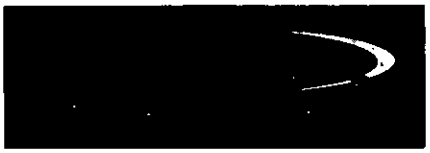

TAMPA ELECTRIC

RECEIVED
JUN 26 2001
BUREAU OF AIR REGULATION

June 25, 2001

Mr. Scott M. Sheplak, P.E.
Administrator, Title V Section
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7900 8642 6427

Re: Tampa Electric Polk Power Station
Coal Residual Beneficiation

Dear Mr. Sheplak:

Tampa Electric Company (TEC) presently generates coal residual material, or slag, at its Polk Power Station as a by-product of the coal gasification process. An air source construction permit application to handle, store, beneficiate, and combust this by-product material at TEC's Big Bend Station was previously submitted to the Department and the Hillsborough County Environmental Protection Commission in May 2001. TEC now plans to install and operate the coal residual beneficiation process (i.e., the Charah Environmental Slag Beneficiation Process) at the Polk Power Station instead of the Big Bend Station. Coal residual beneficiated at the Polk Power Station will transferred by truck to the Big Bend Station for use as a supplemental fuel.

The coal residual beneficiation process is essentially a wet process and therefore will have insignificant fugitive particulate matter (PM) emissions. A process description, process flow diagram, and PM emission estimates are included with this letter as Attachments I through III, respectively. A professional engineer certification is provided in Attachment IV.

Estimates of potential fugitive PM emissions are projected to be less than one ton per year. Accordingly, the coal residual beneficiation process qualifies for the generic emissions unit exemption pursuant to Rule 62-210.300(3)(b)1., F.A.C. Department confirmation that the proposed Polk Power Station coal residual beneficiation process is exempt from permitting is requested. If you have any questions regarding this matter, please feel free to contact me at (813) 641-5376.

Sincerely,

Laura R. Crouch

Laura R. Crouch
Manager-Air Programs
Environmental Affairs

EA\tl\SKT262

Enclosures

c: Mr. Jerry Kissel, FDEP SW

6/26/01 cc: Ed Svec

TAMPA ELECTRIC COMPANY
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ATTACHMENT I

TAMPA ELECTRIC COMPANY
POLK POWER STATION

COAL RESIDUAL BENEFICIATION
PROCESS DESCRIPTION

Coal residual material, or slag, is a by-product of the Polk Power Station (PPS) coal gasification process. Tampa Electric Company (TEC) plans to install the Charah Environmental slag beneficiation process at the PPS to process this by-product coal residual and produce a material suitable for use as a supplemental fuel at TEC's Big Bend Station. The Charah beneficiation process is essentially a wet process and therefore will have insignificant emissions of particulate matter. A process flow diagram of the Charah beneficiation process is provided as Attachment II. A description of the Charah beneficiation process follows this introduction.

Slag currently stockpiled at the PPS will be transported to the inlet feed hopper of the beneficiation process by a rubber tired front-end loader. The slag is then transferred from the feed hopper to the slurry blunger by means of a conveyor belt. Water is added and the slag crushed in the blunger to produce a slag slurry that is subsequently pumped to a three deck primary screen.

Spray water is added at the primary screen to wash fines from the +0.5 inch oversize material. The +0.5 inch oversized material will be recycled to the blunger for recrushing. The primary screen will produce a washed 20 mesh to 0.5 inch material that will be transported of-site by truck and sold as an aggregate product. Material passing through the bottom of the primary screen will be pumped to a high frequency dewatering screen.

Underflow from the high frequency dewatering screen will be pumped to cyclones for additional water separation. Underflow from the cyclones will combine with the oversize material from the high frequency dewatering screen to feed a centrifuge for final dewatering. The centrifuge produces a moist, beneficiated coal residual that will be transported from the PPS by truck for use at the Big Bend Station as a supplemental fuel.

The overheads of the cyclones will combine with the centrifuge underflow and be pumped to a thickener. Cationic and anionic polymers will be added to the thickener to improves solids concentration. Underflow (i.e., concentrated solids) from the thickener will be pumped to a filter press for dewatering. Overflow water from the thickener will be recycled and used as process water.

Dewatered cake from the filter press will be initially trucked to a landfill for disposal. In the future, this material may also be blended with the beneficiated coal residual. The underflow from the filter press will be recycled to the feed section of the thickener.

ATTACHMENT II

TAMPA ELECTRIC COMPANY
POLK POWER STATION

COAL RESIDUAL BENEFICIATION
PROCESS FLOW DIAGRAM

ATTACHMENT III

TAMPA ELECTRIC COMPANY
POLK POWER STATION

COAL RESIDUAL BENEFICIATION
EMISSION ESTIMATES

As previously noted in Attachment I (Process Description), the Charah beneficiation process is essentially a wet process and therefore will have insignificant emissions of particulate matter (PM).

Potential fugitive PM emission points include:

- Transfer of slag from the existing slag stockpile to the beneficiation process inlet feed hopper by front-end loader;
- Transfer of slag from the inlet feed hopper to the slurry blunger; and
- Truck traffic on plant roadways.

The slag inlet feed rate will be up to 100 tons per hour, on a dry basis. Up to 200 tons per day of beneficiated coal residual will be produced by the Charah Environmental process.

Estimates of potential fugitive PM/PM_{10} emissions due to slag handling (upstream of the slurry blunger) are projected to be less than one ton per year using EPA AP-42 algorithms. Details of the potential fugitive PM/PM_{10} emission estimates are provided on the attached worksheets.

Downstream of the slurry blunger, fugitive PM/PM_{10} emissions will be minimal since the coal residual will be in a slurry form or as a moist, solid material. Fugitive PM/PM_{10} emissions due to truck traffic will be insignificant since all PPS roadways are paved and the trucks will be hauling a moist material.

EMISSION INVENTORY WORKSHEET

FUG-PM

Tampa Electric Company - Polk Power 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: 1.0 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 PM Emission Rates (lb)	Potential PM Emission Rates (tons)
Front-End Loader to Inlet Feed Hopper	SF-1	200,000	73,000	0.012648	0.0	0.012648	1.26477	0.46164
Belt Conveyor to Slurry Blunger	SF-2	200,000	73,000	0.012648	0.0	0.012648	1.26477	0.46164
						Totals	2.5295	0.9233

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	ECT, 2001
Material Transfer Rates	TEC, 2001

NOTES AND OBSERVATIONS

DATA CONTROL

Data Collected by:	S. Todd	Date:	6/01
Evaluated by:	T. Davis	Date:	6/01
Data Entered by:	T. Davis	Date:	6/01

EMISSION INVENTORY WORKSHEET

FUG-PM10

Tampa Electric Company - Polk Power Station

EMISSION SOURCE TYPE

FUGITIVE PM_{10} - MATERIAL TRANSFER (DROPS) — **Figure:**

FACILITY AND SOURCE DESCRIPTION

Emission Source Description:	Fugitive PM_{10} - 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: 1.0 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 PM_{10} Emission Rates (lb)	Potential PM_{10} Emission Rates (tons)
Front-End Loader to Inlet Feed Hopper	SF-1	200,000	73,000	0.005982	0.0	0.005982	0.59820	0.21834
Belt Conveyor to Slurry Blunger	SF-2	200,000	73,000	0.005982	0.0	0.005982	0.59820	0.21834
						Totals	**1.1964**	**0.4367**

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	ECT, 2001.
Material Transfer Rates	TEC, 2001.

NOTES AND OBSERVATIONS

DATA CONTROL

Data Collected by:	S. Todd	Date:	6/01
Evaluated by:	T. Davis	Date:	6/01
Data Entered by:	T. Davis	Date:	6/01

ATTACHMENT IV

TAMPA ELECTRIC COMPANY
POLK POWER STATION
COAL RESIDUAL BENEFICIATION

Professional Engineer Certification

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 permit exemption requested by Tampa Electric Company for the Polk Power Station residual coal beneficiation process is in accordance with all applicable Florida Statutes and rules of the Department of Environmental Protection; and

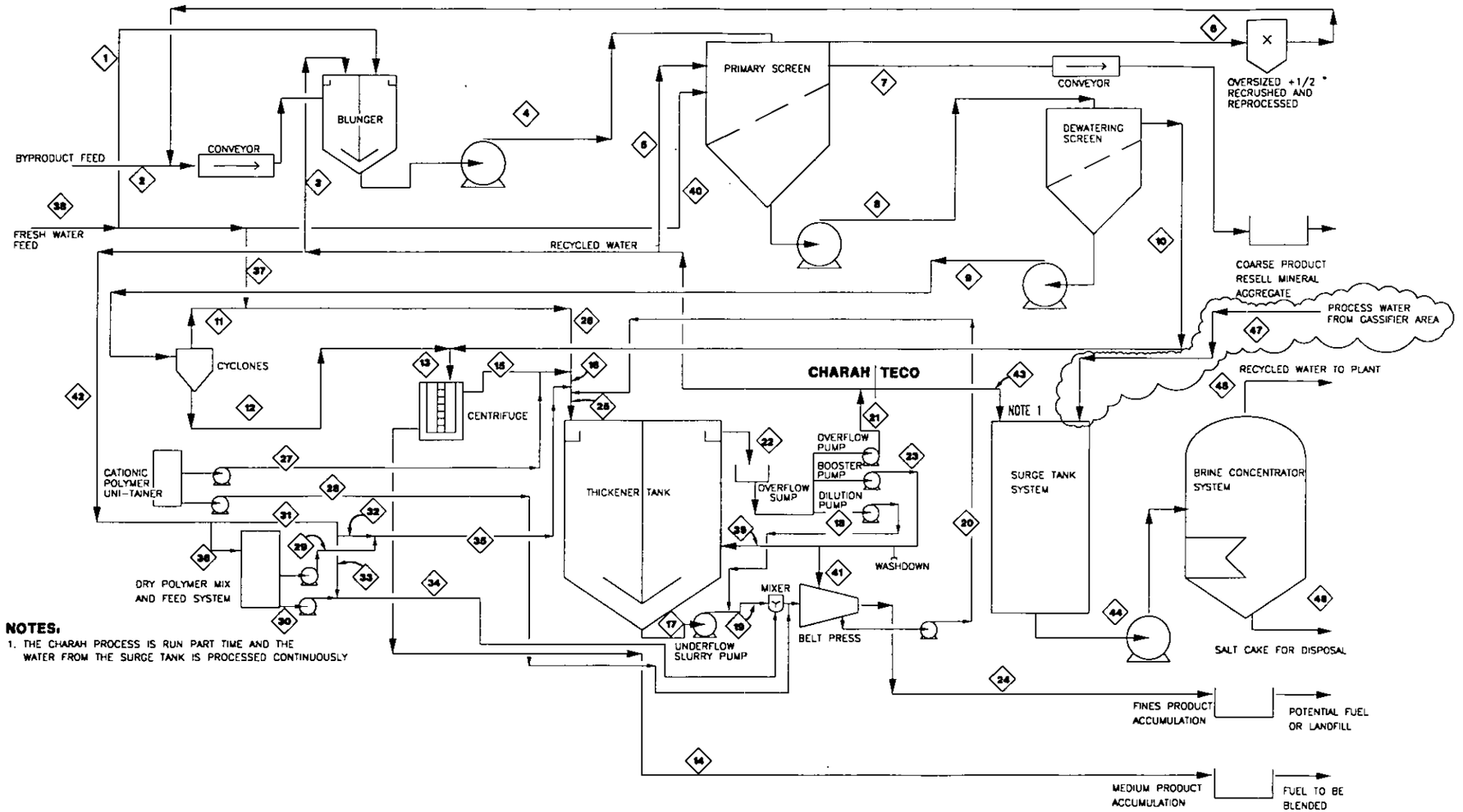
(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of air pollutants not regulated for an emissions unit, based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

Thomas M. Davis — 6/21/01

Signature — Date

(seal)

* Certification is applicable to the permit exemption request for the Tampa Electric Company Polk Power Station coal residual beneficiation process.



NOTES:

1. THE CHARAH PROCESS IS RUN PART TIME AND THE WATER FROM THE SURGE TANK IS PROCESSED CONTINUOUSLY

CHARAH PROCESS AT POLK P.S.

1	ADDED NUMBER 47	MJS	6/6/01
0	ORIGINAL ISSUE	MJS	6/6/01

PROCESS FLOW DIAGRAM
CHARAH FUEL RECOVERY
BENEFICIATION PROCESS
POLK POWER STATION

TECO TAMPA ELECTRIC

ENERGY SUPPLY - GENERATION ENGINEERING

92127-PFD-23-7F | 1

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MAR 15 2001
BUREAU OF AIR REGULATION

March 12, 2001

Mr. Scott Sheplak, P.E.
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, MS # 5505
Tallahassee, Florida 32399-2400

Re: Tampa Electric Company – Polk Power Station
Final Title V Permit No. 1050233-001-AV
Combustion Turbine Units 2 and 3

Dear Mr. Sheplak:

On March 19, 1999, the Florida Department of Environmental Protection (FDEP) issued Permit No. PSD-FL-263 to Tampa Electric Company (TEC) authorizing the construction and initial operation of two, simple-cycle combustion turbines at the existing TEC Polk Power Station.

Condition No. 10 of Permit No. PSD-FL-263 requires the submittal of a Title V operating permit to the FDEP's Bureau of Air Regulation, with a copy to the FDEP's Southwest District, in accordance with Chapter 62-213, F.A.C. Rule 62-213.420(1)(a)5., F.A.C., indicates that a Title V source which commences operation on or before October 25, 1995, but which contains an emission unit that commences operation after October 25, 1995, shall submit a revision to its Title V permit application, or an application for a permit revision, as applicable, no later than 180 days after the emissions unit commences operation.

Simple-cycle combustion turbine Unit 2 commenced initial operations on June 29, 2000. Emissions compliance testing, as required by Condition Nos. 27, 28, 31, 32, 33, and 34, was performed on September 15, 2000 (oil) and October 7, 2000 (natural gas). The results of this compliance testing were submitted to the FDEP's Southwest District as required by Condition No. 36. The initial compliance testing demonstrated that Unit 2 was operating in compliance with all applicable permit emission limits. Simple-cycle combustion turbine Unit 3 is presently under construction and is expected to commence initial operations during the fourth quarter of 2001.

To avoid multiple Title V permit revisions and in confirmation of our telephone conversation on March 7, 2001, TEC understands that the application for a revision to Polk Power Station Title V Final Permit No. 1050233-001-AV to include simple-cycle combustion turbine Units 2 and 3 may be submitted to the FDEP within 180 days following commencement of operation of Unit 3.

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OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

Please contact me at (813) 641-5033 if there are any questions regarding this matter.

Sincerely,

Jamie Hunter
Consulting Engineer
Environmental Affairs

EP\gm\JJH951

c: Tom Davis, ECT

-Ole-

TAMPA ELECTRIC

RECEIVED
MAR 12 2001
BUREAU OF AIR REGULATION

March 6, 2001

Mr. Brian McLean
U.S. Environmental Protection Agency
Clean Air Markets Division (6204N)
633 3rd Street, NW
Washington, DC 20001

Via FedEx
Airbill No. 7919 9143 8133

Re: Tampa Electric Company
Polk Power Station (ORIS 7242)
Petition to Remove Opacity Monitoring Requirement
Under the Acid Rain Program for Unit **1
Additional Information

Dear Mr. McLean:

As requested by Kim Nguyen of your staff, please find enclosed additional information to support the above referenced petition request originally submitted on February 19, 2001. The enclosed information consists of the following:

- A graphical depiction of the data for all of calendar year 2000.
- A list of dates when the Unit 1 opacity monitor was realigned during calendar year 2000.
- A tabulation of the individual six-minute average data points from the Unit 1 continuous opacity monitor for calendar year 2000.
- Copies of the Method 9 annual compliance tests conducted on Unit 1 (during diesel oil and during coal syngas firing) from 1997 – 2000.
- Copies of the Method 9 initial compliance tests conducted on Unit 2 (during diesel oil and during natural gas firing) from 2000.

The continuous opacity monitoring data for calendar year 2000 is provided as requested. However, this data needs further explanation to be understood fully. As can be seen in the graphical representation of the data, there is a constant shift upward in the monitor data. This is caused by a progression in the misalignment of the opacity monitor due to atmospheric conditions, causing the monitor data to constantly drift upward until corrected. Due to this phenomenon, plant personnel must periodically re-site the opacity monitor to correct the misalignment. This can only be performed when the unit is offline and there is a clear stack. Because of this alignment problem, it is felt that most of the data recorded by the opacity monitor does not reflect the correct opacity for this unit. This has been further verified by conducting visible emissions testing on the unit that shows that the actual opacity is zero when burning either gasified coal or diesel oil. The Method 9 compliance tests for this unit have been enclosed in support of this issue. In addition, the initial Method 9

tests (on diesel oil and on natural gas) for a similar combustion turbine (Unit 2) have been enclosed to demonstrate that emissions from a combustion turbine unit are typically zero.

During the third quarter of 2000, a large amount of data could not be collected due to the alignment issues. Due to the inability to correctly align the monitor on the stack, the monitor was removed from the stack and realigned. Once returned to the stack the monitor would still not align properly and was again removed and sent to the vendor for alignment. After reinstalling the monitor on the stack, the monitor could still not be aligned correctly. At this point it was determined that physical modifications needed to be made to the mounting location on the stack to allow proper alignment of the monitor due to the severity of the twisting that causes the misalignment.

It is due to the difficulties encountered with maintaining an opacity monitoring system on a combustion turbine unit, along with the lack of actual visual emissions from this unit that TEC has filed the petition. Hopefully this information, along with the arguments outlined in the original petition, provides adequate support for the removal of a continuous opacity monitoring requirement on this unit.

Should you have any questions regarding this information, please call Jamie Hunter or me at (813) 641-5033.

Sincerely,

Gregory M. Nelson
Tampa Electric Company
Designated Representative
Acid Rain Program

EP/gm/JJH949

Enclosures

c: Ms. Kim Nguyen, U.S. EPA (enc)
Mr. Lynn Haynes, U.S. EPA Region IV
Mr. Scott Sheplak, FDEP - Tallahassee
Mr. Joe Kahn, FDEP – Tallahassee (enc)
Mr. Bill Proses, FDEP - Tampa
Mr. Tom Ellison, FDEP - Tampa

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MAR 2 2001
BUREAU OF AIR REGULATION

February 27, 2001

Mr. W.A. Proses
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

Via FedEx
Airbill No. 7919 8438 8990

Re: Tampa Electric Company
Polk Power Station Unit 3
Start of Construction Notification

Dear Mr. Proses:

As required by 40 CFR 60.7 and Condition 3 of permit PSD-FL-263, TEC hereby gives notice that construction of Polk Power Station Unit 3 commenced on February 26, 2001.

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

Sincerely,

Jamie Hunter
Consulting Engineer
Environmental Affairs

EP\gm\JH947

c: Mr. A. Linero – FDEP
Mr. H. Oven – FDEP
Mr. S. Sheplak – FDEP
Mr. J. Kissel – FDEP SW

Ed

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JAN 26 2001

BUREAU OF AIR REGULATION

January 25, 2001

Mr. Scott Sheplak, P.E.
Administrator, Title V Section
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

Via FedEx
Airbill No. 7911 4243 7413

Re: Tampa Electric Company
Polk Power Station Unit 1
Alternative Sampling Procedure Request
1050233-001-AV

Dear Mr. Sheplak:

In correspondence dated January 17, 2001, Tampa Electric Company (TEC) submitted a permit modification request to modify both the PSD and Title V Permit associated with the above source. Please accept this letter as a request to temporarily withdraw the request to modify the Title V Permit. This request is being made to separate the processing of the PSD portion of the modification request so that it may proceed on an independent track. Once the PSD modification is complete, a separate request to continue processing of the Title V modification will be submitted.

If you have any questions, please telephone Shannon Todd, Jamie Hunter or me at (813) 641-5125.

Sincerely,

Mark J Hornick

Mark J. Hornick
General Manager / Responsible Official
Polk Power Station

EP\gm\SKT226

c: Al Linero, FDEP
Syed Arif, FDEP
Buck Oven, FDEP
Bill Thomas, FDEP - SWD

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JAN 16 2001
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January 9, 2001

Mr. W.A. Proses
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Via FedEx
Airbill No. 7904 4106 6561

Re: Polk Power Station Annual Compliance Inspection
Request for Supplemental Information

Dear Mr. Proses:

Please find enclosed the additional information that you requested during the December 21, 2000 annual compliance inspection of Polk Power Station. The enclosed information is summarized in the table below:

Unit	*Permit Condition*	*Requested Information*
1 Combustion Turbine	A.1	30-Day Rolling Average Heat Input for Unit 1 on December 21, 2000, Manufacturer's Heat Input Correction Curves
1 Combustion Turbine	A.5	SO_2 Emissions Report
Auxiliary Boiler	B.1	Auxiliary Boiler Heat Input for Last Day Fired on Oil
Auxiliary Boiler	B.4	Cumulative Annual Hours of Operation of Auxiliary Boiler
Auxiliary Boiler	B.38	Fuel Consumption of Auxiliary Boiler
Auxiliary Boiler	B.40	30 Day NOx Rolling Average Emission Rate for the Auxiliary Boiler
Sulfuric Acid Plant	C.6	No Test Required Until Title V Permit Renewal.
Sulfuric Acid Plant	C.7	No Test Required Until Title V Permit Renewal.
2 Combustion Turbine	8	Corrected Heat Input Values When Firing Fuel Oil
2 Combustion Turbine	13	Hours of Operation While Firing Each Fuel

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Since compliance with the emission rates defined in Condition A.5 is demonstrated by calculating a 30-day rolling average for each species, and the heat input defined in Condition A.1 of the permit is the basis for these emission rates, TEC believes that it is logical to conclude that compliance with the heat input defined in Condition A.1 is also demonstrated by calculating a 30-day rolling average. This allows for short term excursions due to ambient temperature fluctuations, fuel quality differences and other operation parameters. This calculation is included with the heat input correction curves for Unit 1.

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

Sincerely,

Shannon K Todd for

Patrick L. Shell
Administrator – Air Programs
Environmental Affairs

EP\gm\SKT218

Enclosures

c/enc: Mr. A. Linero – FDEP
Mr. H. Oven – FDEP
Mr. S. Sheplak – FDEP
Mr. J. Kissel – FDEP SW

Condition A.1 Attachment

Heat Input Analysis for Polk Power Station Unit 1 When Firing Syngas

Date	Average Heat Input When Firing Syngas
November 22, 2000	1681.5
November 23, 2000	1645.3
November 24, 2000	1648.1
November 25, 2000	1654.9
November 26, 2000	1647.0
November 27, 2000	1652.6
November 28, 2000	1647.4
November 29, 2000	1572.7
November 30, 2000	1569.3
December 1, 2000	1571.1
December 2, 2000	1456.8
December 3, 2000	1350.2
December 4, 2000	0.0
December 5, 2000	0.0
December 6, 2000	0.0
December 7, 2000	0.0
December 8, 2000	1581.8
December 9, 2000	1367.8
December 10, 2000	1771.7
December 11, 2000	1771.9
December 12, 2000	1566.7
December 13, 2000	1603.6
December 14, 2000	1747.7
December 15, 2000	1804.4
December 16, 2000	1802.9
December 17, 2000	1797.5
December 18, 2000	1813.4
December 19, 2000	1806.5
December 20, 2000	1822.5
December 21, 2000	1730.2

Based on the above data, the 30 day rolling average heat input to Unit 1 when firing syngas is **1657.14 MMBtu/hr**

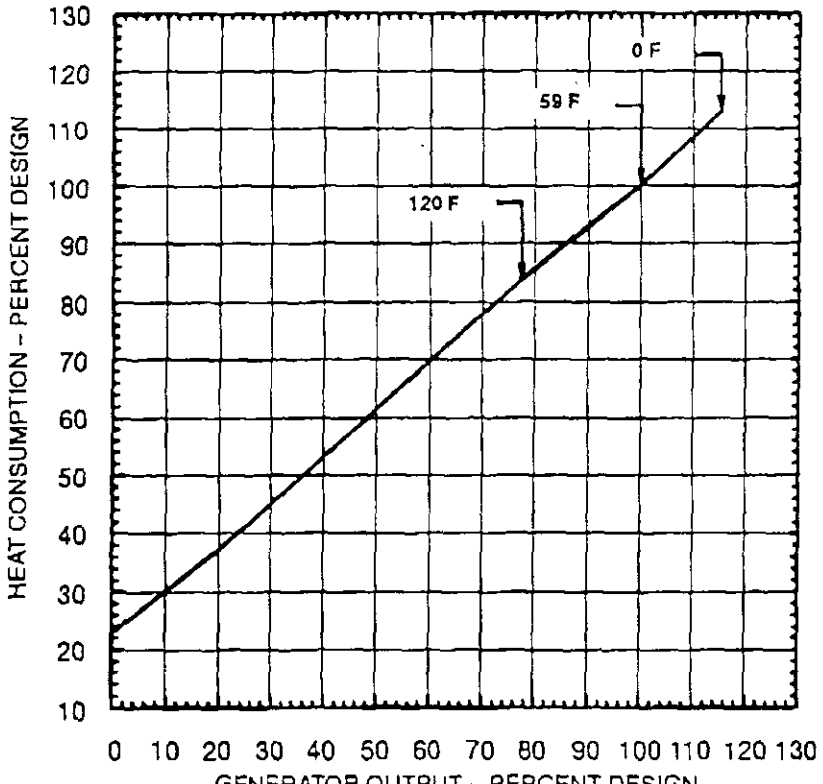
General Electric Model PG7221(FA) Gas Turbine
Estimated Performance – Configuration: Natural Gas & Distillate

Compressor Inlet Conditions 59 F (15.0 C), 60% Rel. Humidity
Atmospheric Pressure 14.7 psia (1.013 bar)

FUEL		NATURAL GAS		DISTILLATE	
DESIGN OUTPUT	kW	169000		155800	
DESIGN HEAT RATE (LHV)	Btu (kJ)/kWh	9500	(10030)	9580	(10110)
DESIGN HEAT CONS (LHV) x10–6	Btu (kJ)/h	1510.5	(1594.8)	1492.6	(1575.1)
DESIGN EXHAUST FLOW x10–3	lb/h (kg)/h	3347	(1518)	3357	(1523)
MODE: BASE LOAD					

NOTES:
1. Altitude correction on curve 416HA662 REV A
2. Ambient temperature correction on curve 517HA304
3. Effect of modulated IGV's on exhaust flow and temp. on curve 517HA305
4. Hydrogen cooled generator
5. Humidity correction on curve 498HA697 REV B – all performance calculated with specific humidity of .0064 or less so as not to exceed 100% relative humidity.
6. Plant performance is measured at the generator terminals and includes allowances for excitation power, shaft driven auxiliaries, 3.5 in. H2O (8.7 mbar) inlet and –3.0 in. H2O (–7.5 mbar) exhaust pressure drops
7. Additional pressure drop effects:

	%Effect on Output	%Effect on Heat Rate	Effect on Exhaust Temp.
4 in. H2O (10.0 mbar) Inlet	–1.45	0.53	2.8 F (1.6 C)
4 in. H2O (10.0 mbar) exhaust	–0.44	0.53	3.0 F (1.7 C)



DATE: 4/18/91
FJ BROOKS

517HA303

Condition A.5 Attachment

POLK COUNTY QUARTERLY EMISSION REPORT
HRSG

DATE	SO2	30-DAY Oil (lbs)	30-DAY Gas (lbs)	Daily Oil (lbs)	Daily Gas (lbs)	Hours Boiler
10/01/2000		34.1	256.9	0.0	357.8	24
10/02/2000		34.1	264.3	0.0	388.8	24
10/03/2000		34.1	266.5	0.0	320.5	24
10/04/2000		34.1	269.1	0.0	331.9	24
10/05/2000		34.1	269.1	0.0	344.5	24
10/06/2000		34.1	275.3	0.0	363.2	24
10/07/2000		34.1	280.1	0.0	393.2	24
10/08/2000		34.1	280.4	0.0	329.5	24
10/09/2000		34.1	278.0	0.0	273.1	24
10/10/2000		34.1	277.2	0.0	244.0	24
10/11/2000		34.1	278.7	0.0	327.8	24
10/12/2000		34.1	277.9	0.0	268.6	24
10/13/2000		34.1	274.6	0.0	142.4	24
10/14/2000		34.1	270.3	0.0	95.9	24
10/15/2000		34.1	265.3	0.0	119.2	24
10/16/2000		34.1	265.9	0.0	277.5	24
10/17/2000		34.1	270.2	0.0	345.1	24
10/18/2000		34.1	275.3	0.0	361.3	24
10/19/2000		34.1	280.5	0.0	329.2	24
10/20/2000		34.1	284.9	0.0	283.1	24
10/21/2000		34.1	284.5	0.0	272.7	24
10/22/2000		34.1	283.5	0.0	261.1	24
10/23/2000		34.1	284.0	0.0	250.1	24
10/24/2000		35.3	280.7	68.9	210.1	24
10/25/2000		37.1	280.7	59.9	0.0	24
10/26/2000		37.4	269.7	44.0	111.1	20
10/27/2000		37.4	262.7	0.0	193.4	24
10/28/2000		37.4	261.1	0.0	232.5	24
10/29/2000		37.4	262.3	0.0	239.6	24
10/30/2000		37.8	271.5	0.0	284.2	24
10/31/2000		37.8	273.8	0.0	261.0	24
11/01/2000		37.8	270.1	0.0	248.8	24
11/02/2000		37.8	267.6	0.0	313.7	24
11/03/2000		37.8	266.8	0.0	296.5	24
11/04/2000		40.6	266.5	114.6	322.0	24
11/05/2000		40.6	266.2	0.0	334.7	24
11/06/2000		40.6	264.3	0.0	306.9	24
11/07/2000		40.6	261.8	0.0	319.5	24
11/08/2000		40.6	259.7	0.0	265.9	24
11/09/2000		40.6	261.3	0.0	320.7	24
11/10/2000		40.6	257.3	0.0	125.6	24
11/11/2000		40.6	248.6	0.0	64.7	24
11/12/2000		40.6	241.6	0.0	58.0	24
11/13/2000		40.6	240.7	0.0	115.3	24
11/14/2000		40.6	244.3	0.0	204.3	24
11/15/2000		40.6	250.4	0.0	304.1	24
11/16/2000		42.0	252.4	60.6	335.9	24
11/17/2000		42.0	250.8	0.0	296.4	24
11/18/2000		42.0	249.0	0.0	307.4	24
11/19/2000		42.0	247.8	0.0	294.5	24
11/20/2000		42.0	249.3	0.0	328.1	24
11/21/2000		42.0	245.7	0.0	164.5	24
11/22/2000		42.0	243.1	0.0	182.1	24
11/23/2000		42.0	239.3	0.0	138.3	24
11/24/2000		42.0	238.0	0.0	170.7	24
11/25/2000		42.0	242.1	0.0	233.2	24
11/26/2000		42.0	245.9	0.0	306.3	24
11/27/2000		42.0	247.9	0.0	294.6	24
11/28/2000		42.0	247.4	0.0	222.5	24
11/29/2000		43.1	244.8	57.9	207.9	24
11/30/2000		43.1	242.3	0.0	186.1	24
12/01/2000		43.1	240.9	0.0	205.9	24
12/02/2000		43.1	234.3	0.0	115.2	24
12/03/2000		44.1	227.0	60.5	79.5	22
12/04/2000		46.1	227.0	70.2	0.0	24
12/05/2000		47.5	227.0	69.5	0.0	24
12/06/2000		48.6	227.0	79.2	0.0	24

12/07/2000	50.5	227.0	74.1	0.0	24
12/08/2000	52.7	218.7	67.9	71.5	24
12/09/2000	52.7	209.4	0.0	55.4	24
12/10/2000	52.7	202.7	0.0	108.1	24
12/11/2000	52.7	199.4	0.0	219.9	24
12/12/2000	54.0	201.8	45.9	336.7	24
12/13/2000	54.0	202.1	0.0	330.7	24
12/14/2000	54.0	218.0	0.0	602.5	24
12/15/2000	54.0	227.1	0.0	337.1	24
12/16/2000	54.0	235.5	0.0	309.5	24
12/17/2000	54.0	241.9	0.0	307.1	24
12/18/2000	54.0	243.7	0.0	260.0	24
12/19/2000	54.0	239.8	0.0	184.9	24
12/20/2000	54.0	234.9	0.0	190.3	24

Condition B.1 Attachment

Polk Power Station
Auxiliary Boiler Fuel Oil No 2 Report

Year 2000	Gallons	Hours	Gal/hour
January	20,914	55	380.26
February	61,079	177	345.08
March	68,121	212	321.33
April	68,351	138	495.30
May	399	3	133.15
June	51,746	150	344.97
July	16,427	44	373.34
August	34,761	90	386.24
September	44,609	115	387.90
October	2,105	8	263.13
November	0	0	0.00
December	7,111	31	229.38
Total	**375,624**	**1023**	

AUXILIARY BOILER

On December 12, 2000 the auxiliary boiler consumption was 2,032.02 gallons for 8 hours 52 minutes

Average oil consumption 229.34 gallons/hr

Average Heat Value of No 2 Oil 138,328 BTU/gallon

Average 31.642 MMBTU/HR

Condition B.4 Attachment

Polk Power Station
Auxiliary Boiler Fuel Oil No 2 Report

Year 2000	Gallons	Hours	Gal/hour
January	20,914	55	380.26
February	61,079	177	345.08
March	68,121	212	321.33
April	68,351	138	495.30
May	399	3	133.15
June	51,746	150	344.97
July	16,427	44	373.34
August	34,761	90	386.24
September	44,609	115	387.90
October	2,105	8	263.13
November	0	0	0.00
December	7,111	31	229.38
Total	**375,624**	**1023**	

AUXILIARY BOILER

On December 12, 2000 the auxiliary boiler consumption was 2,032.02 gallons for 8 hours 52 minutes

Average oil consumption 229.34 gallons/hr

Average Heat Value of No 2 Oil 138,328 BTU/gallon

Average 31.642 MMBTU/HR

Condition B.38 Attachment

Polk Power Station
Auxiliary Boiler Fuel Oil No 2 Report

Year 2000	Gallons	Hours	Gal/hour
January	20,914	55	380.26
February	61,079	177	345.08
March	68,121	212	321.33
April	68,351	138	495.30
May	399	3	133.15
June	51,746	150	344.97
July	16,427	44	373.34
August	34,761	90	386.24
September	44,609	115	387.90
October	2,105	8	263.13
November	0	0	0.00
December	7,111	31	229.38
Total	**375,624**	**1023**	

AUXILIARY BOILER

On December 12, 2000 the auxiliary boiler consumption was 2,032.02 gallons for 8 hours 52 minutes

Average oil consumption 229.34 gallons/hr

Average Heat Value of No 2 Oil 138,328 BTU/gallon

Average 31.642 MMBTU/HR

Condition B.40 Attachment

POLK COUNTY QUARTERLY EMISSION REPORT
AUX

DATE	30-DAY NOX (lb/mmBTU)	DAILY NOX (lb/mmBTU)	HOURS BOILER	HOURS NOX	VALID DAYS
01/01/2000	0.07	0.08	4.00	4	30
01/24/2000	0.07	0.07	21.00	21	30
01/30/2000	0.07	0.11	7.00	7	30
01/31/2000	0.07	0.08	24.00	24	30
02/01/2000	0.07	0.07	24.00	24	30
02/02/2000	0.07	0.07	24.00	24	30
02/03/2000	0.07	0.04	5.00	5	30
02/04/2000	0.07	0.13	18.00	18	30
02/05/2000	0.07	0.08	12.00	12	30
02/08/2000	0.07	0.10	2.00	2	30
02/09/2000	0.07	0.10	7.00	7	30
02/10/2000	0.07	0.07	24.00	24	30
02/11/2000	0.08	0.10	8.00	8	30
02/13/2000	0.08	0.10	6.00	6	30
02/14/2000	0.08	0.11	5.00	5	30
02/25/2000	0.08	0.06	1.00	1	30
02/26/2000	0.08	0.08	24.00	24	30
02/27/2000	0.08	0.07	24.00	24	30
02/28/2000	0.08	0.06	3.00	3	30
03/11/2000	0.08	0.07	8.00	8	30
03/12/2000	0.07	0.07	24.00	24	30
03/13/2000	0.07	0.06	24.00	24	30
03/14/2000	0.07	0.06	24.00	24	30
03/15/2000	0.07	0.06	24.00	24	30
03/16/2000	0.07	0.06	12.00	12	30
03/17/2000	0.08	0.08	16.00	16	30
03/18/2000	0.08	0.05	24.00	24	30
03/19/2000	0.07	0.04	9.00	9	30
03/28/2000	0.08	0.08	8.00	8	30
03/29/2000	0.08	0.09	10.00	10	30
03/30/2000	0.08	0.09	12.00	12	30
03/31/2000	0.08	0.05	24.00	24	30
04/01/2000	0.07	0.05	24.00	24	30
04/02/2000	0.07	0.06	24.00	24	30
04/03/2000	0.07	0.05	6.00	6	30
04/08/2000	0.07	0.07	6.00	6	30
04/10/2000	0.07	0.07	1.00	1	30
04/13/2000	0.07	0.09	22.00	22	30
04/14/2000	0.07	0.06	24.00	24	30
04/15/2000	0.07	0.06	7.00	7	30
04/20/2000	0.07	0.08	3.00	3	30
04/21/2000	0.07	0.08	24.00	24	30
04/22/2000	0.07	0.05	1.00	1	30
05/31/2000	0.07	0.08	3.00	4	30
06/07/2000	0.07	0.06	21.00	21	30
06/20/2000	0.07	0.06	22.00	22	30
06/21/2000	0.07	0.04	5.00	5	30
06/26/2000	0.06	0.06	9.00	10	30
06/27/2000	0.06	0.04	4.00	24	29
06/28/2000	0.06	0.08	17.00	24	28
06/29/2000	0.06	0.07	23.00	24	28
06/30/2000	0.07	0.07	23.00	24	28
07/01/2000	0.07	0.07	23.00	24	28
07/02/2000	0.07	0.07	6.00	6	28
07/26/2000	0.07	0.05	15.00	16	28
08/28/2000	0.06	0.05	19.00	19	28
08/29/2000	0.06	0.05	23.00	24	28
08/30/2000	0.06	0.05	22.00	24	28
08/31/2000	0.06	0.05	22.00	24	28
09/01/2000	0.06	0.02	20.00	24	28
09/02/2000	0.06	0.05	18.00	18	28
09/03/2000	0.06	0.05	2.00	2	28
09/06/2000	0.06	0.06	4.00	4	28
09/07/2000	0.06	0.06	7.00	8	28
09/13/2000	0.06	0.09	7.00	8	28
09/20/2000	0.06	0.08	17.00	17	28
09/28/2000	0.06	0.08	19.00	19	28

09/29/2000	0.06	0.05	20.00	21	28
10/24/2000	0.06	0.17	3.00	3	28
10/26/2000	0.06	0.07	8.00	8	28
12/03/2000	0.06	0.06	8.00	9	28
12/12/2000	0.06	0.07	12.00	13	28

Condition 8 Attachment

12/21/00 Unit 2

* = replaced data, GAS units=100scfh, OIL units=lb/hr

TM	FUEL	FUEL FLOW	HEAT INPUT mmBtu	SO2 EM lbs/hr	CO2 EM ton/hr	GGEN Mw
0	OIL1	46267.2	837.4	46.30000	74.10	147.90
1	OIL1	36590.4	662.3	36.60000	58.60	99.80
2	OIL1	34473.6	624.0	34.50000	55.20	88.60
3	OIL1	34473.6	624.0	34.50000	55.20	88.50
4	OIL1	34372.8	622.1	34.40000	55.10	88.40
5	OIL1	34524.0	624.9	34.50000	55.30	88.60
6	OIL1	39110.4	707.9	39.10000	62.70	111.80
7	OIL1	42487.2	769.0	42.50000	68.10	129.60
8	OIL1	40924.8	740.7	40.90000	65.60	122.20
9	OIL1	46216.8	836.5	46.20000	74.10	147.90
10	OIL1	42487.2	769.0	42.50000	68.10	130.20
11	OIL1	34221.6	619.4	34.20000	54.80	88.50
12	OIL1	20412.0	369.5	20.40000	32.70	72.10

Daily totals:	FUEL FLOW	HEAT INPUT mmBtu	SO2 EM lbs/day	CO2 EM ton/day
OIL1	486561.6	8806.7	486.60000	779.60

Generation Daily Total: 1404.10 Mw

Fuels Data:	HEAT CONTENT Btu/flow unit	SULFUR CONTENT oil-% gas-lb/mmBtu	CARBON CONTENT %	DENSITY
OIL1	18100.0	0.0500	87.40	8.40000 LBGAL

Condition 13 Attachment

03-JAN-2001 13:34:24.500	T1	0457	FALSE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:35:03.188	T1	0457	TRUE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:35:11.375	T1	0457	FALSE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:35:22.781	T1	0457	TRUE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:35:24.500	T1	0457	FALSE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:36:04.781	T1	0457	TRUE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:36:32.375	T1	0457	FALSE	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:38:02.375	T1	0457	LOCK	ALARM	INLET PRESSURE DROP MEASUREMENT FAULT
03-JAN-2001 13:41:03.625	T1	0522	FALSE	ALARM	LIQ FUEL SKID HEATER TROUBLE
03-JAN-2001 13:41:11.656	T1	0522	TRUE	ALARM	LIQ FUEL SKID HEATER TROUBLE

TECO POLK
UNIT T1 2

TIMERS and COUNTERS

03-JAN-2001 15:05:13

[redacted]