

April 18, 2001

Raymond A. Luxton
Designated Representative
Guadalupe Power Partners, LP
13760 Noel Road, Suite 930
Dallas, TX 75240

Re: Petition for alternative method of monitoring NO_x at Guadalupe Power Partners'
Marion units

Dear Mr. Luxton:

EPA has reviewed your November 16, 2000 petition under 40 CFR 75.66(a) requesting to use an alternative method of monitoring nitrogen oxide (NO_x) emissions at four units (each including a combustion turbine and heat recovery steam generator with supplemental firing) operated at Marion, Texas by Guadalupe Power Partners, LP (Guadalupe Power Partners). Specifically, Guadalupe Power Partners requests to use at each unit a continuous emission monitoring system with single, low-range NO_x analyzer. A default high-range value will be used when the full scale of the low-range analyzer is exceeded. Further, Guadalupe Power Partners requests to use the Texas state permit limit as the maximum expected concentration (MEC) in order to set the spans and ranges for the low-range NO_x analyzer. Finally, Guadalupe Power Partners requests to use 50 ppm as the maximum potential concentration (MPC) for NO_x and a default high-range value of twice the requested MPC value (i.e., 100 ppm). The default value would be reported in lieu of installing, certifying, and maintaining a high-range NO_x analyzer. For the reasons discussed below, EPA approves the petition in part with certain conditions.

EPA Determinations

With regard to Guadalupe Power Partners' request to use a low-range NO_x analyzer and a default high-range value to monitor NO_x emissions, EPA agrees that this monitoring approach should be allowed for the units at the Marion facility, in lieu of monitoring with both low-range and high-range NO_x analyzers. Part 75 limits the use of this approach to units with add-on controls (e.g., selective catalytic reduction or selective noncatalytic reduction). See 40 CFR part 75, appendix A, section 2.1.2.4(e). However, while dry low-NO_x control is included in (rather than being added after) the combustion process at the units, such control is a potentially highly

effective, continuous method of controlling NO_x. There is no technical or other basis for not allowing the Marion units to monitor using the same general approach as units with add-on controls.

Further, with regard to establishing the MEC for purposes of setting spans and ranges for the low-range NO_x analyzers, EPA agrees that the enforceable NO_x emission limit in the state permit is a reasonable value to use as the MEC for NO_x for the Marion units. Because the units have potentially highly effective, continuous NO_x controls, the permit limit is not expected to be exceeded during normal operation of the units.

Finally, with regard to establishing the default high-range value, EPA agrees that this value should be 200% of the MPC. This is the approach provided for units with add-on controls under 40 CFR part 75, appendix A, section 2.1.2.4(e).

However, EPA denies Guadalupe Power Partners' request to use an MPC value of 50 ppm, which is included in Table 2-2 in Appendix A. That table lists MPC values for various types of gas- and oil-fired units, including an MPC of 50 ppm for a "[n]ew stationary gas turbine/combustion turbine" (40 CFR part 75, appendix A, Table 2-2). EPA is concerned that NO_x emissions during startup or malfunction of new combustion turbines and new combined cycle turbines can significantly exceed 50 ppm. In fact, Guadalupe Power Partners state in the November 16, 2000 petition that the manufacturer of the Marion units indicated that the units would likely exceed 50 ppm during startup and shutdown. Because of its concern, EPA recently analyzed emission data from new combustion turbines and new combined cycle turbines that had installed high-range NO_x analyzers. EPA found that the units' NO_x emissions can significantly exceed 50 ppm in some hours and can be as high as 200 ppm or more. (See attached memorandum analyzing these emission data.) As a result, a default high-range value of 100 ppm, based on an MPC of 50 ppm, for the units at the Marion facility may result in under-reporting of emissions during start-up or malfunction.

Consequently, if the default high-range option is used for the units at the Marion facility, a more conservative MPC value than 50 ppm must be used for calculating the default high-range value. Based on EPA's recent analysis, EPA maintains that a MPC value of at least 150 ppm and a resulting default high-range value of at least 300 ppm must be used for the Marion units. Further, if EPA revises Table 2-2 in Appendix A to change the MPC for new combustion turbines, Guadalupe Power Partners must use the revised MPC value (and the resulting default high-range value), starting on the effective date of any such revision.

EPA notes that the delay in the Agency's response to Guadalupe Power Partners' November 16, 2000 petition left Guadalupe Power Partners without clear guidance as to how to report emissions for the Marion units for 2000 since the units' commencement of commercial operation. Although the Marion units must report NO_x emissions, the units are not currently subject to an emission limit for NO_x. Since, in addition, the units report emissions for most hours using their low-range NO_x analyzers, rather than the high-range default value, there would be little benefit from requiring Guadalupe Power Partners to resubmit the emission reports for 2000. Instead, EPA is requiring that, starting with the report for first quarter 2001, Guadalupe

Power Partners use an MPC value of 150 ppm and a default high-range value of 300 ppm, which are subject to revision as discussed above.

EPA's determinations in this letter rely on the accuracy and completeness of the information in the November 16, 2000 petition and are appealable under 40 CFR part 78. If you have any questions about the above determinations, please contact Ruben Deza of my staff, at (202) 564-3956. Thank you for your continued cooperation.

Sincerely,

/s/

Brian J. McLean, Director
Clean Air Markets Division

Attachments

cc: Joe Winkler, EPA Region VI
John Smith, Texas NRCC
Ruben Deza, Clean Air Markets Division