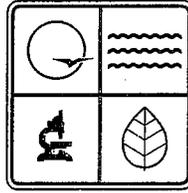


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **102006-006** Project Number: **2006-08-046**

Owner: **City Utilities of Springfield, Missouri**

Owner's Address: **301 East Central, Springfield, Missouri 65801-0551**

Installation Name: **City Utilities of Springfield, Missouri**

Installation Address: **5701 South Kissisk Road, Springfield, Missouri 65801-0551**

Location Information: **Greene County, S29, T28N, R21W**

Application for Authority to Construct was made for:

Addition of a propane-air peak shaving plant to its natural gas distribution system. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

OCT 10 2006

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-08-046

City Utilities of Springfield, Missouri

301 East Central, Springfield, Missouri 65801-0551

City Utilities of Springfield, Missouri

5701 South Kissisk Road, Springfield, Missouri 65801-0551

Greene County, S29, T28N, R21W

Addition of a propane-air peak shaving plant to its natural gas distribution system. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Page No.	2
Permit No.	
Project No.	2006-08-046

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

City Utilities of Springfield, Missouri
Greene County, S29, T28N, R21W

Haul Road Requirements – Paved

1. The installation shall control dust from the haul road(s) by using paved haul road(s). The installation shall periodically water and/or wash the paved portions of the above affected areas such that no "appreciable visible emission" of particulate matter is allowed to occur from the surface of these paved road(s).

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2006-08-046
Installation ID Number: 077-0005
Permit Number:

City Utilities of Springfield, Missouri
5701 South Kissisk Road
Springfield, Missouri 65801-0551

Complete: August 11, 2006
Reviewed: September 8, 2006

Parent Company:
City Utilities of Springfield, Missouri
301 East Central
Springfield, Missouri 65801-0551

Greene County, S29, T28N, R21W

REVIEW SUMMARY

- City Utilities of Springfield, Missouri has applied for authority to add a propane-air peak shaving plant to its natural gas distribution system.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAP of concern from this process is methanol.
- New Source Performance Standard, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984*, does not apply to the new storage tanks. This subpart does not apply to the pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. The new storage tanks are designed for a working pressure of 250 psig (equivalent to 1724 kPa) and the system operates without emissions to the atmosphere.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- The plant will be equipped with a waste gas purge system (control flare assembly) to remove Volatile Organic Compounds (VOC) emissions from the purges lines. Haul road is paved to control the particulate matter emissions.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of air pollutants are at de minimis levels.
- This installation is located in Greene County, an attainment area for all criteria air pollutants.

- This installation is on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2, No. 26], fossil-fueled boilers totaling more than 250 million British thermal units per hour heat.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment.
- Addition of the equipment in this permit qualifies as an off-permit change to your Part 70 Operating Permit.
- Approval of this permit is recommended with special condition.

INSTALLATION DESCRIPTION

City Utilities of Springfield, Missouri is proposing to build a propane-air peak shaving plant on a tract of land southeast of the James River Power Station. James River Power Station is an electric power generation facility. The installation is a major source of criteria air pollutants. It consists of five (5) coal fired boilers and two (2) gas turbine generators that can burn coal, natural gas, fuel oil, and propane as fuel. Emissions are controlled through an electrostatic precipitator for particulate matter and water injection for nitrogen oxides. A Part 70 Operating Permit (OP2001-049) was issued in June 2001.

The following construction permits have been issued to James River Power Station from the Air Pollution Control Program.

Permit Number	Description
1085-002	Dry Fly Ash Collection System
0888-002	Gas Turbine
0391-002 (PSD)	Gas Turbine
0697-008	Coal Unloading and Handling Equipment
042000-016	Water Fogging System
082001-003	Update Coal Unloading System
032003-017	Modification of fly ash collection system.
032003-017A	Amendment to 032003-017.

PROJECT DESCRIPTION

The proposed propane-air shaving plant will generate a propane-air mixture that is injected into the natural gas distribution system. The mixture typically ranges between 20% and 50% propane-air to natural gas. The process combines vaporized liquid of the propane gas with compressed air at 60/40 percent ratio. Typical heating value of the propane-air mixture is 1100-1225 Btu/ft³. Natural gas has a nominal heat content of 1000-1050 Btu/ft³. Equipment / emission sources for the project include:

- Two 18 MMBtu/hr natural gas-fired water baths (EP225-EP226),
- A paved haul road (EP255),
- A methanol injection drying system (EP240),
- Three propane unloading stations (EP195-EP197),
- Various pressure relief valves (EP245),
- Natural gas space heating (EP265),
- Eighteen 60,000-gallon aboveground propane storage tanks (EP200-EP217), and
- A 21 MMBtu/hr waste gas purge system (EP135).

EMISSIONS/CONTROLS EVALUATION

The emission factors used for the natural gas-fired water bath (vaporizers) and the space heaters were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4, *Natural Gas Combustion* (7/98). The paved haul road PM₁₀ emissions were obtained from the EPA document AP-42, Section 13.2.2 *Unpaved Roads* (9/98).

Emissions from the propane unloading stations are expected to be negligible. However, fugitive emissions of VOCs are possible when hooking and unhooking to the delivery system. Emissions were calculated based on the length of hose and an estimated amount of residual propane left in the delivery equipment.

During initial plant startup activities, fifty five gallons of methanol are injected into each of the 60,000 gallon empty tanks to remove moisture found in the fuel. Minimal losses of methanol are expected due to delivery, fugitive leaks and maintenance related activities. A worst case scenario assumes all 1,000 gallons of methanol (18 tanks x 55 gallons) is released as a VOC and HAP.

Propane is stored in a "bullet shaped" closed loop, pressurized system that will not experience normal breathing and working losses similar to fixed and floating roof tanks found in petroleum storage processes. The pressurized system allows storage of propane as a liquid. The emissions of VOC from the propane tanks are expected to be insignificant. The plant will be equipped with a waste gas purge system (control flare assembly) to remove VOC emissions from the purges lines. The emission factors used for the waste gas purge system were obtained from the EPA document AP-42, Section 1.5, *Liquefied Petroleum Gas Combustion* (10/96).

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Existing Potential Emissions were taken from the previous Permit No. 032003-017. Existing actual emissions were taken from the Emissions Inventory Questionnaire (EIQ) submitted by the applicant for 2005. The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	1061.36	254.45	4.02	N/A
SO _x	40.0	32,156	4,893.5	0.7	N/A
NO _x	40.0	9,043	4013.3	35.35	N/A
VOC	40.0	140	33.7	6.58	N/A
CO	100.0	259	275.8	16.56	N/A
HAPs	10.0/25.0	792	40.2	3.67	N/A

*N/A = Not Applicable

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of air pollutants are at de minimis levels.

APPLICABLE REQUIREMENTS

City Utilities of Springfield, Missouri shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-4.040

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special condition.

Fuad Wadud
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 8, 2006, received August 11, 2006, designating City Utilities of Springfield, Missouri as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southwest Regional Office Site Survey, dated September 1, 2006.

Mr. David M. Fraley, Ph.D.
Director, Environmental Affairs
City Utilities of Springfield, Missouri
P.O. Box 551
Springfield, Missouri 65801-0551

RE: New Source Review Permit - Project Number: 2006-08-046

Dear Mr. Fraley:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri. Operation in accordance with the special conditions of this permit, your new source review permit application and with your operating permit is necessary for continued compliance.

The installation of this equipment qualifies as an off-permit change for your Part 70 Operating Permit. As specified in 10 CSR 10-6.065 paragraph (6)(C)9, an off-permit change requires "written notice of the change to this permitting authority and to the administrator." This construction permit serves as notification to the operating permit authority. In order to fulfill the notification requirement to the administrator, please send a written notice to Tamara Freeman, Environmental Protection Agency Region VII, 901 N. 5th Street, Kansas City, KS 66101. As detailed in 10 CSR 10-6.065 paragraph (6)(C)9.B, ". . . the written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirements that would apply as a result of the change." Please send this notification at least 30 but not more than 60 days prior to anticipated start up of this air contaminant source.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:fwl

Enclosures

c: Southwest Regional Office
PAMS File: 2006-08-046
Permit Number: