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

JAN 30 2002

OFFICE OF
AIR AND RADIATION

Mr. Dennis L. Wagner
Designated Representative
NorthWestern Energy & Communications Solutions
Huron Units 2A & 2B
600 Market Street W.
Huron, South Dakota 57350-1500

Dear Mr. Wagner:

We have reviewed your September 4, 2001 petition and supplemental data submitted December 14, 2001 under §75.66(a) of the Acid Rain regulations. The petition requests a modification of the four load nitrogen oxide (NO_x) testing requirements at §75.19(c)(1)(iv)(A) for NorthWestern Public Service's (NorthWestern) Huron Units 2A and 2B. In a January 18, 2002 telephone conversation, NorthWestern modified its request. As discussed below, EPA approves the petition, as modified by the January 18, 2002 telephone conversation and with conditions.

Background

Huron Units 2A and 2B, located in Huron, South Dakota, are turbines that combust natural gas and fuel oil and have water injection NO_x control. According to NorthWestern, the two units qualify as low mass emissions units under §75.19 and use the fuel-and-unit-specific NO_x emission rate method under §75.19(c)(1)(iv)(C)(*4*) and the maximum rated hourly heat input method under §75.19(c)(3)(i) to determine NO_x mass emissions. According to §75.19(c)(1)(iv)(D), these units must determine a new NO_x emission rate every five years. Section 75.19(c)(1)(iv)(A) requires the NO_x emission rate to be determined at a minimum of four load levels using the procedures in part 75, appendix E, section 2.1. The deadline for determination of a new NO_x emission rate for these two units is March 20, 2002.

In the September 4, 2001 petition, NorthWestern proposed to perform the five-year NO_x emission rate testing at each unit at the single load (for each fuel combusted) that has the highest NO_x emission rate. This single load was determined from the initial four load testing at each unit which, according to the petition, was performed following the part 75, appendix E, section 2.1.1 procedures. NO_x emission rate data from the four load testing was provided in Table 1 of the petition. NorthWestern claimed that the single load approach will eliminate unnecessary testing expense and emissions and that the 1.15 multiplier required by §75.19(c)(1)(iv)(C)(*4*)(*i*) further insures that the maximum NOx emissions are reported.

EPA requested, and NorthWestern submitted on December 14, 2001, hourly gas flow data for Units 2A and 2B for 1998-2001. This submittal stated that there was "no real liquid fuel operation upon which to base any conclusions" and that "over the 10+ year life of these units that nearly 100% of the liquid fuel consumed (and of course, associated emissions created) was only for the purpose of required stack testing or initial operational testing." Based on this infrequent oil-firing, NorthWestern stated in a January 18, 2002 telephone conversation, that it now wished to use the 1.2 lb/mmBtu default NO_x emission rate value for an oil-fired turbine in §75.19(c)(1)(ii) instead of a fuel-and-unit-specific NO_x emission rate for oil. Therefore, the five-year NO_x emission rate testing, required under the fuel-and-unit specific method, will only be necessary for gas-firing at the units. NorthWestern requests to conduct single load testing only for gas-firing.

EPA's Determination

With respect to the NO_x emissions for oil-firing at Huron Units 2A and 2B, EPA approves the use of the default NO_x emission rate in §75.19(c)(1)(ii) for an oil-fired turbine (1.2 lb/mmBtu). This default emission rate must be used for every hour during which the unit burns any oil. EPA approves this approach because of the infrequent oil-firing at each unit and because the default NO_x emission rate is conservative.

With regard to the NO_x emission rate for gas-firing at the units, EPA approves use of the results of single load testing at each unit. EPA believes that, in the absence of any significant changes at the units, the previous four-load testing at each unit provides sufficient information to determine what load will likely result in the highest NO_x emission rate at the unit. It appears that requiring repeated four-load testing at the units when firing gas would impose unnecessary testing costs. Consequently, EPA approves, for each unit, the use of testing at the single load at which the unit had the highest NO_x emission rate when firing gas.

However, the average NO_x emission rate data in Table 1 of NorthWestern's petition do not seem to be correct. EPA recalculated the data and found that the highest average NO_x emission rate for gas-firing occurred at 80.75% of maximum load for Unit 2A and at 95.77% of maximum load for Unit 2B. EPA notes that these load levels are found in the second column of Table 1 labelled "Avg Load (%)". For the units when firing gas, EPA therefore approves single load testing at those load levels, i.e., 81% and 96% of maximum load for Unit 2A and Unit 2B respectively. NorthWestern must use the resulting NO_x emission rates for each hour when only gas is burned at the respective units. In addition, NorthWestern must continue to comply with the NO_x emission rate re-determination provisions at §75.19(c)(1)(iv)(D), regarding changes in fuel supply, physical changes to the unit, changes in the manner of unit operation, or changes to emission controls that may cause a significant increase in the unit's actual NO_x emission rate.

EPA notes that on June 13, 2001, the Agency issued a proposed rule revising part 75. The proposed rule would allow the five-year NO_x emission rate testing under §75.19(c)(1)(iv)(D) to be performed at a single load. Once the final rule in that rulemaking becomes effective, NorthWestern must comply with that final rule.

The five-year NO_x emission rate testing is considered a quality assurance or diagnostic activity (see Acid Rain Program Policy Manual Question #13.20), not a recertification. Therefore, no recertification application is required. NorthWestern should submit in the quarterly electronic data report (EDR) for the period in which the testing occurs record types: 531, 556 (only if conditional data validation is used), 560, 650, 651 and 653. Pursuant to §75.19(e)(4), hardcopy test results should be kept at the facility until the fuel-and-unit-specific NO_x emission rates are re-determined. NorthWestern should follow §75.61(a)(5) and notify EPA Region 8 and the State 21 days before the start of the appendix E testing.

EPA's approval of NorthWestern's petition, as modified on January 18, 2002, relies on the accuracy and completeness of the information in NorthWestern's September 4, 2001 petition and in the December 14, 2001 submittal and is appealable under part 78 of the Acid Rain regulations. If there are any further questions or concerns about this matter, please contact John Schakenbach of my staff at 202-564-9158 or at schakenbach.john@epa.gov.

Sincerely,

Brian J. McLean, Director
Clean Air Markets Division

cc: Albion Carlson, Region VIII
Kyrik Rombough, SDDER