

PERMIT BOOK

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Joseph P. Bindbeutel, Acting Director

www.dnr.mo.gov

FEB 17 2009

Mr. Paul Ling
Environmental Manager
Kansas City Power & Light
P.O. Box 418679
Kansas City, MO 64141-9679

RE: New Source Review Temporary Permit Request – Project Number: 2009-02-018
Installation ID Number: 095-0031
Temporary Permit Number: 022009-007
Expiration Date: February 17, 2010

Dear Mr. Ling:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to perform an additional trial burn of biomass fuels at Kansas City Power & Light's Sibley Generating Station. 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 12,000 tons of biofuel during this trial is burned.

The Sibley Generating Station previously assessed the feasibility of burning biomass fuels in their cyclone boilers under Temporary Permit No. 022008-003 and 082008-020. The limited tests showed that the biofuel could be burned in the boilers; however, more information is needed to determine operation impacts. In order to obtain this information, the Sibley Generating Station is requesting approval to perform an additional test on Sibley Unit 1.

As was done previously, the biofuel will be directly fed to existing conveyor belts. Sibley Generating Station will vary the blend up to 10% with coal for a six month time period. The biofuel will consist of pelletized waste nuts, seeds shells, hulls, wood chips, etc. Through testing, the heat content of the biofuel will be approximately 7,770 British thermal units per pound.

There are currently no emission factors available for the introduction of biomass fuel into the boiler except for those of chipped wood. These emission factors 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) and the emissions for burning 12,000 tons of chipped ground wood is shown in Table 1.

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Table 1: Emissions based on 12,000 tons of wood consumed per year

	PM ₁₀ *	Sulfur Oxides	Nitrogen Oxides	Carbon Monoxide	VOC*	HAPs
Potential Emissions	3.74	2.34	20.59	56.16	1.59	3.41

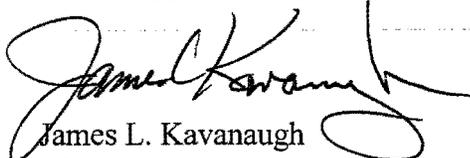
*VOC = Volatile Organic Compound, PM₁₀ = Particulate matter less than 10 microns

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 Sibley Generating Station 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 10-2.070, *Restriction of Emission 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 Mr. Gerard Fox 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


James L. Kavanaugh
Director

JLK:gfm

Attachment

c: Mr. Steve Feeler, Compliance/Enforcement Section
Kansas City Regional Office
PAMS File: 2008-08-015

