

STATE OF MISSOURI

PERMIT BOOK



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: **052014-001** Project Number: 2014-03-043
Parent Company: Rolling Acres Memorial Gardens For Pets, Inc.
Parent Company Address: 12200 North Crooked Road, Kansas City, MO 64152
Installation Name: Rolling Acres Memorial Gardens For Pets, Inc.
Installation Number: 165-0011
Installation Address: 12200 North Crooked Road, Kansas City, MO 64152
Location Information: Platte County, S16, T51N, R34W

Application for Authority to Construct was made for:
The installation of a Matthews Cremation Power-Pak II (Model IEB 26), which has a maximum throughput of 200 pounds per hour. 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 2014

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 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 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."

Rolling Acres Memorial Gardens For Pets, Inc.
Platte County, S16, T51N, R34W

1. Process Requirements for the Incinerator (EU-08)
 - A. Rolling Acres Memorial Gardens For Pets, Inc. will burn exclusively non-infectious animal remains not in containers or non-infectious animal remains in containers not containing chlorine.
 - B. Charging of animal remains between burn cycles is prohibited. The incinerator door shall remain closed at all times during operation.
 - C. The incinerator shall be equipped with a continuous chart recorder that monitors, displays and records the temperature in the final combustion chamber with an accuracy of two percent ($\pm 2\%$).
 - D. Rolling Acres Memorial Gardens For Pets, Inc. shall maintain the temperature in the final combustion chamber at or above 1400 degrees Fahrenheit.
 - E. Remains shall be incinerated at a rate of 200 pounds per hour.
 - F. Batch weight shall not exceed 750 pounds.
 - G. Rolling Acres Memorial Gardens For Pets, Inc. shall maintain an accurate record of the number of cremation and the total mass of remains cremated at this installation per month.
 - H. Rolling Acres Memorial Gardens For Pets, Inc. shall demonstrate compliance with Special Condition 1.E, 1.F and 1.G using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

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SPECIAL CONDITIONS:

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

2. **Restriction of Odors**
If a continued situation of verified nuisance odors exists in violation of 10 CSR 10-6.165, the Director may require through written notice that Rolling Acres Memorial Gardens For Pets, Inc. submit within ten days a corrective action plan adequate to timely and significantly mitigate the odors. Rolling Acres Memorial Gardens For Pets, Inc. 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.

3. **Record Keeping Requirements**
Rolling Acres Memorial Gardens for Pets, Inc. 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. Rolling Acres Memorial Gardens for Pets, Inc. 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 request.

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

Project Number: 2014-03-043
Installation ID Number: 165-0011
Permit Number:

Rolling Acres Memorial Gardens For Pets, Inc.
12200 North Crooked Road
Kansas City, MO 64152

Complete: April 3, 2014

Parent Company:
Rolling Acres Memorial Gardens For Pets, Inc.
12200 North Crooked Road
Kansas City, MO 64152

Platte County, S16, T51N, R34W

REVIEW SUMMARY

- Rolling Acres Memorial Gardens For Pets, Inc. has applied for authority to install a Matthews Cremation Power-Pak II (Model IEB 26), which has a maximum throughput of 200 pounds per hour.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment, but are less than the pollutants' respective screening model action level.
- 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.
- 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. Section (1)(B) requires all incinerators to obtain construction permits.
- This installation is located in Platte 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 are not required for the equipment. Stack testing was conducted on a similar unit and approved by the Air Pollution Control Program.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup. The installation's Basic Operating Permit expires on November 9, 2017 and will need to be amended to include this Construction Permit.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Rolling Acres Memorial Gardens For Pets, Inc. is a *de minimis* source and is located outside of Kansas City, Missouri, where it currently operates four animal incinerators: two Power-Pak Jr. Model IE43-PPJ incinerators (EU-04 and EU-06), one Power-Pak II Model IE43-PPII (EU-3), and one Matthews Cremation IEB Series 56 incinerator (EU-7). The Power-Pak Jr. incinerators are each rated to incinerate 75 pounds of animal remains per hour. The Power-Pak II incinerator is rated to incinerate 100 pounds of animal remains per hour. The Matthews Cremation IEB Series 56 incinerator is rated to incinerate 400 pounds of animal remains per hour. This installation currently has an operating permit (Project # 2012-05-041), which expires on November 9, 2017.

The following permits have been issued to Rolling Acres Memorial Gardens For Pets, Inc. from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
042012-010	Install and operate a Matthews Cremation IEB Series 56 incinerator
112009-005	Install and operate one Power-Pak Jr. model IE43-PPJ incinerator
1193-020	Install and operate two animal incinerators, a Power-Pak Junior IE43-PPJ and a Power-Pak II IE43-PPII
0485-003	Install and operate one Shenandoah P25-2GN model animal incinerator
1081-007	Install and operate one Shenandoah G-64/ITC model animal incinerator

The Shenandoah P25-2GN and Shenandoah G-64/ITC incinerators are no longer on site at this installation.

PROJECT DESCRIPTION

Rolling Acres Memorial Gardens For Pets, Inc. has applied for authority for the installation of a Matthews Cremation Power-Pak II Model IEB 26 (EU-8), which has a maximum throughput of 200 pounds per hour and maximum batch weight of 750 pounds. The animal incinerator may burn natural gas or liquid propane gas at 2.75 million British thermal units per hour. This installation plans on using this incinerator to replace the Power-Pak II Model IE43-PPII incinerator (EU-3). Once the new incinerator is installed, this installation plans on dismantling and removing the Power-Pak II Model IE43-PPII incinerator (EU-3).

Rolling Acres Memorial Gardens For Pets, Inc. submitted a stack test and its results to demonstrate compliance with the programs requirements for incinerators. These requirements include that the incinerator achieve a combustion efficiency of 99.9%, that the maximum particulate concentration in the incinerator's stack gas is less than 0.09 grains per dry standard cubic feet and that the incinerator's opacity does not exceed 10%. These requirements were developed to ensure proper combustion, which ensures destruction of HAPs. This stack test was conducted on March 25, 2010 by Arlington Environmental Services, Inc. in Spring Hill, Florida.

The incinerator is permitted to burn exclusively non-infectious animal remains in containers not containing chlorine. Infectious and non-infectious human bodies and body parts are not permitted to be cremated in this incinerator. The Air Pollution Control Program's definition of non-infectious animal remains is animal bodies and body parts that do not fit the definition of medical/infectious waste as defined in the Code of Federal Regulations, 40 CFR 60.51, *Standards of Performance for New Stationary Sources*, Subpart Ec—"Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996" (specifically paragraph (5)). The rule defines medical/infectious waste as:

Medical/infectious waste means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals that are listed in paragraphs (1) through (7) of this definition. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in part 261 of this chapter; household waste, as defined in §261.4(b)(1) of this chapter; ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment; and domestic sewage materials identified in §261.4(a)(1) of this chapter.

- (1) Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.
- (2) Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.
- (3) Human blood and blood products including:
 - (i) Liquid waste human blood;
 - (ii) Products of blood;
 - (iii) Items saturated and/or dripping with human blood; or
 - (iv) Items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also include in this category.

- (4) Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.
- (5) Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals or testing of pharmaceuticals.
- (6) Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.
- (7) Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, EPA's online Factor Information Retrieval Data System (webFIRE) and stack test data. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The emission rates for particulate matter (PM) and carbon monoxide (CO) were calculated using emission rates from a stack test from a similar unit. Emissions of particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) and particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) were assumed to be equal to PM because emission factors for PM₁₀ and PM_{2.5} are not available. Nitrogen oxide (NO_x) and volatile organic compound (VOC) were calculated using emission factors for Source Classification Code (SCC) 5-02-001-01 from webFIRE. The emission rates for HAP emissions were calculated using emission factors for SCC 3-15-021-01 from webFIRE. The emission rates for sulfur oxides (SO_x) were assumed to be equal to the sulfur dioxide emissions, which were calculated using the emission factors from AP-42 Section 1.4, *Natural Gas Combustion*. The greenhouse gas emissions were calculated by using information in the stack test and a mass balance equation.

This animal incinerator can combust natural gas and liquid propane gas. The potential emissions of this project only include the combustion of natural gas. The existing actual emissions were taken from the previous year's Emissions Inventory Questionnaire (EIQ). The existing potential emissions were taken from Construction Permits 1193-020, 112009-005 and 042012-010. The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	^a Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	8.71	N/D	1.46	N/A
PM ₁₀	15.0	12.83	0.09	1.46	N/A
PM _{2.5}	10.0	12.83	0.09	1.46	N/A
CO	100.0	8.84	0.08	4.64	N/A
SO _x	40.0	0.014	0.24	0.01	N/A
NO _x	40.0	5.32	0.80	1.31	N/A
VOC	40.0	6.82	0.12	1.31	N/A
GHG (CO ₂ e)	75,000 / 100,000	N/A	N/A	2,515.01	N/A
^b GHG (mass)	0.0 / 100.0 / 250.0	N/A	N/A	2,515.01	N/A
HAPs	10.0/25.0	1.01	N/D	0.43	N/A

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

^a Existing potential emissions are a sum of Potential Emissions of the Application from Construction Permits 1193-020, 112009-005 and 042012-010. Emissions from the Shenandoah P25-2GN (associated with Construction Permit 0485-003) and Shenandoah G-64/ITC (associated with Construction Permit 1081-007) incinerators were not included because they are no longer on site at this installation.

^b Methane emissions are negligible due to the incinerator's secondary chamber, therefore CHG (mass) is equivalent to CHG (CO₂e).

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. Section (1)(B) requires all incinerators to obtain construction permits.

APPLICABLE REQUIREMENTS

Rolling Acres Memorial Gardens For Pets, Inc. 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 10-6.165

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.

Daronn A. Williams
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 18, 2014, received March 24, 2014, designating Rolling Acres Memorial Gardens For Pets, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- EPA's online Factor Information Retrieval Data System (webFIRE), last updated on Monday, April 07, 2014

Ms. Nancy Piper
President
Rolling Acres Memorial Gardens For Pets, Inc.
P.O. Box 12073
Kansas City, MO 64152

RE: New Source Review Permit - Project Number: 2014-03-043

Dear Ms. Piper:

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 Daronn A. Williams, at the Department's 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

Susan Heckenkamp
New Source Review Unit Chief

SH:dwl

Enclosures

c: Kansas City Regional Office
PAMS File: 2014-03-043

Permit Number:

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