



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

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: **022009-012** Project Number: 2008-07-090
Parent Company: Marshall Municipal
Parent Company Address: 75 East Morgan, Marshall, MO 65340
Installation Name: Marshall Municipal Utilities
Installation Address: 765 W North St, Marshall, MO 65340
Location Information: Saline County, S24, T50N, R21W

Application for Authority to Construct was made for:
Construction of three (3) diesel generators and associated fuel storage tanks.
This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

FEB 27 2009

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. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the departments' 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 to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and 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 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 Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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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."

Marshall Municipal Utilities
Saline County, S24, T50N, R21W

1. Emission Limitation – Nitrogen Oxides (NO_x)
 - A. Marshall Municipal Utilities shall emit less than 40 tons of NO_x in any consecutive 12 month period from the three diesel generators (EP7, 8 and 9) listed in Table 1.
 - B. Marshall Municipal Utilities shall maintain an accurate record of NO_x emitted into the atmosphere from the three diesel generators (EP7, 8 and 9) listed in Table 1. Attachment A or an equivalent form shall be used for this purpose. Marshall Municipal Utilities shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - C. Marshall Municipal Utilities shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1.B. indicate that the source exceeds the limitation of Special Condition Number 1.A.

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

Project Number: 2008-07-090
Installation ID Number: 195-0010
Permit Number: **022009-012**

Marshall Municipal Utilities
765 W North St
Marshall, MO 65340

Complete: September, 2, 2008

Parent Company:
Marshall Municipal
75 East Morgan
Marshall, MO 65340

Saline County, S24, T50N, R21W

REVIEW SUMMARY

- Marshall Municipal Utilities has applied for authority to construct three (3) diesel generators and associated fuel storage tanks.
- Hazardous Air Pollutant (HAP) emissions are expected from the combustion of diesel fuel in negligible amounts.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. Subpart Kb *Standards of Performance for Volatile Organic Liquid for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984* does not apply since the capacity of each storage tank is below 75 cubic meters.
- The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Stationary Reciprocating Internal Combustion Engines*, applies to the equipment.
- No air pollution control equipment is being used in association with the equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of NOx are conditioned to de minimis levels.
- This installation is located in Saline 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], Number 21, *Fossil Fuel Boilers totaling more than 250 million BTU/hr heat input*.
- 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.
- Revision to the installation's Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Marshall Municipal Utilities is an electric power generating plant owned and operated by the City of Marshall. The existing installation is a major source of air pollutants. A Part 70 Operating Permit application (Project #2003-08-005) is currently being reviewed.

The following construction permits have been issued to Marshall Municipal Utilities from the Air Pollution Control Program.

Permit Number	Description
0493-002	PSD permit for the construction of a Cooper-Bessemer internal combustion engine
1189-012	PSD permit for the construction of a Cooper-Bessemer internal combustion engine
1191-010	PSD permit for the modification of the existing Cooper-Bessemer internal combustion engine
0493-002A	Amendment of Permit 0493-002
0695-024	Section (5) permit for the production, processing, and combusting of pelletized paper fuel
042001-012	Section (5) permit for the addition of water fogging
092002-007	Section (5) permit for the construction of a new boiler

PROJECT DESCRIPTION

According to a U.S. Postal Mail Return Receipt, Marshall Municipal Utilities submitted a construction permit application for the construction of three (3) internal combustion fuel oil generators, two (2) storage tanks, and a fuel oil boiler to the Air Pollution Control Program on March 3, 1988. All applications received by the Air Pollution Control Program are entered into a database so the progress of the application may be tracked. However, no evidence of this application from Marshall Municipal Utilities was available in the database. In addition, a review of the application was not completed at that time, and a construction permit was not issued. Since then, Marshall Municipal Utilities has constructed and operated the generators, storage tanks, and boiler. In July 2008, during the review of the operating permit, it was discovered that a construction permit was not issued for these equipment. Marshall Municipal Utilities was informed that a belated construction permit review was necessary for compliance with State regulations, and an application was re-submitted by Marshall Municipal Utilities.

The original submittal included two applications for the three generators: one for the facility located at Malta Bend and one for the facility located on Watermill Road. However, since the construction of the three generators occurred within one year of each other and the applications were originally submitted at the same time, the three generators are considered one project. Although both applications were given separate project numbers (2008-07-090 and 2008-07-091), the files were combined under Project Number 2008-07-090, since both applications were determined to be one project.

Based on the information in the applications, Table 1 lists the equipment being reviewed in this construction permit. It should be noted that although the original applications included a fuel oil boiler (EP17), it is not included in the list of equipment being permitted in this construction permit because the boiler is considered grandfathered. According to the applicant, the boiler was put into service in 1977 and was included in the original application only as reference.

Table 1: List of Equipment Authorized under this Construction Permit

Emission Point	Description	Maximum Hourly Design Rate
EP7	IC Generator (fuel oil) located at Water Plant, Malta Bend	12 MMBTU
EP8	IC Generator (fuel oil) located at Water Plant, Malta Bend	12 MMBTU
EP9	IC Generator (fuel oil) located at Wastewater Plant, Watermill Road	12 MMBTU
EP15	Fuel Oil Storage Tank at Water Plant, Malta Bend	4,000 gallons
EP16	Fuel Oil Storage Tank at Wastewater Plant, Watermill Road	2,000 gallons

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 3.4, Large Stationary Diesel and All Stationary Dual-Fuel Engines dated October 1996. Emissions from the tanks were determined using the Environmental Protection Agency's Factor Information Retrieval (FIRE) Data System Version 6.23 (SCC 4-03-010-19 & 4-03-010-21).

Existing potential and actual emissions were determined using information from the installation's 2004 Emission Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory	Existing	Existing	Potential	New
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	<i>De Minimis Levels</i>	Potential Emissions	Actual Emissions (2007 EIQ)	Emissions of the Application	Installation Conditioned Potential
PM ₁₀	15.0	Major	135.47	7.68	N/A
SO _x	40.0	Major	3988.99	67.73	N/A
NO _x	40.0	Major	684.44	429.16	<40
VOC	40.0	Major	5.01	23.16	N/A
CO	100.0	Major	53.93	114.00	N/A
HAPs	10.0/25.0	Major	4.49	0.21	N/A

N/A = Not Applicable; N/D = Not Determined

Since the potential emissions of NO_x are above the de minimis level, the applicant has requested a de minimis limit on NO_x emissions. The annual limit of NO_x emissions translates into an operational hourly limit of 810 hours per generator per year or 2430 hours total per year. The emission factor (438.4 pounds per thousand gallon) will be used to show compliance with the NO_x limitation using Attachment A. Since NO_x is the worst-case pollutant, limiting NO_x emissions will reduce the potential emissions of the remaining criteria air pollutants. Therefore, no additional testing will be required for the new engines.

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 NO_x are conditioned to de minimis levels.

APPLICABLE REQUIREMENTS

Marshall Municipal Utilities 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 June 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

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 conditions.

Emily Wilbur
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 29, 1988, received March 2, 1988 and July 21, 2008, designating Marshall Municipal as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Mr. Kyle Gibbs
Electric Production Director
Marshall Municipal Utilities
765 W North St
Marshall, MO 65340

RE: New Source Review Permit - Project Number: 2008-07-090

Dear Mr. Gibbs:

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.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance.

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.

If you have any questions regarding this permit, please do not hesitate to contact Emily Wilbur, at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:ewl

Enclosures

c: Northeast Regional Office
PAMS File: 2008-07-090
Permit Number: **022009-012**