



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

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

www.dnr.mo.gov

OCT 14 2009

Mr. Daniel S. Hedrick
 Environmental Analyst
 City Utilities of Springfield, Missouri
 P.O. Box 551
 Springfield, MO 65801-0551

RE: New Source Review Temporary Permit Request - Project Number: 2009-08-038
 Installation ID Number: 077-0005, Expiration Date: September 15, 2011
 Temporary Permit Number: **102009-006**

Dear Mr. Hedrick:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to perform drilling operations with the use of three (3) diesel engines at Southwest Power Station (SWPS). 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).

According to your letter dated August 12, 2009, City Utilities is seeking authority to use three (3) diesel engines at SWPS for the Carbon Sequestration Pilot Project. City Utilities requires the diesel engines to do drilling for exploratory and injection wells purposes. Initial mobilization and the first phase of drilling are planned for late September 2009. The anticipated project completion date is fall of 2010. Three engines of varying horsepower (2,000, 400 and 100 hp) will be utilized during each phase of the project.

The emission factors used in this analysis were obtained from Environmental Protection Agency document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 3.3, *Gasoline and Diesel Industrial Engines* (October 1996) for the 400 and 100 hp diesel engines and Section 3.4, *Large Stationary Diesel and All Stationary Dual-fuel Engines* (October 1996) for the 2,000 hp diesel engine. Projected emissions are based on the expected usage of the smaller engines for the majority of the drilling, which is expected to take 656 hours or approximately 35,500 gallons of diesel fuel. Worst case estimates are based on drilling taking approximately 2,500 hours.

Table 1: Emissions Impact from Diesel Engines

Criteria Air Pollutant	Potential Emissions for 2,000 hp Engine (pound/hr)	Potential Emissions for 400 hp Engine (pound/hr)	Potential Emissions for 100 hp Engine (pound/hr)	Projected Emissions (tons)
PM ₁₀ ¹	2.15	2.33	0.58	0.76
SO ₂	0.06	2.18	0.54	0.71
NO _x	120	33.1	8.27	10.9
VOC	3.38	2.63	0.66	0.86
CO	31.9	7.13	1.78	2.34
HAPs	0.06	0.05	0.01	0.02

¹PM₁₀ includes both filterable and condensable PM₁₀ emissions.

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City Utilities expects their worst case emissions from the diesel engines to be less than 40 tons for any pollutant for the duration of the drilling operation. City Utilities will be required to limit emissions to their worst case emissions of 40 tons per year. Because NO_x is the limiting pollutant, only recordkeeping on NO_x will be required. Attachment A or an equivalent form approved by the Air Pollution Control Program shall be used to demonstrate compliance.

City Utilities shall maintain all records required by this temporary permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. City Utilities shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten days after the end of the month during which the records from Attachment A or equivalent form indicate that the source exceeds the 40 ton annual NO_x limitation.

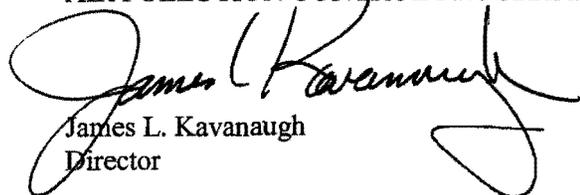
As the potential emissions will be conditioned to 40 tons and the ambient air quality standards should not be threatened, the proposed temporary permit is granted according to provisions of Missouri State Rule 10 CSR 10-6.060(3). All monitoring, recordkeeping, and reporting requirements shall be performed during the use of the three (3) diesel engines. Subsequent notification will be made to the Air Pollution Control Program once the drilling has been completed.

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*; 10 CSR 10-3.090, *Restriction of Emission of Odors*; and 10 CSR 10-3.060, *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*.

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 Susan Heckenkamp 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


James L. Kavanaugh
Director

JLK:shk

c: Southwest Regional Office
PAMS File: 2009-07-001
Temporary Permit Number:

102009-006

