



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

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BUREAU OF AIR REGULATION

A. A. Linero, P.E.
FL Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

011 2534-001-AC
PSD-FL-314

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for Deerfield Beach Energy Center dated June 7, 2001. The preliminary determination is for the proposed construction of three simple cycle combustion turbines (CTs) with a total nominal generating capacity of 510 MW to be located near Deerfield Beach, FL. The combustion turbines proposed for the facility are General Electric, frame 7 FA units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, each CT will be allowed to fire natural gas up to 5,000 hours per year (3,500 hours per year average) and fire No. 2 fuel oil a maximum of 1,000 hours per year. Total net emissions increases from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), and particulate matter (PM/PM₁₀).

Based on our review of the PSD permit application, preliminary determination and draft PSD permit, we have the following comments:

1. In Section III, condition 29d of the draft PSD permit, excess emissions during startup and shutdown are allowed for up to 2 hours in any 24-hour period. Because periods of startup and shutdown are part of normal source operation, we recommend that the Florida Department of Environmental Protection (FDEP) also consider establishment of startup and shutdown best available control technology (BACT) emission limits for CO and NO_x such as mass emission limits (for example, pounds of emissions in any 24-hour period) that include startup and shutdown emissions, or future emission limits derived from monitoring results during the first few months of commercial operation. In addition, compliance with any explicit or implicit annual emissions limits should be assessed with startup and shutdown emissions included.
2. Section III, condition 10 of the draft PSD permit, limits each individual CT to operating a maximum of 5,000 hours per year and all the CTs to an average of 3,500 hours per year per CT. Since it is possible for any single CT to operate up to 5,000 hours per year, the BACT analyses (which are currently based on 3,500 hours per year) should be reconsidered to take this limit into account. In order for the current BACT analyses to remain valid, the final PSD

permit should restrict the operation of each individual CT to a maximum of 3,500 hours per year.

3. Table 5-5 (catalytic oxidation) and Table C-2 (high temperature selective catalytic reduction) include a figure which accounts for the "Cost of Heat Rate Loss," based on an estimated market value of \$0.10/kW-hr. Although it is appropriate to calculate the cost of using additional natural gas to compensate for the power consumption resulting from pressure drops across the catalyst bed, lost revenue should not be included in the cost analyses.

Thank you for the opportunity to comment on the Deerfield Beach Energy Center preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Ms. Katy Forney at 404-562-9130 or Mr. Jim Little at 404-562-9118.

Sincerely,



RDN R. Douglas Neeley
Chief

Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

cc: D. Galtmanth ✓
M. Miller, DEP SED ✓
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