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Memorandum

Florida Department of Environmental Protection

To: Michael G. Cooke, Director
Division of Air Resource Management

Through: Trina L. Vielhauer, Chief
Bureau of Air Regulation

From: Cindy L. Phillips, P.E.

Re: Tampa Electric Company
Big Bend Station
0570039-016-AC

Date: November 16, 2004

This air construction permit is to establish the deletion of redundant conditions, and the clarification of process descriptions and specific conditions, as applicable Title V Operation Permit descriptions and conditions.

These deletions and clarifications were also made in the proposed Title V Operation Permit Revision/Renewal which was posted yesterday, after the applicant withdrew their Enlargement of Time to file a petition for formal administrative proceedings.

I recommend that you sign this final air construction permit.

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# Department of Environmental Protection

Jeb Bush  
Governor

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

Colleen M. Castille  
Secretary

DEPARTMENT OF ENVIRONMENTAL PROTECTION

## NOTICE OF FINAL PERMIT

In the Matter of an  
Application for Permit by:

Ms. Karen Sheffield  
General Manager, Big Bend Station  
Tampa Electric Company  
P. O. Box 111  
Tampa, Florida 33601-0111

FINAL Title V Permit No.: 0570039-016-AC  
Big Bend Station

Enclosed is FINAL Permit Number 0570039-016-AC for the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the permitting authority in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida.

Trina L. Vielhauer  
Chief  
Bureau of Air Regulation

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail or electronic mail before the close of business on 11/23/04 to the persons listed or as otherwise noted:

Karen Sheffield, R.O., TEC\*  
Gregory Nelson, D.R., TEC  
Raiza Calderon, TEC  
Thomas W. Davis, P.E., ECT  
Alice Harman, EPCHC  
Jason Waters, SWD  
Buck Oven, DEP Siting Coordination Office

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

(Clerk)

11/23/04  
(Date)

## **FINAL PERMIT DETERMINATION**

### **I. COMMENTS**

The Public Notice of Intent was published in the Tampa Tribune on October 14, 2004. No public comments were received for this project during the 30-day public comment period which ended on November 13, 2004.

**The applicant requested, and was given, a revision to the following Facility Description found in Section I. Subsection A:**

**From:** Overview of the facility's operation:

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the solid fuel yard ~~blending bins~~ are controlled by 3 4 rotoclones, ~~one at the conveyor drop and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotoclone.~~ ~~Storage bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotoclones.

**To:** Overview of the facility's operation:

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the solid fuel yard ~~blending bins~~ are controlled by 3 4 rotoclones, ~~one at the conveyor drop and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotoclone.~~ ~~Blending bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotoclones.

**The applicant requested, and was given, a revision to the following condition:**

**From:** III.D.10. Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:

- a. All conveyance hoppers will be operational during the test.
- b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
- c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
- d. Two tanker trucks shall be loaded during the test. The loading valve shall be completely open to allow 90%-100% of the maximum loading rate during testing filling. The loading valve position shall be calibrated, and the position of the valve during testing shall be recorded.
- e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.

[Rules 62-4.070(3) and 62-297.310, F.A.C.].

To: III.D.10. Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:

- a. All conveyance hoppers will be operational during the test.
  - b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
  - c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
  - d. Two tanker trucks shall be loaded during the test. The loading valve shall be completely open to allow 90%-100% of the maximum loading rate during testing filling. The position of the valve during testing shall be recorded.
  - e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.
- [Rules 62-4.070(3) and 62-297.310, F.A.C.]

The applicant requested, and was given, a revision to the following Description found in Section III. Subsection H:

**From:**

Solid fuel is unloaded from ship/barge into the solid fuel yard, the blending bins or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be is blended for use at the plant, or transloaded into trucks for shipment off site. From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins. Particulate matter (PM) emissions from the conveyors in the solid fuel yard blending bins are controlled by 3 4 rotocones, one at the conveyor drop and one for every 2 bins. PM emissions from the screw conveyor are controlled by the fourth rotocone. Storage bins can either Each has 2 hoppers, which feed the transloader, or solid fuel can be are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

**To:**

Solid fuel is unloaded from ship/barge into the solid fuel yard, the blending bins or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be is blended for use at the plant, or transloaded into trucks for shipment off site. From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins. Particulate matter (PM) emissions from the conveyors in the solid fuel yard blending bins are controlled by 3 4 rotocones, one at the conveyor drop and one for every 2 bins. PM emissions from the screw conveyor are controlled by the fourth rotocone. Blending bins can either Each has 2 hoppers, which feed the transloader, or solid fuel can be are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

## II. CONCLUSION

In conclusion, the Department hereby issues the FINAL permit as drafted with the minor changes as noted above.



# Department of Environmental Protection

Jeb Bush  
Governor

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

Colleen M. Castille  
Secretary

## PERMITTEE:

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

Permit No.	0570039-016-AC
Project:	Deletion of Redundant Conditions and Clarification of Process Descriptions
SIC:	4911
Expires:	December 31, 2004

*Authorized Representative:*  
Karen Sheffield, General Manager  
Big Bend Station

## PROJECT AND LOCATION:

This air construction permit is to establish the deletion of redundant conditions, and the clarification of process descriptions and conditions as applicable Title V Operation Permit descriptions and conditions.


The Tampa Electric Company (TEC) Big Bend Station is located at Big Bend Road, North Ruskin, Hillsborough County. UTM coordinates are Zone 17; 361.9 km E; 3075.0 km N.

## STATEMENT OF BASIS:

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The above named permittee is authorized to construct/operate the facility 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).

## Attached appendices made a part of this permit:

Appendix GC      Construction Permit General Conditions

  
Michael G. Cooke, Director  
Division of Air Resource  
Management

## SECTION I. GENERAL INFORMATION

### FACILITY DESCRIPTION

This facility is an electric utility.

TEC Big Bend is a nominal 2,028 MW electric generation facility. This facility consists of four steam boilers (Units Nos. 1 through 4); four steam turbines; three simple-cycle combustion turbines (CT Nos. 1, 2, and 3); solid fuels, fly ash, limestone, gypsum, slag, and bottom ash storage and handling facilities, and fuel oil storage tanks. Units No. 1, 2, 3, and 4 have nominal maximum heat inputs of 4037, 3996, 4115 and 4330 million BTU per hour, respectively. Units No. 1 through 4 are fired with coal and with petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal (by weight), or a coal blended with coal residual generated from the Polk Power Station, or a coal/petroleum coke blend further blended with coal residual generated from the Polk Power Station. The combustion turbines are fired with No. 2 distillate fuel oil. In addition, there is a ship surface coating operation.

### EMISSIONS UNITS

This permit revision addresses the following emissions units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
001	Unit No. 1 Steam Generator
002	Unit No. 2 Steam Generator
003	Unit No. 3 Steam Generator
004	Unit No. 4 Steam Generator
008	Fly Ash Silo No. 1 Baghouse
018	Fly Ash Silo No. 1 Truck Loadout
009	Fly Ash Silo No. 2 Baghouse
019	Fly Ash Silo No. 2 Truck Loadout
026	Fly Ash Handling and Storage Fugitive Emissions (all except silos)
014	Fly Ash Silo No. 3 Baghouse
027	Fly Ash Silo No. 3 Truck Loadout
028	Fly Ash Handling System Fugitive Emissions
011	Truck/Railcar Limestone Unloading Receiving Hopper with baghouse
024	Limestone Handling Conveyor LE to South Storage Silo with baghouse, Limestone Handling Conveyor LE to North Storage Silo with baghouse
039	Unit No. 4 Coal Bunker with Roto-Clone
029	Cyclone collectors for fuel blending bins (FH-032 through FH-035)
030	Cyclone collectors for fuel crushers (FH-048 and FH-049)
031	Cyclone collectors for bunkers (FH-059 through FH-062)

### REGULATORY CLASSIFICATION

Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

The existing facility is major source of hazardous air pollutants (HAPs).

The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per

## SECTION I. GENERAL INFORMATION

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year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) of Air Quality.

Unit 4 was certified pursuant Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

This facility is classified as a "Major Source of Air Pollution or Title V Source" due to emissions of at least one regulated air pollutant, such as sulfur dioxide, that exceeds 100 tons per year.

### RELEVANT DOCUMENTS

- Construction Permit Application 0570039-016-AC received May 18, 2004.
- Title V Air Operation Permit Revision Application No. 0570039-015-AV received on January 16, 2004.



## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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1. Permitting Authority: All documents related to applications for permits to construct or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.
2. Compliance Authority: All documents related to operation, reports, tests, and notifications should be submitted to the Environmental Protection Commission of Hillsborough County (EPC) at  

Environmental Protection Commission  
of Hillsborough County  
1410 North 21 Street  
Tampa, Florida 33605  
Telephone: 813/272-5530  
Fax: 813/272-5605
3. 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.]
4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
5. Forms and Application Procedures: 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. [Rule 62-210.900, F.A.C.]
6. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]
7. 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.]
8. Completion of Construction: The permit expiration date is December 31, 2004.
9. Permit Expiration Date Extension: The permittee, for good cause, may request that this permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.080, F.A.C.).
10. Application for Title V Permit Revision: Concurrent processing of Air Construction Permit Application and Title V Permit Revision.
11. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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12. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]
13. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without the applicable air control device operating properly. [Rule 62-210.650, F.A.C.]
14. Unconfined Particulate Matter Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
15. Test Notification: The permittee shall notify each Compliance Authority in writing at least 30 days prior to any initial performance tests and at least 15 days prior to any other required tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]
16. Calculation of Emission Rate: For each emissions performance test, 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.]
17. Applicable Test Procedures
  - a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]
  - b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
  - c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]
18. Determination of Process Variables
  - 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. [Rule 62-297.310(5)(a), F.A.C.]
  - 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. [Rule 62-297.310(5)(b), F.A.C.]

## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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19. Special Compliance Tests: When the Department, or EPC, 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 emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]
20. Stack Testing Facilities: Required stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rule 62-297.310]
21. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating 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 maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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)(b), F.A.C.]
22. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, or EPC, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]
23. Emissions Performance Test Results Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
24. Annual Operating Reports: The permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the Environmental Protection Commission of Hillsborough County by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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The following descriptions and specific conditions established in the initial Title V Air Operation Permit No. 0570039-002-AV, and the previous Title V Air Operation Permit Revisions Nos. 0570039-010-AV and 0570039-013-AV; and included in the Proposed Title V Air Operation Permit Revision/Renewal No. 0570039-017-AV; are changed as follows. Additions are highlighted, and deletions are shown by strikethroughs:

#### I. Subsection A. Facility Description.

##### Overview of the facility's operation:

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending ~~bins tower~~, which consists of six storage bins, where the solid ~~fuel may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the ~~solid fuel yard blending bins~~ are controlled by ~~3 4~~ ~~rotoclones, one at the conveyor drop and one for every 2~~ bins. ~~PM emissions from the screw conveyor are controlled by the fourth rotoclone. Blending bins can either~~ Each ~~has 2 hoppers, which feed the transloader, or solid fuel can be~~ are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotoclones.

From the ~~tripper room~~ ~~solid fuel yard, the solid fuel is conveyed to the tripper room where~~ 2 trippers bunker the solid fuels into 4 solid fuel bunkers. Each unit has its own respective bunker. Solid fuel samples are taken every 15 minutes during bunkering, and composited for analysis. From the bunkers, the solid fuel is gravity fed into 14 ~~crushers mills~~, and then gravity fed into the boilers. There are 3 ~~ball mills tall crushers~~, each for Unit Nos. 1 – 3, and 5 bowl ~~mills crushers~~ for Unit No. 4. From the ~~mills crushers~~, the solid fuel is pneumatically fed into classifiers, two for each ~~mill on Unit Nos. 1-3 and one for each mill on Unit No. 4~~ ~~crusher~~ for a total of ~~238~~ classifiers, and then into the respective boilers.

PM emissions from Boiler Nos. 1- ~~43~~ are controlled by individual Electrostatic Precipitators (ESPs). ~~Unit Nos. 1-4 PM emissions are controlled by an ESP, and the SO<sub>2</sub> emissions are controlled by an FGD scrubber systems.~~ When Unit Nos. ~~1-3~~ burns petroleum coke, the exhaust gases, following particulate matter removal by the units' ESPs, will be routed to the inlet of the ~~Unit No. 4~~ flue gas desulfurization (FGD) system scrubber. In ~~the this~~ integrated mode, Unit No. 3 will meet the same sulfur dioxide emissions limitations as Unit No. 4. The FGD scrubber will continue to treat the exhaust gas from Unit No. 4. The FGD scrubber outlet stream, consisting of the combined Unit No. 3 and Unit No. 4 treated exhaust, will then be split and discharged through stacks CS002 and CS003.

Fly ash from Units No. 1 and No. 2 is vented into Fly Ash Silo #1 which is controlled by a baghouse. Fly ash from Unit No. 3 is vented into Silo #2, ~~which can also receive fly ash from Units No. 1 and 2, while~~ fly ash from Unit No. 4 is vented into Silo #3. The fly ash from each silo is then loaded into trucks and transported off site, while the bottom ash from ~~Unit No. 4~~ is conveyed across Big Bend Road south of the Big Bend facility to a settling pond. ~~Each fly ash silo is controlled by a baghouse~~

The byproduct gypsum is conveyed to the east side of the plant for ~~dewatering diverting~~ and transporting off site. Limestone is unloaded to an underground hopper conveyor belt system to the limestone storage building on the east side of the by-product gypsum area. ~~Particulate matter emissions from the limestone trucks unloading is controlled by a baghouse.~~ From the storage building, limestone is belt conveyed into ~~2-3~~ storage silos and then gravity fed into the mill room. ~~Two~~ ~~Three~~ rotary mills grind the limestone and mix it with water to form a slurry that is stored in ~~2 3~~ storage tanks for use in the FGD. The slurry is then pumped to the 4 reaction tanks of ~~Units 1-4~~ scrubbers that are located directly south of and adjacent to the absorption towers of the FGD scrubber. ~~Gypsum is sold and transported offsite and can be stored south of Big Bend Road prior to offsite removal. Most of the by-product gypsum is wallboard grade, however, gypsum that is produced during start-up, shutdown or upset conditions is dewatered and belt conveyed across the street to the southeast of the plant for drying and transportation off site.~~

## SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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There are 3-combustion turbines (CT) manufactured by Westinghouse. They are all fired on No. 2 fuel oil. Unit CT No. 1 is near the plant and Unit CT Nos. 2 and 3 are on the north side of the property. There is a large No. 2 fuel oil storage tank near Unit CT Nos. 2 and 3 and a small day tank near Unit CT No. 1.

### I. Subsection B.

- 026 Fly Ash Handling and Storage Fugitive Emissions from Unit Nos. 1-3 (all except silos)
- 028 Fly Ash Handling System Fugitive Emissions from Unit No. 4.
- ~~039 Unit No. 4 Coal Bunker~~
- 024 Limestone Handling Conveyor LE to South Storage Silo with Baghouse
- 031 Cyclone collectors for bunkers (FH-059 through FH-062)

### II.4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center

Post Office Box 3346  
Merrifield, VA 22116-3346  
Telephone: 703/816-4434

P.O. Box 1515  
Lanham-Seabrook, Maryland 20703-1515  
Telephone: 301/429-5018

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C. [40 CFR 68]

### III.A.2. b. Other operation:

i. In addition to the fuels allowed to be burned during normal operation, each unit may also burn new No. 2 fuel during startup, shutdown, flame stabilization, and during the start of a mill on an already operating unit.

ii. Evaporation of up to 150,000 gallons per year, total at the facility, is allowed of non-hazardous, but potentially HAP-emitting, mineral acid solution boiler chemical cleaning waste which was generated on site.

III.A.16. Petcoke Sulfur Content: Until January 1, 2006, 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. [Permit Nos. 0570039-003-AC & 0570039-004-AC]

III.A.26. [Deletion of obsolete petcoke fuel sulfur content recordkeeping condition after 2005. SO<sub>2</sub> emissions are measured directly using continuous monitoring systems (CEMS), however, the permittee must submit on an annual basis through 2005, data demonstrating that removal of the sulfur content limit in the petroleum coke fired did not result in a significant increase in the representative actual annual emission of any regulated pollutant. (See Specific Condition III.A.2.)]

III.A.26. Records of Petcoke Sulfur Content: Until January 1, 2006, The owner or operator shall maintain records of petcoke sampling and analysis results performed as required by Specific Condition A.16. of this section. [Rule 62-4.070(3), F.A.C., and permit nos. 0570039-003-AC & 0570039-004-AC]

III.A.29. For Unit Nos. 1-3, gravimetric instrument data verifying that the 20.0% maximum petroleum coke content by weight has not been exceeded shall be maintained for two years and submitted to the Department and the EPCHC with each annual operating report. Also to be maintained and available for inspection shall be a record

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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of operation showing the date, fuel used, mode of operation (integrated/non-integrated), and the duration of all startups, shutdowns and malfunctions. [Rule 62-4.070(3), F.A.C.]

#### III. Subsection B. Description.

As an option, Unit No. 3 exhaust gas, following particulate matter removal by the unit's ESP, will be routed to the inlet of the Unit No. 4 flue gas desulfurization (FGD) system scrubber. In this integrated mode, Unit No. 3 will meet the same sulfur dioxide emissions limitations as Unit No. 4. The FGD scrubber will continue to treat the exhaust gas from Unit No. 4. The FGD scrubber outlet stream, consisting of the combined Unit No. 3 and Unit No. 4 treated exhaust, will then be split and discharged through stacks CS002 and CS003. Stack CS002 does *not* include a recirculation duct to return exhaust gas to the inlet of the FGD scrubber. Continuous opacity monitoring systems (COMS) will be located at the outlet of Unit No. 3 and Unit No. 4 ESPs. Continuous SO<sub>2</sub> and CO<sub>2</sub> emissions monitoring systems (CEMS) will be located in stacks CS002 and CS003. Continuous NO<sub>x</sub> emissions monitoring systems (CEMS) will be located in the inlet ducts of each unit. These monitoring systems will be used to determine compliance with all current applicable requirements.

#### III.B.2. Methods of Operation - Fuels.

a. Normal operation: The fuel fired in Unit No. 4 shall consist of coal, or a coal/petroleum coke blend containing a maximum of 20% petroleum coke by weight, or coal blended with coal residual generated from the Polk Power Station, or a coal/petroleum coke blend further blended with coal residual generated from the Polk Power Station. In any case, the petroleum coke content of any fuel blend shall not exceed 20% by weight.. The vanadium content of the petroleum coke fired shall not exceed 2660 ppm vanadium. The ash content of the petroleum coke fired shall not exceed 0.76% by weight on a dry basis. The permittee shall maintain and submit to the Department, and to the Environmental Protection Commission of Hillsborough County, on an annual basis for the years 2001, 2002, 2003, 2004, and 2005 data demonstrating that removal of the sulfur content limit and the revision of the vanadium content limit in the petroleum coke fired did not result in a significant increase in the representative actual annual emissions of any regulated pollutant.

b. Other operation:

i. In addition to the fuels allowed to be burned during normal operation, Unit No. 4 may also burn new No. 2 fuel during startup, shutdown, flame stabilization and during the start of an additional solid fuel ~~mill pulverizer~~ on an already operating unit.

ii. Evaporation of up to 150,000 gallons per year, total at the facility, is allowed of non-hazardous, but potentially HAP-emitting, mineral acid solution boiler chemical cleaning waste which was generated on site.

c. Coal shall not be burned in Unit No. 4 unless both the electrostatic precipitator and limestone scrubber are operating properly.

d. ~~[Reserved] Coal burned in Unit No. 4 shall be washed before it is transported to the plant site. TEC shall maintain records of all coal washing and preparation activities for any coal which is to be fired in Big Bend Unit No. 4. These reports shall be submitted to the Department on a quarterly basis.~~

e. TEC shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values.

f. Beneficiated, or refined, coal residual: The total amount of beneficiated, or refined, coal residual fired at Big Bend Station (all Unit Nos. 1-4 combined) shall be limited to 500 tons per day. The beneficiated, or refined, coal residual results from using the beneficiated process, described in permit application 0570039-012-AC, to wash and screen the raw coal residual to remove fines and oversized materials. This beneficiation process shall be performed at Polk Power Station, not Big Bend Station.

g. Raw coal residual: The total amount of raw coal residual fired at Big Bend Station (all Unit Nos. 1-4 combined) shall be limited to 200 tons per day. The raw coal residual is a by-product of the gasification of coal at the Polk Power Station. At the time of the issuance of permit 0570039-012-AC on October 4, 2001, there were approximately 100,000 tons of raw coal residual stored at Polk Power Station. Once this raw coal residual pile has been fired, TEC shall only fire raw coal residual in the event of a significant beneficiation process malfunction. TEC shall document all beneficiation process malfunctions and record the amount of raw coal residual, if any, fired at Big Bend Station. These records should be kept on site at Big Bend and made readily available to the Department and the Environmental Protection Commission of Hillsborough County upon request.

h. No coal residual shall be fired in any Unit when the corresponding scrubber is not in operation.

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

[Rules 62-4.070(3), 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; PSD-FL-040; Power Plant Siting Certification PA 79-12; Permit No. 0570039-012-AC; ~~Permit No. 0570039-016-AC~~]

**III. B. 12.** During emergency conditions in the principal company, an affected facility with a malfunctioning flue gas desulfurization system may be operated if sulfur dioxide emissions are minimized by:

- (1) Operating all operable flue gas desulfurization system modules, and bringing back into operation any malfunctioned module as soon as repairs are completed,
- (2) Bypassing flue gases around only those flue gas desulfurization system modules that have been taken out of operation because they were incapable of any sulfur dioxide emission reduction or which would have suffered significant physical damage if they had remained in operation, and
- (3) Operating a *spare* flue gas desulfurization system module. The Department or EPCHC may at their discretion require TEC within 60 days of notification to demonstrate spare module capability. To demonstrate this capability, the owner or operator must demonstrate compliance with the appropriate requirements of specific conditions ~~B.5. and~~ B.7. for any period of operation lasting from 24 hours to 30 days when:
  - (i) Any one flue gas desulfurization module is not operated,
  - (ii) The affected facility is operating at the maximum heat input rate,
  - (iii) The fuel fired during the 24-hour to 30-day period is representative of the type and average sulfur content of fuel used over a typical 30-day period, and
  - (iv) TEC has given the Department or EPCHC at least 30 days notice of the date and period of time over which the demonstration will be performed.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.46a(d)]

**III.B.19.** TEC shall calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen and/or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored. The sulfur dioxide, nitrogen dioxide, oxygen and/or carbon dioxide, and opacity monitoring devices shall meet the applicable requirements of Section 62-214, F.A.C., 40 CFR 60.47a., and 40 CFR 75. ). The opacity monitor shall be placed in the duct work between the electrostatic precipitator and the FGD scrubber. ~~When Units 3 and 4 are operating in the integrated mode (Unit 3 flue gases routed through the Unit 4 FGD system), the~~ The continuous monitoring system will measure sulfur dioxide emissions at the inlet of each unit and outlet of the Unit 4 FGD system and from the Unit 3 stack (CS002) and Unit 4 stack (CS003), while emissions of nitrogen oxides, oxygen and/or carbon dioxide, and opacity shall be measured in the Units 3 and 4 ducts prior to the FGD system. When Unit 4 is operating and Unit 3 is not operating in the integrated mode, the continuous monitoring system will measure only Unit 4's inlet duct and stack for SO<sub>2</sub> emissions. The emissions of nitrogen oxides and opacity shall be measured in the Unit 4 duct prior to the FGD system. The emissions of carbon dioxide and sulfur dioxide are both measured in the inlet and outlet ducts.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.47a(d); Power Plant Siting Certification PA 79-12D]

**III.B.28.** TEC shall determine compliance with the SO<sub>2</sub> standards in specific condition B.7. as follows:

- (1) The percent of potential SO<sub>2</sub> emissions (%P<sub>s</sub>) to the atmosphere shall be computed using the following equation:

$$\%P_s = \frac{(100 - \%R_f)(100 - \%R_g)}{100}$$

where:

- $\%P_s$  = percent of potential SO<sub>2</sub> emissions, percent.  
 ~~$\%R_f$  = percent reduction from fuel pretreatment, percent.~~  
 $\%R_g$  = percent reduction by SO<sub>2</sub> control system, percent.

(2) ~~[Reserved.] The procedures in Method 19 may be used to determine percent reduction (%R<sub>f</sub>) of sulfur by such processes as fuel pretreatment (physical coal cleaning, hydrodesulfurization of fuel oil, etc.), coal pulverizers, and bottom and flyash interactions. This determination is optional.~~

(3) The procedures in Method 19 shall be used to determine the percent SO<sub>2</sub> reduction (%R<sub>g</sub> of any SO<sub>2</sub> control system. Alternatively, a combination of an "as fired" fuel monitor and emission rates measured after the control

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

system, following the procedures in Method 19, may be used if the percent reduction is calculated using the average emission rate from the SO<sub>2</sub> control device and the average SO<sub>2</sub> input rate from the "as fired" fuel analysis for 30 successive boiler operating days.

(4) The appropriate procedures in Method 19 shall be used to determine the emission rate.

(5) The continuous monitoring systems specified in conditions B.17. and B.19. shall be used to determine the concentrations of SO<sub>2</sub> and CO<sub>2</sub> or O<sub>2</sub>.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.48a (c); 40 CFR 60.43a; 40 CFR 60.47a(b) and (d); 40 CFR 60 Appendix A, Method 19; Applicant request: 0570039-016-AC]

**B.35. [Reserved]** If fuel pretreatment credit is claimed toward the sulfur dioxide emission standards in specific condition B.7. TEC shall submit a signed statement:

—(1) Indicating what percentage cleaning credit was taken for the calendar quarter, and whether the credit was determined in accordance with the provisions of specific condition B.28. and Method 19 (Appendix A of 40 CFR 60); and

—(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous quarter.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.49a(e), 40 CFR 60.48a(e)]

#### III. Subsection D. Descriptions.

Fly Ash Silo No. 2 handles fly ash from Steam Generator Units Nos. 1, 2, and/or 3. Fly ash is pneumatically conveyed in a series of pipes from the individual unit precipitators (Units 1, 2, and/or 3, only two units at any time) to the silo for temporary storage. Fly ash from Silo No. 2 is discharged in either a wet or dry state. From the silo, the dry fly ash is gravity fed by tubing into closed tanker trucks and transported to an off-site consumer. The wet fly ash is processed through a pugmill and then unloaded into a dump truck to be transported to an off-site consumer. Particulate emissions generated during silo loading operation and from the tanker truck loadout chutes are controlled by a 20,081 DSCFM Flex Kleen, Model No. 84 UDTR-640 baghouse in addition to reasonable precautions.

**III.D.1. Capacity.** The maximum permitted loading rate for all Fly Ash Silo No. 1 processes combined is 44.5 tons per hour. The maximum permitted loading rate for all Fly Ash Silo No. 2 processes combined is 44.5 tons per hour. For Fly Ash Silo No. 2, the maximum permitted loading rate is the simultaneous maximum transfer of fly ash from boiler Units 1, 2, and 3. Separate testing of emissions from each unit shall be conducted with each emissions unit operation at 90 to 100 percent of the maximum permitted capacity heat input rate. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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. [AC29-194516; AO29-161082; Rule 62-4.160(2), and Rule 62-297.310(2), F.A.C.]

{Permitting note: The material loading limitations have been placed in each permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular recordkeeping is not required for material loading. Instead the owner or operator is expected to determine material loading whenever the emission testing is required, to demonstrate at what percentage of the rated capacity that the emissions unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of process variables for emission tests. Material loading demonstrations may be based on best engineering evaluation of the operating requirements necessary to achieve 90 to 100 percent of the rated loading, unless such operating conditions are otherwise specified by permit condition.}

**III.D.10.** Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:

a. All conveyance hoppers will be operational during the test.



### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
- c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
- d. Two tanker trucks shall be loaded during the test. The loading valve shall be completely open to allow 90%-100% of the maximum loading rate during testing filling. The position of the valve during testing shall be recorded.
- e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.  
[Rules 62-4.070(3) and 62-297.310, F.A.C.]

#### III. Subsection E. Description.

Fly Ash Silo No. 3 handles fly ash from Steam Generator Unit No. 4. Also, fly ash may be pneumatically conveyed from tanker trucks to Silo No. 3. Particulate matter emissions are controlled by a 1,200 DSCFM Flex Kleen Model 84-WRTC-80-II-G baghouse. The wet flyash may be processed through a pugmill and then unloaded into a dump truck.

#### III. SUBSECTION F. LIMESTONE HANDLING AND STORAGE

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-011	Truck/Railcar Limestone Unloading Receiving Hopper with baghouse
-012	Limestone Silo A with 2 baghouses
-013	Limestone Silo B with 2 baghouses
-023	Limestone Handling Conveyor LB to Conveyor LC with baghouse, Limestone Handling Conveyor LD to Conveyor LE with baghouse
-024	Limestone Handling Conveyor LE to South Storage Silo with baghouse, Limestone Handling Conveyor LE to North Storage Silo with baghouse
-025	Limestone Storage and Handling Fugitive Emissions

#### DESCRIPTIONS

~~Particulate matter emissions from the truck and railcar unloading of limestone are controlled by a Mikro-Pulsaire Model 400S12TR baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LB to Conveyor LC are controlled by a Sternvent Model DKED18003 baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LD to Conveyor LE are controlled by a Sternvent Model DKED 18003 baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LE to the South Storage Silo are controlled by a Flex Kleen Model 58-BVBC-36-II-G baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LE to the North Storage Silo are controlled by a Flex Kleen Model 58-BVBC-36-II-G baghouse.~~

**III. F.1.** Total combined particulate matter emissions from the limestone handling hoppers/conveyors shall not exceed 0.65 lb/hr. Visible emissions are limited to 5% opacity. Compliance testing for particulate matter emissions is not required provided the opacity limit is maintained.  
[PSD-FL-040; Power Plant Siting Certification PA 79-12]

**III.F.4.** The limestone handling receiving hopper, conveyor transfer points and silos shall be maintained at negative pressures with the exhaust vented to a control system(s).  
[PSD-FL-040]

## SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

### Subsection G. Coal Bunkers with Roto-Clones

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-015	Unit No. 1 Coal Bunker with Roto-Clone
-016	Unit No. 2 Coal Bunker with Roto-Clone
-017	Unit No. 3 Coal Bunker with Roto-Clone
<del>-039</del>	<del>Unit No. 4 Coal Bunker with Roto-Clone</del>

Descriptions

These emission units are Steam Generator Units Nos. 1- ~~43~~ Coal Bunkers with an exhaust fan/cyclone collector (Roto-Clone) controlling dust emission from each unit's respective bunker. Two moving transfer stations via their respective conveyor belts route coal through enclosed chutes to the various bunkers. Coal Bunkers 1- ~~43~~ are each equipped with a 9400 ACFM American Air Filter (AAF) Company Type D Roto-Clone to abate dust emissions during ventilation. A number of vent pipes convey fresh air from each bunker to a Roto-Clone during particulate matter removal. Particulate matter removed by the Roto-Clones is returned to the coal bunkers via a hopper and return line. Unit No. 1 Coal Bunker is situated west of Unit No. 2 Coal Bunker. Unit No. 3 Coal Bunker is situated east of Unit No. 2 Coal Bunker. ~~Unit No. 4 Coal Bunker is located east of Unit No. 3~~

#### III.G.4.

Since a source of less than 1 TPY is exempt from particulate matter RACT provisions, the maximum allowable particulate emissions shall not exceed 0.99 tons per year from each ~~rotoclone~~ ~~eyclone~~ exhaust. Also maximum allowable particulate matter emissions shall not exceed 0.48 lbs/hr from each cyclone exhaust. [AO29-163788 to escape RACT]

### Subsection H. Solid Fuel Yard

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-010	Solid Fuel Yard, Fugitive Emissions
-029	Cyclone collectors for fuel blending bins (FH-032 through FH-035)
-030	Cyclone collectors for fuel crushers (FH-048 and FH-049)
<del>-031</del>	<del>Cyclone collectors for bunkers (FH-059 through FH-062)</del>

#### Descriptions

Solid fuel is unloaded from ship/barge into the Solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins ~~tower~~, which consists of six storage bins, where the solid fuel ~~may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the ~~blending bins solid fuel yard~~ are controlled by ~~3 4~~ rotoclones, ~~one at the conveyor drop, and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotoclone.~~ ~~Blending bins can either~~ Each has ~~2 hoppers, which feed the transloader, or can be~~ are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotoclones.

From the ~~tripper room solid fuel yard, the solid fuel is conveyed to the tripper room where~~ 2 trippers bunker the solid fuels into 4 solid fuel bunkers. Each unit has its own respective bunker. Solid fuel samples are taken every 15 minutes during bunkering, and composited for analysis. From the bunkers, the solid fuel is gravity fed into 14 ~~mills crushers~~, and then ~~gravity~~-fed into the boilers. There are 3 ~~ball mills tall crushers~~, each for Unit Nos. 1 – 3, and 5 bowl ~~mills crushers~~ for Unit No. 4. From the ~~mills crushers~~, the solid fuel is pneumatically fed into classifiers, two for each ~~crusher mill on Unit Nos. 1-3 and one for each mill on Unit No. 4~~ for a total of 238 classifiers, and then into the respective boilers.



# Department of Environmental Protection

Jeb Bush  
Governor

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

Colleen M. Castille  
Secretary

DEPARTMENT OF ENVIRONMENTAL PROTECTION

## NOTICE OF FINAL PERMIT

In the Matter of an  
Application for Permit by:

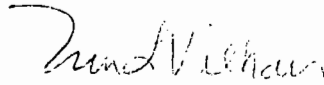
Ms. Karen Sheffield  
General Manager, Big Bend Station  
Tampa Electric Company  
P. O. Box 111  
Tampa, Florida 33601-0111

FINAL Title V Permit No.: 0570039-016-AC  
Big Bend Station

Enclosed is FINAL Permit Number 0570039-016-AC for the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the permitting authority in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida.

  
Trina L. Vielhauer  
Chief  
Bureau of Air Regulation

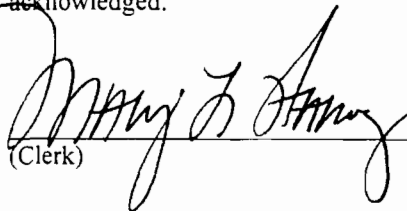
## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail or electronic mail before the close of business on 11/23/04 to the persons listed or as otherwise noted:

Karen Sheffield, R.O., TEC\*  
Gregory Nelson, D.R., TEC  
Raiza Calderon, TEC  
Thomas W. Davis, P.E., ECT  
Alice Harman, EPCHC  
Jason Waters, SWD  
Buck Oven, DEP Siting Coordination Office

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

  
(Clerk)

11/23/04  
(Date)

**FINAL PERMIT DETERMINATION**

**I. COMMENTS**

The Public Notice of Intent was published in the Tampa Tribune on October 14, 2004. No public comments were received for this project during the 30-day public comment period which ended on November 13, 2004.

**The applicant requested, and was given, a revision to the following Facility Description found in Section I. Subsection A:**

**From: Overview of the facility's operation:**

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the solid fuel yard ~~blending bins~~ are controlled by 3 4 rotocones, ~~one at the conveyor drop and one for every 2 bins.~~ PM emissions from the screw conveyor are controlled by the fourth rotocone. ~~Storage bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be are-conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

**To: Overview of the facility's operation:**

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending bins tower, which consists of six storage bins, where the solid fuel may be blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the solid fuel yard ~~blending bins~~ are controlled by 3 4 rotocones, ~~one at the conveyor drop and one for every 2 bins.~~ PM emissions from the screw conveyor are controlled by the fourth rotocone. ~~Blending bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be are-conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

**The applicant requested, and was given, a revision to the following condition:**

**From: III.D.10. Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:**

- a. All conveyance hoppers will be operational during the test.
- b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
- c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
- d. Two tanker trucks shall be loaded during the test. The loading valve shall be completely open to allow 90%-100% of the maximum loading rate during testing filling. The loading valve position shall be calibrated, and the position of the valve during testing shall be recorded.
- e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.

[Rules 62-4.070(3) and 62-297.310, F.A.C.]

**To:** III.D.10. Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:

- a. All conveyance hoppers will be operational during the test.
- b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
- c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
- d. Two tanker trucks shall be loaded during the test. The loading valve shall be ~~completely open to allow 90%-100% of the maximum loading rate during testing filling. The position of the valve during testing shall be recorded.~~
- e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.

[Rules 62-4.070(3) and ~~62-297.310~~, F.A.C.].

**The applicant requested, and was given, a revision to the following Description found in Section III. Subsection H:**

**From:**

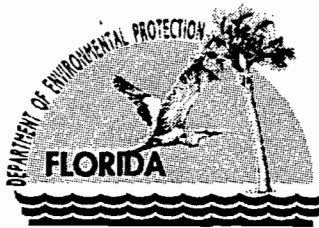
Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the ~~blending bins tower~~, which consists of six storage bins, where the solid fuel ~~may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the ~~solid fuel yard blending bins~~ are controlled by 3 4 rotocones, ~~one at the conveyor drop and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotocone.~~ ~~Storage bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be ~~are~~ conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

**To:**

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the ~~blending bins tower~~, which consists of six storage bins, where the solid fuel ~~may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the ~~solid fuel yard blending bins~~ are controlled by 3 4 rotocones, ~~one at the conveyor drop and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotocone.~~ ~~Blending bins can either~~ Each has 2 hoppers, which feed the transloader, or solid fuel can be ~~are~~ conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

## II. CONCLUSION

In conclusion, the Department hereby issues the FINAL permit as drafted with the minor changes as noted above.



# Department of Environmental Protection

Jeb Bush  
Governor

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

Colleen M. Castille  
Secretary

## PERMITTEE:

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

Permit No.	0570039-016-AC
Project:	Deletion of Redundant Conditions and Clarification of Process Descriptions
SIC:	4911
Expires:	December 31, 2004

*Authorized Representative:*  
Karen Sheffield, General Manager  
Big Bend Station

## PROJECT AND LOCATION:

This air construction permit is to establish the deletion of redundant conditions, and the clarification of process descriptions and conditions as applicable Title V Operation Permit descriptions and conditions.


The Tampa Electric Company (TEC) Big Bend Station is located at Big Bend Road, North Ruskin, Hillsborough County. UTM coordinates are Zone 17; 361.9 km E; 3075.0 km N.

## STATEMENT OF BASIS:

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The above named permittee is authorized to construct/operate the facility 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).

## Attached appendices made a part of this permit:

Appendix GC      Construction Permit General Conditions

  
Michael G. Cooke, Director  
Division of Air Resource  
Management

## SECTION I. GENERAL INFORMATION

### FACILITY DESCRIPTION

This facility is an electric utility.

TEC Big Bend is a nominal 2,028 MW electric generation facility. This facility consists of four steam boilers (Units Nos. 1 through 4); four steam turbines; three simple-cycle combustion turbines (CT Nos. 1, 2, and 3); solid fuels, fly ash, limestone, gypsum, slag, and bottom ash storage and handling facilities, and fuel oil storage tanks. Units No. 1, 2, 3, and 4 have nominal maximum heat inputs of 4037, 3996, 4115 and 4330 million BTU per hour, respectively. Units No. 1 through 4 are fired with coal and with petcoke in a mixture with coal up to 20.0% petcoke/80.0% coal (by weight), or a coal blended with coal residual generated from the Polk Power Station, or a coal/petroleum coke blend further blended with coal residual generated from the Polk Power Station. The combustion turbines are fired with No. 2 distillate fuel oil. In addition, there is a ship surface coating operation.

### EMISSIONS UNITS

This permit revision addresses the following emissions units:

EMISSION UNIT No.	EMISSION UNIT DESCRIPTION
001	Unit No. 1 Steam Generator
002	Unit No. 2 Steam Generator
003	Unit No. 3 Steam Generator
004	Unit No. 4 Steam Generator
008	Fly Ash Silo No. 1 Baghouse
018	Fly Ash Silo No. 1 Truck Loadout
009	Fly Ash Silo No. 2 Baghouse
019	Fly Ash Silo No. 2 Truck Loadout
026	Fly Ash Handling and Storage Fugitive Emissions (all except silos)
014	Fly Ash Silo No. 3 Baghouse
027	Fly Ash Silo No. 3 Truck Loadout
028	Fly Ash Handling System Fugitive Emissions
011	Truck/Railcar Limestone Unloading Receiving Hopper with baghouse
024	Limestone Handling Conveyor LE to South Storage Silo with baghouse, Limestone Handling Conveyor LE to North Storage Silo with baghouse
039	Unit No. 4 Coal Bunker with Roto-Clone
029	Cyclone collectors for fuel blending bins (FH-032 through FH-035)
030	Cyclone collectors for fuel crushers (FH-048 and FH-049)
031	Cyclone collectors for bunkers (FH-059 through FH-062)

### REGULATORY CLASSIFICATION

Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

The existing facility is major source of hazardous air pollutants (HAPs).

The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per

## SECTION I. GENERAL INFORMATION

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year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) of Air Quality.

Unit 4 was certified pursuant Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

This facility is classified as a "Major Source of Air Pollution or Title V Source" due to emissions of at least one regulated air pollutant, such as sulfur dioxide, that exceeds 100 tons per year.

### RELEVANT DOCUMENTS

- Construction Permit Application 0570039-016-AC received May 18, 2004.
- Title V Air Operation Permit Revision Application No. 0570039-015-AV received on January 16, 2004.



## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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1. Permitting Authority: All documents related to applications for permits to construct or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.
2. Compliance Authority: All documents related to operation, reports, tests, and notifications should be submitted to the Environmental Protection Commission of Hillsborough County (EPC) at  

Environmental Protection Commission  
of Hillsborough County  
1410 North 21 Street  
Tampa, Florida 33605  
Telephone: 813/272-5530  
Fax: 813/272-5605
3. 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.]
4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
5. Forms and Application Procedures: 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. [Rule 62-210.900, F.A.C.]
6. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]
7. 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.]
8. Completion of Construction: The permit expiration date is December 31, 2004.
9. Permit Expiration Date Extension: The permittee, for good cause, may request that this permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.080, F.A.C.).
10. Application for Title V Permit Revision: Concurrent processing of Air Construction Permit Application and Title V Permit Revision.
11. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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12. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]
13. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without the applicable air control device operating properly. [Rule 62-210.650, F.A.C.]
14. Unconfined Particulate Matter Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
15. Test Notification: The permittee shall notify each Compliance Authority in writing at least 30 days prior to any initial performance tests and at least 15 days prior to any other required tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]
16. Calculation of Emission Rate: For each emissions performance test, 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.]
17. Applicable Test Procedures
  - a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]
  - b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
  - c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]
18. Determination of Process Variables
  - 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. [Rule 62-297.310(5)(a), F.A.C.]
  - 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. [Rule 62-297.310(5)(b), F.A.C.]

## SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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19. Special Compliance Tests: When the Department, or EPC, 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 emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]
20. Stack Testing Facilities: Required stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rule 62-297.310]
21. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating 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 maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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)(b), F.A.C.]
22. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, or EPC, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]
23. Emissions Performance Test Results Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
24. Annual Operating Reports: The permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the Environmental Protection Commission of Hillsborough County by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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The following descriptions and specific conditions established in the initial Title V Air Operation Permit No. 0570039-002-AV, and the previous Title V Air Operation Permit Revisions Nos. 0570039-010-AV and 0570039-013-AV; and included in the Proposed Title V Air Operation Permit Revision/Renewal No. 0570039-017-AV; are changed as follows. Additions are highlighted, and deletions are shown by strikethroughs:

#### I. Subsection A. Facility Description.

##### Overview of the facility's operation:

Solid fuel is unloaded from ship/barge into the solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the ~~blending bins tower~~, which consists of six storage bins, where the solid ~~fuel may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the solid fuel yard ~~blending bins~~ are controlled by 3 ~~4~~ rotocones, ~~one at the conveyor drop and one for every 2 bins.~~ PM emissions from the screw conveyor are controlled by the fourth rotocone. ~~Blending bins can either~~ Each has 2 hoppers, which feed the transloader, or ~~solid fuel can be~~ are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotocones.

From the ~~tripper room~~ solid fuel yard, ~~the solid fuel is conveyed to the tripper room where~~ 2 trippers bunker the solid fuels into 4 solid fuel bunkers. Each unit has its own respective bunker. Solid fuel samples are taken every 15 minutes during bunkering, and composited for analysis. From the bunkers, the solid fuel is gravity fed into 14 ~~crushers mills~~, and then gravity fed into the boilers. There are 3 ~~ball mills tall crushers~~, each for Unit Nos. 1 – 3, and 5 bowl ~~mills crushers~~ for Unit No. 4. From the ~~mills crushers~~, the solid fuel is pneumatically fed into classifiers, two for each ~~mill on Unit Nos. 1-3 and one for each mill on Unit No. 4 crusher~~ for a total of 23 ~~8~~ classifiers, and then into the respective boilers.

PM emissions from Boiler Nos. 1- ~~4~~3 are controlled by individual Electrostatic Precipitators (ESPs). Unit Nos. ~~1-4~~ PM emissions are controlled by an ESP, and the SO<sub>2</sub> emissions are controlled by an FGD scrubber systems. When Unit Nos. ~~1-3~~ burns petroleum coke, the exhaust gases, following particulate matter removal by the units's ESPs, will be routed to the inlet of the Unit No. 4 flue gas desulfurization (FGD) system scrubber. In the ~~this~~ integrated mode, Unit No. 3 will meet the same sulfur dioxide emissions limitations as Unit No. 4. The FGD scrubber will continue to treat the exhaust gas from Unit No. 4. The FGD scrubber outlet stream, consisting of the combined Unit No. 3 and Unit No. 4 treated exhaust, will then be split and discharged through stacks CS002 and CS003.

Fly ash from Units No. 1 and No. 2 is vented into Fly Ash Silo #1 which is controlled by a baghouse. Fly ash from Unit No. 3 is vented into Silo #2, ~~which can also receive fly ash from Units No. 1 and 2, while~~ fly ash from Unit No. 4 is vented into Silo #3. The fly ash from each silo is then loaded into trucks and transported off site, while the bottom ash from Unit No. 4 is conveyed across Big Bend Road south of the Big Bend facility to a settling pond. ~~Each fly ash silo is controlled by a baghouse.~~

The byproduct gypsum is conveyed to the east side of the plant for ~~dewatering diverting~~ and transporting off site. Limestone is unloaded to an underground hopper conveyor belt system to the limestone storage building on the east side of the by-product gypsum area. ~~Particulate matter emissions from the limestone trucks unloading is controlled by a baghouse.~~ From the storage building, limestone is belt conveyed into 2-3 storage silos and then gravity fed into the mill room. ~~Two~~ Three rotary mills grind the limestone and mix it with water to form a slurry that is stored in 2-3 storage tanks for use in the FGD. The slurry is then pumped to the 4 reaction tanks of Units 1- 4 scrubbers that are located directly south of and adjacent to the absorption towers of the FGD scrubber. ~~Gypsum is sold and transported offsite and can be stored south of Big Bend Road prior to offsite removal. Most of the by-product gypsum is wallboard grade, however, gypsum that is produced during start-up, shutdown or upset conditions is de-watered and belt conveyed across the street to the southeast of the plant for drying and transportation off site.~~

## SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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There are 3-combustion turbines (CT) manufactured by Westinghouse. They are all fired on No. 2 fuel oil. Unit CT No. 1 is near the plant and Unit CT Nos. 2 and 3 are on the north side of the property. There is a large No. 2 fuel oil storage tank near Unit CT Nos. 2 and 3 and a small day tank near Unit CT No. 1.

### I. Subsection B.

- 026 Fly Ash Handling and Storage Fugitive Emissions from Unit Nos. 1-3 (all except silos)
- 028 Fly Ash Handling System Fugitive Emissions from Unit No. 4.
- 039 Unit No. 4 Coal Bunker
- 024 Limestone Handling Conveyor LE to South Storage Silo with Baghouse
- 031 Cyclone collectors for bunkers (FH 059 through FH 062)

### II.4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center

Post Office Box 3346  
Merrifield, VA 22116-3346  
Telephone: 703/816-4434

P.O. Box 1515  
Lanham-Seabrook, Maryland 20703-1515  
Telephone: 301/429-5018

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C. [40 CFR 68]

### III.A.2. b. Other operation:

i. In addition to the fuels allowed to be burned during normal operation, each unit may also burn new No. 2 fuel during startup, shutdown, flame stabilization, and during the start of a mill on an already operating unit.

ii. Evaporation of up to 150,000 gallons per year, total at the facility, is allowed of non-hazardous, but potentially HAP-emitting, mineral acid solution boiler chemical cleaning waste which was generated on site.

III.A.16. Petcoke Sulfur Content: Until January 1, 2006, 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. [Permit Nos. 0570039-003-AC & 0570039-004-AC]

III.A.26. [Deletion of obsolete petcoke fuel sulfur content recordkeeping condition after 2005. SO<sub>2</sub> emissions are measured directly using continuous monitoring systems (CEMS), however, the permittee must submit on an annual basis through 2005, data demonstrating that removal of the sulfur content limit in the petroleum coke fired did not result in a significant increase in the representative actual annual emission of any regulated pollutant. (See Specific Condition III.A.2.)]

III.A.26. Records of Petcoke Sulfur Content: Until January 1, 2006, The owner or operator shall maintain records of petcoke sampling and analysis results performed as required by Specific Condition A.16. of this section. [Rule 62-4.070(3), F.A.C., and permit nos. 0570039-003-AC & 0570039-004-AC]

III.A.29. For Unit Nos. 1-3, gravimetric instrument data verifying that the 20.0% maximum petroleum coke content by weight has not been exceeded shall be maintained for two years and submitted to the Department and the EPCHC with each annual operating report. Also to be maintained and available for inspection shall be a record

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

of operation showing the date, fuel used, mode of operation (integrated/non-integrated), and the duration of all startups, shutdowns and malfunctions. [Rule 62-4.070(3), F.A.C.]

#### III. Subsection B. Description.

As an option, Unit No. 3 exhaust gas, following particulate matter removal by the unit's ESP, will be routed to the inlet of the Unit No. 4 flue gas desulfurization (FGD) system scrubber. In this integrated mode, Unit No. 3 will meet the same sulfur dioxide emissions limitations as Unit No. 4. The FGD scrubber will continue to treat the exhaust gas from Unit No. 4. The FGD scrubber outlet stream, consisting of the combined Unit No. 3 and Unit No. 4 treated exhaust, will then be split and discharged through stacks CS002 and CS003. Stack CS002 does *not* include a recirculation duct to return exhaust gas to the inlet of the FGD scrubber. Continuous opacity monitoring systems (COMS) will be located at the outlet of Unit No. 3 and Unit No. 4 ESPs. Continuous SO<sub>2</sub> and CO<sub>2</sub> emissions monitoring systems (CEMS) will be located in stacks CS002 and CS003. Continuous NO<sub>x</sub> emissions monitoring systems (CEMS) will be located in the inlet ducts of each unit. These monitoring systems will be used to determine compliance with all current applicable requirements.

#### III.B.2. Methods of Operation - Fuels.

a. Normal operation: The fuel fired in Unit No. 4 shall consist of coal, or a coal/petroleum coke blend containing a maximum of 20% petroleum coke by weight, or coal blended with coal residual generated from the Polk Power Station, or a coal/petroleum coke blend further blended with coal residual generated from the Polk Power Station. In any case, the petroleum coke content of any fuel blend shall not exceed 20% by weight. The vanadium content of the petroleum coke fired shall not exceed 2660 ppm vanadium. The ash content of the petroleum coke fired shall not exceed 0.76% by weight on a dry basis. The permittee shall maintain and submit to the Department, and to the Environmental Protection Commission of Hillsborough County, on an annual basis for the years 2001, 2002, 2003, 2004, and 2005 data demonstrating that removal of the sulfur content limit and the revision of the vanadium content limit in the petroleum coke fired did not result in a significant increase in the representative actual annual emissions of any regulated pollutant.

b. Other operation:

i. In addition to the fuels allowed to be burned during normal operation, Unit No. 4 may also burn new No. 2 fuel during startup, shutdown, flame stabilization and during the start of an additional solid fuel ~~mill pulverizer~~ on an already operating unit.

ii. Evaporation of up to 150,000 gallons per year, total at the facility, is allowed of non-hazardous, but potentially HAP-emitting, mineral acid solution boiler chemical cleaning waste which was generated on site.

c. Coal shall not be burned in Unit No. 4 unless both the electrostatic precipitator and limestone scrubber are operating properly.

d. ~~[Reserved] Coal burned in Unit No. 4 shall be washed before it is transported to the plant site. TEC shall maintain records of all coal washing and preparation activities for any coal which is to be fired in Big Bend Unit No. 4. These reports shall be submitted to the Department on a quarterly basis.~~

e. TEC shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values.

f. Beneficiated, or refined, coal residual: The total amount of beneficiated, or refined, coal residual fired at Big Bend Station (all Unit Nos. 1-4 combined) shall be limited to 500 tons per day. The beneficiated, or refined, coal residual results from using the beneficiated process, described in permit application 0570039-012-AC, to wash and screen the raw coal residual to remove fines and oversized materials. This beneficiation process shall be performed at Polk Power Station, not Big Bend Station.

g. Raw coal residual: The total amount of raw coal residual fired at Big Bend Station (all Unit Nos. 1-4 combined) shall be limited to 200 tons per day. The raw coal residual is a by-product of the gasification of coal at the Polk Power Station. At the time of the issuance of permit 0570039-012-AC on October 4, 2001, there were approximately 100,000 tons of raw coal residual stored at Polk Power Station. Once this raw coal residual pile has been fired, TEC shall only fire raw coal residual in the event of a significant beneficiation process malfunction. TEC shall document all beneficiation process malfunctions and record the amount of raw coal residual, if any, fired at Big Bend Station. These records should be kept on site at Big Bend and made readily available to the Department and the Environmental Protection Commission of Hillsborough County upon request.

h. No coal residual shall be fired in any Unit when the corresponding scrubber is not in operation.

### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

[Rules 62-4.070(3), 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; PSD-FL-040; Power Plant Siting Certification PA 79-12; Permit No. 0570039-012-AC; ~~Permit No. 0570039-016-AC~~]

**III. B. 12.** During emergency conditions in the principal company, an affected facility with a malfunctioning flue gas desulfurization system may be operated if sulfur dioxide emissions are minimized by:

- (1) Operating all operable flue gas desulfurization system modules, and bringing back into operation any malfunctioned module as soon as repairs are completed,
- (2) Bypassing flue gases around only those flue gas desulfurization system modules that have been taken out of operation because they were incapable of any sulfur dioxide emission reduction or which would have suffered significant physical damage if they had remained in operation, and
- (3) Operating a *spare* flue gas desulfurization system module. The Department or EPCHC may at their discretion require TEC within 60 days of notification to demonstrate spare module capability. To demonstrate this capability, the owner or operator must demonstrate compliance with the appropriate requirements of specific conditions ~~B.5 and~~ B.7. for any period of operation lasting from 24 hours to 30 days when:
  - (i) Any one flue gas desulfurization module is not operated,
  - (ii) The affected facility is operating at the maximum heat input rate,
  - (iii) The fuel fired during the 24-hour to 30-day period is representative of the type and average sulfur content of fuel used over a typical 30-day period, and
  - (iv) TEC has given the Department or EPCHC at least 30 days notice of the date and period of time over which the demonstration will be performed.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.46a(d)]

**III.B.19.** TEC shall calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen and/or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored. The sulfur dioxide, nitrogen dioxide, oxygen and/or carbon dioxide, and opacity monitoring devices shall meet the applicable requirements of Section 62-214, F.A.C., 40 CFR 60.47a., and 40 CFR 75. ). The opacity monitor shall be placed in the duct work between the electrostatic precipitator and the FGD scrubber. ~~When Units 3 and 4 are operating in the integrated mode (Unit 3 flue gases routed through the Unit 4 FGD system),~~ The continuous monitoring system will measure sulfur dioxide emissions at the inlet of each unit and outlet of the Unit 4 FGD system and from the Unit 3 stack (CS002) and Unit 4 stack (CS003), while emissions of nitrogen oxides, oxygen and/or carbon dioxide, and opacity shall be measured in the Units 3 and 4 ducts prior to the FGD system. When Unit 4 is operating and Unit 3 is not operating in the integrated mode, the continuous monitoring system will measure only Unit 4's inlet duct and stack for SO<sub>2</sub> emissions. The emissions of nitrogen oxides and opacity shall be measured in the Unit 4 duct prior to the FGD system. The emissions of carbon dioxide and sulfur dioxide are both measured in the inlet and outlet ducts.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.47a(d); Power Plant Siting Certification PA 79-12D]

**III.B.28.** TEC shall determine compliance with the SO<sub>2</sub> standards in specific condition B.7. as follows:

- (1) The percent of potential SO<sub>2</sub> emissions (%P<sub>s</sub>) to the atmosphere shall be computed using the following equation:

$$\%P_s = \frac{(100 - \%R_f)(100 - \%R_g)}{100}$$

where:

- $\%P_s$  = percent of potential SO<sub>2</sub> emissions, percent.  
 ~~$\%R_f$  = percent reduction from fuel pretreatment, percent.~~  
 $\%R_g$  = percent reduction by SO<sub>2</sub> control system, percent.

(2) ~~[Reserved.] The procedures in Method 19 may be used to determine percent reduction (%R<sub>f</sub>) of sulfur by such processes as fuel pretreatment (physical coal cleaning, hydrosulfurization of fuel oil, etc.), coal pulverizers, and bottom and flyash interactions. This determination is optional.~~

(3) The procedures in Method 19 shall be used to determine the percent SO<sub>2</sub> reduction (%R<sub>g</sub>) of any SO<sub>2</sub> control system. Alternatively, a combination of an "as fired" fuel monitor and emission rates measured after the control

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system, following the procedures in Method 19, may be used if the percent reduction is calculated using the average emission rate from the SO<sub>2</sub> control device and the average SO<sub>2</sub> input rate from the "as fired" fuel analysis for 30 successive boiler operating days.

(4) The appropriate procedures in Method 19 shall be used to determine the emission rate.

(5) The continuous monitoring systems specified in conditions B.17. and B.19. shall be used to determine the concentrations of SO<sub>2</sub> and CO<sub>2</sub> or O<sub>2</sub>.

[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.48a (c); 40 CFR 60.43a; 40 CFR 60.47a(b) and (d); 40 CFR 60 Appendix A, Method 19; ~~Applicant request: 0570039-016-AC~~]

**B.35. [Reserved.]** ~~If fuel pretreatment credit is claimed toward the sulfur dioxide emission standards in specific condition B.7. TEC shall submit a signed statement:~~

~~—(1) Indicating what percentage cleaning credit was taken for the calendar quarter, and whether the credit was determined in accordance with the provisions of specific condition B.28. and Method 19 (Appendix A of 40 CFR 60); and~~

~~—(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous quarter.~~

~~[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.49a(e), 40 CFR 60.48a(e)]~~

#### III. Subsection D. Descriptions.

Fly Ash Silo No. 2 handles fly ash from Steam Generator Units Nos. 1, 2, and/or 3. Fly ash is pneumatically conveyed in a series of pipes from the individual unit precipitators (Units 1, 2, and/or 3, only two units at any time) to the silo for temporary storage. ~~Fly ash from Silo No. 2 is discharged in either a wet or dry state.~~ From the silo, the dry fly ash is gravity fed by tubing into closed tanker trucks and transported to an off-site consumer. ~~The wet fly ash is processed through a pugmill and then unloaded into a dump truck to be transported to an off-site consumer.~~ Particulate emissions generated during silo loading operation and from the tanker truck loadout chutes are controlled by a 20,081 DSCFM Flex Kleen, Model No. 84 UDTR-640 baghouse in addition to reasonable precautions.

**III.D.1. Capacity.** The maximum permitted loading rate for all Fly Ash Silo No. 1 processes combined is 44.5 tons per hour. ~~The maximum permitted loading rate for all Fly Ash Silo No. 2 processes combined is 44.5 tons per hour.~~ For Fly Ash Silo No. 2, the maximum permitted loading rate is the simultaneous maximum transfer of fly ash from boiler Units 1, 2, and 3. Separate testing of emissions from each unit shall be conducted with each emissions unit operation at 90 to 100 percent of the maximum permitted ~~capacity heat input rate~~. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the ~~maximum~~ ~~minimum~~ permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test ~~rate 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. [AC29-194516; AO29-161082; Rule 62-4.160(2), and Rule 62-297.310(2), F.A.C.]

~~{Permitting note: The material loading limitations have been placed in each permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular recordkeeping is not required for material loading. Instead the owner or operator is expected to determine material loading whenever the emission testing is required, to demonstrate at what percentage of the rated capacity that the emissions unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of process variables for emission tests. Material loading demonstrations may be based on best engineering evaluation of the operating requirements necessary to achieve 90 to 100 percent of the rated loading, unless such operating conditions are otherwise specified by permit condition.}~~

**III.D.10.** Compliance testing for the silo and tanker truck loading operations shall be conducted under the following conditions:

a. All conveyance hoppers will be operational during the test.



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- b. All fly ash will be directed to the silo, no reinjection of fly ash to the boiler systems will occur during the test.
- c. The boilers shall operate at the maximum capability of this unit under normal operating conditions during the test.
- d. Two tanker trucks shall be loaded during the test. The loading valve shall be completely open to allow 90%-100% of the maximum loading rate during testing filling. The position of the valve during testing shall be recorded.
- e. The visible emission test shall be at least 30 minutes in duration and the period of time during which truck loading occurred indicated on the test report.  
[Rules 62-4.070(3) and 62-297.310, F.A.C.]

#### III. Subsection E. Description.

Fly Ash Silo No. 3 handles fly ash from Steam Generator Unit No. 4. Also, fly ash may be pneumatically conveyed from tanker trucks to Silo No. 3. Particulate matter emissions are controlled by a 1,200 DSCFM Flex Kleen Model 84-WRTC-80-II-G baghouse. The wet flyash may be processed through a pugmill and then unloaded into a dump truck.

### III. SUBSECTION F. LIMESTONE HANDLING AND STORAGE

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-011	Truck/Railcar Limestone Unloading Receiving Hopper with baghouse
-012	Limestone Silo A with 2 baghouses
-013	Limestone Silo B with 2 baghouses
-023	Limestone Handling Conveyor LB to Conveyor LC with baghouse, Limestone Handling Conveyor LD to Conveyor LE with baghouse
-024	<del>Limestone Handling Conveyor LE to South Storage Silo with baghouse, Limestone Handling Conveyor LE to North Storage Silo with baghouse</del>
-025	Limestone Storage and Handling Fugitive Emissions

#### DESCRIPTIONS

~~Particulate matter emissions from the truck and railcar unloading of limestone are controlled by a Mikro Pulsaire Model 400S12TR baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LB to Conveyor LC are controlled by a Sternvent Model DKED18003 baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LD to Conveyor LE are controlled by a Sternvent Model DKED 18003 baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LE to the South Storage Silo are controlled by a Flex Kleen Model 58-BVBC-36-II-G baghouse. Particulate matter emissions generated by the transfer of limestone from Handling Conveyor LE to the North Storage Silo are controlled by a Flex Kleen Model 58-BVBC-36-II-G baghouse.~~

**III. F.1.** Total combined particulate matter emissions from the limestone handling hoppers/conveyors shall not exceed 0.65 lb/hr. Visible emissions are limited to 5% opacity. Compliance testing for particulate matter emissions is not required provided the opacity limit is maintained.  
[PSD-FL-040; Power Plant Siting Certification PA 79-12]

**III.F.4.** The limestone handling receiving hopper, conveyor transfer points and silos shall be maintained at negative pressures with the exhaust vented to a control system(s).  
[PSD-FL-040]

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#### Subsection G. Coal Bunkers with Roto-Clones

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-015	Unit No. 1 Coal Bunker with Roto-Clone
-016	Unit No. 2 Coal Bunker with Roto-Clone
-017	Unit No. 3 Coal Bunker with Roto-Clone
<del>-039</del>	<del>Unit No. 4 Coal Bunker with Roto-Clone</del>

#### Descriptions

These emission units are Steam Generator Units Nos. 1- ~~43~~ Coal Bunkers with an exhaust fan/cyclone collector (Roto-Clone) controlling dust emission from each unit's respective bunker. Two moving transfer stations via their respective conveyor belts route coal through enclosed chutes to the various bunkers. Coal Bunkers 1- ~~43~~ are each equipped with a 9400 ACFM American Air Filter (AAF) Company Type D Roto-Clone to abate dust emissions during ventilation. A number of vent pipes convey fresh air from each bunker to a Roto-Clone during particulate matter removal. Particulate matter removed by the Roto-Clones is returned to the coal bunkers via a hopper and return line. Unit No. 1 Coal Bunker is situated west of Unit No. 2 Coal Bunker. Unit No. 3 Coal Bunker is situated east of Unit No. 2 Coal Bunker. ~~Unit No. 4 Coal Bunker is located east of Unit No. 3.~~

#### III.G.4.

Since a source of less than 1 TPY is exempt from particulate matter RACT provisions, the maximum allowable particulate emissions shall not exceed 0.99 tons per year from each ~~rotoclone~~ ~~cyclone~~ exhaust. Also maximum allowable particulate matter emissions shall not exceed 0.48 lbs/hr from each cyclone exhaust. [AO29-163788 to escape RACT]

#### Subsection H. Solid Fuel Yard

This section addresses the following Regulated Emissions Units:

<u>E.U. ID No.</u>	<u>Brief Description</u>
-010	Solid Fuel Yard, Fugitive Emissions
-029	Cyclone collectors for fuel blending bins (FH-032 through FH-035)
-030	Cyclone collectors for fuel crushers (FH-048 and FH-049)
<del>-031</del>	<del>Cyclone collectors for bunkers (FH-059 through FH-062)</del>

#### Descriptions

Solid fuel is unloaded from ship/barge into the Solid fuel yard, ~~the blending bins~~ or directly to the tripper room via belt conveyors. Solid fuel from the piles is loaded onto belt conveyors using a rail mounted or mobile reclaimer. The solid fuel is then belt conveyed to the blending ~~bins tower~~, which consists of six storage bins, where the solid ~~fuel may be~~ is blended for use at the plant, or transloaded into trucks for shipment off site. ~~From the solid fuel yard conveyors, the solid fuel is screw conveyed into the bins.~~ Particulate matter (PM) emissions from the conveyors in the ~~blending bins solid fuel yard~~ are controlled by ~~3 4~~ rotoclones, ~~one at the conveyor drop, and one for every 2 bins.~~ ~~PM emissions from the screw conveyor are controlled by the fourth rotoclone.~~ ~~Blending bins can either~~ Each has 2 hoppers, which feed the transloader, or ~~can be~~ are conveyed, via 2 parallel belts (T1, T2) to 2 crushers (each belt has a crusher), or diverted directly to the tripper room. PM emissions from the 2 crushers and transfer tower are controlled by 2 rotoclones.

From the ~~tripper room solid fuel yard, the solid fuel is conveyed to the tripper room where~~ 2 trippers bunker the solid fuels into 4 solid fuel bunkers. Each unit has its own respective bunker. Solid fuel samples are taken every 15 minutes during bunkering, and composited for analysis. From the bunkers, the solid fuel is gravity fed into 14 ~~mills crushers~~, and then gravity-fed into the boilers. There are 3 ~~ball mills tall crushers~~, each for Unit Nos. 1 - 3, and 5 bowl ~~mills crushers~~ for Unit No. 4. From the ~~mills crushers~~, the solid fuel is pneumatically fed into classifiers, two for each ~~crusher mill on Unit Nos. 1-3 and one for each mill on Unit No. 4~~ for a total of 238 classifiers, and then into the respective boilers.