

Florida Department of  
Environmental Protection

**Memorandum**

TO: Buck Oven, Power Plant Siting Office  
FROM: Cindy Mulkey THROUGH Al Linero, Program Administrator  
DATE: June 6, 2005  
SUBJECT: FMPA Treasure Coast Energy Center  
300 MW Combined Cycle Project

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We have conducted our initial sufficiency review for the proposed FMPA Treasure Coast Energy Center project. Following are our sufficiency items:

General Electric (GE) advised in publication GER-4213 that they will provide a guarantee of 5 ppm for CO emissions on a case-by-case basis to avoid installation of oxidation catalyst. Such a guarantee was reportedly provided to FP&L for the recent Turkey Point Unit 5 project. Our own data from numerous new installations confirm low emissions on the order of 0.5 to 2.0 ppm. Please justify the higher values requested in light of GE's claims and the actual performance of the new GE 7FA units throughout the state.

In the BACT analysis included in the application, the use of selective catalytic reduction was considered cost effective for the control of NO<sub>x</sub> at \$3,546 per ton of NO<sub>x</sub> removed. Please explain why oxidation catalyst to reduce CO emissions was not considered cost effective at \$3,405 per ton of CO removed.

Please provide estimates of ammonia injection rates and projected ammonia use for the project.

In the application, section 4.2.5 states that receptors were placed along the "fence line." The receptor plot on 4-7 shows the "property line." Upon construction, will there be an actual fence separating the facility from the "ambient air" along the property line shown in 4-7?

In section 2.4 of the application, it is indicated that the Maximum Potential to Emit is based on 40 - 100 % load at 73 degrees. With an average annual site temperature of 73 degrees, the temperature is below 73 degrees about 50% of the time. Therefore, determining the Maximum Potential to Emit may be more representative of the area at 59 degrees. Please explain why determining the "maximum potential to emit" at 73 degrees would be more representative of the proposed project rather than at 59 degrees or re-evaluate the maximum potential to emit emission rates.

Rule 62-212.400(3)(h)(5) states that an application must include information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Although growth is addressed in section 5.1 of the application, please satisfy this rule by evaluating growth as it relates to the August 7, 1977 date.

In the application, Vegetation and Soils are addressed in Section 5.2. PSD pollutants, SO<sub>2</sub>, PM/PM<sub>10</sub> and NO<sub>x</sub> are briefly mentioned. How will the other applicable PSD pollutants, SAM and CO, affect the vegetation and soils? How will all applicable PSD pollutants affect wildlife?

Sufficiency Review  
PSD Permit Application  
FMPA Treasure Coast Energy Center

For the Class I analysis, CALPUFF was used. In Section 5.3.6 of the application, the meteorological data used in the model is detailed. 5 years of West Palm Beach NWS data were used for surface and upper air data for the entire modeling domain. According to comments the National Park Service made on 2/28/05 on the modeling protocol for this project, "appropriate NWS surface, upper air and precipitation stations from the modeling domain" is acceptable. The modeling domain extends much further than Palm Beach. Please include NWS station surface and upper air data that encompasses the entire modeling domain. Were hourly precipitation data used from NWS precipitation-recording stations within the modeling domain used? Was a horizontal grid spacing of 3km used as the National Park Service suggested in those same 2/28/05 comments?

In Section 2.4 of the application, it states that the PTE was based on 40-100% load at various temperatures for natural gas and fuel oil. Modeling for fuel oil at 40% load was not completed. Please complete this modeling if using fuel oil at 40% load is planned.

Please document consultation to-date with the EPA, the Federal Land Manager, and the U.S. Fish and Wildlife Service regarding any applicable provisions of the Endangered Species Act. We encourage your early contact with these agencies.

We did not receive any comments from the National Park Service or EPA Region 4. We will pass these on if and when received. Either agency might submit comments during the sufficiency review or during the normal comment period.

The DEP contacts for the PSD Permit application are Debbie Nelson (850/921-9537) for modeling issues and Cindy Mulkey (850/921-8968) on all other matters.