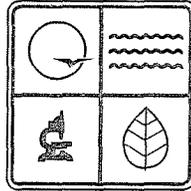


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



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: **06 2 0 0 6 - 0 1 4** Project Number: **2006-04-050**

Owner: **Animal Care Clinic**

Owner's Address: **1750 East 5th Street, Washington , MO 63090**

Installation Name: **Animal Care Clinic**

Installation Address: **17765 Highway 42E, Belle MO 65013**

Location Information: **Maries County, S10, T40N, R8W**

Application for Authority to Construct was made for:

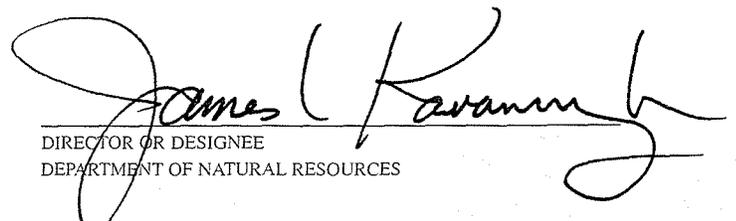
Installation of a Shenandoah P16-2GLPT animal crematory unit. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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.

JUN 26 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.

Page No.	2
Permit No.	
Project No.	2006-04-050

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."

Animal Care Clinic
Maries County, S10, T40N, R8W

1. Process Requirements

- A. Animal Care Clinic shall burn exclusively non-infectious animal bodies or body parts not in containers and non-infectious animal bodies or body parts in containers not containing chlorine.
- B. The incinerator shall have an operable door lockout mechanism that prohibits the charging of waste between burn cycles.
- 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 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

Animal Care Clinic 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. Animal Care Clinic 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 Missouri Department of Natural Resources' personnel upon verbal request.

3. Opacity

The incinerator shall have opacity of less than ten percent (10%) at all times.

Page No.	3
Permit No.	
Project No.	2006-04-050

SPECIAL CONDITIONS:

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

4. Operator Requirements

- 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/her in an easy to read and follow manual.

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

Project Number: 2006-04-050
Installation ID Number: 125-0021
Permit Number:

Animal Care Clinic
17765 Highway 42E
Belle, MO 65013

Complete: April 14, 2006
Reviewed: May 18, 2006

Parent Company:
Animal Care Clinic
1750 East 5th Street
Washington, MO 63090

Maries County, S10, T40N, R8W

REVIEW SUMMARY

- Animal Care Clinic has applied for authority to relocate and install an 80 pound per hour natural gas fired Shenandoah P-16 2GT animal incinerator. The burner is rated at 0.73 million Btu per hour.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. Due to the nature of pathological waste incineration, hydrogen chloride (HCl) and metal emissions, such as lead, antimony, mercury and cadmium, may be present. However, these emissions should be small enough to be considered insignificant. HAP emissions are not expected to be significant.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. However, Subpart Ec will apply to the incinerator if animals with infectious diseases are cremated in the incinerator.
- 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.
- 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*. All incinerators are required to obtain a permit from the Air Pollution Control Program as mandated in 10 CSR 10-6.060. Potential emissions are less than de minimis levels.

- This installation is located in Maries County, a nonattainment area for ozone (O₃) and an attainment area for all other criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- 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.
- An operating permit is required for this installation. All incinerators are required to obtain an operating permit.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Animal Care Clinic has applied for the authority to construct a liquefied propane gas fired incinerator in Maries County (125-0021). This incinerator will be used to cremate animals. Animal Care Clinic, located in Washington, Missouri, is an animal center that is proposing to construct an animal crematory unit off site to cremate animals for purposes of private cremations and for mass cremation for waste disposal. The relocated crematory unit is considered a new installation located in rural Maries County. No construction permits have been issued to Animal Care Clinic in Maries County from the Air Pollution Control Program.

All incinerators are required to obtain an operating permit from the Air Pollution Control Program as mandated in 10 CSR 10-6.065(3)(B). Animal Care Clinic has submitted an application for a basic operating permit when it was located in Franklin County. However, since the permit has not been issued it can not be amended. Therefore, a new operating permit application is required for the new location.

Table 1: Previous Permit(s) when in Franklin County (071-0204)

Permit Number	Description
042002-016	A Section (5) permit for the authority to install a Therm-Tec Model G-30-P animal incinerator.
OP	Basic Operating Permit project number 2002-05-370
012003-013	A Section (5) permit for the authority to install one Shenandoah Model C6 and one Therm-Tec Model G-12-P-1 animal incinerator.

PROJECT DESCRIPTION

Animal Care Clinic has applied for the authority to install a Shenandoah P16-2GLPT animal crematory unit. The Shenandoah P16-2GLPT is an animal waste incinerator with a maximum hourly design rate of 80 pounds of waste per hour. Liquid petroleum

gas is used to power the unit which has a burner rated at 0.73 million Btu per hour. Type 4 waste and a very small percentage of Type 0 waste will be combusted in the unit. Type 4 waste is non-infectious animal remains to include bodies, body parts, organs and solid tissue waste. Type 0 waste is plastic, wood and paper used to hold the bodies. It is a violation of this permit if Type 0 material is processed while not being used to hold bodies. In addition, no Type 0 waste shall contain any chlorine.

Animal Care Clinic has submitted stack test data to comply with the 99.9% combustion efficiency required for incinerators by the State of Missouri. Emissions testing on July 14 and 15, 1992, was performed on a similar model incinerator, which uses natural gas. In addition, this model incinerator, which uses liquid petroleum gas, has been previously permitted (Permit Number 1189-006). Results from that test demonstrated emissions from that incinerator of particulate matter less than ten microns (PM₁₀), nitrogen oxides (NO_x), and carbon monoxide (CO). Sulfur oxide (SO_x) and Volatile Organic Compounds (VOC) emissions are also possible from the combustion of the fuel used in the burners. The burners have a total maximum hourly design rate of 0.73 million Btu per hour. Due to the nature of pathological waste incineration, hydrogen chloride (HCl) and metal emissions, such as lead, antimony, mercury and cadmium, may be present. However, these emissions should be small enough to be considered insignificant. There are no other emission points at this installation.

EMISSIONS/CONTROLS EVALUATION

There is no control equipment for this unit. The emission factors used in the analysis of HAP emissions are obtained from the Factor Information Retrieval (FIRE) Data System Version 6.23 for SCC 3-15-021-01. The cumulative emission factor of HAPs listed in FIRE was 0.076 pounds of HAP per body cremated. The potential emission is 0.0191 tons per year. The rate of emission of PM₁₀, NO_x, and CO was obtained from previous permits (Permit Number 1189-006) for the same model incinerator.

The emission factors used in the analysis of SO_x and VOC were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition 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). Since this is a new facility, there are no existing potential emissions or existing actual emissions. The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/A	N/A	1.23	N/A
SO _x	40.0	N/A	N/A	0.05	N/A
NO _x	40.0	N/A	N/A	0.53	N/A
VOC	40.0	N/A	N/A	1.29	N/A
CO	100.0	N/A	N/A	1.75	N/A
HAPs	10.0/25.0	N/A	N/A	0.0191	N/A

N/A = Not Applicable

No control devices are in operation with this incinerator and control efficiencies are not taken into account in the calculation of the potential to emit of the application.

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 pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Animal Care Clinic 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

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.

Tim Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 30, 2006, received April 14, 2006, designating Dr. James Hale as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Regional Office Site Survey, received April 25, 2006.

Dr. James Hale
Owner
Animal Care Clinic
1750 East 5th Street
Washington, MO, 63090

RE: New Source Review Permit - Project Number: 2006-04-050

Dear Dr. Hale:

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 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 me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:tha

Enclosures

c: Southeast Regional Office
PAMS File 2006-04-050

Permit Number: