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Ms. Karen A. Sheffield

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Ms. Karen A. Sheffield

Street, Apt. No.; or PO Box No.

Post Office Box 111

City, State, ZIP+ 4

Tampa, Florida 33601-0111

7000 0520 0020 9371 1700



Jeb Bush
Governor

Department of Environmental Protection

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

October 26, 2001

David B. Struhs
Secretary

CERTIFIED MAIL – Return Receipt Requested

Ms. Karen A. Sheffield
General Manager - F. J. Gannon Station
Tampa Electric Company
Post Office Box 111
Tampa, FL 33601-0111

Re: DEP File No. 0570040-016-AC
Request to Burn Unmarketable Byproduct Materials in Units 1-6

Dear Ms. Sheffield:

The Department received your application to burn unmarketable byproduct materials in Units 1-6 on September 28, 2001. Based on our review of your application we have deemed it incomplete. Please submit the following information including all calculations, assumptions and reference material, and the Department will resume processing your application:

1. Please describe the beneficiation process in detail and include process flow diagram(s).
2. What effect will the combustion of unmarketable byproduct material in Units 1-6 have on air pollutant emissions? What are the potential air pollutant emission increases that will result from the combustion of these materials for air pollutants listed in Chapter 62-212, F.A.C., Table 212.400-2?
3. Will any physical changes need to be made to the boilers? You indicated in your application that you plan to add the byproducts to the raw fuel (coal) in the bunkers. Do you plan to add this material as a percentage (%) of the heat input or % of the mass, tons per hour? If so, at what rate?
4. Why are the byproduct materials "unmarketable"? Is the fly ash and/or slag a hazardous waste?
5. Please describe the "slag". Is this material the same as bottom ash?
6. Please provide a full elemental speciation analysis of the fly ash and slag constituents. Be sure to include heavy metals, i.e., mercury, lead, nickel, etc. on a

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percentage (%) by weight basis. Will there be any increases in mercury and/or lead air pollutant emissions from combustion?

7. Is the "closed loop fly ash re-injection system" mentioned on page 1-2 of your application a permitted activity? Please describe this activity.
8. The following questions relate to the material handling operations:
 - A) The PM/PM10 emissions calculations were based on AP-42 Chapter 13.2. The silt content and moisture content were not in the range of the allowable source conditions for the equation(s). As such, the quality rating should be lowered at least one quality rating and the emissions estimates should be adjusted accordingly (Reference "Using the AP-42 Data Base for Making Exclusionary Rule Applicability Determinations" by Eric Noble 3/2/95).
 - B) In the emissions calculations, you used a control efficiency of 99% for water spray. As noted in AP-42 Appendix B-2, the maximum control efficiency for dust suppression by water sprays for particle sizes 6-10 μ m is 90%. In addition, the U.S. Department of Energy, "Technical Guide to Estimating Fugitive Dust Impacts from Coal Handling Operations", Table 4-3 list a maximum control efficiency of 90% for micron droplet water spray systems. It is more appropriate to use the 90% control efficiency listed in AP-42 and the DOE document, since the equation used to estimate emissions is from AP-42. In addition, the 99% control efficiency used in the application is not appropriate. Its use would imply that the control efficiency of a water spray system is equivalent to that of a high efficiency wet scrubber (Reference AP-42 Appendix B-2). If the emissions are adjusted using the 90% control efficiency, then PM emissions from the project would exceed 200 tpy and PM10 emissions would exceed of 100 tpy, and the project would be subject to PSD New Source Review Requirements pursuant to Rule 62-212.400(5), F.A.C. If PSD NSR is triggered, please revise your application accordingly.
 - C) Per the process description on page 1-2 of your application, it states that a "front-end loader will place the screened byproduct materials on the portable conveyor". After screening, if the material is placed on a "new" pile prior to conveyor, then this transfer point needs to be included in Table 1 and 2 for emissions estimates.
 - D) In your application, you state that the material will be sufficiently wet. What measures will be employed by TECO to keep the material wet during handling and storage? Is the 5% moisture content used in the emission estimate before or after the application of water? If the 5% moisture content is after the application of water, then the 90% control


efficiency estimate used in the application is not appropriate since it is double counting the water spray controls.

- E) On page 1-3 of your application, you state that emissions from the slag loading/unloading operations were negligible. Similar to the flyash handling, there are emissions associated with the slag handling. What are the emissions estimates and assumptions taken for the slag handling?
9. Given that the Gannon Station is undergoing a repowering and the station is operating under EPA and DEP settlements, what is the duration of these activities (combustion of unmarketable byproduct materials in Units 1-6 and beneficiation of flyash/slag)?

Rule 62-4.050(3), F.A.C., requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature.

Additionally, permit applicants are advised that Rule 62-4.055(1), F.A.C., now requires applicants to respond to requests for information with 90 (ninety) days. If you have any questions regarding this matter, please call me at 850/921-9532.

Sincerely,


Scott M. Sheplak, P.E.
Administrator
Title V Section

cc: Jerry Campbell, P.E., EPCHC
Bill Thomas, P.E., DEP SWD
Daniel N. Hlaing, P.E., ECT
Raiza Calderon, TECO

10/26/01 cc: Mike Halpin
Jeff Koerber
Reading Dile
Scott Sheplak

Mailed 10/26/01