



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

## DEPARTMENT OF NATURAL RESOURCES

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**SEP 28 2016**

Mr. Ajay K. Arora  
Vice President – Environmental Services & Generation Resource Planning  
Ameren Missouri Sioux Energy Center  
8501 North State Route 94  
West Alton, MO 63386

RE: New Source Review Temporary Permit Request - Project Number: 2016-09-002

Installation ID Number: 183-0001

Temporary Permit Number: **092016-018**

Expiration Date: February 1, 2017

Dear Mr. Arora:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to conduct trial burns to test the feasibility of combusting up to 5 wt% Enviro-Fuelcubes (EFC) blended with coal in B-2 Boiler 2 at the Ameren Missouri Sioux Energy Center, located in West Alton, Missouri. The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location in accordance with Missouri State Rule 10 CSR 10-6.060(3).

Ameren Missouri Sioux Energy Center is authorized to conduct trial testing of EFCs. During each trial test burn EFCs shall comprise 5 wt% or less of the total material being combusted with the balance of the material weight comprised of coal. Total EFC combustion as allowed by this permit shall not exceed 2,500 tons. No new equipment shall be added to the installation as a result of this permit and each EFC trailer and temporary conveyor shall be removed from the installation prior the expiration date of this permit.

Combustion of 2,500 tons of EFC is expected to offset combustion of ~2,500 tons of Sioux's coal based on chemical analyses of Sioux's coal and EFC submitted by Ameren Missouri Sioux Energy Center. Chemical analyses of the EFC and Sioux's coal also indicate:

- EFC contains approximately equivalent amounts of ash compared to Sioux's coal
- EFC contains triple the volatile matter compared to Sioux's coal
- EFC contains less nitrogen and sulfur than Sioux's coal



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While EFC will likely result in an increase in VOC and CO emissions, the increase is expected to be less than 100 tons; therefore, temporary combustion of EFC meets the applicability requirements of 10 CSR 10-6.060(3).

Permission to conduct the trial burns is granted with the following conditions:

1. The permittee shall combust no more than 2,500 tons of EFC in B-2 Boiler 2.
2. No later than 90 days after the expiration date of this permit, the permittee shall submit a project report to the Air Pollution Control Program. The report shall include:
  - ◆ A copy of the analytical data for a representative of EFC and coal combusted during the trial burns.
  - ◆ The start date, start time, and duration of each trial burn.
  - ◆ The quantity in tons and the heat content in Btu of the EFC and coal combusted during the trial burns.
  - ◆ The NO<sub>x</sub>, SO<sub>x</sub>, and PM CEMS data from the trial burns.
  - ◆ Conclusions reached concerning the long-term feasibility of blending EFC with coal in B-2 Boiler 2.

Please note: if Ameren Missouri Sioux Energy Center wishes to use data from this trial burn to permit future combustion of EFC in the boilers, the following information should also be obtained:

- ◆ A table of emission factors developed from the stack testing conducted during the trial burns. The developed emission factor table shall include sample calculations and a full stack testing report.
- ◆ The emission factors shall be reported in both pounds of pollutant per MMBtu and pounds of pollutant per ton.
- ◆ An emission factor comparison for the different types of fuels combusted.
- ◆ A steam production rate comparison for the different types of fuels combusted.
- ◆ An emission factor summary including discussion of the methods used to develop the emission factors.

The permittee is 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 10-6.165 *Restriction of Emission of Odors*
- ◆ 10 CSR 10-6.170 *Restriction of PM to the Ambient Air Beyond the Premises of Origin*
- ◆ 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*
- ◆ 10 CSR 10-6.260 *Restriction of Emission of Sulfur Compounds*
- ◆ 10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions*
- ◆ 10 CSR 10-6.405 *Restriction of PM Emissions From Fuel Burning Equipment Used for Indirect Heating*
- ◆ 40 CFR Part 64 *Compliance Assurance Monitoring*
- ◆ 40 CFR Parts 72, 73, 75, 76, 77, and 78 *Acid Rain Program*
- ◆ 40 CFR Part 96 *CAIR*
- ◆ 40 CFR Part 63, Subpart UUUUU

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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 do not hesitate to contact Alana Hess at 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.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in cursive script that reads "Kyra L. Moore".

Kyra L. Moore  
Director

KLM:ahj

c: PAMS File: 2016-09-002  
St. Louis Regional Office