

Barbara

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

NOTICE OF AIR OPERATION PERMIT AMENDMENT

In the Matter of a Request for an air operation permit amendment:

Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

Permit No.: AO29-219924
Big Bend Station
Unit No. 1

Enclosed is an AMENDMENT to the air operation permit, AO29-219924, for the operation of the Tampa Electric Company Big Bend Station Unit No. 1 located at Big Bend Road, North Ruskin, Hillsborough County. This amendment is issued pursuant to Rule 62-210.360(1)(c), Florida Administrative Code and Chapter 403, Florida Statutes (F.S.). This amendment does not alter the effective dates of the existing permit.

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 Department 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 Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes, P.E.
Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF AIR OPERATION PERMIT AMENDMENT (including the corrected page) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/24/00 to the persons listed or as otherwise noted:

James Hunter, Administrator – Air Programs Environmental Planning, TEC
Rick Kirby, EPCHC
Sterlin Woodard, EPCHC

Clerk Stamp

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

Barbara J. Portwell
(Clerk) 2/24/00 (Date)

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AIR OPERATION PERMIT AMENDMENT

Permit No.: AO29-219924

Big Bend Station Unit No. 1

Specific Condition 7 on Page 3 is hereby changed:

- ~~7. This source shall be stack tested for sulfur dioxide at intervals of 12 months from the date of December 21, 1991, or within a 90 day period prior to that annual date. Testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C. A copy of the test data shall be submitted to both the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation within 45 days of such testing.~~
7. Compliance with the SO₂ emission standards set forth by Specific Condition No. 4 shall be demonstrated by Continuous Emission Monitoring (CEM) Systems. The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring system, in each of the stacks that are used by Unit No. 1, to measure and record the sulfur dioxide emissions from these emissions units, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limits of this permit shall be based on 2-hour or 3-hour averages or 24-hour calendar day averages calculated by the CEM system expressed in units of pounds per million Btu heat input, pounds per hour or tons per hour, as applicable. [Rule 62-4.070(3), F.A.C., and applicant request.]

Specific Condition 9 on Pages 4 and 5 is hereby changed:

9. ~~Compliance with the SO₂ emission standards set forth by Specific Condition No. 4 shall be demonstrated by:~~
- A) ~~Conducting an annual stack test, using an approved DER Method, with a fuel analysis for the coal burned to show compliance with the two hour standard (two hour average emissions) of 6.5 pounds of sulfur dioxide per million Btu heat input.~~
- B) ~~Not charging the fuel bunker of units 1 through 3 with any coal with a composite sulfur content that would produce emissions greater than 6.5 pounds of sulfur dioxide per million Btu heat input to show continuing compliance with the two hour standard. This can be accomplished in part by blending various grades of coal on-site prior to charging into the fuel bunkers located in the tripper room.~~
- C) ~~Daily composite fuel sampling and analysis to show compliance with the emission cap for units 1 through 3 of 25 tons of sulfur dioxide per hour on a 24 hour average. The following equation shall be used:~~

$$SO_2 = \frac{(i)}{MMBTU} \times \frac{(ii)}{\#S} \times \frac{(iii)}{\#SO_2} \times \frac{(iv)}{MMBTU} \times \frac{(v)}{day} \times \frac{(vi)}{2000 \text{ lbs. } SO_2}$$

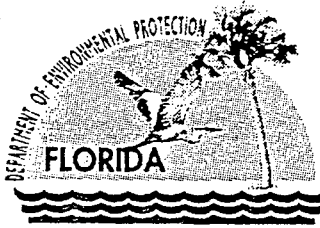
- Where: (i) comes from the daily fuel analysis
 (ii) conversion factor
 (iii) heat rate from the previous month's heat rate calculation
 (iv) conversion factor describing percent S in the coal that is converted to gaseous SO₂
 (v) daily generation from station logs
 (vi) conversion factor

This equation shall be used and the calculations completed for each of the units 1 through 3. This information shall be submitted to the Environmental Protection Commission of Hillsborough County on a quarterly basis no later than 45 days following the calendar quarter. If an exceedance of this standard occurs, then the permittee shall report this event to the Department of Environmental Regulation and the Environmental Protection Commission of Hillsborough County within 24 hours of the determination.

- D) ~~Adhering to the study, previously submitted, that demonstrates by a statistical analysis, that the 31.5 tons of SO₂ per hour on a three-hour average is being met. This study provides reasonable assurance that a daily sample can be used to demonstrate compliance with the 3-hour emission cap.~~

9.A. CEM System Requirements: The CEM systems shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. Missing data shall be substituted in a manner pursuant to 40 CFR Part 75, Subpart D. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subpart F and G. Excess emissions shall be determined using the CEM systems. [Rule 62-4.070(3), F.A.C.]

9.B. Records of Operation: The owner or operator shall make and maintain a daily record of operation of the emissions unit showing the date, fuel(s) used, whether flue gas was directed to the FGD system, and the duration of all startups, shutdowns and malfunctions of the boiler. [Rule 62-4.070(3), F.A.C.]



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David B. Struhs
Secretary

NOTICE OF AIR OPERATION PERMIT AMENDMENT

In the Matter of a Request for an air operation permit amendment:

Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

Permit No.: AO29-179912
Big Bend Station
Unit No. 2

Enclosed is an AMENDMENT to the air operation permit, AO29-179912, for the operation of the Tampa Electric Company Big Bend Station Unit No. 2 located at Big Bend Road, North Ruskin, Hillsborough County. This amendment is issued pursuant to Rule 62-210.360(1)(c), Florida Administrative Code and Chapter 403, Florida Statutes (F.S.). This amendment does not alter the effective dates of the existing permit.

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 Department 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 Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes, P.E.
Director
Division of Air Resources
Management

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James Hunter, Administrator – Air Programs Environmental Planning, TEC
Rick Kirby, EPCHC
Sterlin Woodard, EPCHC

Clerk Stamp

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(Clerk) 2/24/00 (Date)

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AIR OPERATION PERMIT AMENDMENT

Permit No.: AO29-179912

Big Bend Station Unit No. 2

Specific Condition 7 on Page 4 is hereby changed:

7. ~~This source shall be stack tested for sulfur dioxide at intervals of 12 months from the date of December 31, 1990, or within a 90 day period prior to that annual date. Testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C. A copy of the test data shall be submitted to both the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation within 45 days of such testing.~~
7. Compliance with the SO₂ emission standards set forth by Specific Condition # 4 shall be demonstrated by Continuous Emission Monitoring (CEM) Systems. The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring system, in each of the stacks that are used by Unit No. 2, to measure and record the sulfur dioxide emissions from these emissions units, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limits of this permit shall be based on 2-hour or 3-hour averages or 24-hour calendar day averages calculated by the CEM system expressed in units of pounds per million Btu heat input, pounds per hour or tons per hour, as applicable. [Rule 62-4.070(3), F.A.C., and applicant request.]

Specific Condition 9 on Pages 4 and 5 is hereby changed:

9. ~~Compliance with the SO₂ emission standards set forth by Specific Condition # 4 shall be demonstrated by:~~
- A) ~~Conducting an annual stack test, using an approved DER Method, with a fuel analysis for the coal burned to show compliance with the two hour standard of 6.5 pounds of sulfur dioxide per million Btu heat input.~~
- B) ~~Not charging the fuel bunker of units 1 through 3 with any coal with a composite sulfur content that would produce emissions greater than 6.5 pounds of sulfur dioxide per million Btu heat input to show continuing compliance with the two hour standard. This can be accomplished in part by blending various grades of coal on site prior to charging into the fuel bunkers located in the tripper room.~~
- C) ~~Daily composite fuel sampling and analysis to show compliance with the emission cap for units 1 through 3 of 25 tons of sulfur dioxide per hour on a 24 hour average. The following equation shall be used:~~

$$\text{SO}_2 = \frac{(i)}{\text{MMBTU}} \times \frac{(ii)}{\#S} \times \frac{(iii)}{\#S} \times \frac{(iv)}{\text{MWH}} \times .95 \times \frac{(v)}{\text{day}} \times \frac{(vi)}{2000 \text{ lbs. SO}_2} \text{ tons SO}_2$$

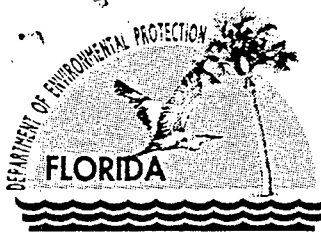
- Where: (i) ~~comes from the daily fuel analysis~~
(ii) ~~conversion factor~~
(iii) ~~heat rate from the previous month's heat rate calculation~~
(iv) ~~conversion factor describing percent S in the coal that is converted to gaseous SO₂ (reference 6/25/76 DER TECO stipulation)~~
(v) ~~daily generation from station logs~~
(vi) ~~conversion factor~~

~~This equation shall be used and the calculations completed for each of the units 1 through 3. This information shall be submitted to the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation on a quarterly basis no later than 45 days following the calendar quarter. If an exceedance of this standard occurs, then the permittee shall report this event to the Department of Environmental Regulation and the Environmental Protection Commission of Hillsborough County within 24 hours of the determination.~~

- D) ~~Adhering to the study, previously submitted, that demonstrates by a statistical analysis, that the 31.5 tons of SO₂ per hour on a three hour average is being met. This study provides reasonable assurance that a daily sample can be used to demonstrate compliance with the 3 hour emission cap.~~

9.A. CEM System Requirements: The CEM systems shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75. Subparts B and C. Missing data shall be substituted in a manner pursuant to 40 CFR Part 75. Subpart D. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75. Subpart F and G. Excess emissions shall be determined using the CEM systems. [Rule 62-4.070(3), F.A.C.]

9.B. Records of Operation: The owner or operator shall make and maintain a daily record of operation of the emissions unit showing the date, fuel(s) used, whether flue gas was directed to the FGD system, and the duration of all startups, shutdowns and malfunctions of the boiler. [Rule 62-4.070(3), F.A.C.]



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NOTICE OF AIR OPERATION PERMIT AMENDMENT

In the Matter of a Request for an air operation permit amendment:

Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

Permit No.: AO29-179911
Big Bend Station
Unit No. 3

Enclosed is an AMENDMENT to the air operation permit, AO29-179911, for the operation of the Tampa Electric Company Big Bend Station Unit No. 3 located at Big Bend Road, North Ruskin, Hillsborough County. This amendment is issued pursuant to Rule 62-210.360(1)(c), Florida Administrative Code and Chapter 403, Florida Statutes (F.S.). This amendment does not alter the effective dates of the existing permit.

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 Department 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 Department.

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(Clerk) 2/24/00 (Date)

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AIR OPERATION PERMIT AMENDMENT

Permit No.: AO29-179911

Big Bend Station Unit No. 3

Specific Condition 9 on Page 3 is hereby changed:

9. This source shall be stack tested for sulfur dioxide at intervals of 12 months from the date of August 14, 1989, or within a 90 day period prior to that annual date. Testing procedures shall be consistent with the requirements of Rule 17 2.700, F.A.C. A copy of the test data shall be submitted to both the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation within 45 days of such testing.

9. Compliance with the SO2 emission standards set forth by Specific Condition # 4 shall be demonstrated by Continuous Emission Monitoring (CEM) Systems. The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring system, in each of the stacks that are used by Unit No. 3, to measure and record the sulfur dioxide emissions from these emissions units, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limits of this permit shall be based on 2-hour or 3-hour averages or 24-hour calendar day averages calculated by the CEM system expressed in units of pounds per million Btu heat input, pounds per hour or tons per hour, as applicable. [Rule 62-4.070(3), F.A.C., and applicant request.]

Specific Condition 12 on Pages 4 and 5 is hereby changed:

12. Compliance with the SO2 emission standards set forth by Specific Condition # 4 shall be demonstrated by:

- A) Conducting an annual stack test, using an approved DER Method, with a fuel analysis for the coal burned to show compliance with the two hour standard of 6.5 pounds of sulfur dioxide per million Btu heat input.
- B) Not charging the fuel bunker of units 1 through 3 with any coal with a composite sulfur content that would produce emissions greater than 6.5 pounds of sulfur dioxide per million Btu heat input to show continuing compliance with the two hour standard. This can be accomplished in part by blending various grades of coal on site prior to charging into the fuel bunkers located in the tripper room.
- C) Daily composite fuel sampling and analysis to show compliance with the emission cap for units 1 through 3 of 25 tons of sulfur dioxide per hour on a 24 hour average. The following equation shall be used:

$$SO_2 = \frac{\#S}{MMBTU} \times 2 \frac{\#SO_2}{\#S} \times \frac{MMBTU}{MWH} \times .95 \times \frac{MWH}{day} \times \frac{tons SO_2}{2000 lbs. SO_2}$$

- Where:
- (i) comes from the daily fuel analysis
 - (ii) conversion factor
 - (iii) heat rate from the previous month's heat rate calculation
 - (iv) conversion factor describing percent S in the coal that is converted to gaseous SO2 (reference 6/25/76 DER-TECO stipulation)
 - (v) daily generation from station logs
 - (vi) conversion factor

This equation shall be used and the calculations completed for each of the units 1 through 3. This information shall be submitted to the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Regulation on a quarterly basis no later than 45 days following the calendar quarter. If an exceedance of this standard occurs, then the permittee shall report this event to the Department of Environmental Regulation and the Environmental Protection Commission of Hillsborough County within 24 hours of the determination.

D) Adhering to the study, previously submitted, that demonstrates by a statistical analysis, that the 31.5 tons of SO2 per hour on a three hour average is being met. This study provides reasonable assurance that a daily sample can be used to demonstrate compliance with the 3 hour emission cap.

12.A. CEM System Requirements: The CFM systems shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75. Subparts B and C. Missing data shall be substituted in a manner pursuant to 40 CFR Part 75. Subpart D. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75. Subpart F and G. Excess emissions shall be determined using the CEM systems. [Rule 62-4.070(3), F.A.C.]

12.B. Records of Operation: The owner or operator shall make and maintain a daily record of operation of the emissions unit showing the date, fuel(s) used, time the unit operated in the integrated mode, and the duration of all startups, shutdowns and malfunctions of the boiler. [Rule 62-4.070(3), F.A.C.]