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ENVIRONMENTAL PROTECTION COMMISSION  
of Hillsborough County

FAX Transmittal Sheet

DATE: 6/7/99

TO: Teresa Heron

FAX Phone: \_\_\_\_\_ Voice Phone: \_\_\_\_\_

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 3

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FROM: Steve Pak  
(Circle applicable section below)

Air Division

-Compliance

-Enforcement/Analysis

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-Permitting

SPECIAL INSTRUCTIONS: \_\_\_\_\_  
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MEMORANDUM

DATE: June 7, 1999  
TO: Teresa Heron  
FROM: RK Richard Kirby, IV, P.E.  
SUBJECT: TECO, Polk Power Station, PPSA No. 8A92-32  
Request for modification dated May 6, 1999

The Environmental Protection Commission of Hillsborough County (EPC) has received and reviewed a copy of the referenced application. Although the facility is not located in Hillsborough County, it is very close to the eastern edge of our county. Since Hillsborough County was previously nonattainment for particulate matter (PM) and ozone, and will probably be reclassified as nonattainment for ozone, we are especially interested in large projects in the area which could affect our air quality. This application proposes construction of 2 new combustion turbine generators. The project triggers PSD and requires BACT for NO<sub>x</sub>, CO, PM, SO<sub>2</sub>, and SAM. Based on my review of the project, I offer the following comments for your consideration:

1. TECO has requested that the 2 hr/24 hr excess emissions allowed by rule be increased to 4 hr per any 24 hour period. This will accommodate the 180 and 240 minutes cold start periods. Several issues relate to this request (Reference pages 2-5 & 2-8):
  - a) In the application, it is stated that GE emission factors are used at 100% load and using TECO's capacity factors of 4380 hr/year for natural gas and 876 hr/year for #2 fuel oil. Potential to emit calculations should be based on worst case conditions allowed by the permit.
  - b) The requested 4 hr/24 hr seems excessive since a cold start cannot occur until 48 hours after shutdown. A warm startup can occur when a unit has been shut down for between 2 and 48 hours. Since 4 hours seems unnecessary and excessive, perhaps a weekly limit would be more appropriate. Say 10 hours per any calendar week.
  - c) It should be noted that the state allowed excess emissions does not apply to violation of an NSPS requirement. The proposed units would be subject to 40 CFR 60, Subpart GG.

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Teresa Heron  
June 7, 1999

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2. Table 2-5 gives maximum emissions of HCl at 5.1 lb/hr and nickel at 2.48 lb/hr. Since at 8,760 hours/yr, this would give emissions of 22.3 tpy and 10.9 tpy respectively, it will be necessary to establish a federally enforceable limit on either fuel usage or hours of operation to avoid triggering "case-by-case" MACT.
3. On page 5-9 TECO has requested 10% opacity as a surrogate test to show compliance with the proposed PM<sub>10</sub> standard. At 9 lb PM/hr and the design flow rate this comes to 0.004 gr/acf. EPC strongly disagrees that 10% opacity demonstrates compliance with this grain loading. Two previous tests performed at other TECO facilities were reviewed. A test on Big Bend 4 (April, 1995) showed 1% opacity at a PM grain loading of 0.0015 gr/acf. A test at Hookers Point #5 (August, 1998) showed 5% opacity at a PM grain loading of 0.028 gr/acf. Clearly it would require an opacity standard of less than 5% to demonstrate compliance with the proposed PM standard.

PB