TECO

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MAY 11 2001

BUREAU OF AIR REGULATION

May 10, 2001

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

Via FedEx
Airbill No. 7915 5304 1777

Re: Tampa Electric Big Bend Station
Combustion of Polk Power Station Residual Fuel

Dear Mr. Fancy:

Please find enclosed a permit application requesting permission to fire both raw residual fuel from Polk Power Station at Big Bend Station and a refined form of this same fuel. At the same time, TEC would like to withdraw the permit application submitted on March 15, 2001 requesting permission to fire only the raw residual fuel.

The refined residual fuel is the result of a separation process that splits the raw residual fuel into three component streams. One component is a high mineral content stream, one component is a high carbon content stream, and one component is a high ash content stream. TEC is only requesting permission to fire the high carbon content material from the separation process.

In an effort to speed the permitting process, TEC has requested a cap on PM and SO_2 emissions equivalent to the average of 1997 and 1998 actual emissions. This will ensure that PM and SO_2 future actual emissions do not increase as a result of this change. Emissions of other criteria pollutants are not expected to be affected as a result of firing these fuels.

If you have any questions, please feel free to call Shannon Todd or me at (813) 641-5125.

Sincerely,

Laura A. Crosley for

Gregory M. Nelson, P.E.
Director
Environmental Affairs

EP\gm\SKT254

Enclosure

c: Mr. Jerry Campbell, EPCHC
Ms. Alice Harman, EPCHC
Mr. Jerry Kissel, FDEP SW

C. Phillips
G. Worley, EPA
J. Bunyak, NPS

TAMPA ELECTRIC COMPANY
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BIG BEND STATION
USE OF POLK POWER STATION RESIDUAL COAL
AIR CONSTRUCTION PERMIT APPLICATION

Prepared for:

TECO
TAMPA ELECTRIC

Prepared by:

ECT
Environmental Consulting & Technology, Inc.
3701 Northwest 98th Street
Gainesville, Florida 32606

ECT No. 001099-0100

May 2001

INTRODUCTION

Tampa Electric Company (TEC) operates four, solid fuel-fired steam boilers (Units Nos. 1 through 4) at the Big Bend Station located at Big Bend Road, Tampa, Hillsborough County, Florida. Operation of the existing steam boilers is currently authorized by Title V Final Permit No. 0570039-001-AV. Final Permit No. 0570039-001-AV was issued with an effective date of January 1, 2001 and expires on December 31, 2004.

In response to requests by the Hillsborough County Environmental Protection Commission (EPC) and the Florida Department of Environmental Protection (FDEP), TEC has evaluated the air permitting requirements associated with the combustion of residual coal generated at the Polk Power Station (PPS) in the Big Bend Station (BBS) steam boilers. The coal residual is a by-product of the PPS coal gasification process that is suitable as a supplemental fuel source for the BBS due to its heat content.

In response to regulatory agency requests, TEC has prepared a Prevention of Significant Deterioration (PSD) applicability analysis for the handling, storage, beneficiation, and combustion of PPS residual coal at the BBS. In addition to all current applicable emission limitations, TEC proposes to limit future actual emission rates of SO_2 and PM/PM_{10} for Units 1 through 4 to the historical average actual rates for 1997 and 1998 by means of a federally enforceable permit condition. This permit condition will provide reasonable assurance that a significant net emission rate increase will not occur as a result of combusting raw and beneficiated PPS residual coal in Units 1 through 4. Specifically, TEC requests SO_2 and PM/PM_{10} annual emission caps of 104,914 and 2,951 tons per year, respectively, for Units 1 through 4. TEC proposes to monitor future SO_2 emissions using the existing 40 CFR Part 75 CEMS and track future annual SO_2 emissions on a rolling, 12-month average basis. TEC proposes to monitor Units 1 through 4 annual PM/PM_{10} emissions by conducting periodic stack tests using Reference Method 17. Based on these proposed emission caps, the analysis of PSD applicability concludes that the use of both raw and beneficiated PPS residual coal at the BBS is not subject to PSD permitting review.

Although PPS residual coal meets the regulatory definition of "coal" and therefore is considered to be a currently authorized fuel for the BBS under the terms of Title V Final Permit No. 0570039-001-AV, TEC has also prepared an air construction permit application for the handling, storage, beneficiation, and combustion of PPS residual coal at the BBS as requested by EPC and FDEP. TEC requests authorization to handle, store, beneficiate, and combust PPS residual coal in amounts up to 200 and 500 tons per day for raw and beneficiated PPS residual coal, respectively.

A completed FDEP Application for Air Permit—Title V Source; DEP Form 62-210.900(1) follows this introduction. Typical PPS raw and beneficiated residual coal analyses and the PSD applicability analysis are provided in Attachments A and B, respectively. Attachment C provides emission estimates for the storage and handling of PPS residual coal. Process schematics of the handling, storage, and beneficiation of PPS residual coal at the BBS solid fuel yard are provided in Attachment D. Because the beneficiation of the residual coal is a wet process, additional fugitive emissions from the process will be negligible.

Application form

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Tampa Electric Company**	
2. Site Name: **Big Bend Station**	
3. Facility Identification Number: **0570039** [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **Big Bend Road** City: **North Ruskin** County: **Hillsborough** Zip Code: **33572**	
5. Relocatable Facility? [ ] Yes [✔] No	6. Existing Permitted Facility? [✔] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Laura R. Crouch** **Manager – Air Programs, Environmental Affairs**
2. Application Contact Mailing Address: Organization/Firm: **Tampa Electric Company** Street Address: **6499 U.S. Highway 41 North** City: **Apollo Beach** State: **FL** Zip Code: **33572-9200**
3. Application Contact Telephone Numbers: Telephone: **(813)641 – 5376** Fax: **(813) 641-5081**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	0570039-012-AV
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:_____

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[✔] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Darryl Scott, General Manager – Big Bend Station

2. Application Contact Mailing Address:
   Organization/Firm: **Tampa Electric Company**
   Street Address: **PO Box 111**
   City: **Tampa** State: **FL** Zip Code: **33601-0111**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(813) 228-4111** Fax: **(813) 228-1864**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [✔], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   _____ 5/11/01

   Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Thomas W. Davis**
   Registration Number: **36777**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Environmental Consulting & Technology, Inc.**
   Street Address: **3701 Northwest 98th Street**
   City: **Gainesville** State: **FL** Zip Code: **32606**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 332-0444** Fax: **(352) 332-6722**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [✔], if so), I further certify that the engineering features of each such emissions unit described in this application have been ~~designed or~~ examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

5/9/01
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Unit No. 1 Steam Generator	AC1B	N/A
002	Unit No. 2 Steam Generator	AC1B	N/A
003	Unit No. 3 Steam Generator	AC1B	N/A
004	Unit No. 4 Steam Generator	AC1B	N/A
010	Solid Fuel Yard, Fugitive Emissions	AC1B	N/A

Application Processing Fee

Check one: [ ] Attached - Amount: $ _____ [✔] Not Applicable

Note: The Big Bend Station has been issued Final Title V Permit No. 0570039-002-AV. An application processing fee is not required pursuant to Rule 62-4.050(4)(a)2., F.A.C.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Conditions Nos. A.2.a. and B.2.a of Final Title V Permit No. 0570039-002-AV limit the fuels to be burned in Big Bend Units 1 – 4 to coal, coal/petroleum coke blends, and No. 2 fuel oil. In addition to these fuels, Tampa Electric Company (TEC) requests approval to combust residual coal generated at the TEC Polk Power Station in Big Bend Units 1 – 4. Specifically, TEC requests approval to combust up to a total 200 tons per day of raw Polk Power Station coal residual and up to 500 tons per day of beneficiated Polk Power Station coal residual at the Big Bend Station.

TEC is not requesting any revisions to currently authorized emission rates for Big Bend Units 1 – 4.

An analysis of PSD applicability indicates that the combustion of Polk Power Station residual coal in Big Bend Units 1 – 4 will not be subject to PSD review. A PSD applicability analysis is provided in Attachment B. Supporting emission rate calculations for the fuel yard are provided in Attachment C.

2. Projected or Actual Date of Commencement of Construction: **N/A**

3. Projected Date of Completion of Construction: **N/A**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **361.9** North (km): **3,075.0**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): Longitude (DD/MM/SS):			
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: **Greg Benton, Environmental Coordinator**
2. Facility Contact Mailing Address: Organization/Firm: **Tampa Electric Company** Street Address: **Big Bend Road** City: **North Ruskin** State: **FL** Zip Code: **33572**
3. Facility Contact Telephone Numbers: Telephone: **(813) 228-4111** Fax: **(813) 228-1864**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [✔] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [✔] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [✔] One or More Emissions Units Subject to NSPS?	
7. [ ] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	

List of Applicable Regulations

Facility applicable regulations previously submitted with the Title V permit application;	
reference Big Bend Station Title V Operating Permit Application, Volume II,	
Attachment A.	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
NOX	**A**	**N/A**	**N/A**	**N/A**	
SO2	**A**	**63,000**	**N/A**	**62-296.405 (1)(c)2.b., F.A.C.**	**Units 1-3, 3-hr average**
SO2	**A**	**37,500**	**N/A**	**62-204.240 (1), F.A.C.**	**Units 1-3, 24-hr average**
SO2	**A**	**33,000**	**N/A**		**Units 1 and 2, 3-hr average**
SO2	**A**	**N/A**	**104,914**	**ESCPSD**	**Units 1 - 4, rolling 12-month average**
CO	**A**	**N/A**	**N/A**	**N/A**	
PM10	**A**	**N/A**	**N/A**	**N/A**	
PM	**A**	**N/A**	**N/A**	**N/A**	
PM/PM10	**A**	**N/A**	**2,951**	**ESCPSD**	**Units 1 - 4, rolling 12-month average**
SAM	**A**	**N/A**	**N/A**	**N/A**	
VOC	**A**	**N/A**	**N/A**	**N/A**	
PB	**B**	**N/A**	**N/A**	**N/A**	
H106	**A**	**N/A**	**N/A**	**N/A**	**Hydrochloric Acid**
H107	**A**	**N/A**	**N/A**	**N/A**	**Hydrofluoric Acid**
H133	**A**	**N/A**	**N/A**	**N/A**	**Nickel Cmpds.**
HAPS	**A**	**N/A**	**N/A**	**N/A**	**Total HAPs**

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **Previously submitted; reference Document II.D.1 of Title V permit application.**
2. Facility Plot Plan: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **Previously submitted; reference Document II.D.2 of Title V permit application.**
3. Process Flow Diagram(s): [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **Previously submitted; reference Document II.D.3 of Title V permit application.**
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **Previously submitted; reference Document II.D.4 of Title V permit application.**
5. Fugitive Emissions Identification: [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested **Previously submitted; reference Document II.D.5 of Title V permit application.**
6. Supplemental Information for Construction Permit Application: [✔] Attached, Document ID: [ ] Not Applicable **Reference Air Construction Permit Application Report**
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

8. List of Proposed Insignificant Activities: [ ] Attached, Document ID:_____ [ ] Not Applicable
9. List of Equipment/Activities Regulated under Title VI: [ ] Attached, Document ID:_____ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ ] Not Applicable
10. Alternative Methods of Operation: [ ] Attached, Document ID:_____ [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID:_____ [ ] Not Applicable
12. Identification of Additional Applicable Requirements: [ ] Attached, Document ID:_____ [ ] Not Applicable
13. Risk Management Plan Verification: [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____) [ ] Plan to be submitted to CEPPO (Date required:_____) [ ] Not Applicable
14. Compliance Report and Plan: [ ] Attached, Document ID:_____ [ ] Not Applicable
15. Compliance Certification (Hard-copy Required): [ ] Attached, Document ID:_____ [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[✔] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✔] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of a fossil fuel steam boiler with an electrical generating capacity of 445-MW. Boiler is a wet bottom unit manufactured by Riley Stoker Corporation.

4. Emissions Unit Identification Number:
ID: **001**
[ ] No ID
[ ] ID unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[✔]

9. Emissions Unit Comment: (Limit to 500 Characters)

This permit application requests approval to combust residual coal generated at the TEC Polk Power Station in Big Bend Unit No. 1.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

   Electrostatic Precipitator
   Flue Gas Desulfurization

2. Control Device or Method Code(s): **010, 042**

Emissions Unit Details

1. Package Unit:
   Manufacturer: Model Number:
2. Generator Nameplate Rating: **445** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**4,037**	mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Emission unit applicable regulations were previously submitted with the Title V permit application; reference Big Bend Station Title V Operating Permit Application, Volume II, Attachment A.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **CS-001, CS-0W1**		2. Emission Point Type Code: **2**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **001 and 002**		
5. Discharge Type Code: **V**	6. Stack Height: **490** feet	7. Exit Diameter: **24.0** feet **(CS-001)** **29.0** feet **(CS-0W1)**
8. Exit Temperature: **294** °F **(CS-001)** **127** °F **(CS-0W1)**	9. Actual Volumetric Flow Rate: **3,146,368** acfm **(CS-001)** **2,377,871** acfm **(CS-0W1)**	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters): **Actual flow rates (Field 9) are for both Units 1 and 2 combined.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Coal burned in Unit No. 1.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **183.5**	5. Maximum Annual Rate: **1,607,460**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.71**	8. Maximum % Ash: **10.7**	9. Million Btu per SCC Unit: **22**
10. Segment Comment (limit to 200 characters): **Btu per SCC unit value (Field 9) based on a nominal coal heat content of 11,000 Btu/lb.**		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No. 2 fuel oil burned in Unit No. 1.**		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **139**
10. Segment Comment (limit to 200 characters): **No. 2 fuel oil burned only during startup, shutdown, flame stabilization, and during the start of a mill.**		

Segment Description and Rate: Segment **3** of **5**

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum coke burned in Unit No. 1.**		
2. Source Classification Code (SCC): **1-01-008-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **36.7**	5. Maximum Annual Rate: **321,492**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **6.0**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **28**
10. Segment Comment (limit to 200 characters): **Maximum petcoke rates (Fields 4 and 5) based on 20% of coal rates.**		

Segment Description and Rate: Segment **4** of **5**

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Raw coal residual burned in Unit No. 1.**		
3. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **8.3**	5. Maximum Annual Rate: **73,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.43**	8. Maximum % Ash: **57.7**	9. Million Btu per SCC Unit: **6.1**
10. Segment Comment (limit to 200 characters): **Maximum coal residual rates (Fields 6 and 7) are totals for Units 1 – 4.**		

Segment Description and Rate: Segment 5 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Beneficiated coal residual burned in Unit No. 1.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.8**	5. Maximum Annual Rate: **182,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.45**	8. Maximum % Ash: **35.4**	9. Million Btu per SCC Unit: **17.95**
10. Segment Comment (limit to 200 characters): **Maximum beneficiated coal residual rates (Fields 6 and 7) are totals for Units 1 – 4. Sulfur, ash, and heat contents are on a dry basis.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – NOX			**NS**
2 – CO			**NS**
3 – PM	**ESP**		**EL**
4 – PM10	**ESP**		**NS**
5 – SO2	**FGD**		**EL**
6 – VOC			**NS**
7 – H106 (HCl)			**NS**
8 – H107 (HF)			**NS**
7 – H133 (Ni)			**NS**
9 – HAPS			**NS**

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section G of the FDEP permit application form regarding emission limitations for Unit No. 1 can be found in Final Title V Permit No. 0570039-002-AV.

In addition to all current emission limits, TEC requests emissions caps for Units 1-4 combined of 104,914 tons per year of SO_2 and 2,951 tons per year of PM.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section H regarding visible emissions for Unit No. 1 can be found in Final Title V Permit No. 0570039-002-AV.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Information regarding Unit No. 1 CEMS remains unchanged from the data previously provided to the Department.**	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
2. Fuel Analysis or Specification [✔] Attached, Document ID: [ ] Not Applicable [ ] Waiver Requested **Attachment A**
3. Detailed Description of Control Equipment [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [✔] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [✔] Not Applicable
9. Other Information Required by Rule or Statute [✔] Attached, Document ID:_____ [ ] Not Applicable **Attachment B – PSD Applicability Analysis**
10. Supplemental Requirements Comment: **Items 1, 3, 4, 6, and 7 previously submitted with the Title V permit application for Big Bend Station.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[✔] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✔] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of a fossil fuel steam boiler with an electrical generating capacity of 445-MW. Boiler is a wet bottom unit manufactured by Riley Stoker Corporation.

4. Emissions Unit Identification Number:
ID: **002**
[ ] No ID
[ ] ID unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[✔]

9. Emissions Unit Comment: (Limit to 500 Characters)

This permit application requests approval to combust residual coal generated at the TEC Polk Power Station in Big Bend Unit No. 2.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Electrostatic Precipitator
Flue Gas Desulfurization

2. Control Device or Method Code(s): **010, 042**

Emissions Unit Details

1. Package Unit:
Manufacturer: Model Number:

2. Generator Nameplate Rating: **445** MW

3. Incinerator Information:

Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**3,996**	mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Emission unit applicable regulations were previously submitted with the Title V permit application; reference Big Bend Station Title V Operating Permit Application, Volume II, Attachment A.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **CS-001, CS-0W1**	2. Emission Point Type Code: **2**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **001 and 002**		
5. Discharge Type Code: **V**	6. Stack Height: **490** feet	7. Exit Diameter: **25.0** feet **(CS-001)** **29.0** feet **(CS-0W1)**
8. Exit Temperature: **294** °F **(CS-001)** **127** °F **(CS-0W1)**	9. Actual Volumetric Flow Rate: **3,146,368** acfm **(CS-001)** **2,377,871** acfm **(CS-0W1)**	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **Actual flow rates (Field 9) are for both Units 1 and 2 combined.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Coal burned in Unit No. 2.		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **181.6**	5. Maximum Annual Rate: **1,591.135**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.71**	8. Maximum % Ash: **10.7**	9. Million Btu per SCC Unit: **22**
10. Segment Comment (limit to 200 characters): **Btu per SCC unit value (Field 9) based on a nominal coal heat content of 11,000 Btu/lb.**		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
No. 2 fuel oil burned in Unit No. 2.		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **139**
10. Segment Comment (limit to 200 characters): **No. 2 fuel oil burned only during startup, shutdown, flame stabilization, and during the start of a mill.**		

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum coke burned in Unit No. 2.**		
2. Source Classification Code (SCC): **1-01-008-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **36.3**	5. Maximum Annual Rate: **318,227**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **6.0**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **28**
10. Segment Comment (limit to 200 characters): **Maximum petcoke rates (Fields 4 and 5) based on 20% of coal rates.**		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Raw coal residual burned in Unit No. 2.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **8.3**	5. Maximum Annual Rate: **73,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.43**	8. Maximum % Ash: **57.7**	9. Million Btu per SCC Unit: **6.1**
10. Segment Comment (limit to 200 characters): **Maximum coal residual rates (Fields 6 and 7) are totals for Units 1 – 4.**		

Segment Description and Rate: Segment **5** of **5**

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Beneficiated coal residual burned in Unit No. 2.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.8**	5. Maximum Annual Rate: **182,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.45**	8. Maximum % Ash: **35.4**	9. Million Btu per SCC Unit: **17.95**
10. Segment Comment (limit to 200 characters): **Maximum beneficiated coal residual rates (Fields 6 and 7) are totals for Units 1 – 4. Sulfur, ash, and heat contents are on a dry basis.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – NOX			**NS**
2 – CO			**NS**
3 – PM	**ESP**		**EL**
4 – PM10	**ESP**		**NS**
5 – SO2	**FGD**		**EL**
6 – VOC			**NS**
7 – H106 (HCl)			**NS**
8 – H107 (HF)			**NS**
7 – H133 (Ni)			**NS**
9 – HAPS			**NS**

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section G of the FDEP permit application form regarding emission limitations for Unit No. 2 can be found in Final Title V Permit No. 0570039-002-AV.

In addition to all current emission limits, TEC requests emission caps for Units 1-4 combined of 104,914 tons per year of SO_2 and 2,951 tons per year of PM.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions_____ of_____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section H regarding visible emissions for Unit No. 2 can be found in Final Title V Permit No. 0570039-002-AV.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Information regarding Unit No. 2 CEMS remains unchanged from the data previously provided to the Department.**	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
2. Fuel Analysis or Specification [✔] Attached, Document ID: [ ] Not Applicable [ ] Waiver Requested **Attachment A**
3. Detailed Description of Control Equipment [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [✔] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [✔] Not Applicable
9. Other Information Required by Rule or Statute [✔] Attached, Document ID:_____ [ ] Not Applicable **Attachment B – PSD Applicability Analysis**
10. Supplemental Requirements Comment: **Items 1, 3, 4, 6, and 7 previously submitted with the Title V permit application for Big Bend Station.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[✔] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✔] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of a fossil fuel steam boiler with an electrical generating capacity of 445-MW. Boiler is a wet bottom unit manufactured by Riley Stoker Corporation.

4. Emissions Unit Identification Number:
ID: **003**
[ ] No ID
[ ] ID unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[✔]

9. Emissions Unit Comment: (Limit to 500 Characters)

This permit application requests approval to combust residual coal generated at the TEC Polk Power Station in Big Bend Unit No. 3.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Electrostatic Precipitator
Flue Gas Desulfurization

2. Control Device or Method Code(s): **010, 042**

Emissions Unit Details

1. Package Unit:
   Manufacturer: Model Number:
2. Generator Nameplate Rating: **445** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**4,115**	mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Emission unit applicable regulations were previously submitted with the Title V permit application; reference Big Bend Station Title V Operating Permit Application, Volume II, Attachment A.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **CS-003**	2. Emission Point Type Code: **2**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **003 and 004 (when FGD is used)**		
5. Discharge Type Code: **V**	6. Stack Height: **490** feet	7. Exit Diameter: **24.0** feet **(CS-003)**
8. Exit Temperature: **308** °F **(CS-003)**	9. Actual Volumetric Flow Rate: **1,389,740** acfm **(CS-003)**	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Coal burned in Unit No. 3.		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **187.0**	5. Maximum Annual Rate: **1,638,518**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.71**	8. Maximum % Ash: **10.7**	9. Million Btu per SCC Unit: **22**
10. Segment Comment (limit to 200 characters): **Btu per SCC unit value (Field 9) based on a nominal coal heat content of 11,000 Btu/lb.**		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
No. 2 fuel oil burned in Unit No. 3.		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **139**
10. Segment Comment (limit to 200 characters): **No. 2 fuel oil burned only during startup, shutdown, flame stabilization, and during the start of a mill.**		

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum coke burned in Unit No. 3.**		
2. Source Classification Code (SCC): **1-01-008-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **37.4**	5. Maximum Annual Rate: **273,704**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **6.0**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **28**
10. Segment Comment (limit to 200 characters): **Maximum petcoke rates (Fields 4 and 5) based on 20% of coal rates.**		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Raw coal residual burned in Unit No. 3.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **8.3**	5. Maximum Annual Rate: **73,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.43**	8. Maximum % Ash: **57.7**	9. Million Btu per SCC Unit: **6.1**
10. Segment Comment (limit to 200 characters): **Maximum coal residual rates (Fields 6 and 7) are totals for Units 1 – 4.**		

Segment Description and Rate: Segment **5** of **5**

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Beneficiated coal residual burned in Unit No. 3.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.8**	5. Maximum Annual Rate: **182,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.45**	8. Maximum % Ash: **35.4**	9. Million Btu per SCC Unit: **17.95**
10. Segment Comment (limit to 200 characters): **Maximum beneficiated coal residual rates (Fields 6 and 7) are totals for Units 1 – 4. Sulfur, ash, and heat contents are on a dry basis.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – NOX			**NS**
2 – CO			**NS**
3 – PM	**ESP**		**EL**
4 – PM10	**ESP**		**NS**
5 – SO2	**FGD**		**EL**
6 – VOC			**NS**
7 – H106 (HCl)			**NS**
8 – H107 (HF)			**NS**
7 – H133 (Ni)			**NS**
8 – HAPS			**NS**

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section G of the FDEP permit application form regarding emission limitations for Unit No. 3 can be found in Final Title V Permit No. 0570039-002-AV.

In addition to all current emission limits, TEC requests emission caps for Units 1-4 combined of 104,914 tons per year of SO_2 and 2,951 tons per year of PM.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions_____ of_____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section H regarding visible emissions for Unit No. 3 can be found in Final Title V Permit No. 0570039-002-AV.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Information regarding Unit No. 3 CEMS remains unchanged from the data previously provided to the Department.**	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
2. Fuel Analysis or Specification [✔] Attached, Document ID: [ ] Not Applicable [ ] Waiver Requested **Attachment A**
3. Detailed Description of Control Equipment [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [✔] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [✔] Not Applicable
9. Other Information Required by Rule or Statute [✔] Attached, Document ID:_____ [ ] Not Applicable **Attachment B – PSD Applicability Analysis**
10. Supplemental Requirements Comment: **Items 1, 3, 4, 6, and 7 previously submitted with the Title V permit application for Big Bend Station.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[✔] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✔] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Emission unit consists of a fossil fuel steam boiler with an electrical generating capacity of 486-MW. Boiler is a dry bottom, tangentially fired unit manufactured by Foster Wheeler Corporation.

4. Emissions Unit Identification Number:
ID: **004**
[ ] No ID
[ ] ID unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[✔]

9. Emissions Unit Comment: (Limit to 500 Characters)

This permit application requests approval to combust residual coal generated at the TEC Polk Power Station in Big Bend Unit No. 4.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Electrostatic Precipitator
Flue Gas Desulfurization

2. Control Device or Method Code(s): **010, 042**

Emissions Unit Details

1. Package Unit:
   Manufacturer: Model Number:
2. Generator Nameplate Rating: **486** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**4,330**	mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Emission unit applicable regulations were previously submitted with the Title V permit application; reference Big Bend Station Title V Operating Permit Application, Volume II, Attachment A.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **CS-004**		2. Emission Point Type Code: **2**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **003 and 004 (when FGD is used)**		
5. Discharge Type Code: **V**	6. Stack Height: **490** feet	7. Exit Diameter: **24.0** feet **(CS-004)**
8. Exit Temperature: **127** °F **(CS-004)**	9. Actual Volumetric Flow Rate: **2,125,325** acfm **(CS-004)**	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Coal burned in Unit No. 4.		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **196.8**	5. Maximum Annual Rate: **1,724,127**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.71**	8. Maximum % Ash: **10.7**	9. Million Btu per SCC Unit: **22**
10. Segment Comment (limit to 200 characters): **Btu per SCC unit value (Field 9) based on a nominal coal heat content of 11,000 Btu/lb.**		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
No. 2 fuel oil burned in Unit No. 4.		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **139**
10. Segment Comment (limit to 200 characters): **No. 2 fuel oil burned only during startup, shutdown, flame stabilization, and during the start of a mill.**		

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum coke burned in Unit No. 4.**		
2. Source Classification Code (SCC): **1-01-008-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **39.4**	5. Maximum Annual Rate: **344,825**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **6.0**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **28**
10. Segment Comment (limit to 200 characters): **Maximum petcoke rates (Fields 4 and 5) based on 20% of coal rates.**		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Raw coal residual burned in Unit No. 4.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **8.3**	5. Maximum Annual Rate: **73,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.43**	8. Maximum % Ash: **57.7**	9. Million Btu per SCC Unit: **6.1**
10. Segment Comment (limit to 200 characters): **Maximum coal residual rates (Fields 6 and 7) are totals for Units 1 – 4.**		

Segment Description and Rate: Segment **5** of **5**

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Beneficiated coal residual burned in Unit No. 4.**		
2. Source Classification Code (SCC): **1-01-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.8**	5. Maximum Annual Rate: **182,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.45**	8. Maximum % Ash: **35.4**	9. Million Btu per SCC Unit: **17.95**
10. Segment Comment (limit to 200 characters): **Maximum beneficiated coal residual rates (Fields 6 and 7) are totals for Units 1 – 4. Sulfur, ash, and heat contents are on a dry basis.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – NOX			**EL**
2 – CO			**EL**
3 – PM	**ESP**		**EL**
4 – PM10	**ESP**		**NS**
5 – SO2	**FGD**		**EL**
6 – VOC			**NS**
7 – H106 (HCl)			**NS**
8 – H107 (HF)			**NS**
9 – HAPS			**NS**

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section G of the FDEP permit application form regarding emission limitations for Unit No. 4 can be found in Final Title V Permit No. 0570039-002-AV.

In addition to all current emission limits, TEC requests emission caps for Units 1-4 combined of 104,914 tons per year of SO_2 and 2,951 tons per year of PM.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions_____ of_____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section H regarding visible emissions for Unit No. 4 can be found in Final Title V Permit No. 0570039-002-AV.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Information regarding Unit No. 4 CEMS remains unchanged from the data previously provided to the Department.**	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
2. Fuel Analysis or Specification [✔] Attached, Document ID: [ ] Not Applicable [ ] Waiver Requested **Attachment A**
3. Detailed Description of Control Equipment [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [✔] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [✔] Not Applicable
9. Other Information Required by Rule or Statute [✔] Attached, Document ID:_____ [ ] Not Applicable **Attachment B – PSD Applicability Analysis**
10. Supplemental Requirements Comment: **Items 1, 3, 4, 6, and 7 previously submitted with the Title V permit application for Big Bend Station.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[✔] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✔] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Fugitive emissions associated with solid fuel storage and handling.

4. Emissions Unit Identification Number:
ID: **010**
[ ] No ID
[ ] ID unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

This permit application requests approval to store, beneficiate, and handle residual coal generated at the TEC Polk Power Station.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Application of water, as necessary.
Enclosures

2. Control Device or Method Code(s): **062**

Emissions Unit Details

1. Package Unit:
   Manufacturer: Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr		
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate: **4,000 tons/hour (24-hour average)**				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Emission unit applicable regulations were previously submitted with the Title V permit application; reference Big Bend Station Title V Operating Permit Application, Volume II, Attachment A.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **Reference TV5 permit application**		2. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Reference TV5 permit application and Attachment D Process Flow Schematic**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: **77** °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: **20** feet
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Solid fuel handing (including coal residual from Polk Power Station)		
2. Source Classification Code (SCC): **3-05-102-03**	3. SCC Units: **Tons Transferred or Handled**	
4. Maximum Hourly Rate: **4,000**	5. Maximum Annual Rate: **6,228,030**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 – PM			**WP**
2 – PM10			**WP**

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section G of the FDEP permit application form regarding emission limitations for the solid fuel yard can be found in Final Title V Permit No. 0570039-002-AV.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions_____ of_____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

TEC is not requesting any revisions to currently authorized emission limits as specified in Final Title V Permit No. 0570039-002-AV. The information requested by Section H regarding visible emissions for the solid fuel yard can be found in Final Title V Permit No. 0570039-002-AV.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION – N/A
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram
   [✔] Attached, Document ID: **Attachment D** [ ] Not Applicable [ ] Waiver Requested

2. Fuel Analysis or Specification
   [✔] Attached, Document ID: **Attachment A** [ ] Not Applicable [ ] Waiver Requested

3. Detailed Description of Control Equipment
   [ ] Attached, Document ID: [ ] Not Applicable [✔] Waiver Requested

4. Description of Stack Sampling Facilities
   [ ] Attached, Document ID:_____ [✔] Not Applicable [ ] Waiver Requested

5. Compliance Test Report
   [ ] Attached, Document ID:_____
   [ ] Previously submitted, Date:_____
   [✔] Not Applicable

6. Procedures for Startup and Shutdown
   [ ] Attached, Document ID:_____ [✔] Not Applicable [ ] Waiver Requested

7. Operation and Maintenance Plan
   [ ] Attached, Document ID:_____ [ ] Not Applicable [✔] Waiver Requested

8. Supplemental Information for Construction Permit Application
   [ ] Attached, Document ID:_____ [✔] Not Applicable

9. Other Information Required by Rule or Statute
   [✔] Attached, Document ID:_____ [ ] Not Applicable
   Attachment B – PSD Applicability Analysis

10. Supplemental Requirements Comment:

    Items 3 and 7 previously submitted with the Title V permit application for Big Bend Station.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Not Applicable

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

Attachment A

Tampa Electric Company

Environmental Affairs - Laboratory Services

5012 Causeway Blvd * Tampa Fl. 33619 * Ph:(813)630-7378 * Fax (813)630-7360 * CompQAP #910140G * DOH #E54272

Sample Information

Sample ID: AA53163
Coal Supplier:
Dock:
Composite For:
Sample Description: Polk Residual Fuel

Location Code: PK-RESID
Mine:
Total Tons:
P.O. Number:
Supplier Lab I.D. Number:

Laboratory Results

	Result	Units	Lower Limit	Upper Limit	Violation
Fluorine in Coal, Dry Basis	181	ug/g			

Ash Mineral Analysis	Result	Units	Lower Limit	Upper Limit	Violation
Silicon Dioxide, SiO2	49.56	%			
Aluminum Oxide, Al203	17.96	%			
Titanium Dioxide, TiO2	0.97	%			
Iron Oxide, Fe2O3	19.45	%			
Calcium Oxide, CaO	5.22	%			
Magnesium Oxide, MgO	0.94	%			
Sodium Oxide, Na2O	1.42	%			
Potassium Oxide, K2O	2.24	%			
Base/Acid Ratio	0.427				
T250	2379	Degrees F			
Phosphorus, P2O5	0.13	%			
Sulfur Trioxide, SO3	2.55	%			
Undetermined, Ash Minerals	-.400	%			
Fouling Index for Bituminous Ash	0.606				
Fouling Tendency for Bituminous Ash	High				
Slagging Index for Bituminous Ash	0.679				
Slagging Tendency for Bituminous Ash	Medium				
Silica Value	65.9	%			

Coal Analysis - As Received	Result	Units	Lower Limit	Upper Limit	Violation
Ash, as Received	49.3	%			
BTU, as Received	2399	BTU/Lb			
Sulfur, as Received	1.05	%			

Tampa Electric Company

Environmental Affairs - Laboratory Services

5012 Causeway Blvd * Tampa Fl. 33619 * Ph (813)630-7378 * Fax (813)630-7360 * CompQAP #910140G * DOH #E54272

Coal Analysis - Dry Basis	Result	Units	Lower Limit	Upper Limit	Violation
Ash, Dry Basis	74.5	%			
BTU, Dry Basis	3623.6	BTU/Lb.			
Sulfur, Dry Basis	1.59	%			

Coal Analysis - Miscellaneous	Result	Units	Lower Limit	Upper Limit	Violation
Total Moisture	33.8	%			
BTU, Moisture-Ash Free	14210	BTU/Lb.			
Pounds SO2 / Million BTU	8.36	Lbs. SO2/MMBTU			
Sulfur in Ash	1.02	%			

Trace Anions in Coal	Result	Units	Lower Limit	Upper Limit	Violation
Chlorine , as Received	0.07	%			
Chlorine , Dry Basis	0.11	%			

Trace Metals in Coal	Result	Units	Lower Limit	Upper Limit	Violation
Nickel	89.5	ug/g dry basis			
Molybdenum	70.7	ug/g dry basis			
Zinc	439.6	ug/g dry basis			
Copper	59.7	ug/g dry basis			
Cadmium	5.3	ug/g dry basis			
Cobalt	75.8	ug/g dry basis			
Antimony	5.4	ug/g dry basis			
Lead	53.3	ug/g dry basis			
Arsenic	21.1	ug/g dry basis			
Manganese	290.9	ug/g dry basis			
Barium	550.9	ug/g dry basis			
Beryllium	10.7	ug/g dry basis			
Vanadium	607.7	ug/g dry basis			
Chromium	235.5	ug/g dry basis			
Mercury	0.01	ug/g dry basis			

Comments:

Cargo #8402
December 1999 Composite

Tampa Electric Company

Environmental Affairs - Laboratory Services

5012 Causeway Blvd * Tampa Fl. 33619 * Ph (813)630-7378 * Fax (813)630-7360 * CompQAP #910140G * DOH #E54272

Tuesday, May 01, 2001

Report Patrick Shell, Envir. Affairs

Sample Information

Sample ID: AA59814
Coal Supplier: SAMPLE DESCRIPTION: 20-200 MESH
Dock:
Composite For:
Sample Description: Polk Refined Residual Fuel

Location Code: SPECL-PK
Mine: POLK SLAG
Total Tons:
P.O. Number:
Supplier Lab I.D. Number:

Laboratory Results

Ash Mineral Analysis	Result	Units	Lower Limit	Upper Limit	Violation
Silicon Dioxide, SiO2	48.97	%			
Aluminum Oxide, Al203	22.87	%			
Titanium Dioxide, TiO2	1.11	%			
Iron Oxide, Fe2O3	17.83	%			
Calcium Oxide, CaO	4.18	%			
Magnesium Oxide, MgO	0.83	%			
Sodium Oxide, Na2O	0.83	%			
Potassium Oxide, K2O	1.64	%			
Base/Acid Ratio	0.347				
T250	2483	Degrees F			
Phosphorus, P2O5	0.29	%			
Sulfur Trioxide, SO3	2.05	%			
Undetermined, Ash Minerals	-.600	%	-5	5	
Fouling Index for Bituminous Ash	0.288				
Fouling Tendency for Bituminous Ash	Medium				
Slagging Index for Bituminous Ash	0.503				
Slagging Tendency for Bituminous Ash	Low				
Silica Value	68.2	%			

Ash Fusion Analysis	Result	Units	Lower Limit	Upper Limit	Violation
Ash Fusion, IT, Reducing	2065	Degrees F			
Ash Fusion, ST, Reducing	2135	Degrees F			
Ash Fusion, HT, Reducing	2270	Degrees F			
Ash Fusion, FT, Reducing	2360	Degrees F			

Tampa Electric Company

Environmental Affairs - Laboratory Services

5012 Causeway Blvd * Tampa Fl. 33619 * Ph (813)630-7378 * Fax (813)630-7360 * CompQAP #910140G * DOH #E54272

Coal Analysis - Dry Basis	Result	Units	Lower Limit	Upper Limit	Violation
Ash, Dry Basis	35.41	%			
BTU, Dry Basis	8975.0	BTU/Lb.			
Sulfur, Dry Basis	1.45	%			
Volatiles, Dry Basis	6.72	%			
Fixed Carbon, Dry Basis	57.87	%			
Carbon, Dry Basis	62.47	%			
Hydrogen, Dry Basis	0.231	%			
Nitrogen, Dry Basis	0.582	%			
Oxygen, Dry Basis	-.193	%			

Coal Analysis - Miscellaneous	Result	Units	Lower Limit	Upper Limit	Violation
BTU, Moisture-Ash Free	13895	BTU/Lb.			
Pounds SO2 / Million BTU	3.07	Lbs. SO2/MMBTU			
Pounds of Ash / Million BTU	39.453	Lbs./MMBTU			
Sulfur in Ash	0.82	%			

Trace Anions in Coal	Result	Units	Lower Limit	Upper Limit	Violation
Chlorine as Cl, Dry Basis	0.05	%			
Fluorine as F, Dry Basis	321	ug/g			

Trace Metals in Coal	Result	Units	Lower Limit	Upper Limit	Violation
Barium	261.7	ug/g dry basis			
Vanadium	191.9	ug/g dry basis			
Manganese	79.0	ug/g dry basis			
Chromium	78.6	ug/g dry basis			
Beryllium	3.8	ug/g dry basis			
Mercury	0.045	ug/g dry basis			
Molybdenum	10.2	ug/g dry basis			
Arsenic	37.2	ug/g dry basis			
Cobalt	18.2	ug/g dry basis			
Copper	41.4	ug/g dry basis			
Lead	28.2	ug/g dry basis			
Nickel	54.9	ug/g dry basis			
Zinc	263.1	ug/g dry basis			

Comments:

Attachment B

BIG BEND STATION – UNITS 1 THROUGH 4
COMBUSTION OF POLK POWER STATION RESIDUAL COAL
PSD APPLICABILITY ANALYSIS

The procedures for determining applicability of the PSD NSR permitting program to modifications planned at existing major Florida facilities are specified in Rule 62-212.400(2)(d)4., F.A.C. Because the existing BBS is a major facility (i.e., has potential emissions of 100 tons per year or more of an air pollutant subject to regulation under Chapter 403, Florida Statutes) that would be subject to PSD preconstruction review if it were itself a proposed new facility (i.e., has potential emissions of 100 tons per year or more of a pollutant regulated under the Clean Air Act and is located in an attainment area), modifications to the existing BBS which result in a *significant net emissions increase* of any pollutant regulated under the Clean Air Act are subject to PSD NSR.

The term "significant net emission increase" is defined by Rule 62-212.400(2)(e), F.A.C. For each regulated pollutant, the net emission increase for a modification project is equal to the sum of the increases in emissions associated with the proposed project plus all facility-wide creditable, contemporaneous emission increases minus all facility-wide creditable, contemporaneous emission decreases. If this net emissions increase is equal to or greater than the applicable Table 212.400-2, F.A.C. Regulated Pollutants - Significant Emission Rates, then the net emission increase is considered to be "significant" and the modification will be subject to PSD NSR for that particular regulated pollutant.

In accordance with Rule 62-212.400(2)(e)3., F.A.C., the "contemporaneous" period for a modification project begins five years prior to the date of submittal of a complete permit application and ends when the new or modified emission units are estimated to begin operation.

In accordance with Rule 62-212.400(2)(e)4., F.A.C., contemporaneous emission increases and decreases are "creditable" if:

(1) the emission increase or decrease will affect PSD increment consumption; i.e., will

consume or expand the available increment;

(2) The emission increase or decrease was not previously considered in the issuance of a PSD NSR permit (to avoid "double counting"); and

(3) The FDEP has not relied on the emission increase or decrease in attainment or reasonable further progress demonstrations.

Contemporaneous emission increases and decreases are based on *actual* emission rates. The term "actual emissions" is defined by Rule 62-210.200(12), F.A.C. For new emission units, including new electric utility steam generating units, actual emissions are equal to potential emissions. For physical or operational changes to existing emissions units, actual emissions prior to the physical or operational change are generally the actual average emission rates, in tons per year, for the two-year period preceding the change and which are representative of normal operations. The Department may allow the use of a different time period if it is determined that the other time period is more representative of the normal operation of an emissions unit. For changes to existing electric utility generating units, actual emissions following a physical or operational change are equal to the "representative actual annual emissions" as defined by 40 CFR 52.21(b)(33). This federal rule defines "representative actual annual emissions" as the average rate, in tons per year, which a source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation, considering the effect the change will have on increasing or decreasing the hourly emission rate and on projected capacity utilization.

For emission decreases, the old level of actual or allowable emissions (whichever is lower) must be greater than the new level of actual emissions. The actual emission decrease must also take place on or before the date that emissions from the modification project first occur and must be federally enforceable on and after the date the Department issues a construction permit for the modification project.

With respect to the combustion of Polk Power Station (PPS) residual coal (including both raw and beneficiated residual coal) at the BBS and PSD applicability, the primary consideration is whether co-firing of PPS residual coal at BBS Units 1 through 4 will cause

a significant net increase in PM/PM_{10} and SO_2 air emissions. Because the proposed use of PPS residual coal at Units 1 through 4 (up to 200 tons per day of raw PPS residual coal and up to 500 tons per day of beneficiated PPS residual coal for all four units combined) will displace the current use of coal (in amounts equal to the heat input of the PPS residual coal), a significant net increase will not occur as long as the emissions resulting from PPS residual coal combustion, for each PSD regulated air pollutant, do not exceed the 2 year historical average coal emission rates. Summaries of actual 1995 through 1999 annual emission rates of SO_2 and PM/PM_{10} for Units 1 through 4 follow this discussion.

The pollutants addressed by the PSD regulatory program with respect to significant emission rates are listed in Chapter 62-212, Table 212.400-2, F.A.C; these pollutants and their significant emission rates are shown on Table 1. For the BBS, PM is monitored on an annual basis using EPA Reference Method 17 and SO_2 is monitored using continuous emissions monitoring systems (CEMS).

Year-to-year variations in operating hours, load, or coal sulfur content are generally *not* considered operational changes and therefore do *not* constitute modifications under the PSD regulatory program. The BBS is a baseload facility. Therefore, the use of PPS residual coal will not change the electrical generation capacity of the facility nor change its operating hours from what would have occurred if PPS residual coal were not utilized. A discussion of the actual emission rate changes for the PSD pollutants listed in Table 1 are provided in the following sections.

Particulate Matter (PM/PM_{10}), Sulfur Dioxide (SO_2), and Sulfuric Acid Mist (H_2SO_4)

To ensure that the combustion of raw and beneficiated PPS residual coal in Units 1 through 4 will not result in a net significant emission rate increase for PM, PM_{10}, SO_2, and H_2SO_4, TEC requests a federally enforceable emissions cap for Units 1 through 4 equal to the average actual emission rates for the 1997 and 1998 two-year period. Specifically, SO_2 and PM/PM_{10} annual emission caps of 104,914 and 2,951 tons per year, respectively, are requested for Units 1 through 4. Because H_2SO_4 emissions are directly related to SO_2 emissions, limiting future SO_2 emissions to past actual rates will also

ensure that future H_2SO_4 emissions do not increase.

Table 1. Significant Emission Rates for PSD Review

Pollutant	Emission Rate (tpy)	Emission Rate (lb/yr)
CO	100	
NO_x	40	
SO_2	40	
Ozone	40 (as VOC)	
PM	25	
PM_{10}	15	
Total reduced sulfur (including H_2S)	10	
Reduced sulfur compounds (including H_2S)	10	
Sulfuric acid mist	7	
Fluorides	3	
Lead		1,200
Mercury		200
Municipal waste combustor organics		0.007
Municipal waste combustor metals	15	
Municipal waste combustor acid gases	40	
Municipal solid waste landfill emissions	50	

Source: Chapter 62-212, Table 212.400-2, F.A.C.

Limiting future actual emission rates of SO_2 and PM/PM_{10} for Units 1 through 4 to the historical average actual rates for 1997 and 1998 by means of a federally enforceable permit condition provides reasonable assurance that a significant net emission rate increase will not occur for PM, PM_{10}, SO_2, and H_2SO_4 as a result of combusting raw and beneficiated PPS residual coal in Units 1 through 4. TEC proposes to monitor future SO_2 emissions using the existing 40 CFR Part 75 CEMS and track future annual SO_2 emissions on a rolling, 12-month average basis. TEC proposes to monitor Units 1 through 4annual PM/PM_{10} emissions by conducting periodic stack tests using Reference Method 17.

Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and Volatile Organic Compounds (VOCs)

Emissions of NO_x, CO, and VOC from Units 1 through 4 are primarily influenced by boiler operating parameters such as air-to-fuel ratio, combustion residence time, combustion zone temperature, etc. These boiler operating parameters will not change due to the combustion of PPS residual coal in Units 1 through 4. Accordingly, it is concluded that the combustion of PPS residual coal in Units 1 through 4 will not affect NO_x, CO, and VOC emissions.

In summary, to ensure that the combustion of the raw and benficiated PPS residual fuel does not result in a significant increase in PM/PM_{10} or SO_2 emissions, TEC proposes an emissions cap of 2,951 and 104,914 tons per year for PM/PM_{10} and SO_2, respectively. Due to the fact that the combustion chemistry in each boiler will not vary as a result of firing the raw and beneficiated PPS residual fuel, emissions of NO_x, CO and VOC will not be affected by this change.

Table 1. Big Bend Station
PPS Coal Residual Netting Analysis - Big Bend Station Unit 1 Historical Emissions

	Unit 1				
	1995	1996	1997	1998	1999
Heat Input (10^6 Btu/yr)	29,474,450	28,259,881	25,052,890	26,311,320	24,288,043
Coal Usage (tons)	1,234,582	1,224,582	1,043,843	1,071,759	990,253
Oil Usage (10^3 gal)	395.2	406.0	463.9	679.5	744.8
SO_2					
AOR CEMS (lb/10^6 Btu)	2.28	2.60	2.98	3.54	3.26
AOR CEMS (tpy)	33,565	36,738	37,315	46,622	39,545
PM_{10}					
AOR (lb/10^6 Btu)	0.080	0.040	0.040	0.050	0.060
AOR (tpy)	1,179	564	501	658	729
PM					
AOR (lb/10^6 Btu)	0.080	0.040	0.040	0.050	0.060
AOR (tpy)	1,179	564	501	658	729

Sources: ECT, 2001.
TEC, 2001.

Table 2. Big Bend Station
PPS Coal Residual Netting Analysis - Big Bend Station Unit 2 Historical Emissions

	Unit 2				
	1995	1996	1997	1998	1999
Heat Input (10^6 Btu/yr)	28,991,137	28,901,007	30,791,369	25,427,606	24,844,317
Coal Usage (tons)	1,217,160	1,264,519	1,266,912	1,003,265	982,336
Oil Usage (10^3 gal)	395.2	406.0	472.3	622.3	744.8
SO_2					
AOR CEMS (lb/10^6 Btu)	2.37	2.42	2.91	3.47	3.31
AOR CEMS (tpy)	34,295	34,941	44,876	44,168	41,158
PM_{10}					
AOR (lb/10^6 Btu)	0.080	0.050	0.060	0.070	0.110
AOR (tpy)	1,160	722	924	890	1,366
PM					
AOR (lb/10^6 Btu)	0.080	0.050	0.060	0.070	0.110
AOR (tpy)	1,160	722	924	890	1,366

Sources: ECT, 2001.
TEC, 2001.

Table 3. Big Bend Station
PPS Coal Residual Netting Analysis - Big Bend Station Unit 3 Historical Emissions

	Unit 3				
	1995	1996	1997	1998	1999
Heat Input (10^6 Btu/yr)	25,845,839	28,611,093	24,932,302	24,572,779	22,285,930
Coal Usage (tons)	1,103,856	1,238,036	1,131,277	1,102,739	908,703
Oil Usage (10^3 gal)	395.2	406.0	472.3	679.5	677.7
SO_2					
AOR CEMS (lb/10^6 Btu)	1.13	0.86	1.16	0.99	0.97
AOR CEMS (tpy)	14,543	12,355	14,459	12,173	10,798
PM_{10}					
AOR (lb/10^6 Btu)	0.050	0.050	0.110	0.110	0.070
AOR (tpy)	646	714	1,371	1,352	780
PM					
AOR (lb/10^6 Btu)	0.050	0.050	0.110	0.110	0.070
AOR (tpy)	646	714	1,371	1,352	780

Sources: ECT, 2001.
TEC, 2001.

Table 4. Big Bend Station

PPS Coal Residual Netting Analysis - Big Bend Station Unit 4 Historical Emissions

	Unit 4				
	1995	1996	1997	1998	1999
Heat Input (10^6 Btu/yr)	29,517,363	31,546,816	34,566,650	34,130,648	29,944,800
Coal Usage (tons)	1,335,623	1,408,282	1,347,696	1,328,324	1,173,657
Oil Usage (10^3 gal)	468.4	270.0	273.4	765.1	572.0
SO_2					
AOR CEMS (lb/10^6 Btu)	0.18	0.32	0.34	0.26	0.27
AOR CEMS (tpy)	2,620	5,087	5,844	4,371	4,112
PM_{10}					
AOR (lb/10^6 Btu)	0.0040	0.0030	0.0060	0.0060	0.0040
AOR (tpy)	59	48	104	102	60
PM					
AOR (lb/10^6 Btu)	0.0040	0.0030	0.0060	0.0060	0.0040
AOR (tpy)	59	48	104	102	60

Sources: ECT, 2001.
TEC, 2001.

Table 5. Big Bend Station

PPS Coal Residual Netting Analysis - Big Bend Station Units 1 - 4 Historical Emissions

	Units 1-4					
	1995	1996	1997	1998	1999	97,98 Avg.
Heat Input (10^6 Btu/yr)	113,828,789	117,318,797	115,343,211	110,442,353	101,363,090	112,892,782
Coal Usage (tons)	4,891,221	5,135,419	4,789,728	4,506,087	4,054,949	4,647,908
Oil Usage (10^3 gal)	1,654.1	1,487.9	1,681.8	2,746.4	2,739.2	2,214.1
SO_2						
AOR CEMS (lb/10^6 Btu)	1.49	1.52	1.78	1.94	1.89	1.86
AOR CEMS (tpy)	85,023	89,121	102,494	107,334	95,613	104,914
PM_{10}						
AOR (lb/10^6 Btu)	0.053	0.035	0.050	0.054	0.058	0.052
AOR (tpy)	3,044	2,048	2,900	3,002	2,935	2,951
PM						
AOR (lb/10^6 Btu)	0.053	0.035	0.050	0.054	0.058	0.052
AOR (tpy)	3,044	2,048	2,900	3,002	2,935	2,951

Sources: ECT, 2001.
TEC, 2001.

Attachment C

EMISSION INVENTORY WORKSHEET

FUG-PM

Tampa Electric Company - Big Bend Station

EMISSION SOURCE TYPE

FUGITIVE PM - MATERIAL TRANSFER (DROPS) Figure:

FACILITY AND SOURCE DESCRIPTION

Emission Source Description:	Fugitive PM - Polk Power Station Coal Residual (Drops)
Emission Control Method(s)/ID No.(s):	Moist material, enclosures
Emission Point ID:	FUG-PM

EMISSION ESTIMATION EQUATIONS

PM Emission (lb/hr) = 0.74 x 0.0032 x [(Wind Speed/5)$^{1.3}$ / (Material Moisture Content/2)$^{1.4}$] x Material Handled (ton/hr)

PM Emission (ton/yr) = 0.74 x 0.0032 x [(Wind Speed/5)$^{1.3}$ / (Material Moisture Content/2)$^{1.4}$] x Material Handled (ton/yr) x (1 ton/2,000 lb)

Source: Section 13.2-4, AP-42, January 1995.

INPUT DATA AND EMISSIONS CALCULATIONS

Mean Wind Speed: 8.6 mph

Material Moisture Content: 5.0 weight %

Material Transfer Point	Source ID	Material Transfer Rates (lb/hr)	Material Transfer Rates (tpy)	Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential Emission Rates (lb)	Potential Emission Rates (tons)
Dump Truck to Storage Pile	SF-1	50,000	73,000	0.001329	0.0	0.001329	0.03322	0.04850
Front End Loader to Hopper No. 1	SF-2	50,000	73,000	0.001329	0.0	0.001329	0.03322	0.04850
Hopper No. 1 to Belt Conveyor No. 1	SF-3	50,000	73,000	0.001329	100.0	0.000000	0.00000	0.00000
Belt Conveyor No. 1 to Hopper No. 2	SF-4	50,000	73,000	0.001329	0.0	0.001329	0.03322	0.04850
Hopper No. 2 to Belt Conveyor No. 2	SF-5	50,000	73,000	0.001329	100.0	0.000000	0.00000	0.00000
						Totals	0.0997	0.1455

SOURCES OF INPUT DATA

Parameter	Data Source
Mean Wind Speed, mph	Climate of the States (Tampa, FL), Third Edition, 1985.
Material Moisture Content	TEC, 2001.
Material Transfer Point Identification	TEC, 2001.
Material Transfer Rates	TEC, 2001.
Control Efficiency	Complete enclosure - 100%.

NOTES AND OBSERVATIONS

Hourly rates based on 200 tons per day and 8 hours per day operation.

DATA CONTROL

Data Collected by:	P. Shell	Date:	3/01
Evaluated by:	T. Davis	Date:	3/01
Data Entered by:	T. Davis	Date:	3/01

EMISSION INVENTORY WORKSHEET

FUG-PM10

Tampa Electric Company - Big Bend Station

EMISSION SOURCE TYPE

FUGITIVE PM_{10} - MATERIAL TRANSFER (DROPS & SCREENING) Figure:

FACILITY AND SOURCE DESCRIPTION

Emission Source Description:	Fugitive PM - Polk Power Station Coal Residual (Drops)
Emission Control Method(s)/ID No.(s):	Moist material, enclosures
Emission Point ID:	FUG-PM_{10}

EMISSION ESTIMATION EQUATIONS

PM_{10} Emission (lb/hr) = 0.35 x 0.0032 x [(Wind Speed/5)$^{1.3}$ / (Material Moisture Content/2)$^{1.4}$] x Material Handled (ton/hr)

PM_{10} Emission (ton/yr) = 0.35 x 0.0032 x [(Wind Speed/5)$^{1.3}$ / (Material Moisture Content/2)$^{1.4}$] x Material Handled (ton/yr) x (1 ton/2,000 lb)

Source: Section 13.2-4, AP-42, January 1995.

INPUT DATA AND EMISSIONS CALCULATIONS

Mean Wind Speed: 8.6 mph

Material Moisture Content: 5.0 weight %

Material Transfer Point	Source ID	Material Transfer Rates (lb/hr)	Material Transfer Rates (tpy)	Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential Emission Rates (lb)	Potential Emission Rates (tons)
Dump Truck to Storage Pile	SF-1	50,000	73,000	0.000628	0.0	0.000628	0.01571	0.02294
Front End Loader to Hopper No. 1	SF-2	50,000	73,000	0.000628	0.0	0.000628	0.01571	0.02294
Hopper No. 1 to Belt Conveyor No. 1	SF-3	50,000	73,000	0.000628	100.0	0.000000	0.00000	0.00000
Belt Conveyor No. 1 to Hopper No. 2	SF-4	50,000	73,000	0.000628	0.0	0.000628	0.01571	0.02294
Hopper No. 2 to Belt Conveyor No. 2	SF-5	50,000	73,000	0.000628	100.0	0.000000	0.00000	0.00000
						Totals	0.0471	0.0688

SOURCES OF INPUT DATA

Parameter	Data Source
Mean Wind Speed, mph	Climate of the States (Tampa, FL), Third Edition, 1985.
Material Moisture Content	TEC, 2001.
Material Transfer Point Identification	TEC, 2001.
Material Transfer Rates	TEC, 2001.
Control Efficiency	Complete enclosure - 100%.

NOTES AND OBSERVATIONS

Hourly rates based on 200 tons per day and 8 hours per day operation.

DATA CONTROL

Data Collected by:	P. Shell	Date:	3/01
Evaluated by:	T. Davis	Date:	3/01
Data Entered by:	T. Davis	Date:	3/01

TECO Big Bend
PPS Coal Residual
Storage Pile Dimensions

Pile Dimension Calculations:

Pile	Pile Length (ft)	Pile Width (ft)	Pile Height (ft)	Pile Base Area (ft^2)	Pile Base Area (acre)	Pile Volume (ft^3)
Coal Residual	511.3	170.4	25.0	87,119	2.000	2,177,975

Sources: ECT, 2001.
TEC, 2001.

EMISSION INVENTORY WORKSHEET

FUG-PM

Tampa Electric Company - Big Bend Station

EMISSION SOURCE TYPE

FUGITIVE PM - ACTIVE OUTDOOR STORAGE

Figure:

FACILITY AND SOURCE DESCRIPTION

Emission Source Description:	Fugitive PM - Active Outdoor Storage Pile
Emission Control Method(s)/ID No.(s):	Moist Material
Emission Point ID:	FUG-PM

EMISSION ESTIMATION EQUATIONS

PM Emission (lb/hr) = Emission Factor (lb PM/acre/day) x Storage Pile Area (acres) x (1 day/24 hrs)

PM Emission (ton/yr) = Emission Factor (lb PM/acre/day) x Storage Pile Area (acres) x Storage Period (dys/yr) x (1 ton/2,000 lb)

Source: ECT, 2001.

INPUT DATA AND EMISSIONS CALCULATIONS

Storage Pile Material Type	Source ID	Period of Storage (dys/yr)	Pile Area (acre)	Uncontrolled Emission Factor (lb PM/acre/dy)	Control Efficiency (%)	Controlled Emission Factor (lb PM/acre/dy)	Potential PM Emission Rates (lb/hr)	(tpy)
Polk Power Station Coal Residual	SF-6	365	2.000	13.2	70.0	3.96	0.330	1.445

SOURCES OF INPUT DATA

Parameter	Data Source
Uncontrolled Emission Factors	Section 8.19.1-1, AP-42, September 1991.
Control Efficiency	Based on high moisture content.
Pile Size (acre)	TEC and ECT, 2001.

NOTES AND OBSERVATIONS

DATA CONTROL

Data Collected by:	P. Shell	**Date:**	3/01
Evaluated by:	T. Davis	**Date:**	3/01
Data Entered by:	T. Davis	**Date:**	3/01

EMISSION INVENTORY WORKSHEET

FUG-PM10

Tampa Electric Company - Big Bend Station

EMISSION SOURCE TYPE

FUGITIVE PM_{10} - ACTIVE OUTDOOR STORAGE — Figure:

FACILITY AND SOURCE DESCRIPTION

Emission Source Description:	Fugitive PM - Active Outdoor Storage Pile
Emission Control Method(s)/ID No.(s):	Moist Material
Emission Point ID:	FUG-PM_{10}

EMISSION ESTIMATION EQUATIONS

PM_{10} Emission (lb/hr) = Emission Factor (lb PM/acre/day) x Storage Pile Area (acres) x (1 day/24 hrs)

PM_{10} Emission (ton/yr) = Emission Factor (lb PM/acre/day) x Storage Pile Area (acres) x Storage Period (dys/yr) x (1 ton/2,000 lb)

Source: ECT, 2001.

INPUT DATA AND EMISSIONS CALCULATIONS

Storage Pile Material Type	Source ID	Period of Storage (dys/yr)	Pile Area (acre)	Uncontrolled Emission Factor (lb PM/acre/dy)	Control Efficiency (%)	Controlled Emission Factor (lb PM/acre/dy)	Potential PM_{10} Emission Rates (lb/hr)	Potential PM_{10} Emission Rates (tpy)
Polk Power Station Coal Residual	SF-6	365	2.000	6.3	70.0	1.89	0.157	0.690

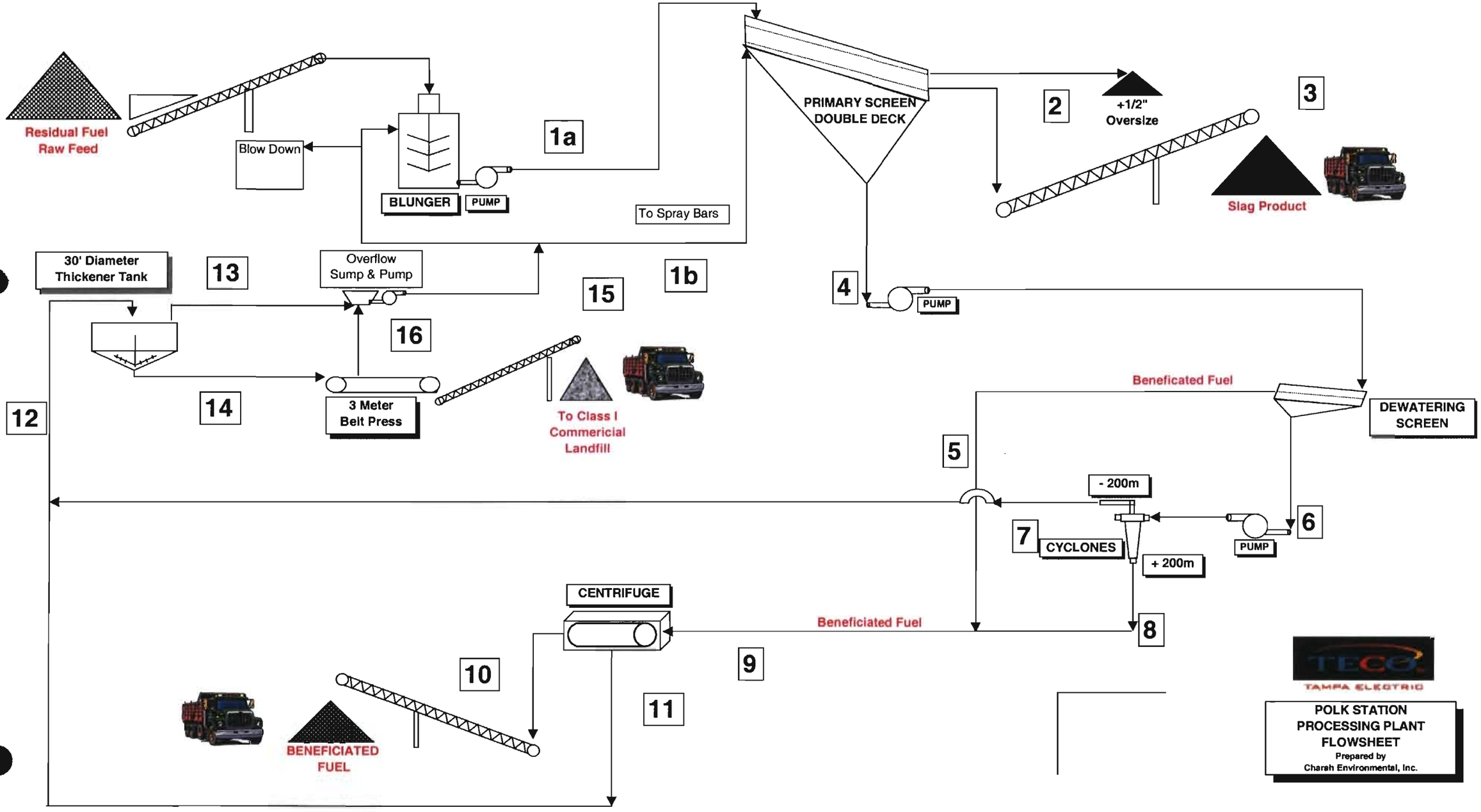
SOURCES OF INPUT DATA

Parameter	Data Source
Uncontrolled Emission Factors	Section 8.19.1-1, AP-42, September 1991.
Control Efficiency	Based on high moisture content.
Pile Size (acre)	TEC and ECT, 2001.

NOTES AND OBSERVATIONS

DATA CONTROL

Data Collected by:	P. Shell	**Date:**	3/01
Evaluated by:	T. Davis	**Date:**	3/01
Data Entered by:	T. Davis	**Date:**	3/01



Attachment D