



TAMPA ELECTRIC

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BUREAU OF AIR REGULATION

June 30, 2008

Mr. Jeff Koerner  
Florida Department of Environmental Protection  
111 South Magnolia Drive, Suite 4  
Tallahassee, FL 32301

Via FedEx  
Airbill No. 7989 7100 2557

Mr. Bill Schroeder  
Southwest District  
Florida Department of Environmental Protection  
13051 N. Telecom Parkway  
Temple Terrace, FL 33637

Via FedEx  
Airbill No. 7919 2330 3463

Re: **Initial Equipment Upgrade Report**  
**Polk Power Station**  
**File No.: 1050233-021-AC**

Dear Mr. J. Koerner and Mr. B. Schroeder:

According to condition 11 of Air Permit No. 1050233-021-AC prior to performing upgrades Polk Power Station is to submit a report detailing all equipment changes made to the sulfuric acid plant ("SAP") and MDEA acid gas removal system. Please find attached the initial equipment upgrade report: "Initial Plant Modifications to Accommodate 85% pet coke, 4.7% sulfur fuels".

TEC appreciates your cooperation in this matter and if you have any questions, please call me at (813) 228-4433.

Sincerely,

Joshua D. Ellwein, P.E.  
Principal Engineer - Air Programs  
Environmental, Health & Safety

EHS/tlk/JDE128

Enclosure

TAMPA ELECTRIC COMPANY  
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POLK COUNTY (863) 299-0800  
ALL OTHER COUNTIES 1 (888) 223-0800

## ATTACHMENT

<b>Initial Plant Modifications to Accommodate 85% pet coke, 4.7% sulfur fuels</b>			
<b>Item</b>	<b>Component</b>	<b>Description</b>	<b>Modification</b>
1	Sulfuric Acid Plant O <sub>2</sub> valve OXY-FV-447	3" 300# flange class Fisher Model EZ with 2" port.	Replace 2" port with full sized port.
2	Lean MDEA Stripper bottoms valve AML-FV-202	6" 150# flange class Fisher model 8560 with full port.	Replace entire valve with identical style valve with 8" body and full sized port.
3	Sulfuric Acid Plant Decomposition Furnace Inlet Air Plenum	Inlet Air Plenum	Modify ductwork to enlarge air passage into burner compartment 7.3% from 1001 square inches to 1073 square inches.
4	MDEA Anti-Foam Injection Pump	Existing pump is a 0-2.5 gallon/hour variable capacity LMI Milton Electromagnetic dosing pump. The desired injection rate for continuous anti-foam injection is only 0.05 to 0.10 gallons/hour. Reliable operation of the existing pump at turndown to this low flow is questionable and it is currently being tested.	If the pump can perform reliably at the low desired flow, no change will be made, but if it is unsuccessful, the existing pump will be replaced with a similar pump with lower capacity supplied by Novatech Company.
5	Lean MDEA supply line to reclaim system	Presently there is no activated carbon bed filter and reclamation system.	Install Tigg Corporation model CP-500 Cannosorb-P activated carbon bed. The bed has a 34 cubic foot media capacity and comes filled with 500 lbs of activated carbon produced from lignitic coal.