



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

PERMIT BOOK

www.dnr.mo.gov

SEP 30 2009

Mr. Todd Tolbert  
Environmental Analyst II  
Associated Electric Cooperative, Inc  
P.O. Box 754  
Springfield, MO 65801-0754

RE: New Source Review Temporary Permit Request – Project Number: 2009-06-041  
Installation ID Number: 151-0002  
Temporary Permit Number: **092009-008**  
Expiration Date: December 31, 2009

Dear Mr. Tolbert:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to perform a trial burn of biomass fuels at Central Electric Power Cooperative's Chamois Power Plant. The Air Pollution Control Program is hereby granting your request to conduct these temporary operations at this location according to Missouri State Rule 10 CSR 10-6.060(3). Permission to conduct the above activities is hereby granted provided that no more than 20,000 tons of biofuel during this trial is burned.

The Chamois Power Plant is seeking a temporary permit in order to assess the operation of burning biomass fuels in their existing boilers. The trials are expected to last less than a week although a longer timeframe is given to conduct the trials. The biofuel which will be blended up to 15% by weight with coal will be fed into existing boilers, Unit #1 and Unit #2, using the existing feed handling systems. No modifications will be made to incorporate the use of the biofuel. The biofuel will consist of pelletized waste nuts, seeds shells, hulls, wood chips, etc and have a heat content of approximately 7,500 British thermal units per pound.

There are currently no emission factors available for the combustion of biomass fuel into the boiler except for those of chipped wood. These emission factors for each pollutant except SO<sub>x</sub> were obtained from Environmental Protection Agency document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.6, *Wood Residue Combustion in Boilers* (9/03). SO<sub>x</sub> emissions are based on the expected sulfur content of the biomass. Filterable PM<sub>10</sub> emissions are based on the use of an electrostatic precipitator.

The emissions for burning 20,000 tons of the biofuel is shown in Table 1. The emissions shown in Table 1 are based solely on the additional amount of biomass that will be burned and do not

Mr. Todd Tolbert  
Page Two

take into account the reductions that will occur for some pollutants due to a portion of coal being replaced by the biomass.

Table 1: Emissions based on 20,000 tons of wood consumed per year

	PM <sub>10</sub> *	Sulfur Oxides	Nitrogen Oxides	Carbon Monoxide	VOC*	HAPs
Potential Emissions	8.55	36.0	73.5	90.0	2.55	5.20

\*VOC = Volatile Organic Compound, PM<sub>10</sub> = Particulate matter less than 10 microns, includes both filterable and condensable emissions.

Since all pollutants are expected to have emissions below 100 tons per year, permission to temporarily burn the biofuels is granted up to the expiration date stated above. In order to continue burning the biofuels past the expiration date, the Chamois Power Plant will need to seek permission from the Air Pollution Control Program.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.045, *Open Burning Restrictions*, 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, and 10 CSR 10-3.090, *Restriction of Emissions of Odors*.

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please contact Ms. Susan Heckenkamp with the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

AIR POLLUTION CONTROL PROGRAM



for James L. Kavanaugh  
Director

Attachment

JLK:shl

c: Mr. Steve Feeler, Compliance/Enforcement Section  
Northeast Regional Office  
PAMS File: 2009-06-041

