A029-204434

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S)

If major alterations have occurred, the applicant should complete the Standard Air Permit Application Form.

Source Type: Air Pollution Renewal of DER Permit No. A029-125315

Company Name: Tampa Electric Company County: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e., Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired):

F.J. Gannon Station Unit One

Source Location: Street: Port Sutton City: Tampa

UTM: East 360,000 North 3,087,500

Latitude: 27° 54' 25"N. Longitude: 82° 25' 21"W.

1. Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05. Enclosed

2. Have there been any alterations to the plant since last permitted? [ ] Yes [X] No
If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Submitted 2/22/91

4. Have previous permit conditions been adhered to? [X] Yes [ ] No If no, explain on a separate sheet and attach.

5. Has there been any malfunction of the pollution control equipment during tenure of current permit? [X] Yes [ ] No If yes, and not previously reported, give brief details and what action was taken on a separate sheet and attach. Previously addressed in Quarterly Reports.

6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach.

I. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process: Not Applicable.

Description	Contaminant Type	%Wt	Utilization Rate	lbs/hr

B. Product Weight (lbs/hr): Not Applicable

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Max/hr**	Maximum Heat Input (MMBTU/hr)
Coal	69,691 *	100,000	1257

D. Normal Equipment Operating Time: hrs/day 24; days/wk 7; wks/yr 52; hrs/yr (power plants only) 8760; if seasonal, describe _____

*Average Value, 1989 and 1990 emissions inventory

The undersigned owner or authorized representative*** of Tampa Electric Company is fully aware that the statements made in this application for a renewal of a permit to operate an air pollution source are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403, Florida Statutes, and all the rules and regulations of the Department. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted facility.

*During actual time of operation.
**Units: Natural Gas-MMCF/hr; Fuel Oils-barrels/hr; Coal-lbs/hr.
***Attach letter of authorization if not previously submitted

Lynn F. Robinson
Signature, Owner or Authorized Representative (Notarization is mandatory)

Lynn F. Robinson, Manager, Environmental Planning
Typed Name and Title

P.O. Box 111
Address

Tampa FL 33601-0111
City State Zip

10/30/91 813 228-4841
Date Telephone No.

ER Form 17-1.202(4)
Effective November 30, 1982

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

Sworn to and subscribed before me this 30 day of October, 1991.

Diana R. Rogers
Notary Public
Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. DEC. 4, 1993
BONDED THRU GENERAL INS. UND.

Professional Engineer in Florida (as required by Subsection 17-4.05(3), F.A.C.)

This is to certify that the engineering features of this air pollution control project have been examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statuates of the State of Florida and the rules and the regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintainance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

Date: 10-21-91 Telephone No. 228-4111

David W. Ross
Name (Please type)

Tampa Electric Company
Company Name (Please type)

P.O. Box 111, Tampa, FL 33601-0111
Mailing Address (Please Type)

DAVID W. ROSS CERTIFICATE NO. 42720 STATE OF FLORIDA REGISTERED ENGINEER

Affix seal here

Florida Registration No. 42720

This certification is only applicable for the permit renewal application of Tampa Electric Company's F.J. Gannon Station Unit 1.

TAMPA ELECTRIC
A TECO ENERGY COMPANY

December 20, 1991

Mr. Roger P. Stewart
Environmental Protection Commission
of Hillsborough County
1900 Ninth Avenue
Tampa, Florida 33605

Certified Mail #P740 380 520

Richard D. Garrity, Ph.D.
Florida Department of
Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

Certified Mail #P740 380 521

Re: Tampa Electric Company
Modification of Air Operation Permits
F.J. Gannon Station, Units 1-4

Gentlemen:

Please find enclosed four (4) copies of an application to modify the existing air operation permits for the referenced units, including an authorization letter for the applicant.

The application package, together with a check for $1600 ($400 for each source), to the Hillsborough County Board of County Commissioners, and a check for $250 to the Florida Department of Environmental Regulation, are included in Mr. Stewart's copy. Please note a similar source fee to FDER is applicable, pursuant to Chapter 17-4.050(3), F.A.C.

Should you have any questions, please feel free to call Ms. Janice Taylor or me at 228-4836. 228-4839

Sincerely

Lynn Robinson

Lynn F. Robinson, P.E.
Manager
Environmental Planning

sn/QQwp1

Enclosure

TAMPA ELECTRIC COMPANY
P.O. Box 111 Tampa, Florida 33601-0111 (813) 228-4111
P.O. Box 271 Winter Haven, Florida 33882-0271 (813) 294-4171
P.O. Drawer N Plant City, Florida 33564-9009 (813) 752-1115
P.O. Box 588 Dade City, Florida 33526-0588 (904) 567-5101
P.O. Box 907 Ruskin, Florida 33570-0907 (813) 645-6461
(Ruskin Engineering & All Other Inquiries (813) 641-1411)
137 S. Parsons Av. Brandon, Florida 33511-5224 (813) 681-4451
P.O. Box 215 Mulberry, Florida 33860-0215 (813) 425-4988

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BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Electrical Power Plant [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Tampa Electric Company COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Gannon Station Units 1-4

SOURCE LOCATION: Street Port Sutton Road City Tampa

UTM: East 360.0 km North 3,087.5 km

Latitude 28 ° 02 ' 31 "N Longitude 82 ° 25 ' 31 "W

APPLICANT NAME AND TITLE: Jerry L. Williams, Director Environmental

APPLICANT ADDRESS: P.O. Box 111, Tampa, FL 33601-0111

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Tampa Electric Company

I certify that the statements made in this application for a modification permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: Jerry L. Williams

Jerry L. Williams, Director Environmental
Name and Title (Please Type)

Date: 12/20/91 Telephone No. (813) 228-4837

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Thomas W. Davis

Thomas W. Davis
Name (Please Type)

Environmental Consulting & Technology, Inc.
Company Name (Please Type)

P.O. Box 8188, Gainesville, FL 32605-0888
Mailing Address (Please Type)

Florida Registration No. 36777 Date: 12/19/91 Telephone No. (904) 336-0444

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The requested permit modification would allow burning of oily soil/coal mixtures in coal-fired Units 1 through 4 at Gannon Station. Attachment A provides further details.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction N/A Completion of Construction N/A

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

No changes from existing operations.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A029-125315 (Unit 1), A029-189206 (Unit 2)
A029-172179 (Unit 3), A029-160269 (Unit 4)

E. Requested permitted equipment operating time: hrs/day_____; days/wk_____; wks/yr_____; if power plant, hrs/yr_____; if seasonal, describe: No change from existing operations.

F. If this is a new source or major modification, answer the following questions. N/A (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? _____

   a. If yes, has "offset" been applied? _____

   b. If yes, has "Lowest Achievable Emission Rate" been applied? _____

   c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. _____

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. _____

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? _____

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? _____

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? Yes

   a. If yes, for what pollutants? PM

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

The proposed modifications will not affect the ability of Units 1 through 4 to meet the RACT limitation of 0.10 lb/MMBtu for PM.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Oily soil	Oil	Variable	0.5 tons/hour (total to Units 1-4)	N/A

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): N/A

2. Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
PM (Unit 1)	0.68	0.205	0.1 lb/MMBtu (17-2.650)	125.7	125.7	550.6	N/A
PM (Unit 2)	0.68	0.205	"	125.7	125.7	550.6	N/A
PM (Unit 3)	0.68	0.205	"	159.9	159.9	700.4	N/A
PM (Unit 4)	0.68	0.205	"	187.6	187.6	821.7	N/A
TOTALS	2.72	0.82					

[1]See Section V, Item 2. Incremental increases in emissions due to soil burning.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated ~~without~~ with control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4) No change from existing operations.

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels No change from existing operations.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

_____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average N/A Maximum N/A

G. Indicate liquid or solid wastes generated and method of disposal.

No change from existing operations.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

No change from existing operations.

Stack Height: _____ ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION N/A

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

N/A 1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

N/A 2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
See Attachment B.

N/A 4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

N/A 5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

N/A 6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

N/A 7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

N/A 8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

N/A 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy).

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy [2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION N/A

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^{2*} _____ Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____/_____/_____ to _____/_____/_____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A
PROJECT DESCRIPTION

BACKGROUND INFORMATION

Average data from previous years indicates that TEC may handle (or generate) up to 1,200 55-gallon drums of non-hazardous oily soil during any given year at Gannon Station. These oily soils have contained petroleum products, mineral oil, hydraulic oil, or used oil. Presently, after proper waste characterization, oily soils are incinerated or thermally treated (offsite), or sent to a secure landfill (also offsite). Disposal costs have typically been approximately $200 per drum (i.e., $240,000 per year, based on 1,200 drums per year). TEC would like to incinerate these oily soils more economically onsite in Units 1 through 4.

PROCESS DESCRIPTION

Drummed oily soil will be emptied into the rail unloading hopper on days when this equipment is not otherwise being used. The soil will then be discharged on the rail conveyor and gradually mixed with the bunkering coal through belt-to-belt transfers.

It is expected that the soil-to-coal ratio will be much less than 1 percent. Since the soil is emptied into the rail unloading hopper through a grating, and is additionally processed by passing through the crusher house with the bunkering coal, no soil pretreatment will be instituted.

The soil/coal mixture will then be fed to one of the cyclone boilers. As per industry standard, cyclone boilers typically produce 30-percent flyash and 70-percent bottom slag by-product.

The incineration temperature and residence time for each boiler are given as follows. These parameters will ensure proper combustion of oil contained in the soils.

	Boiler 1	Boiler 2	Boiler 3	Boiler 4
Incineration temperature (°F)	3,000	3,000	3,000	3,000
Residence time (seconds)	2 to 5	2 to 5	2 to 5	2 to 5

ATTACHMENT B
EMISSION CALCULATIONS

Calculations presented below indicate no significant particulate emissions increases will occur during incineration of the oily soils. These calculations assume the following: soil loading is 100-percent ash, flyash production is 30 percent of ash loading, and electrostatic precipitator efficiency is 99.09 percent.

ANNUAL INCREASE IN PM EMISSIONS

Assumptions:	All soil ash generated is PM_{10} or less Soil ash loading is 100 percent Flyash production is 30 percent of ash loading Electrostatic precipitator efficiency is 99.09 percent
Annual soil accumulation:	Approximately 1,200 drums per year at 500 lb per drum
Soil to be incinerated:	1,200 drums/year x 500 lb/drum x 1 ton/2,000 lb = 300 tons/year
Increased flyash to precipitator:	300 tons/year x 30 percent = 90 tons/year
Increased particulate emissions:	90 tons/year x 0.91 percent = 0.82 tons/year (total)

MAXIMUM HOURLY INCREASE IN PM EMISSIONS

Assumptions:	All soil ash generated is PM_{10} or less Soil ash loading is 100 percent Flyash production is 30 percent of ash loading Electrostatic precipitator efficiency is 99.09 percent
Hourly soil throughput:	2 drums per hour at 500 lb per drum
Soil to be incinerated:	2 drums/hour x 500 lb/drum x 1 ton/2,000 lb = 0.5 tons/hour
Increased flyash to precipitator:	0.5 tons/year x 30 percent = 0.15 tons/hour
Increased particulate emissions:	0.15 tons/hour x 0.91 percent x 2,000 lb/ton = 2.73 lb/hour (total)

TAMPA ELECTRIC
A TECO ENERGY COMPANY

TO WHOM IT MAY CONCERN:

Please be advised that Jerry L. Williams, Director of Environmental, is the authorized representative of Tampa Electric Company concerning matters with which this permit application deals.

Very truly yours,

WN Cantrell

William N. Cantrell
Vice President
Regulatory Affairs

WNC/ams/GG073.DOC