

April 26, 2010

Mr. Michael L. Menne, Vice President
Environmental Services
Alternate Designated Representative
One Ameren Plaza
P.O. Box 66149
St. Louis, MO 63166-6149

Re: Petition to Use Alternative Missing Data Substitution for Common Stack CS0001 at
Ameren Energy's Coffeen Power Plant (Facility ID (ORISPL) 861)

Dear Mr. Menne:

The United States Environmental Protection Agency (EPA) has reviewed the June 11, 2009 petition submitted under §75.66 by AmerenEnergy (Ameren), in which Ameren requested permission to use an alternative missing data routine for a specified time period in the 1st quarter of 2009, to provide substitute nitrogen oxides (NO_x) emission rate data (in lb/mmBtu) for common stack CS001 at the Coffeen Power Plant (Coffeen). EPA approves the petition in part, with conditions, as discussed below.

Background

Common stack CS001 at Ameren's Coffeen Power Plant in Illinois is the exhaust point for two coal-burning cyclone-fired boilers, i.e., Units 01 and 02. These units are equipped with selective catalytic reduction (SCR) to control NO_x emissions. Unit 01 is rated at 368 MW and Unit 02 is rated 610 MW. According to Ameren, both units are subject to the Acid Rain Program and to the Clean Air Interstate Rule (CAIR). Therefore, Ameren is required to continuously monitor and report sulfur dioxide (SO₂), NO_x, and carbon dioxide (CO₂) emissions and heat input for the units, in accordance with 40 CFR Part 75. To meet the Part 75 monitoring requirements, Ameren has installed and certified continuous emission monitoring systems (CEMS) for SO₂ and CO₂ concentration, NO_x emission rate, and stack gas flow rate at common stack CS0001. The NO_x emission rate CEMS is used to determine compliance with the applicable Acid Rain NO_x limit under 40 CFR Part 76. To calculate NO_x mass emissions for compliance with the CAIR NO_x annual and ozone season trading programs, hourly NO_x emission rates are multiplied by the corresponding hourly heat input rates.

Coffeen was formerly subject to the NO_x Budget Trading Program (NBP), which required compliance with NO_x mass emission limits only in the ozone season (i.e., May 1

through September 30). Therefore, Ameren did not operate the SCR outside the ozone season. However, as of January 1, 2009, the NBP was superseded by the CAIR NO_x annual and ozone season trading programs, and Ameren began operating the SCR on a year-round basis. In the first quarter of 2009, Ameren had problems with Coffeen's NO_x emission rate CEMS and failed to obtain valid NO_x data for a period of 125 hours while the SCR was operating. Part 75 requires that the invalidated data be replaced with conservatively high substitute data, drawn from a lookback through 2,160 hours of quality-assured NO_x emission rate data recorded by the CEMS immediately prior to the missing data incident. In the case of Coffeen CS001, the majority of the NO_x emission rate data in the lookback were recorded at a time when the SCR was not operating.

On June 11, 2009, Ameren submitted a petition to EPA, requesting that the Agency allow the use of alternative substitute data for NO_x emission rate in the 125 hour missing data period in question. Ameren's rationale for its request was that the standard missing data procedures in §75.33(c) do not take into account the change in operating status of the SCR and result in a gross overestimation of the actual NO_x emissions. In view of this, Ameren requested to calculate the arithmetic average of the NO_x emission rate recorded in the hour immediately before the missing data period and the NO_x emission rate in the hour immediately after the missing data period and to use this arithmetic average as the substitute data value for the entire 125 hour period.

EPA's Determination

EPA concurs that, for Coffeen CS001, when the standard Part 75 missing data routines are applied to the 125 hour period of missing NO_x emission rate data in the first quarter of 2009, the NO_x emissions are grossly overstated due to the transition from operating the SCR only in the ozone season to operating it year-round beginning in 2009. In fact, at Coffeen CS001, the average hourly non-ozone season NO_x emission rate in 2008 (0.478 lb/mmBtu) was about 10 times the average, hourly ozone season NO_x emission rate in 2008 (0.05 lb/mmBtu). Therefore, EPA approves Ameren's request to use alternative substitute NO_x emission rate data for the 125 hour period in question.

However, the Agency denies Ameren's request to use the hour before/hour after average as the substitute data value. Part 75 allows the substitution of the NO_x emission rate from the average of the hour before and hour after missing hours in the case of short periods of missing data. However, for longer periods of missing data (or periods where the monitor availability is less than 95%), more conservative substitute data (i.e., a higher NO_x emission rate than the average of the hour before and the hour after) are used. This encourages the owners and operators to properly maintain their monitoring systems and insures that emissions (which can vary more, and so are more uncertain, over a longer period than over a short period) are not under reported.

Instead, EPA approves the use of the maximum controlled NO_x emission rate (MCR), calculated according to §75.17(d)(2), for each hour of the missing data period in which the SCR is documented to have been operating normally. For any hour in which proper operation of the SCR cannot be documented, Ameren must report the maximum potential NO_x emission rate (MER), calculated according to section 2.1.2.1(b) of Appendix A to Part 75.

The conditions of this approval are as follows:

- (1) Ameren must resubmit the first, second, third, and fourth quarter 2009 electronic data reports (EDRs) for Coffeen CS001; and
- (2) For each hour of the 125 hour missing data period in the first quarter of 2009:
 - a. If the MCR is reported, Ameren must report a method of determination code (MODC) of “55” for NO_x emission rate.
 - b. If the MER is reported, Ameren must report a MODC of “12”.

EPA’s determination relies on the accuracy and completeness of the information provided in Ameren’s June 11, 2009 petition and is appealable under Part 78. If you have any questions regarding this determination, please contact Louis Nichols at (202) 343-9008.

Sincerely,

/s/

Sam Napolitano, Director
Clean Air Markets Division

cc: Richard Angelbeck, USEPA Region 5
Kevin Mattison, IEPA
Louis Nichols, CAMD