



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: 052012-001

Project Number: 2012-03-022

Installation Number: 051-0084

Parent Company: Jefferson City Animal Shelter

Parent Company Address: 320 E. McCarty St., Jefferson City, MO 65101

Installation Name: Jefferson City Animal Shelter

Installation Address: 2308 Hyde Park Road, Jefferson City, MO 65101

Location Information: Cole County, S11, T44N, R12W

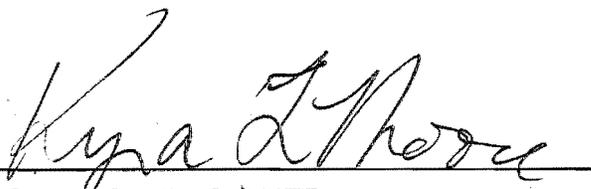
Application for Authority to Construct was made for a new small animal incinerator. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

MAY - 2 2012

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 Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. 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 these air contaminant sources.

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 sources(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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| Page No. | 3 |
| Permit No. | |
| Project No. | 2012-03-022 |

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."

Jefferson City Animal Shelter
Cole County, S11, T44N, R12W

1. Process Requirements for the Incinerator (EP-01)
 - A. Jefferson City Animal Shelter will burn exclusively non-infectious animal remains not in containers and non-infectious animal remains in containers not containing chlorine.
 - B. Charging of waste between burn cycles is prohibited in the batch-type incinerator.
 - C. The incinerator shall be equipped with a continuous chart recorder that is able to monitor, display and record the temperature in the final combustion chamber to an accuracy of plus or minus two percent (2%).
 - D. The operators shall maintain the primary chamber at a temperature of no less than 1400 degrees Fahrenheit and the secondary chamber at a temperature of no less than 1500 degrees Fahrenheit.
 - E. The incinerator shall have a minimum combustion efficiency of 99.9% determined from the carbon dioxide (CO₂) concentration divided by the sum of the carbon monoxide (CO) and CO₂ concentrations.
2. Record Keeping Requirements
Jefferson City Animal Shelter shall maintain an accurate record of the monthly amount and type of waste combusted at this installation. The installation shall use Attachment A or other equivalent form(s) approved by the Air Pollution Control Program for this purpose. Jefferson City Animal Shelter shall maintain records on-site for the most recent 60 months of all records required by this permit and shall immediately make such records available to any Department of Natural Resources' personnel upon request.

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| Page No. | 4 |
| Permit No. | |
| Project No. | 2012-03-022 |

SPECIAL CONDITIONS:

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

3. Opacity
The incinerator (EP-01) shall have opacity of less than ten percent (10%) at all times.
4. Operator Requirements for the Incinerator (EP-01)
 - A. All incinerator operators shall attend a training program equivalent to that developed by the American Society of Mechanical Engineers (ASME), by the incinerator manufacturer or by an individual with more than one (1) year experience in the operation of the incinerator. The training shall include basic combustion theory, operating procedures, monitoring of combustion control parameters and all emergency procedures to be followed if the incinerator should malfunction or exceed operating parameters.
 - B. The incinerator operator shall have the essential steps necessary for satisfactory operation of the incinerator readily available to him or her in an easy to read and follow manual.
5. Restriction of Odors
If a continued situation of demonstrated nuisance odors exists in violation of 10 CSR 10-2.070, the Director may require through written notice that Jefferson City Animal Shelter submit a corrective action plan within ten days adequate to timely and significantly mitigate the odors and Jefferson City Animal Shelter shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be in violation of this permit.

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

Project Number: 2012-03-022
Installation ID Number: 051-0084
Permit Number:

Jefferson City Animal Shelter
2308 Hyde Park Road
Jefferson City, MO 65101

Complete: March 6, 2012

Parent Company:
Jefferson City Animal Shelter
320 E. McCarty St.
Jefferson City, MO 65101

Cole County, S11, T44N, R12W

REVIEW SUMMARY

- Jefferson City Animal Shelter has applied for authority to install a new small animal incinerator, Therm-Tec Model G-12-PF, rated to incinerate 150 pounds of animal remains per hour.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new 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 all criteria pollutants are below de minimis levels.
- This installation is located in Cole County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

- 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.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Jefferson City Animal Shelter at 2308 Hyde Park Road is installing a new small animal incinerator, which is permitted in this project. They do, however, have a crematorium (Permit # 0698-028) at the existing animal shelter at 919 E. Miller St., Jefferson City, Missouri, which will be dismantled at the completion of the new animal shelter at 2308 Hyde Park Road. Emissions from the 919 East Miller St. facility were not considered in the review.

No permits have been issued to Jefferson City Animal Shelter, Installation Number 051-0084, from the Air Pollution Control Program.

PROJECT DESCRIPTION

Jefferson City Animal Shelter is installing a Therm-Tec Model G-12-PF incinerator to combust 150 pounds of waste per hour. The applicant submitted stack test results from a similar unit operated by Animal Care Services. The test was conducted on May 18, 2000, in Barnhart, Missouri. Another identical incinerator was installed at the Lee's Summit Animal Shelter in Lee's Summit, Missouri, and was permitted in 2007, Permit Number 082007-011.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) Factor Information Retrieval (FIRE) Data System SCC 5-02-001-01 and stack test results from a similar unit. Emissions of particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) were assumed to be equal to particulate matter less than ten microns in aerodynamic diameter (PM₁₀) because an emission factor for PM_{2.5} is not available. 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 De Minimis Levels | Existing Potential Emissions | Existing Actual Emissions (year EIQ) | Potential Emissions of the Application | New Installation Conditioned Potential |
|-------------------|------------------------------|------------------------------|--------------------------------------|--|--|
| PM ₁₀ | 15.0 | N/A | N/A | 0.79 | N/A |
| PM _{2.5} | 10.0 | N/A | N/A | 0.79 | N/A |
| SO _x | 40.0 | N/A | N/A | 0.82 | N/A |
| NO _x | 40.0 | N/A | N/A | 0.99 | N/A |
| VOC | 40.0 | N/A | N/A | 0.99 | N/A |
| CO | 100.0 | N/A | N/A | 0.31 | N/A |
| HAPs | 10.0/25.0 | N/A | N/A | N/D | N/A |

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

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 all criteria pollutants are below de minimis levels. 10 CSR 10-6.060 Section (1)(B) requires all incinerators to obtain construction permits.

APPLICABLE REQUIREMENTS

Jefferson City Animal Shelter 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.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *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 10-6.165

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.

Kathy Kolb
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 28, 2012, received March 6, 2012, designating Jefferson City Animal Shelter as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Stack Test Results from Animal Care Services conducted May 18, 2000 in Barnhart, Missouri.

Ms. Karen Jennings
Director-Animal Shelter
Jefferson City Animal Shelter
320 E. McCarty St.
Jefferson City, MO 65101

RE: New Source Review Permit - Project Number: 2012-03-022

Dear Ms. Jennings:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions 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 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 Kathy Kolb, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:kkk

Enclosures

c: Northeast Regional Office
PAMS File: 2012-03-022

Permit Number: