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

SUBJ: Preliminary Determination and Draft PSD Permit for IPS Avon Park Corp. - DeSoto Power Project (PSD-FL-284) located in DeSoto County, Florida

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for IPS APC - DeSoto dated March 3, 2000. The preliminary determination is for the proposed construction and operation of three simple cycle combustion turbines (CTs) with a total nominal generating capacity of 510 MW to be located near Arcadia, FL. The combustion turbines proposed for the facility are General Electric (GE), frame 7FA units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CTs will be allowed to fire natural gas up to 3,390 hours per year and fire No. 2 fuel oil a maximum of 1,000 hours per year. Total emissions from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM/PM₁₀) and sulfuric acid mist (SAM).

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

1. We suggest you verify the emission rate used by Golder Associates to estimate potential formaldehyde emissions. The emission factor cited by Golder is two orders of magnitude lower than the 1998 draft AP-42 emission factor for formaldehyde from natural gas turbines and lower yet than the current official AP-42 factor that will eventually be replaced. If a higher emission rate is more appropriate than the emission rate in the application, the facility could be subject to 112(g) case-by-case MACT requirements.
2. As indicated in Condition 25 and 26 of the draft permit, FDEP is proposing to allow excess emissions due to startup, shutdown or malfunction for up to 2 hours in any 24-hour period. It is the Environmental Protection Agency's (EPA's) policy that BACT applies during all normal operations and that automatic exemptions should not be granted for excess emissions. Startup and shutdown of process equipment are part of the normal operation of a source and

should be accounted for in the planning, design, and implementation of operating procedures for the process and control equipment. Accordingly, it is reasonable to expect that careful and prudent planning and design will eliminate violations of emission limitations during such periods.

3. Section III, Condition 13 of the draft PSD permit addresses the maximum number of hours the CTs are allowed to operate. It is unclear whether each CT is limited to 3,390 hours/year or 5,000 hours/year. After discussing this question with FDEP, we understand that each individual CT may not operate more than 5,000 hours/year, and 3,390 hours/year is the average number of hours a CT may operate based on the total number of hours all three CTs can operate (10,170 hours/year). This should be clarified in the final PSD permit. Additionally, since a single turbine could potentially operate up to 5,000 hours per year, the BACT cost analyses should take this into account when calculating the tons of pollutants reduced.
4. The applicant's cost analysis for selective catalytic reduction includes both a "MW Loss" and a "Heat Rate Loss Penalty" and cites the document "EPA, 1993 (Page 6-20)" as the reference for this approach. A complete citation is not provided for this reference, and we are not sure which EPA publication is meant. Please verify this reference and make certain the use of both the MW loss and the Heat Rate loss penalty is not double-counting energy losses. Additionally, page B-13 of the PSD application indicates the applicant used the 1990 and 1993 *OAQPS Control Cost Manuals* when performing the cost evaluations. We would like to point out that the latest version of the *OAQPS Control Cost Manual* is dated February 1996.

Thank you for the opportunity to comment on the IPS Avon Park - DeSoto Power Project preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,



R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

cc: J. Ellis, IPS

NPS

SWD

R. Kosky, Golder