UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 18 2001

OFFICE OF
AIR AND RADIATION

Ronald Schrank
Designated Representative and
Authorized Account Representative
Mirant Kendall, LLC
265 First Street
Cambridge, MA 02142-1214

Re: Petition to Allow Alternative Test Procedure for Kendall Units 6 and 7

Dear Mr. Hanlon:

EPA has reviewed your March 26, 2001 petition under 310 CMR 7.28(11) and 40 CFR 75.70(h) for the use of an alternative test procedure for Mirant Kendall, LLC's (Mirant) Kendall Station (Kendall), Units 6 and 7, ORIS Code1595. The petition requests to use an alternative test procedure to Method 20 in 40 CFR Part 60, Appendix A to measure nitrogen oxide (NOx) and oxygen (O_2) concentrations in order to qualify for a unit-specific default NOx emissions rate under 40 CFR 75.19(c)(1)(iv). For the reasons discussed below, EPA approves the petition in part.

Background

Kendall Units 6 and 7 are simple cycle gas peaking gas turbines (each about 23 MWe) that burn jet fuel oil and have water injection NOx controls. The units are subject to the Ozone Transport Region NO_x Budget Program. Under that program, the units will become subject to Part 75, Subpart H monitoring for NOx mass emissions in the near future. Mirant plans to use a default value for each unit's NOx emission rate, as allowed in 40 CFR 75.19(c)(1)(iv) for low mass emissions units. That provision requires the use of procedures under Method 20 in Appendix A of Part 60 in order to determine a unit-specific default NOx emission rate. According to Mirant, access to the turbines' exhaust flow is restricted. Each unit's exhaust duct is housed in a small enclosure with a stack. Conditions in the enclosure (i.e., high temperatures and limited space between the exhaust duct and the walls) do not allow placing a person in the enclosure to conduct manual sampling at multiple traverse points under Method 20 at the exhaust duct.

The petition requests to use Method 7E (which requires sampling at three traverse points) in Appendix A of Part 60, in lieu of Method 20 (which requires sampling at eight or more traverse points),

to determine the units' default NOx emission rates in lb/mmBtu. In addition, the petition requests to use one of two alternative sampling arrangements for performing the stack test. One of the alternative sampling arrangements uses a fixed probe that incorporates three inlet ports spaced to match the traverse sampling distances specified in Performance Specification (PS)-2 in 40 CFR 60 Appendix B. The other sampling arrangement uses a multi-probe bundle comprised of three separate probe tubes of lengths corresponding to the traverse sampling distances specified in PS-2. Both sampling arrangements will follow Method 20 siting criteria and will make it unnecessary to have a person in the exhaust system enclosure to move the probe across the traverse points.

EPA's Determination

In this case, EPA approves the use of Method 7E in lieu of Method 20. Mirant has shown that it is not physically possible to use Method 20 at the exhaust duct at Kendall Units 6 and 7. Further, since the testing (whether under Method 20 or Method 7E) is being used to develop a default NOx emission rate in lb/mmBtu, the number of traverse points required under Method 7E will be sufficient.

With regard to the sampling arrangements described in the petition, EPA denies the request to use the fixed probe sampling arrangement with three inlet ports and approves the request to use the multi-probe bundle sampling arrangement. There is not sufficient information included in the petition to determine if the fixed probe sampling arrangement will provide an accurate representation of the gas being sampled. EPA is concerned, and the petition does not show, whether the fixed probe sampling arrangement will provide sufficient amount of sample gas from each port, and sufficient mixing of the three ports' sample gases, to allow for accurate measurement. In contrast, sampling using a multi-probe bundle comprised of three separate probe tubes and the sampling times and locations detailed in the petition will yield a gas sample and flow at each port that are equivalent to those provided by a single port probe that is moved across the traverse points.

EPA's determination relies on the accuracy and completeness of the information in Mirant's September 22, 2000 petition and is appealable under 40 CFR Part 78. If you have any further questions or concerns about this matter, please contact Theresa Alexander at (202)564-9747 or alexander.theresa@epa.gov.

Sincerely,

Brian J. McLean, Director
Clean Air Markets Division

cc: Ian Cohen, Region I
Sharon Weber, Mass. DEP