replace an existing bifurcated chute which feeds from conveyor LE to silos A and B. Limestone will be transferred from an enclosed storage structure through a transfer tower to conveyor LE. Conveyor LE will drop to conveyor LF. Conveyor LF can drop to conveyor LG, or can discharge into existing silo A. Conveyor LG will discharge into existing silo B or new silo C. Limestone will be conveyed through a rotary unloader from silo C via a belt feeder to a new wet ball mill with a capacity of 55 tons per hour to provide limestone slurry to the proposed FGD system. Existing baghouses on this system control emissions from displaced air in silos A and B (each silo has two baghouses). Two new baghouses (emissions units) are associated with this project: one to control particulate emissions from the drop points from conveyors LE, LF and LG as well as the silo C belt feeder, and one to control emissions from displaced air in silo C. The new emissions units and control equipment are: [Telephone conversations with James Hunter of TEC on January 14, 1999 and information received 1/15/99 by e-mail]

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Emissions Unit Number	Emission Unit	Manufacturer/Model	Size
020	Drops from limestone handling conveyors LE, LF and LG and silo C belt feeder with baghouse	American Air Filter, Fabripulse - Model B	12-72-1155
021	Silo C with one baghouse	American Air Filter, Fabripak	6-16-132G

The applicant, in its revised submittal, identified the drops from conveyors LE, LF and LG and silo C as subject to NSPS Subpart OOO. The drop from silo C to the new belt feeder through a rotary unloader and from the belt feeder to the new wet ball mill are enclosed, with emissions controlled by the baghouse that controls the conveyor drops. The new wet ball mill is not subject to NSPS Subpart OOO because it is a wet process.

NSPS Subpart OOO limits particulate emissions from the baghouse that controls the conveyor drop points to 0.05 g/dscm and 7% opacity, although the applicant has requested a more stringent VE limit of 5% opacity. At the specified air/cloth ratio for this baghouse, annual emissions are estimated at 4.8 tons per year. The limit from Subpart OOO for the silo baghouse is 7% opacity, although the applicant has requested a more stringent VE limit of 5% opacity. At the specified air/cloth ratio for this baghouse, annual emissions are estimated at 0.4 tons per year. The applicant requested that it be allowed to demonstrate compliance with the more stringent limit of 5% opacity in lieu of a stack test for compliance with the PM limit of Subpart OOO for the baghouse controlling the drop points (emissions unit 020). This alternate standard will require the approval of EPA, and the draft permit will be sent to EPA requesting its approval of this alternate standard. If EPA does not approve this alternate standard, it will be removed from the final permit.

These new emissions units are not part of TEC's current limestone handling facilities addressed in PSD permit PSD-FL-040, and these are not intended to be covered by the requirements of that permit.

9.2 GYPSUM HANDLING SYSTEM

The new gypsum handling facilities are not subject to a source-specific emission standard. The project includes new hydroclones for thickening the gypsum slurry, the replacement of two existing vacuum drum filters with two new ones, each with a capacity to dewater the gypsum product of units 1 through 4, and a new return slurry tank. The gypsum is dewatered to about 90% solids and conveyed to either a stackout area where it is loaded into trucks or a storage area where it is stored in a pile. The existing gypsum conveying configuration is capable of handling the additional gypsum and is not proposed to be modified as part of this project. The proposed dewatering facilities are not expected to be a source of particulate emissions because these processes handle wet gypsum crystals.

The gypsum handling operation, emissions points GH-001 - 017, are listed as unregulated emissions units in the Draft Title V permit, and the applicant identified these emissions points (included in this application as one emissions unit) as unregulated in its application for this project. As an unregulated emissions unit, the gypsum handling facilities will be subject only to the facility-wide specific conditions of the permit.

Emissions from the handling operations are estimated by the applicant to be 0.04 lb/hr and 0.16 tons per year each for emission points GH-001 (stacker conveyor to the north stackout pile), GH-004a and GH-004b (transfer points from the stackout pile to a loadout conveyor and from the conveyor into trucks), GH-007, GH-008, GH-009 and GH-010 (conveyor drops for conveyors GD, GE, GF, and radial stacker), and

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

GH-015 (dozer transfer from storage pile to trucks). These are existing emission points that will be handling the additional gypsum from the proposed project.

10. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that TEC's proposed installation of a flue gas desulfurization system to control sulfur dioxide emissions from units 1 and 2 will comply with all applicable state and federal air pollution regulations, and that the project constitutes a pollution control project per Department and EPA regulations. Considering the revised operating scenarios and the percentage reduction in mass emissions of sulfur dioxide, the installation of the FGD system is environmentally beneficial. Neither the use of petcoke in a mixture with coal, nor the selective operation of the FGD system, exclude consideration of the FGD installation as a pollution control project.

The Department intends to issue a permit to the applicant to construct the FGD system and the related appurtenances including the booster fans and the new stack, and allow the use of petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal. The permit will require that whenever each unit is fired with petcoke in any amount, its flue gases be directed to the FGD system, but will allow TEC to bypass the system otherwise at its option. The permit will provide for a limit on the amount of petcoke that may be bunkered, to limit possible excess emissions in the event of an unexpected breakdown of the FGD system. The permit will include emission limits for sulfur dioxide for units 1, 2 and 3 for six operating scenarios and will include the current limitations specified by Rule 62-296.405(1)(c)2.b., F.A.C.. The permit will include the new emission units associated with limestone handling, will specify the applicable requirements of the NSPS Subpart OOO, as well as the applicant's more stringent requested VE limit of 5% opacity. The applicant's request that it be allowed to demonstrate compliance with the more stringent limit of 5% opacity in lieu of a stack test for compliance with the PM limit of Subpart OOO for the baghouse controlling the drop points (emissions unit 020) will be included in the draft permit. The draft permit will be sent to EPA requesting its approval of this alternate standard. If EPA does not approve this alternate standard, it will be removed from the final permit. The permit will authorize construction of the new equipment associated with gypsum handling. The permit will require that compliance with the existing and new sulfur dioxide emission limitations for units 1, 2 and 3 be demonstrated via CEMS, and will require the CEMS comply with the quality assurance requirements of the acid rain program.

The ambient impact analysis was evaluated by Cleve Holladay of the New Source Review Section. This Preliminary Determination and Technical Evaluation was prepared by:

Joseph Kahn, P.E.
Bureau of Air Regulation
New Source Review Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
850/921-9519

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

This facility consists of an electric power generating plant with four fossil fired steam generating units, units 1, 2, 3 and 4.

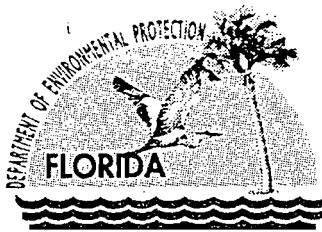
PROJECT DETAILS

This permitting action is to construct an FGD system and the related appurtenances including booster fans and a new 490 foot stack to serve existing units 1 and 2, and to allow the use of petcoke in a mixture with coal up to 20% petcoke/80% coal (by weight) in existing units 1 and 2. The permit requires that whenever either unit is fired with petcoke in any amount up to the allowable ratio, its flue gases be directed to the FGD system. This permit allows the applicant to bypass the system otherwise at its option. (Existing emission controls include an electrostatic precipitator (ESP) for each unit, with flue gas from each ESP ducted into a common stack. The FGD system will receive flue gas from each ESP, with scrubbed flue gas discharged into a new common stack.) Included in this permitting action is the construction of new emission units associated with limestone handling. Emissions units addressed by this permit are:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
001	Fossil fuel fired steam boiler generating unit rated at 4037 mmBtu/hr (mo. avg. basis), with an electrical generating capacity of 445 MW
002	Fossil fuel fired steam boiler generating unit rated at 3996 mmBtu/hr (mo. avg. basis), with an electrical generating capacity of 445 MW
003	Fossil fuel fired steam boiler generating unit rated at 4115 mmBtu/hr (mo. avg. basis), with an electrical generating capacity of 445 MW
020	Drops from limestone handling conveyors LE, LF and LG and silo C belt feeder, with baghouse
021	Silo C with one baghouse

This permit authorizes construction of new components of the limestone handling system to provide limestone for the proposed FGD system. New components are silo C and its related rotary unloader, belt feeder and wet ball mill, and reversible belt conveyors LF and LG. Conveyors LF and LG will replace an existing bifurcated chute which feeds from conveyor LE to silos A and B. Particulate emissions from drops from limestone handling conveyors LE, LF and LG and the silo C belt feeder are controlled by a baghouse: American Air Filter Fabripulse - Model B, size 12-72-1155. Particulate emissions from displaced air in silo C will be controlled by a baghouse: American Air Filter Fabripak, size 6-16-132. The new wet ball mill is a wet process with no expected particulate emissions.

This permit also authorizes construction of the new equipment associated with gypsum handling (dewatering). The new gypsum handling facilities are not subject to a source-specific emission standard (they are subject to the facility-wide specific conditions of this permit). The project includes new hydroclones for thickening the gypsum slurry from the FGD system, the replacement of two existing vacuum drum filters with two new ones, each with a capacity to dewater the gypsum product of units 1 through 4, and a new return slurry tank. This equipment is not expected to be a source of particulate emissions because these processes handle wet gypsum crystals. The existing gypsum handling equipment will also handle the additional dewatered gypsum from this FGD system with no changes.



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE

Tampa Electric Company
Big Bend Station
PO Box 111
Tampa, Florida 33601-0111

Authorized Representative:

Gregory M. Nelson, P.E.
Manager--Environmental Planning

Permit No.	0570039-003-AC and 0570039-004-AC
Project	FGD System--Units 1 and 2
SIC Code:	4911
Expires:	^DRAFT

PROJECT AND LOCATION

This permit authorizes Tampa Electric Company to construct a flue gas desulfurization (FGD) system to serve existing units 1 and 2, and allows the use of petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal (by weight) in existing units 1 and 2 under the conditions of this permit.

This facility is located at Big Bend Station, 6944 US Highway 41 North, Apollo Beach, Hillsborough County. UTM coordinates are: Zone 17; 361.90 km E and 3075.00 km N.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to perform the construction in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix GC General Permit Conditions
Appendix A NSPS General Provisions

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

This project will require imposition of emission limitations for SO₂ for unit 3 under certain operating scenarios.

REGULATORY CLASSIFICATION

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

This project is exempt from the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) as discussed in the Technical Evaluation and Preliminary Determination dated January 26, 1999.

This facility is a major source of hazardous air pollutants (HAPs) (based on the initial Title V permit application received June 14, 1996) and is also subject to the provisions of Title IV, Acid Rain, Clean Air Act as amended in 1990.

Emissions units 001 and 002 are subject to the requirements of the state rules as indicated in this permit. The new limestone handling emissions units (020 and 021) are subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR 60.670 - 60.676) and 40 CFR 60 Subpart A (effective July 1, 1998); and are subject to the requirements of the state rules as indicated in this permit.

PERMIT SCHEDULE

- July 6, 1998 Received application for construction/operation permit
- Nov. 11, 1998 Received final response to request for additional information
- Nov. 11, 1998 Permit application deemed complete
- Jan. 15, 1999 Received information from applicant regarding limestone handling controls.
- Jan. 25 1999 Distributed Notice of Intent to Issue permit
- ^ Notice of Intent published in ^

SECTION I. FACILITY INFORMATION

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received at the Bureau of Air Regulation on July 6, 1998
- Department's Technical Evaluation and Preliminary Determination dated January 26, 1999
- Department's Intent to Issue and public notice information dated January 25, 1999
- Department's letters dated August 5, 1998 requesting additional information
- Applicant's letters received August 11, 1998 and August 21, 1998 (via fax)
- Applicant's aerial photograph of modeling receptor locations received August 19, 1998
- Applicant's revised application received November 11, 1998
- E-mail from James Hunter of TEC with revised information about control equipment for new limestone handling equipment received January 15, 1999

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

The following specific conditions apply to all emissions units at this facility addressed by this permit.

ADMINISTRATIVE

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection at Mail Station 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, phone number 850/488-0114. All documents related to reports, tests, minor modifications and notifications shall be submitted to the Department's Southwest District office at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218, and phone number 813/744-6100. Copies of reports, tests, minor modifications and notifications shall be submitted to Air Management Division, Hillsborough County Environmental Protection Commission, 1410 North 21 Street, Tampa, Florida 33605, and phone number 813/272-5530.
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Expiration: This air construction permit shall expire on ^DRAFT. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C.]
7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
8. Title V Operation Permit Required: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The owner or

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

operator shall apply for and receive a Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the DEP's Bureau of Air Regulation, and a copy sent to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSION LIMITING STANDARDS

9. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]
10. Unconfined Emissions of Particulate Matter: [Rule 62-296.320(4)(c), F.A.C.]
- (a) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
 - (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
 - (c) Reasonable precautions include the following:
 - Paving and maintenance of roads, parking areas and yards.
 - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
 - Landscaping or planting of vegetation.
 - Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
 - Confining abrasive blasting where possible.
 - Enclosure or covering of conveyor systems.
 - (d) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impact of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

11. General Pollutant Emission Limiting Standards: [Rule 62-296.320(1)(a)&(2), F.A.C.]

- (a) No person shall not store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
- (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Note: An objectionable odor is defined in Rule 62-210.200(198), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

OPERATIONAL REQUIREMENTS

- 12. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office and, if applicable, appropriate local program. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
- 13. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
- 14. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS requirements (from any subpart of 40 CFR 60).
 - (a) Excess emissions resulting from start-up, shutdown or malfunction of any emissions units shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
 - (b) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

- 15. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

16. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
17. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
18. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C. [Rule 62-297.310(4), F.A.C.]
19. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]
 - (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
20. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]
21. Test Notification: The owner or operator shall notify the Department's district office and, if applicable, appropriate local program, at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.]

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

[Note: The federal requirements of 40 CFR 60.8 require 30 days notice of the initial test and any tests required under section 114 of the Clean Air Act, but the Department rules require 15 days notice for the annual compliance tests. Unless otherwise advised by the district office or, if applicable, appropriate local program, provide 15 days notice prior to conducting annual tests.]

22. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

23. Duration of Record Keeping: Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. [Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.]
24. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
25. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]
26. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate local program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department. [Rule 62-210.700(6), F.A.C.]
27. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southwest District office and, if applicable, the appropriate local program by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

AIR CONSTRUCTION PERMIT 0570039-003-AC & 0570039-004-AC

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
001	Fossil fuel fired steam boiler generating unit 1
002	Fossil fuel fired steam boiler generating unit 2
003	Fossil fuel fired steam boiler generating unit 3

[Note: These emissions units are subject to the requirements of the state rules as indicated in this permit. Emissions unit 003 is specifically subject only to the requirements of Section II and specific conditions 5, 6 and 7 of Section III of this permit.]

OPERATIONAL REQUIREMENTS

1. Hours of Operation: These emissions units may operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE)]
2. Fuel: This permit authorizes the use of petroleum coke (petcoke) in a mixture with coal up to 20.0% petcoke (by weight). [Rules 62-4.070(3) and 62-210.200, F.A.C., Definitions-potential to emit (PTE), and applicant request]
3. FGD Operation Required for Petcoke: Whenever each emissions unit is fired with petcoke in any amount up to the allowable percentage, its flue gases shall be directed to the FGD system. [Rule 62-4.070(3), F.A.C., and applicant request]

[Note: The owner or operator may operate each emissions unit without directing its emissions to the FGD system whenever petcoke is not being fired in the emissions unit.]

[Note: The excess emissions provisions of section II, condition 14 of this permit are also applicable to the FGD system operation.]

4. Limit on Petcoke Bunkering: The owner or operator at any given time shall not bunker more than the amount of petcoke that may be fired in each emissions unit in one day. [Rule 62-4.070(3), F.A.C., and applicant request]

[Note: This condition is intended to limit possible excess emissions in the event of an unexpected breakdown of the FGD system that requires its shutdown while either emissions unit is firing petcoke.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

5. Emission Limitations, SO₂: Emissions of sulfur dioxide from these emissions units are limited as shown in the following tables.

[Tables begin on the following page]

AIR CONSTRUCTION PERMIT 0570039-003-AC & 0570039-004-AC

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

Operating Scenario	Operating Mode, Emission Limits			Emission Limit Units	Averaging Period ^a
	Unit 1	Unit 2	Unit 3		
1	Scrubbed, 3310	Scrubbed, 3277	Unscrubbed, 14814	lb/hour	24 hours
2	Scrubbed, 3310	Unscrubbed, 9590	Unscrubbed, 9876	lb/hour	24 hours
3	Scrubbed, 3310	Scrubbed, 3277	Scrubbed, 3374	lb/hour	24 hours
4	Scrubbed, 3310	Unscrubbed, 11588	Scrubbed, 3374	lb/hour	24 hours
5	Unscrubbed, 11707	Scrubbed, 3277	Scrubbed, 3374	lb/hour	24 hours
6	Unscrubbed, 9689	Scrubbed, 3277	Unscrubbed, 9876	lb/hour	24 hours

Emission Limitations for Unit 1

Emission Limit	Units	Averaging Period
6.5 ^b	lb/mmBtu	2 hours

Emission Limitations for Unit 2

Emission Limit	Units	Averaging Period
6.5 ^b	lb/mmBtu	2 hours

Emission Limitations for Units 1, 2 and 3

Emission Limit	Units	Averaging Period
25 ^{b c}	tons/hour	24 hours
31.5 ^{b c}	tons/hour	3 hours

Notes for tables:

Emission limits are as proposed by the applicant in its application or modeling data except where noted. The "base case" operating scenario (units 1, 2 and 3 all operating in the unscrubbed mode) is not specifically addressed by this permit.

"Scrubbed" refers to operation while directing flue gas to the FGD system. "Unscrubbed" refers to operation while not directing flue gas to the FGD system.

a The 24-hour averaging period for these limits shall be calculated on a calendar day basis.

b Emission limit from Rule 62-296.405(1)(c)2.b., F.A.C.

c Total emissions from units 1, 2 & 3

[Rules 62-296.405(1)(c)2.b. and 62-4.070(3), F.A.C.]

[Note: These emissions limits are formulated to protect the 24-hour AAQS for sulfur dioxide.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

6. Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) in the FGD system stack to measure and record the sulfur dioxide emissions from these emissions units, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limits of this permit shall be based on 2-hour or 3-hour averages or 24-hour calendar day averages calculated by the CEMS expressed in units of pounds per million Btu heat input, pounds per hour or tons per hour, as applicable. [Rules 62-4.070(3) and 62-296.405(1)(f)1.b., F.A.C., and applicant request]

[Note: The averaging period for the 24 hour 25 tons/hour emission limit of Rule 62-296.405(1)(c)2.b., F.A.C., is not specified by rule, but is assumed in this permit to also be on a calendar day basis.]

7. CEMS Requirements: The monitoring devices shall comply with the applicable requirements of Rule 62-297.520, F.A.C., and with 40 CFR Part 51, Appendix P, and 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) and 40 CFR 60, Appendix F, Quality Assurance Procedures, and 40 CFR Part 75. The monitoring plan, consisting of data on CEMS equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the Department's Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. [Rules 62-4.070(3) and 62-296.405(1)(f), F.A.C.]

8. Petcoke Sulfur Content: The owner or operator shall measure the sulfur content of representative samples of all petcoke received using appropriate ASTM methods to demonstrate compliance with the sulfur content limit of this permit. [Rule 62-4.070(3), F.A.C.]

[Note: The sulfur content of petcoke is not limited by this permit. This condition and condition 11 of this section require records of petcoke sulfur content to ensure that the applicant has sufficient information available to alter the ratio of petcoke to coal, if necessary to ensure compliance with the emission limit for sulfur dioxide from the FGD system, when it fires petcoke with a higher than average sulfur content.]

9. Monitor Petcoke Usage: The owner or operator shall operate and maintain equipment to record and calculate the weight percentage of petcoke and coal bunkered and fired in each emissions unit, to verify compliance with the bunkering limit and the percentage limitation on petcoke usage of this permit. [Rule 62-4.070(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

10. Records of Operation: The owner or operator shall make and maintain a daily record of operation of each emissions unit showing the date, fuel(s) used, whether flue gas was directed to the FGD system, and the duration of all startups, shutdowns and malfunctions. Records of fuel bunkering and petcoke usage (weight percent of petcoke fired) shall also be made on at least a daily basis. Data that verifies compliance with the percentage limitation on petcoke usage shall be submitted with the annual operating report. [Rule 62-4.070(3), F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

11. Records of Petcoke Sulfur Content: The owner or operator shall maintain records of petcoke sampling and analysis results performed as required by specific condition 8 of this section. [Rule 62-4.070(3), F.A.C.]

[See the note for condition 8 of this section.]

12. Quarterly Reporting Requirements: The owner or operator shall submit to the Department a written report of emissions in excess of emission limiting standards of this permit for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file for a period of five years. [Rules 62-4.070(3) and 62-296.405(1)(g), F.A.C.]

[Note: Five year record keeping is required for Title V sources.]

AIR CONSTRUCTION PERMIT 0570039-003-AC & 0570039-004-AC

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
020	Drops from limestone handling conveyors LE, LF and LG and silo C belt feeder with baghouse
021	Silo C with one baghouse

[Note: These emissions units are subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR 60.670 - 60.676) and 40 CFR 60 Subpart A (effective July 1, 1998); and are subject to the requirements of the state rules as indicated in this permit. The emission limit of specific condition 16 is more stringent than the limitations of 40 CFR 60.672(a)(2) and 60.672(f), and compliance with this limit will assure compliance with those requirements.]

OPERATIONAL REQUIREMENTS

13. Hours of Operation: These emissions units may operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE)]
14. Enclosure of Equipment: All conveyors and conveyor transfer points shall be enclosed and exhaust from this equipment shall be directed to a baghouse to minimize particulate matter emissions. [62-4.070(3), F.A.C.]
15. Operating Procedures: Enclosures and baghouses for these emissions units shall be properly operated and maintained at all times in a condition to minimize particulate emissions. The owner and operator shall ensure that all facility staff responsible for these emissions units are trained in their operation and maintenance in accordance with the guidelines and procedures as established by the equipment manufacturers. [Rule 62-4.070(3), F.A.C.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

16. Visible Emissions: No owner or operator shall cause or allow visible emissions from the baghouses controlling these emissions units in excess of 5% opacity. [Rule 62-4.070(3), F.A.C. and request of applicant]

[Note: The emission limit of this condition is more stringent than the limitations of 40 CFR 60.672(a)(2) and 60.672(f), and compliance with this limit will assure compliance with those requirements.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

17. Visible Emissions Tests: Compliance with the visible emission limit of this permit shall be demonstrated by an annual compliance test using EPA Method 9. The duration of initial tests shall be three hours and the duration of subsequent annual tests shall be thirty minutes. [Rules 62-4.070(3) and 62-297.310(4)(a)2., F.A.C., and 40 CFR 60.11(b)]

[Note: The three hour duration of initial tests complies with the requirements of the NSPS and the thirty minute duration of subsequent tests complies with state rules.]

18. Visible Emissions Tests in Lieu of Stack Tests, Emissions Unit 020: The owner or operator is permitted to comply with the visible emission limit of specific condition 16 and the testing requirement

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

of specific condition 17 of this section in lieu of demonstrating compliance with the limitations of 40 CFR 60.672(a)(1) and (2). If the Department has reason to believe that the particulate weight emission limit of 40 CFR 60.672(a)(1) is not being met, it shall require compliance be demonstrated by the test method specified by 40 CFR 60.675.

THIS CONDITION REQUIRES THE APPROVAL OF THE ENVIRONMENTAL PROTECTION AGENCY. IF EPA DOES NOT APPROVE OF THIS CONDITION, IT WILL BE REMOVED FROM THE FINAL PERMIT.

REPORTING AND RECORD KEEPING REQUIREMENTS

19. Records of Maintenance: The owner or operator shall make and maintain records of maintenance on the enclosures and baghouses sufficient to demonstrate compliance with the operating procedures requirements of specific condition 15 of this section. [Rule 62-4.070(3), F.A.C.]

NSPS SUBPART OOO REQUIREMENTS

[Note: The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. The definitions of terms of this part shall have the meanings as defined in 40 CFR 60.671 Definitions. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

20. Pursuant to 40 CFR 60.672 Standard for Particulate Matter:

[Note: The requirements of 40 CFR 60.672(a)(1) and (2) apply to emissions unit 020, and the requirements of 40 CFR 60.672(f) apply to emissions unit 021.]

- (a) No owner or operator shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:
- (1) Contain particulate matter in excess of 0.05 g/dscm; and
 - (2) Exhibit greater than 7 percent opacity.

[Note: The emission limit of specific condition 16 of this section is more stringent than the limitation of 40 CFR 60.672(a)(2). See the note for that condition and the note for condition 21 below.]

- (f) No owner or operator shall cause to be discharged into the atmosphere from any baghouse that controls emissions from only an individual, enclosed storage bin, stack emissions which exhibit greater than 7 percent opacity.

[Note: The emission limit of specific condition 16 of this section is more stringent than the limitation of 40 CFR 60.672(f). See the note for that condition.]

21. Pursuant to 40 CFR 60.675 Test Methods and Procedures:

- (a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR 60 or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).
- (b) The owner or operator shall determine compliance with the particulate matter standards in 40 CFR 60.672(a) as follows:

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

[Note: The owner or operator is permitted to comply with the visible emission limit of specific condition 16 of this section in lieu of demonstrating compliance with the limitations of 40 CFR 60.672(a)(1) and (2). See also specific condition 18 of this section.]

THE PREVIOUS NOTE IS CONTINGENT ON APPROVAL OF SPECIFIC CONDITION 18 BY THE ENVIRONMENTAL PROTECTION AGENCY. IF EPA DOES NOT APPROVE OF THIS CONDITION, THIS NOTE WILL BE REMOVED FROM THE FINAL PERMIT.

(c) (2) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under 40 CFR 60.672(f) of this subpart, using Method 9, the duration of the Method 9 observations shall be 1 hour (ten 6-minute averages).

[Note: The duration of Method 9 observations for the initial test for the belt conveyor baghouses is 3 hours pursuant to 40 CFR 60.11(b).]

(g) If, after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting any rescheduled performance test required in this section, the owner or operator of an affected facility shall submit a notice to the Administrator at least 7 days prior to any rescheduled performance test.

22. Pursuant to 40 CFR 60.676 Reporting and Recordkeeping:

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672 of this subpart.

(h) The subpart A requirement under 40 CFR 60.7(a)(2) for notification of the anticipated date of initial startup of an affected facility shall be waived for owners or operators of affected facilities regulated under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

APPENDIX A. NSPS GENERAL PROVISIONS

[Note: The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

1. Pursuant to 40 CFR 60.1 Applicability:

- (a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).

[40 CFR 60.1]

2. Pursuant to 40 CFR 60.7 Notification And Record Keeping:

- (a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:
 - (1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 - (2) A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days nor less than 30 days prior to such date.
 - (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
 - (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
 - (6) A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the

AIR CONSTRUCTION PERMIT 0570039-003-AC & 0570039-004-AC

APPENDIX A. NSPS GENERAL PROVISIONS

Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

- (b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- (f) The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least three years following the date of such measurements, maintenance, reports, and records.
- (g) If notification substantially similar to that in 40 CFR 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR 60.7(a).
- (h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

[40 CFR 60.7]

3. Pursuant to 40 CFR 60.8 Performance Tests:

- (a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
- (b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
- (c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor

APPENDIX A. NSPS GENERAL PROVISIONS

shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

- (d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.
- (e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows: (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures. (2) Safe sampling platform(s). (3) Safe access to sampling platform(s). (4) Utilities for sampling and testing equipment.
- (f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8] [See the note for specific condition 21 of Section II of this permit regarding the proper advance notification of compliance tests.]

4. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements:

- (a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.
- (b) Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard). [See specific condition 17, Section III, above for test duration requirements.]
- (c) The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
- (d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing

APPENDIX A. NSPS GENERAL PROVISIONS

emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

- (e) (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in 40 CFR 60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.
- (2) Except as provided in 40 CFR 60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.
- (3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in 40 CFR 60.7(a)(6). If, for some reason, the Administrator cannot

APPENDIX A. NSPS GENERAL PROVISIONS

determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of 40 CFR 60.7(e)(1) shall apply.

- (6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by 40 CFR 60.8, the opacity observation results and observer certification required by 40 CFR 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by 40 CFR 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with 40 CFR 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, the shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.
- (7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.
- (8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.
- (f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of paragraphs (a) through (e) of 40 CFR 60.11.
- (g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in 40 CFR 60, nothing in 40 CFR 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[40 CFR 60.11]

5. Pursuant to 40 CFR 60.12 Circumvention:

No owner or operator subject to the provisions of 40 CFR 60.12 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

APPENDIX A. NSPS GENERAL PROVISIONS

6. Pursuant to 40 CFR 60.14 Modification:

- (a) Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
- (b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:
 - (1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
 - (2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1). When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
 - (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.
 - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
 - (3) An increase in the hours of operation.

APPENDIX A. NSPS GENERAL PROVISIONS

- (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.
- (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
- (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

[40 CFR 60.14]

7. Pursuant to 40 CFR 60.15 Reconstruction:

- (a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
- (b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:
 - (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
 - (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
- (c) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
 - (1) Name and address of the owner or operator.
 - (2) The location of the existing facility.

APPENDIX A. NSPS GENERAL PROVISIONS

- (3) A brief description of the existing facility and the components which are to be replaced.
- (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
- (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
- (6) The estimated life of the existing facility after the replacements.
- (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
- (e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
- (f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:
 - (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
 - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;
 - (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
 - (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

[40 CFR 60.15]

8. Pursuant to 40 CFR 60.17 Incorporations by Reference:

[Note: The remainder of this section has not been reproduced in this permit for brevity. See 40 CFR 60.17 for materials incorporated by reference.]

9. Pursuant to 40 CFR 60.19 General notification and reporting requirements:

- (a) For the purposes of 40 CFR 60, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.
- (b) For the purposes of 40 CFR 60, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide

APPENDIX A. NSPS GENERAL PROVISIONS

indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

- (c) Notwithstanding time periods or postmark deadlines specified in 40 CFR 60 for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
- (d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under 40 CFR 60 to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under 40 CFR 60, the owner or operator may change the dates by which periodic reports under 40 CFR 60 shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in 40 CFR 60. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
- (f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of 40 CFR 60.
- (ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in 40 CFR 60.
- (2) Notwithstanding time periods or postmark deadlines specified in 40 CFR 60 for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.
- (3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.
- (4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.
[40 CFR 60.19]

APPENDIX GC
GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology ();
 - (b) Determination of Prevention of Significant Deterioration (); and
 - (c) Compliance with New Source Performance Standards ().
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX GC
GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
- Reasonable time may depend on the nature of the concern being investigated.
- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy
THRU: Al Linero
FROM: Joe Kahn *JK*
DATE: January 26, 1999
SUBJECT: Tampa Electric Company, Big Bend Station FGD System for
Units 1 and 2

Attached for approval and signature is the intent to issue package for this project. This project is the installation of an FGD system for Big Bend units 1 and 2. The system includes new booster fans and a new 490 foot stack. The permit allows TEC to bypass the FGD system at its option unless the units are using petcoke. The FGD system will allow TEC to operate the FGD system to reduce emissions of sulfur dioxide as part of a strategy to meet the requirements of the Title IV Acid Rain program of the Clean Air Act. Operation of the FGD system will allow TEC to reduce the number of SO₂ allowances required at Big Bend (perhaps allowing use of the Big Bend allowances at another TEC facility such as the Gannon plant). The permit allows the use of up to 20.0% (by weight) petroleum coke (petcoke) blended with coal at units 1 and 2. The flue gas must be directed to the FGD system whenever any petcoke is fired in the unit(s) in any proportion up to the requested 20.0% petcoke/80.0% coal mixture.

The permit also includes new emissions units associated with limestone handling related to operation of the proposed FGD system. These are subject to NSPS Subpart OOO. Additional gypsum handling equipment will be installed to dewater gypsum from the proposed FGD system. The applicant requested that it be allowed to demonstrate compliance with the more stringent limit of 5% opacity in lieu of a stack test for compliance with the PM limit of Subpart OOO for the baghouse controlling the new limestone handling drop points (emissions unit 020). This alternate standard will require the approval of EPA, and the draft permit will be sent to EPA requesting its approval of this alternate standard. If EPA does not approve this alternate standard, it will be removed from the final permit.

Emissions of sulfur dioxide will decrease by approximately 84% from uncontrolled levels firing the coal/petcoke mixture, or an approximate 83% reduction from uncontrolled levels firing coal alone, when the FGD systems is used. The equivalent full load controlled sulfur dioxide emission rate is 0.82 lb/mmBtu. Emissions of sulfur dioxide from unit 3 are also limited by this permit under certain operating scenarios. Stack emissions of other pollutants are not expected to increase from units 1 and 2 as a result of this project. Particulate matter emissions from the new limestone handling operations will be about 5.2 tons per year.

I recommend your approval and signature.

Attachments

/jk



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

P.E. Certification Statement

Tampa Electric Company
Big Bend Station
FGD System for Units 1 and 2

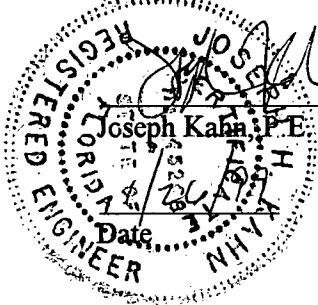
DEP File No.: 0570039-003-AC & -004-AC
Facility ID No.: 0570039

Project: Air Construction Permit

I HEREBY CERTIFY that the engineering features described in the above referenced application and related additional information submittals, if any, and subject to the proposed permit conditions, provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

This review was conducted by me, with the exception of the ambient impact analysis evaluation which was conducted by Cleve Holladay under my responsible supervision.

(Seal)



Permitting Authority:
Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/922-6979

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