



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 N. 5th STREET
KANSAS CITY, KANSAS 66101

AIR PERMITTING AND
COMPLIANCE BRANCH

August 31, 2006

Jim Kavanaugh, Interim Director
Air Pollution Control Program
205 Jefferson Street
Jefferson City, MO 65101

Dear Mr. Kavanaugh,

On July 31, 2006, we received a draft Prevention of Significant Deterioration (PSD) permit for the Associated Electric Cooperative, Inc. (AECI) New Madrid Power Plant. AECI proposes to retrofit Units 1 and 2 with overfire air to further reduce its NO_x emissions. In turn, CO emissions are expected to increase and trigger PSD review.

We appreciate the opportunity to review the draft permit and have a few recommendations for improving the enforceability of the permit and the underlying documentation used to support the CO BACT limit. Please see Attachment A for our comments. We also appreciate the department's willingness to expedite pollution control projects in light of the recent U.S. Court of Appeals decision that such projects should no longer avoid PSD review through the PCP exclusion.

If you have any questions, please contact Jon Knodel at (913) 551-7622 or knodel.jon@epa.gov.

Sincerely,

JoAnn Heiman, Chief
Air Permitting and Compliance Branch

Cc: Kyra Moore, MDNR

Attachment A

EPA Region 7 Comments on Associated Electric Cooperative, Inc., New Madrid Power Plant Draft PSD Permit

CO BACT Limit

The permit application proposes a CO BACT limit of 0.70 lb/mmBtu. Following review of the application, MDNR proposes in Condition 1 of the draft permit to lower the CO BACT limit to 0.55 lb/mmBtu, 30-day rolling average. While we agree that the record clearly establishes that “combustion control” is the appropriate technology for BACT, we believe that the record is unclear with respect to the BACT limit itself.

A number of similar PSD permits for NO_x retrofit projects establish limits well below those in the Associated Electric permit. Therefore, it is appropriate to provide an explanation in the record on what factors make the New Madrid units unique and why they are incapable of achieving these lower levels. For example, at Jeffrey Unit 3, the Kansas Department of Health and Environment set a CO BACT limit of 0.25 lb/mmBtu in its October '05 PSD permit < see http://www.epa.gov/region07/programs/artd/air/nsr/archives/2005/finalpermits/westar_jeffrey_pc_p_final_psd_permit.pdf >. Likewise, the Iowa Department of Natural Resources has established CO BACT limits for LNB and OFA retrofits in the 0.385 to 0.42 range and as high as 1.27 lb/mmBtu for earlier pollution control projects. As you note in the permit summary for the New Madrid permit, Nebraska is currently evaluating a similar project and has proposed CO BACT at 0.50 lb/mmBtu. While these projects represent a significant range of emissions, and may indeed reflect the individual characteristics of each boiler, the New Madrid record does not appear to provide any distinguishing factors that would argue for the higher CO BACT limit; or even the lower limit ultimately established by the department.

We understand that the cyclone boiler design at New Madrid may well have an influence on CO emissions, as it does with NO_x, and may have inherently higher emissions. This would be an appropriate factor to consider in the record. Likewise, the New Madrid units have been retrofitted with selective catalytic reduction (SCR) devices to minimize NO_x and these too may have an impact on CO emissions. Therefore, we recommend that the department supplement the record with additional analysis that explains why the New Madrid units are incapable of meeting 0.45, 0.40, 0.35 or some lower threshold for CO. Any engineering analyses, vendor studies or other information from similar retrofit units would be a useful supplement to the record.

Use of CO CEMS and Enhanced Enforceability

We commend the department's use of CO continuous emission monitors for verification that the CO BACT limits is being met during all periods of operation. We encourage you to build on the requirements in Condition 2 by requiring the CO CEMS to be certified pursuant to

40 CFR Part 60, Appendix B, Performance Specification 4. This assures that the monitor at least meets minimum EPA specifications.

The department may also want to enhance the quality of monitoring data by requiring periodic quality assurance assessments using procedures similar to those in 40 CFR Part 60, Appendix F. Even if the CO CEMS does not undergo annual relative accuracy testing, it could benefit from periodic cylinder gas audits to assure that the measurements can be tied by to NIST-certified calibration gases.

Lastly, while Associated is required to keep records of CEMS data in Condition 2.B., the permit does not appear to require the utility to report periodically on its CO BACT compliance status. Given the uncertainty and wide range of CO BACT emission limits across the region, it would be beneficial to have Associated Electric provide a CO emissions report for some period of time following the retrofit. For example, it might help inform other CO BACT analyses performed for NO_x retrofits occurring under the Clean Air Implementation Rule program. If the data show ultimately show that the CO BACT limit is being met with an adequate margin of safety, then it may be appropriate to go to “excess emission” reporting at some point in the future.

In any case, we encourage the department to add some level of reporting so that there is adequate information available to verify compliance without visiting the plant on site.

[End of Comments]