



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 6 2001

79-12
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

AUG 6 2001

CITING COORDINATION

4EAD

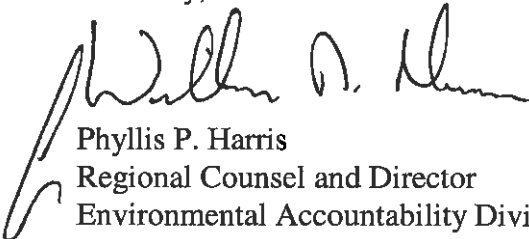
Mr. Hamilton S. Oven
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Application for Certification of Pollution Control Facility -
Tampa Electric Company, Big Bend Station

Dear Mr. Oven:

The purpose of this letter is to inform you that the Application for Certification of Pollution Control Facility submitted by Tampa Electric Company has been certified by the Environmental Protection Agency as prescribed in 40 C.F.R. § 20. The facility is a flue gas desulfurization system. A Notice of Federal Certification has been sent to the Internal Revenue Service with copies to the company and to you for the state file.

Sincerely,



Phyllis P. Harris
Regional Counsel and Director
Environmental Accountability Division

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 6 2001

4EAD

Mr. A. Spencer Autry
Vice President, Environmental and Fuels
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

SUBJ: Application for Certification of Pollution Control Facility - Tampa Electric Company,
Flue Gas Desulfurization System at Big Bend Station

Dear Mr. Autry:

The purpose of this letter is to inform you that the above-referenced Application for Certification of Pollution Control Facility has been certified by the Environmental Protection Agency. A copy of the Notice of Federal Certification issued to the Internal Revenue Service is enclosed. A copy of the Notice is being sent to the state certifying office also.

Sincerely,

A handwritten signature in black ink, appearing to read "Phyllis P. Harris".

Phyllis P. Harris
Regional Counsel and Director
Environmental Accountability Division

Enclosure

cc: Hamilton S. Oven



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 6 2001

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Mr. Henry O. Lamar, Jr.
District Director
Internal Revenue Service
400 West Bay Street
Jacksonville, Florida 32202

SUBJ: Notice of Certification of Pollution Control Facility - Tampa Electric Company,
Flue Gas Desulfurization System at Big Bend Station
Tax ID no. 59-0475140

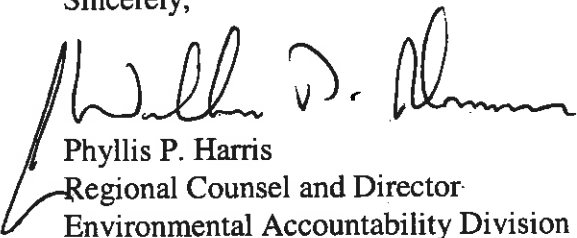
Dear Mr. Lamar:

The purpose of this letter is to notify you that the Environmental Protection Agency has certified the above-named pollution control facility for rapid amortization. The requirements for certification are set forth in 40 C.F.R. § 20 (Certification of Facilities) and 26 C.F.R. § 1.169 (Income Tax Regulations). A Notice of Federal Certification is enclosed.

Please note that this facility generates profits for Tampa Electric Company through the recovery and sales of a gypsum by-product. At time of application there were existing and potential sales agreements for the by-product and the company continues to try to identify new customers and new uses for the by-product. This information is provided in the Notice of Federal Certification as required by 40 C.F.R. § 20.9.

If you have any questions or if an address correction is necessary, please contact Marcia English, Paralegal Specialist, at 404/562-9570.

Sincerely,


Phyllis P. Harris
Regional Counsel and Director
Environmental Accountability Division

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8960

4EAD

NOTICE OF FEDERAL CERTIFICATION

(Pursuant to Section 169 of the
Internal Revenue Code, as amended)

PLEASE TAKE NOTICE that pursuant to Section 169 of the Internal Revenue Code, as amended, and Part 20 of Title 40 of the Code of Federal Regulations, THE CONTROL FACILITY IDENTIFIED HEREIN IS CERTIFIED AS BEING IN COMPLIANCE WITH THE APPLICABLE REGULATIONS of Federal agencies and the general policies of the United States for cooperation with the states in the prevention and abatement of air pollution under the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq. This certification is based on facts furnished by the applicant and is valid for the purposes of Section 169 only to the extent that such facts are complete and accurate.

Name of Applicant: Tampa Electric Company

Employer Identification Number: 59-0475140

Person Authorized to Receive Certification:

Mr. A. Spencer Autry
Vice President, Environmental and Fuels
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

Description of Control Facility:

The pollution control facility is a flue gas desulfurization system based on limestone slurry scrubbing with in situ forced oxidation. It is capable of producing a gypsum by-product suitable for wallboard manufacturing and/or cement production. The system is designed for sulfur dioxide removal efficiencies of eighty-five percent or greater.

Location of Control Facility:

Big Bend Station
Units 1 and 2

Additional Information:

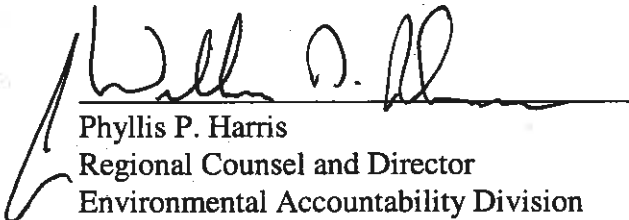
The control facility identified herein generates profits through the recovery and sales of a gypsum by-product suitable for wallboard manufacturing and/or cement production. Tampa Electric Company has long-term sales agreements for the by-product. At time of application, existing sales agreements accounted for approximately 375,000 tons of gypsum sales annually with potential for an increase up to 800,000 tons annually. In addition, the company has on-going programs to identify new customers and new uses for its gypsum by-product.

The control facility identified herein is not a building the only function of which is the abatement or control of pollution, as determined in accordance with the applicable income tax regulations.

The control facility identified herein is used only in connection with plants or properties that were in service on or before December 31, 1975.

The control facility identified herein performs no function in addition to the abatement or control of pollution, as determined in accordance with the applicable income tax regulations.

ISSUED this 25th day of July, 2001.


Phyllis P. Harris
Regional Counsel and Director
Environmental Accountability Division

TEF 2000



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

May 24, 2000

Ms. Marcia English
EPA-Legal Support
61 Forsyth Street Southwest
Atlanta, Georgia 30303

Dear Ms. English:

Please find enclosed the Application for Certification of Pollution Control Facility for Tampa Electric Company located at the Big Bend Station along with EPA Form 3300-2 (8-77) and EPA Form 3300-3 (8-77).

We are proud of our reputation for putting the customer first in every area of our operations. We feel that this attitude is one of the most important contributors to our success and to the success of the customers we serve.

If you have any questions or need any additional information please feel free to contact Mr. Hamilton Owen at 850- 487-0472. Again thank you for your interest.

Sincerely,

Erica Herring
Staff Assistant

/EH

Enclosure (3)



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

May 24, 2000

Mr. Greg Nelson
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601

Dear Mr. Nelson:

Please find enclosed the EPA Form 3300-2 (8-77) and EPA Form 3300-3 (8-77) for Tampa Electric Company located at the Big Bend Station.

We are proud of our reputation for putting the customer first in every area of our operations. We feel that this attitude is one of the most important contributors to our success and to the success of the customers we serve.

If you have any questions or need any additional information please feel free to contact Mr. Hamilton Owen at 850- 487-0472. Again thank you for your interest.

Sincerely,

Erica Herring
Staff Assistant

/EH
Enclosure (2)

TO Buck

DATE 16 May TIME 3:00

WHILE YOU WERE OUT

M Jamie Hunter

of Tampa Electric

PHONE 813-641-5033

AREA CODE

NUMBER

EXTENSION

TELEPHONED ☒	PLEASE CALL ☒	WILL CALL AGAIN ☒
RETURNED YOUR CALL	CALL IMMEDIATELY	
CAME TO SEE YOU	WANTS TO SEE YOU	

MESSAGE Re: Pollution Control
Devices For Ad Valorem
Tax Purposes Status of
their Submittal on March 30

By _____

ENVIRONMENTAL PROTECTION AGENCY NOTICE OF STATE CERTIFICATION (Pursuant to Section 169 of the Internal Revenue Code of 1954, as amended)		STATE FLORIDA WATER OR AIR POLLUTION CONTROL AGENCY OR AUTHORITY FL. DEPT. OF ENVIRONMENTAL PROTECTION	
It is hereby certified that the control facility described in the attached application is in conformity with State and local programs and requirements for the control of ☐ water pollution ☒ air pollution, as required by section 169 of the Internal Revenue Code of 1954, as amended, and regulations issued thereunder. According to the applicant, this control facility ☒ was placed ☐ will be placed in operation on DEC. 30, 19 99 In the case of control facility not yet in operation, this notice is certification only that the control facility, if constructed and operated in accordance with the application, will be in conformity with State and local programs or requirements for abatement or control of water or air pollution.			
1. NAME OF APPLICANT TAMPA ELECTRIC COMPANY ADDRESS (Street, City, State, Zip Code) POST OFFICE BOX 111 TAMPA, FLORIDA 33601		2. PERSON AUTHORIZED TO RECEIVE CERTIFICATION A. SPENCER AUTRY TITLE VICE PRESIDENT ADDRESS (Street, City, State, Zip Code) POST OFFICE BOX 111 TAMPA, FLORIDA 33601	
3. DESCRIPTION OF CONTROL FACILITY FLUE GAS DESULFURIZATION SYSTEM			
4. LOCATION OF CONTROL FACILITY (Street, City, State, Zip Code) BIG BEND STATION		5. RECEIVING BODY OR STREAM OF WATER, IF ANY	
6. USE OF THE CONTROL FACILITY CERTIFIED HEREBY IS IN CONFORMITY WITH THE FOLLOWING APPLICABLE STATE PLAN OR REQUIREMENTS FOR THE CONTROL OF ☐ WATER POLLUTION ☒ AIR POLLUTION.			
ISSUED THIS <u>24th</u> DAY OF <u>May</u> <u>2000</u>		SIGNED (Official of State Agency) <u>Hamilton S. Ores</u>	
STATE CERTIFICATION NUMBER FL2000-001		TITLE P.E. Administrator	

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF FEDERAL CERTIFICATION

(Pursuant to Section 169 of the Internal Revenue Code of 1954, as amended)

PLEASE TAKE NOTICE that pursuant to section 169 of the Internal Revenue Code of 1954, as amended, and Part 20 of Title 40 of the Code of Federal Regulations, the control facility identified herein

☒ Is certified

☐ Will, if constructed, reconstructed, acquired, erected, installed and operated in accordance with the accompanying application, be certified

as being in compliance with the applicable regulations of Federal agencies and the general policies of the United States for cooperation with the States in the prevention and abatement of ☐ water pollution ☒ air pollution under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.) or the Clean Air Act, as amended (42 U.S.C. 1857 et seq.). This certification is based on facts furnished by the applicant, and is valid for purposes of section 169 only to the extent that such facts are complete and accurate.

1. NAME OF APPLICANT TAMPA ELECTRIC COMPANY		ADDRESS (Street, City, State, Zip Code) POST OFFICE BOX 111	
2. EMPLOYER IDENTIFICATION NUMBER 59-0475140		TAMPA, FLORIDA 33601	
3. PERSON AUTHORIZED TO RECEIVE CERTIFICATION:			
NAME A. SPENCER AUTRY		ADDRESS (Street, City, State, Zip Code) POST OFFICE BOX 111	
TITLE VICE PRESIDENT		TAMPA, FLORIDA 33601	
4. DESCRIPTION OF CONTROL FACILITY FLUE GAS DESULFURIZATION SYSTEM			
5. LOCATION OF CONTROL FACILITY (Street, City, State, Zip Code) BIG BEND STATION			
6. EFFLUENT DISCHARGED TO			
7. THE CONTROL FACILITY IDENTIFIED HEREIN ☒ DOES ☐ DOES NOT GENERATE PROFITS THROUGH THE RECOVERY AND SALES OF WASTES, OR OTHERWISE.			
8. THE CONTROL FACILITY IDENTIFIED HEREIN ☐ IS ☒ IS NOT A BUILDING THE ONLY FUNCTION OF WHICH IS THE ABATEMENT OR CONTROL OF POLLUTION, AS DETERMINED IN ACCORDANCE WITH SECTION 1.169-2 (2) (i) OF THE INCOME TAX REGULATIONS.			
9. ☒ A. THE CONTROL FACILITY IDENTIFIED HEREIN IS USED ONLY IN CONNECTION WITH PLANTS OR PROPERTIES THAT WERE IN SERVICE ON OR BEFORE DECEMBER 31, 1975 ☐ B. _____ % OF THE AMORTIZABLE BASIS OF THE FACILITY IS ALLOCABLE TO ITS USE IN CONNECTION WITH PLANTS OR PROPERTIES THAT WERE IN SERVICE ON OR BEFORE DECEMBER 31, 1975.			
10. ☒ A. THE CONTROL FACILITY PERFORMS NO FUNCTION IN ADDITION TO THE ABATEMENT OR CONTROL OF POLLUTION. ☐ B. _____ % OF THE AMORTIZABLE BASIS OF THE CONTROL FACILITY IS ALLOCABLE TO THE ABATEMENT OR CONTROL OF POLLUTION.			
ISSUED THIS <u>24TH</u> DAY OF <u>May</u> , <u>2000</u>		SIGNATURE <i>Hamilton S. Owen</i>	
STATE CERTIFICATION NUMBER FL 2000-001		TITLE PROFESSIONAL ENGINEER ADMINISTRATOR	

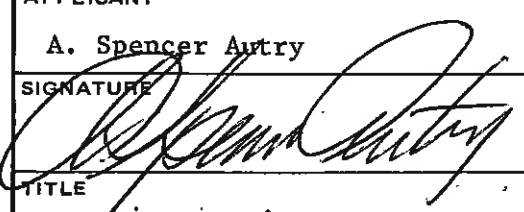
ENVIRONMENTAL PROTECTION AGENCY

APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY
(Pursuant to Section 169 of the Internal Revenue Code of 1954, as amended)

NO CERTIFICATION MAY BE MADE UNLESS A COMPLETED APPLICATION FORM HAS BEEN RECEIVED (26 U.S.C. §169; 40 C.F.R. PART 20). IF NO CLAIM OF BUSINESS CONFIDENTIALITY ACCOMPANIES THIS INFORMATION WHEN IT IS RECEIVED BY EPA, IT MAY BE MADE AVAILABLE TO THE PUBLIC BY EPA WITHOUT FURTHER NOTICE. INFORMATION COVERED BY A CLAIM OF CONFIDENTIALITY WILL BE DISCLOSED BY EPA ONLY TO THE EXTENT, AND BY MEANS OF THE PROCEDURES, SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS, PART 2, 41 C.F.R. 26902 et seq., SEPTEMBER 1, 1976.

A BUSINESS CONFIDENTIALITY CLAIM COVERING ALL OR PART OF THE INFORMATION FURNISHED IN OR WITH THIS APPLICATION MAY BE ASSERTED BY PLACING ON (OR ATTACHING TO) THE INFORMATION AT THE TIME IT IS SUBMITTED TO EPA, A COVER SHEET STAMPED OR TYPED LEGEND, OR OTHER SUITABLE FORM OF NOTICE EMPLOYING LANGUAGE SUCH AS "TRADE SECRET," "PROPRIETARY," OR "COMPANY CONFIDENTIAL." ALLEGEDLY CONFIDENTIAL PORTIONS OF OTHERWISE NON-CONFIDENTIAL DOCUMENTS SHOULD BE CLEARLY IDENTIFIED, AND MAY BE SUBMITTED SEPARATELY TO FACILITATE IDENTIFICATION AND HANDLING BY EPA. IF THE APPLICANT DESIRES CONFIDENTIAL TREATMENT ONLY UNTIL A CERTAIN DATE OR UNTIL THE OCCURRENCE OF A CERTAIN EVENT, THE NOTICE SHOULD SO STATE.

Application is hereby made for certification of the pollution control facility described herein. The following information is submitted in accordance with provisions of Part 20 of Title 40 of the Code of Federal Regulations and to the best of my knowledge and belief is true and correct.

APPLICANT A. Spencer Autry	DATE 2/29/00
SIGNATURE 	STREET ADDRESS, CITY, STATE, ZIP CODE Tampa Electric Company P.O. Box 111 Tampa, FL 33601
TITLE Vice President, Environmental and Fuels	

NOTE: READ ACCOMPANYING INSTRUCTIONS CAREFULLY PRIOR TO COMPLETING FORM.

SECTION A - IDENTITY AND LOCATION OF CONTROL FACILITY

1. FULL BUSINESS NAME OF APPLICANT Tampa Electric Company		2. TYPE OF OWNERSHIP ☐ INDIVIDUAL ☐ OTHER (Describe) ☐ PARTNERSHIP ☒ CORPORATION	
3. PERSON TO CONTACT REGARDING THIS APPLICATION (Name and Title) Greg Nelson, Manager Environmental Planning		TELEPHONE 813-228-4111	
ADDRESS (Street, City, State, Zip Code) P.O. Box 111, Tampa, FL 33601			
4. PERSON AUTHORIZED TO RECEIVE CERTIFICATION (Name and Title) A. Spencer Autry, Vice President, Environmental and Fuels			
ADDRESS (Street, City, State, Zip Code) P.O. Box 111, Tampa, FL 33601			
5. BUSINESS NAME OF PLANT (If different from Item 1) (Street, City, State, Zip Code) Big Bend Station		6. APPLICANT'S EMPLOYER IDENTIFICATION NO. 59-0475140	

SECTION B - DESCRIPTION OF CONTROL FACILITY

1. DESCRIBE THE FACILITY FOR WHICH CERTIFICATION IS SOUGHT. INCLUDE TYPE OF EQUIPMENT, MANUFACTURER AND MODEL NUMBER. SUBMIT DESIGN CRITERIA, ENGINEERING REPORT AND/OR PERFORMANCE SPECIFICATIONS WHICH DESCRIBE FUNCTION AND OPERATION OF FACILITY: Flue Gas Desulfurization System (see attached description)			
2. IS FACILITY IN OPERATION? ☒ YES ☐ NO	A. IF "YES" DATE FACILITY WAS PLACED IN OPERATION 12/30/99	B. IF "NO" DATE FACILITY IS EXPECTED TO BE PLACED IN OPERATION	3. IF FACILITY CONSISTS OF A BUILDING, IS IT EXCLUSIVELY FOR CONTROL OF POLLUTION? ☐ YES ☒ NO
4. DOES THE FACILITY (installed after December 31, 1975 ONLY) AFFECT THE OPERATING UNIT (of the plant or other property in connection with which the facility is used) MOST DIRECTLY ASSOCIATED WITH THE FACILITY IN ANY OF THE FOLLOWING WAYS? INCREASE THE OUTPUT OR CAPACITY ☐ YES ☒ NO EXTEND THE USEFUL LIFE? ☐ YES ☒ NO REDUCE THE TOTAL OPERATING COSTS? ☐ YES ☒ NO a. IF THE ANSWER TO ANY OF THE ABOVE IS "YES" IS THE PERCENTAGE BY WHICH THE OPERATING UNIT WAS EFFECTED ☐ 5% OR ☐ LESS b. IF NONE OF THE FOREGOING INCREASES, EXTENSIONS, OR REDUCTIONS EXCEEDING 5% STATE THE RATIONALE AND FURNISH THE DATA USED TO ARRIVE AT THE PERCENTAGE(S) GIVEN IN RESPONSE TO ITEM 4(a).			

SECTION C - DESCRIPTION OF COMMERCIAL PROCESS OR ACTIVITY

1. DESCRIBE PROCESS OR ACTIVITY IN CONNECTION WITH WHICH FACILITY IS OR WILL BE USED. Fossil-fuel fired steam generation of electricity	
2. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE NUMBER 4911	
3. DATE THAT EACH PLANT OR OTHER PROPERTY IN CONNECTION WITH WHICH FACILITY IS OR WILL BE USED, COMMENCE OPERATION.	
PLANT OR PROPERTY	DATE
A. Big Bend Station Unit No. 1	1970
B. Big Bend Station Unit No. 2	1973
C.	

SECTION C - DESCRIPTION OF COMMERCIAL PROCESS OR ACTIVITY

4A. IF FACILITY IS OR WILL BE USED IN CONNECTION WITH MORE THAN ONE PLANT OR PROPERTY, AND IF ONE OR MORE OF THE PLANTS OR PROPERTIES IN CONNECTION WITH WHICH THE FACILITY IS OR WILL BE USED WAS NOT IN OPERATION PRIOR TO JANUARY 1, 1976, STATE THE PERCENTAGE OF THE COST OF FACILITY WHICH IS ALLOCABLE TO THE PLANT(S) OR PROPERTY(IES) IN OPERATION PRIOR TO THAT DATE. _____ % **N/A**

4B. DESCRIBE THE REASONING AND FURNISH THE DATA USED TO ARRIVE AT THE PERCENTAGE GIVEN IN RESPONSE TO ITEM 4(A).

N/A

5A. IF FACILITY PERFORMS A FUNCTION OR FUNCTIONS IN ADDITION TO THE ABATEMENT OF POLLUTION, STATE THE PERCENTAGE OF THE COST OF FACILITY ALLOCABLE TO THE ABATEMENT OF POLLUTION. _____ % **N/A**

5B. DESCRIBE THE REASONING AND FURNISH THE DATA USED TO ARRIVE AT THE PERCENTAGE GIVEN IN RESPONSE TO ITEM 5(A).

N/A

SECTION D - WASTEWATER CHARACTERISTICS (To be completed only in connection with facilities for the control of water pollution)

DESCRIBE THE EFFECT OF POLLUTION CONTROL FACILITY IN TERMS OF QUANTITY AND QUALITY OF EMISSION AND OF WASTES OR BY-PRODUCTS REMOVED, ALTERED, DISPOSED OF, OR PREVENTED. IF FEASIBLE, ATTACH PROCESS FLOW OR SCHEMATIC DIAGRAM WITH MATERIAL BALANCES OF THE WASTE OR WASTEWATER STREAM OR DISCHARGE. REPORT EITHER ON ACTUAL BASIS OR, IF FACILITY IS NOT YET IN OPERATION, ON DESIGN BASIS (*Use Standard Units - pounds/gallon, grams/liter, ppm, etc.*).

1. HOURS PLANT OR PROPERTY IS IN OPERATION: a. Per Month: Min. _____ Max. _____ Avg. _____
b. Per Year: Min. _____ Max. _____ Avg. _____

2. WASTEWATER DISCHARGE IN (A) GALLONS PER MINUTE, (B) MILLIONS OF GALLONS	WITHOUT POLLUTION CONTROL FACILITY			WITH POLLUTION CONTROL FACILITY		
	a. Min. _____	Max. _____	Avg. _____	Min. _____	Max. _____	Avg. _____
	b. Min. _____	Max. _____	Avg. _____	Min. _____	Max. _____	Avg. _____

3. POLLUTANTS OR WASTE PRODUCTS

3.a	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.b	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.c	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.d	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.e	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.f	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.g	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.h	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.i	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____
3.j	Min. _____ Max. _____ Avg. _____	Min. _____ Max. _____ Avg. _____

4. DESCRIBE METHOD (GRAB OR COMPOSITE) AND FREQUENCY OF SAMPLING AND METHODS USED TO DETERMINE QUANTITIES OF POLLUTANTS.			
5. IS FACILITY A PRETREATMENT FACILITY TO PREPARE WASTEWATER FOR RECEIPT BY ANOTHER FACILITY, PUBLIC OR PRIVATE, FOR FURTHER TREATMENT? IF "YES", SKIP ITEMS 6, 7 AND 8 AND IDENTIFY RECEIVING FACILITY. ☐ YES ☐ NO			
6. IDENTIFY THE BODY OR STREAM OF WATER INTO WHICH WASTEWATER FROM THE PLANT OR PROPERTY, IN CONNECTION WITH WHICH THE FACILITY IS USED, IS OR WILL BE DISCHARGED.			
7. DESCRIBE LOCATION OF DISCHARGE OR OUTFALL WITH RESPECT TO RECEIVING WATERS.			
8. IS THE RECEIVING BODY OR STREAM OF WATER A NAVIGABLE WATERWAY OF THE UNITED STATES OR A TRIBUTARY THEREOF? ☐ YES ☐ NO IF "NO," PROCEED TO ITEM 9.			
A. IF "YES" HAS A U.S. ARMY CORPS OF ENGINEERS DISCHARGE PERMIT BEEN APPLIED FOR? ☐ YES ☐ NO IF "NO," EXPLAIN, THEN PROCEED TO ITEM 9.			
B. IF ANSWER TO ITEM 8A IS "YES" HAS A U.S. ARMY CORPS OF ENGINEERS DISCHARGE PERMIT BEEN ISSUED? ☐ YES ☐ NO (1) IF "YES," ATTACH COPY OR PROVIDE PERMIT NUMBER _____ OMIT ITEM 9. (2) IF "NO," EXPLAIN, GIVING DATES OF ANY OFFICIAL ACTION WITH RESPECT TO APPLICATION.			
9. IF ITEM 8B HAS NOT BEEN ANSWERED "YES," IDENTIFY APPLICABLE STATE AND LOCAL WATER POLLUTION CONTROL REQUIREMENTS AND STANDARDS.			
SECTION E - EMISSION CHARACTERISTICS (To be completed only in connection with facilities for the control of air pollution)			
DESCRIBE THE EFFECT OF POLLUTION CONTROL FACILITY IN TERMS OF QUANTITY AND QUALITY OF EMISSION AND OF EMISSION AND OF WASTES OR BY-PRODUCTS REMOVED, ALTERED, DISPOSED OF, OR PREVENTED. IF FEASIBLE, ATTACH PROCESS FLOW OR SCHEMATIC DIAGRAM WITH MATERIAL BALANCES OF POLLUTANTS IN THE EMISSION STREAM. REPORT EITHER ON ACTUAL BASIS, OR, IF FACILITY IS NOT YET IN OPERATION, ON DESIGN BASIS.			
1. HOURS PLANT OR PROPERTY IS IN OPERATION:		a. Per Month: Min. _____ Max. _____ Avg. _____ b. Per Year: Min. _____ Max. <u>8760</u> Avg. _____	
2. POLLUTANTS TO BE CONTROLLED (Specify each)	a. <u>Sulfur Dioxide</u>		
	b. _____		
	c. _____		
	d. _____		
3. VOLUMETRIC FLOW RATE OF EMISSION (actual cubic feet/minute)	WITHOUT POLLUTION CONTROL FACILITY		WITH POLLUTION CONTROL FACILITY
	Min. _____ Max. <u>3145000</u> Avg. _____ at <u>294</u> °F		Min. _____ Max. <u>2377000</u> Avg. _____ at <u>127</u> °F
4. CONCENTRATION (in volume % of gaseous components)	a. Min. _____ Max. _____ Avg. _____ at _____ °F <u>2800 ppm</u>		Min. _____ Max. _____ Avg. _____ at _____ °F <u>350 ppm</u>
	b. Min. _____ Max. _____ Avg. _____ at _____ °F		Min. _____ Max. _____ Avg. _____ at _____ °F
	c. Min. _____ Max. _____ Avg. _____ at _____ °F		Min. _____ Max. _____ Avg. _____ at _____ °F
	d. Min. _____ Max. _____ Avg. _____ at _____ °F		Min. _____ Max. _____ Avg. _____ at _____ °F
5. CONCENTRATION (grains/cubic feet of all particulate matter)	Min. _____ Max. _____ Avg. _____ at _____ °F <u>N/A</u>		Min. _____ Max. _____ Avg. _____ at _____ °F <u>N/A</u>
6. CONCENTRATION (grains/cubic feet of any specific particulate listed in E-2 above)	Min. _____ Max. _____ Avg. _____ at _____ °F <u>N/A</u>		Min. _____ Max. _____ Avg. _____ at _____ °F <u>N/A</u>

7. DESCRIBE METHOD OF DETERMINING RATES, CONCENTRATION AND CHARACTERISTICS OF EMISSIONS.

Continuous Emission Monitoring System and/or engineering estimates.

8. IDENTIFY APPLICABLE STATE AND LOCAL AIR POLLUTION CONTROL REQUIREMENTS AND STANDARDS.

N/A

SECTION F - COST INFORMATION (See Note to instructions for this section)

1. IS THERE ANY BY-PRODUCT OR MATERIAL WHICH, WITHOUT THE CONTROL FACILITY, WOULD BE LOST AND WHICH IS RECOVERED THROUGH THE USE OF THE FACILITY?
- ☒
- YES
- ☐
- NO

A. IF YES, IDENTIFY Gypsum

- B. INDICATE THE DISPOSITION OF EACH TYPE OF RECOVERED MATERIAL, INCLUDING IF APPLICABLE, THE SALE OR SIMILAR DISPOSITION OF RECLAIMED OR RECOVERED MATERIAL TO INDUSTRIAL WASTE RECOVERY FIRMS OR OTHERS.

Sold

2. ANNUAL COST RECOVERY	A. MATERIAL RECOVERED AND SOLD	\$ 800,000
	B. OTHER	\$ N/A
	C. TOTAL	\$ 800,000
3. TOTAL AVERAGE ANNUAL MAINTENANCE AND OPERATING COSTS (Not applicable if no cost recovery is reported in Item 2)		\$4,275,000

FLUE GAS DESULFURIZATION (FGD)

Emission Unit:	Unit #1, #2
Emission Point ID No.:	CS-001b
Manufacturer:	Wheelabrator
Description of Control Equipment:	Single absorber module
Inlet Temp. (°F):	300
Outlet Temp. (°F):	127
Inlet Air Flow Rate (acfm):	2,820,000
Additive Liquid Scrubbing Medium:	Limestone Slurry
Total Liquid Injection Rate (gpm):	49,000 per each of four spray heads

UNIT NOS. 1 AND 2 FGD SYSTEM DESCRIPTION

The Unit Nos. 1 and 2 flue gas desulfurization (FGD) system is based on limestone slurry scrubbing with *in situ* forced oxidation and is capable of producing a gypsum byproduct suitable for wallboard manufacturing and/or cement production. The FGD system is designed for sulfur dioxide (SO₂) removal efficiencies of 85 percent or greater.

The FGD system consists of the following main subsystems:

- Gas handling.
- SO₂ absorption.
- Reagent preparation.
- Gypsum dewatering.

1.1 GAS HANDLING

Flue gas from the Unit Nos. 1 and 2 electrostatic precipitators is ducted to the booster fans which provide the additional energy necessary to overcome the gas side resistance of the downstream system equipment. The flue gas discharged from the booster fans is combined in a common plenum and routed to the absorber inlet. The existing chimney (Emission Point CS-001a) will remain in place for use during nonscrubbed operation of Unit Nos. 1 and/or 2.

The cleaned, cooled and saturated flue gas exiting the absorber module is ducted to a new wet chimney with an acid brick flue. The chimney is sized to prevent condensate reentrainment into the flue gas released to the atmosphere. Acidic condensate collected in the chimney base is collected and transferred to the absorber system.

1.2 SULFUR DIOXIDE ABSORPTION

Flue gas enters the SO₂ absorber where the gas is exposed to a limestone-based slurry spray to remove 85 percent or more of the inlet SO₂.

The continuous emission monitoring system (CEMS) that will be used to measure emissions from the new flue gas treatment system is currently being designed. A detailed CEMS description will be submitted to the Florida Department of Environmental Protection (FDEP) for approval prior to FGD startup.

The single spray tower absorber is capable of handling 0 to 100 percent of the gas flow from Unit Nos. 1 and 2, simultaneously. Any gases not scrubbed will be directed to existing Stack 1a. Flue gas enters the absorber tower, flows countercurrently, and contacts the slurry spray consisting of calcium carbonate, calcium sulfite, and calcium sulfate. The slurry is distributed as finely divided droplets by multiple stages of spray banks throughout the absorber. The positioning of the spray banks and individual spray nozzles is engineered to ensure that the entire tower cross-sectional flow area is uniformly covered by a spray pattern. Each spray bank contains numerous individual spray nozzles, designed to generate droplet size distributions which provide sufficient surface area for mass transfer and, at the same time, cause minimum droplet entrainment in the gas stream. The absorber contains a dual-flow tray which maintains high removal efficiencies under a maximum flue gas and SO₂ loading conditions by increasing the mass transfer surface area of the slurry. Dibasic acid is also added for enhanced SO₂ removal.

Following contact with the slurry sprays, the scrubbed flue gas passes through mist eliminators which remove entrained slurry droplets from the gas stream. The mist eliminators are maintained in a clean condition by periodic washing. The water used for the mist eliminator wash supplements the source of makeup water to the FGD system. After the absorber recycle slurry has been exposed to the gas stream in the spray tower absorption section, the slurry enters the reaction tank at the bottom of the tower. Fresh makeup limestone reagent is added to the reaction tank as a slurry to maintain the design pH, typically in the range of 5.0 to 6.0. The reaction tank is designed to:

- Retain the circulating slurry to permit dissolution of fresh limestone and crystallization of the reaction products.
- Facilitate the oxidation of calcium sulfite to calcium sulfate.

To accomplish *in situ* oxidation within the reaction tank, air is sparged into the slurry at a pre-designed rate and submergence level. This action provides effective oxygen transfer to ensure virtually complete oxidation of calcium sulfite to calcium sulfate.

The residence time of solids in the reaction tank is generally 15 to 20 hours. This extended residence time provides an environment conducive for gypsum crystal growth.

Recirculation pumps take suction from the reaction tank as do the absorber bleed pumps which feed the primary dewatering system. The slurry in the tank is agitated to maintain the solids in suspension and prevent solids settling to the tank bottom.

1.3 REAGENT PREPARATION

The reagent preparation system grinds limestone to produce a minimum 35-percent solids slurry for feed to the absorber. The new FGD system utilizes onsite reagent preparation equipment similar to the existing system supporting the Unit No. 4 FGD scrubber. As part of the Unit Nos. 1 and 2 FGD system project, one new wet ball mill will be added to the existing system for the production of the limestone reagent slurry. This new mill will be oversized for Unit Nos. 1 and 2 so that the mill may also be used as a partial backup for the two existing wet ball mill grinding systems.

The new reagent preparation system consists of:

- Storage silo discharge equipment and weigh feeder.
- One wet grinding mill.
- Slurry classification and recycle equipment.
- One reagent slurry storage tank.

Crushed limestone, which has been transported to the day storage silos by conveyors, is fed via a weigh feeding system from the silo into the wet grinding mill. The grinding water is primarily filtrate recovered from the gypsum processing system.

The pulverized limestone exiting the mill is classified in a set of hydroclones. The fine fraction (overflow), containing a minimum 35-percent weight limestone particles of typically 70 percent minus 200 mesh, flows to a limestone slurry storage tank while the coarse fraction (underflow) is recycled back to the mill for further grinding. Provisions are made to direct the overflow slurry either to the new storage tank, dedicated to Unit Nos. 1 and 2, or to one of the existing storage tanks, dedicated to Unit Nos. 3 and 4.

The new agitated reagent storage tank is equipped with limestone slurry feed pumps which operate a continuous flow recycle system feeding the absorber reaction tank. Fresh limestone feed is taken from this recycle loop upon system demand based primarily on pH control.

1.4 GYPSUM DEWATERING

The purpose of the dewatering system is to produce a gypsum product with 90 percent solids and recirculate process water to the absorption and reagent preparation systems.

The gypsum dewatering system design consists of:

- Primary dewatering hydroclones.
- Fines separation hydroclones.
- Filter feed tank.
- Vacuum drum filters.
- Filtrate and reclaim water equipment.

Absorber bleed slurry at a nominal 20-weight percent solids content is pumped from the absorber module through a set of hydroclones which concentrate the product to produce a

nominal 45-weight percent solids underflow. Product solids contained in the hydroclone underflow stream flow to the filter feed tank for secondary dewatering.

Most of the limestone, fine crystals (calcium sulfite and sulfate), and water are contained in the hydroclone overflow stream. This stream is sent to a set of final separation hydroclones. The larger particles are captured and report to the under flow which is recycled back to the absorber via the return slurry system. The over flow from the fines separation hydroclones contains very small particles (broken gypsum crystals and some fly ash) which must be removed from the FGD system. This stream is also the source of the purge stream to the wastewater treatment system, required to limit the amount of dissolved chlorides in the scrubbing slurry.

The filter feed tank is designed to accept and store the hydroclone underflow from both the existing and new FGD systems for subsequent feed to the vacuum filters. This tank is equipped with an agitator to maintain the solids in suspension.

The product solids are fed to the vacuum drum filters where the solids are concentrated to approximately 90 percent by weight. Provisions are included in the vacuum filter system to wash the gypsum cake with fresh water to remove traces of chloride to meet the gypsum byproduct specification for sale. The new vacuum filters are designed to replace the existing filters so that each filter will dewater the gypsum produced by both FGD systems.

The filtrate from the operating filter is collected in a filtrate tank, sized to store and return water to the reagent preparation and absorption systems. Water is pumped from the filtrate tank to:

- The existing Unit No. 4 filtrate return system.
- The new absorber reaction tank via the return slurry system.

- The overall plant makeup water tank.
- The area slurry line flush connections.

The new return slurry tank collects the primary dewatering hydroclone overflow slurry, fines separation hydroclone under flow, filtrate from the vacuum filter system, and transfer slurry from temporary absorber slurry storage. The return slurry is pumped back to the Unit Nos. 1 and 2 module for density control and to promote crystal growth. All or a portion of the slurry is directed to a set of chloride purge hydroclones. The hydroclone underflow drops back to the return slurry tank and the overflow, containing relatively high amounts of dissolved solids and low amounts of suspended solids, are directed to a chloride purge tank for transfer to the wastewater treatment system prior to discharge.

LIMESTONE HANDLING SYSTEM DESCRIPTION

The existing limestone receiving and handling system starts at the limestone receiving hoppers in the limestone unloading facility and terminates at the discharge of the belt feeders which meter the limestone into ball mills which prepare the limestone feed for the Unit No. 4 FGD system.

In the existing system, limestone delivered by truck is unloaded into the receiving hoppers of the limestone receiving facility. Belt feeders meter the limestone onto 36-inch belt conveyor LB. A belt scale on conveyor LB tracks the quantity of limestone delivered to the plant.

The limestone is transferred from Conveyor LB to a 36-inch tripper conveyor in transfer house LL-1. The tripper conveyor stacks the limestone in a pile housed in a storage building. A portal type reclaimer reclaims limestone from the pile and deposits the material onto 24-inch belt conveyor LD at the rate of 300 tons per hour (tph).

Conveyor LD transfers the limestone onto 24-inch belt conveyor LE in transfer house LL-2. Conveyor LE raises the limestone to the top of two limestone storage silos. A bifurcated chute equipped with a diverting gate deposits the limestone into either of the two silos. A rotary type discharger and belt feeder, installed beneath each silo, transfers limestone to a corresponding ball mill. The limestone ground in the ball mills is mixed with water streams introduced into the mills and the slurries are carried into the FGD reagent tanks of Unit No. 4. The existing ball mills are 100 percent redundant. Each is capable of grinding 30 tph of limestone which is the combined limestone requirement if both Unit Nos. 3 and 4 are being scrubbed.

The system described above is presently supplying the limestone requirements of the FGD system serving Unit Nos. 3 and 4. To add a new FGD system for Unit Nos. 1 and 2, a new limestone silo, rotary unloader, belt feeder, and ball mill will be installed. The new

ball mill will provide the new FGD system with 41 tph of ground limestone. However, the new mill will be sized for a grinding capacity of 55 tph.

The new limestone silo and ball mill will be installed at the south end of the two existing silos. To divert limestone to the new silo, the existing bifurcated will be removed, and two new reversible belt conveyors LF and LG will be installed to supply the existing new silos.

The existing conveying system from storage pile to limestone silos has sufficient capacity to supply the new FGD System. Existing belt speeds, horsepower, and belt tensions will not be changed.

Addition of new limestone handling equipment creates new particulate matter emission sources which will operate simultaneously with the equipment currently used for supplying limestone to the Unit No. 4 FGD system. The new sources are conveyors LF and LG installed atop the silos for supplying limestone to the new silo. A baghouse will be included in the design to control particulate matter (PM) emissions from these new conveyor transfers.

GYPSUM HANDLING SYSTEM DESCRIPTION

The existing two gypsum filters will be replaced by two new gypsum filters. Each new filter will be capable of dewatering the gypsum product of Unit Nos. 1 through 4. The existing conveying configuration, which is capable of directing gypsum to either the north stackout area or to the long-term storage area, will be retained.

Tampa Electric Company (TEC) maintains several long-term sales agreements for gypsum by-product as part of the efforts to ensure that the vast majority of the gypsum produced at Big Bend Station is recycled in a productive and environmentally sensitive manner. In addition to these agreements, TEC operates a concerted marketing effort designed to identify new byproduct customers.

Existing sales agreements account for approximately 375,000 tons of gypsum sales annually. TEC's current customers include clients in the wallboard, cement, and agricultural industries. TEC expects to renew all of these agreements over the next 18 to 24 months. An expansion of facilities at our wallboard customer coupled with a new extension of that sales agreement already provides the potential for an increase in gypsum sales that could be up to 800,000 tons annually. Even if only part of this potential is realized, TEC has an active interest from several large, established wallboard manufacturers evaluating new production capacity in the vicinity of Big Bend Station. This interest, coupled with our sales to the cement and agricultural markets, should provide adequate demand to allow TEC to market most, if not all, of the future gypsum production.

The FGD systems are designed to yield a high-quality gypsum product that makes TEC's gypsum attractive to a wide variety of users. TEC's history of producing high quality, nonhazardous gypsum is one of the principal reasons TEC continues to draw interest in this product from many firms.

TEC is also continuing the on-going program to identify new gypsum customers to develop the greatest number of possible alternative outlets for this product. TEC's market development not only looks at potential new customers, but at possible new uses for gypsum and more economical ways of transporting this material to end-users. With this strategy, TEC hopes not only to find new gypsum markets, but to expand traditional markets via low-cost forms of transportation.

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF FEDERAL CERTIFICATION

(Pursuant to Section 169 of the Internal Revenue Code of 1954, as amended)

PLEASE TAKE NOTICE that pursuant to section 169 of the Internal Revenue Code of 1954, as amended, and Part 20 of Title 40 of the Code of Federal Regulations, the control facility identified herein

☒ Is certified

☐ Will, if constructed, reconstructed, acquired, erected, installed and operated in accordance with the accompanying application, be certified

as being in compliance with the applicable regulations of Federal agencies and the general policies of the United States for cooperation with the States in the prevention and abatement of ☐ water pollution ☒ air pollution under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.) or the Clean Air Act, as amended (42 U.S.C. 1857 et seq.). This certification is based on facts furnished by the applicant, and is valid for purposes of section 169 only to the extent that such facts are complete and accurate.

1. NAME OF APPLICANT <i>Tampa Electric Company</i>		ADDRESS (Street, City, State, Zip Code) <i>P.O. Box 111 Tampa, FL 33601</i>	
2. EMPLOYER IDENTIFICATION NUMBER <i>59-0475140</i>			
3. PERSON AUTHORIZED TO RECEIVE CERTIFICATION:			
NAME <i>A. Spencer Autry</i>		ADDRESS (Street, City, State, Zip Code) <i>P.O. Box 111 Tampa, FL 33601</i>	
TITLE <i>Vice President</i>			
4. DESCRIPTION OF CONTROL FACILITY <i>Flue Gas Desulfurization System</i>			
5. LOCATION OF CONTROL FACILITY (Street, City, State, Zip Code) <i>Big Bend Station</i>			
6. EFFLUENT DISCHARGED TO			
7. THE CONTROL FACILITY IDENTIFIED HEREIN ☒ DOES ☐ DOES NOT GENERATE PROFITS THROUGH THE RECOVERY AND SALES OF WASTES, OR OTHERWISE.			
8. THE CONTROL FACILITY IDENTIFIED HEREIN ☐ IS ☒ IS NOT A BUILDING THE ONLY FUNCTION OF WHICH IS THE ABATEMENT OR CONTROL OF POLLUTION, AS DETERMINED IN ACCORDANCE WITH SECTION 1.169-2 (2) (i) OF THE INCOME TAX REGULATIONS.			
9. ☒ A. THE CONTROL FACILITY IDENTIFIED HEREIN IS USED ONLY IN CONNECTION WITH PLANTS OR PROPERTIES THAT WERE IN SERVICE ON OR BEFORE DECEMBER 31, 1975 ☐ B. _____% OF THE AMORTIZABLE BASIS OF THE FACILITY IS ALLOCABLE TO ITS USE IN CONNECTION WITH PLANTS OR PROPERTIES THAT WERE IN SERVICE ON OR BEFORE DECEMBER 31, 1975.			
10. ☒ A. THE CONTROL FACILITY PERFORMS NO FUNCTION IN ADDITION TO THE ABATEMENT OR CONTROL OF POLLUTION. ☐ B. _____% OF THE AMORTIZABLE BASIS OF THE CONTROL FACILITY IS ALLOCABLE TO THE ABATEMENT OR CONTROL OF POLLUTION.			
ISSUED THIS _____ DAY OF _____, 19____		SIGNATURE	
STATE CERTIFICATION NUMBER <i>FL 2000-001</i>		TITLE <i>Professional Engineer Administrator</i>	

ENVIRONMENTAL PROTECTION AGENCY NOTICE OF STATE CERTIFICATION (Pursuant to Section 169 of the Internal Revenue Code of 1954, as amended)		STATE Florida WATER OR AIR POLLUTION CONTROL AGENCY OR AUTHORITY Dept of Environmental Protection
It is hereby certified that the control facility described in the attached application is in conformity with State and local programs and requirements for the control of ☐ water pollution ☒ air pollution, as required by section 169 of the Internal Revenue Code of 1954, as amended, and regulations issued thereunder. According to the applicant, this control facility ☒ was placed ☐ will be placed in operation on Dec. 30, 1999. In the case of control facility not yet in operation, this notice is certification only that the control facility, if constructed and operated in accordance with the application, will be in conformity with State and local programs or requirements for abatement or control of water or air pollution.		
1. NAME OF APPLICANT Tampa Electric Company	2. PERSON AUTHORIZED TO RECEIVE CERTIFICATION A. Spencer Autry	
ADDRESS (Street, City, State, Zip Code) P.O. Box 111 Tampa, FL 33601	TITLE Vice President	
	ADDRESS (Street, City, State, Zip Code) P.O. Box 111, Tampa, FL 33601	
3. DESCRIPTION OF CONTROL FACILITY Flue Gas Desulfurization System		
4. LOCATION OF CONTROL FACILITY (Street, City, State, Zip Code) Big Bend Station	5. RECEIVING BODY OR STREAM OF WATER, IF ANY 	
6. USE OF THE CONTROL FACILITY CERTIFIED HEREBY IS IN CONFORMITY WITH THE FOLLOWING APPLICABLE STATE PLAN OR REQUIREMENTS FOR THE CONTROL OF ☐ WATER POLLUTION ☒ AIR POLLUTION.		
ISSUED THIS _____ DAY OF _____ 19____	SIGNED (Official of State Agency) 	
STATE CERTIFICATION NUMBER FL 2000-001	TITLE 	