

PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: August 14, 2013

Name of Applicant: Scott Orr

Source: All Paws and Small Pet Crematory

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 3236-03.

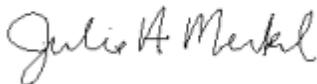
Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by September 13, 2013. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

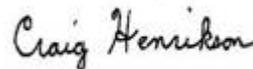
Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,



Julie A. Merkel
Air Permitting Supervisor
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(406) 444-3626



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JAM:CH
Enclosure

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
1520 East Sixth Avenue
P.O. Box 200901, Helena, Montana 59620-0901
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued to: All Paws Great & Small Pet Crematory, Inc.
81590 Gallatin Road
Bozeman, MT 59718

Montana Air Quality Permit Number: 3236-03

Preliminary Determination Issued: August 14, 2013

Department Decision Issued:

Permit Final:

1. *Legal Description of Site:* The facility is located in the Southwest ¼ of the Northwest ¼, of Section 13, Township 2 South, Range 4 East, in Gallatin County, Montana. The physical address is 81590 Gallatin Road, Bozeman, Montana 59718.
2. *Description of Project:* All Paws owns and operates a 2002 Thermtec, Inc. pathological animal cremation unit and a 2011 Thermtec, Inc. pathological animal cremation unit and proposes to install a 2013 Thermtec unit. Each of the cremation units are fired on natural gas and each is capable of incinerating up to 85 pounds per hour of animal remains.
3. *Objectives of Project:* The project would allow All Paws to safely dispose of animal remains while maintaining compliance with negligible risk requirements as discussed in Section VIII of the permit analysis. Further, the project would result in business and revenue for the company.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because All Paws demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #3236-03.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats:

Emissions from the proposed project would affect terrestrial and aquatic life and habitats in the proposed project area. However, as detailed in Section VI, VII, and VIII of the permit analysis, any emissions and resulting impacts from the project would be minor due to the low concentration of the pollutants emitted.

The crematorium would operate within an existing building and only a limited amount of new construction or ground disturbance to the area would be required. Overall, any impact to the terrestrial and aquatic life and habitats of the proposed project area would be minor.

B. Water Quality, Quantity and Distribution:

The proposed project would not affect water quantity or distribution in the proposed project area. The crematorium would operate within a building and would not discharge or use water as part of the project.

Emissions from the proposed project would affect water quality in the proposed project area. However, as detailed in Sections VI, VII, and VIII of the permit analysis any emissions and resulting deposition impacts from the project would be minor due to the low concentration of the pollutants emitted and dispersion characteristics of pollutants and the atmosphere.

C. Geology and Soil Quality, Stability, and Moisture:

The proposed project would affect the geology, soil quality, stability, and moisture of the proposed project area. However, the crematorium would operate within an existing building and only a limited amount of new construction or ground disturbance to the area would be required.

Further, as described in Sections VI, VII and VIII of the permit analysis, the crematorium would result in minor air pollution emissions to the ambient environment. These pollutants would deposit on the soils in the surrounding area. Any impact from deposition of these pollutants would be minor due to dispersion characteristics of pollutants and the atmosphere and the low concentration of the pollutants emitted.

D. Vegetation Cover, Quantity, and Quality:

Emissions from the proposed project would affect vegetation cover, quantity, and quality in the proposed project area. However, as detailed in Sections VI, VII, and VIII of the permit analysis, any emissions and resulting impacts from the project would be minor.

Further, the crematorium would operate within an existing building and only a limited amount of new construction or ground disturbance to the area would be required. Therefore, any impact to vegetation cover, quantity, and quality from facility construction would be minor. Overall, any impact to the vegetation cover, quantity, and quality of the proposed project area would be minor.

E. Aesthetics:

The proposed project would have minor, if any, impacts on the aesthetic nature of the proposed project area because the crematorium would operate within an existing building and only minor, if any, modifications to the building would be required for the construction project. In addition, visible emissions from the source would be limited to 10% opacity and the permit would include emission control requirements. Further, noise generated by the crematorium would be minor due to the nature of the business. Overall, the crematorium would have only minor impacts to the aesthetics of the proposed project area.

F. Air Quality:

The proposed project would result in the emission of various criteria pollutants and HAPs to the ambient air in the proposed project area. However, as detailed in Sections VI, VII, and VIII of the permit analysis, the Department demonstrated, through air dispersion modeling, that any air quality impacts from the proposed project would be minor.

The Department conducted air dispersion modeling to determine the ambient air quality impacts that would be generated from HAPs that would be emitted by the crematorium. The Screen View model was used for the air dispersion modeling. The full meteorology option was selected to provide a conservative result. Receptors were placed from 0 to 5000 meters in a simple terrain array. Simple terrain receptors were used to represent the topography of the project area.

Stack parameters and emission rates used in the Screen View model are contained in Section VII of the permit analysis and are on file with the Department. Stack velocity was taken from data provided by the manufacturer of the crematorium and exit gas temperature was based on the minimum operating temperature that was determined through the BACT analysis. Due to dispersion characteristics of pollutants and the atmosphere and the low levels of pollutants that would be emitted from the proposed project, the Department determined that any impacts to air quality would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources:

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS) to confirm earlier search results. The previous NRIS search identified plant two species of special concern (Dwarf Purple Monkey Flower and Slender Wedgegrass) in the vicinity of the project area. In this most recent search, Slender Wedgegrass was identified as was Rocky Mountain Twinpod but the Dwarf Purple Monkey Flower did not come up on the search. Three animal species were also identified in the most recent NRIS search. These included the Great Blue Heron, the Bald Eagle, and Hoary Bat. For the NRIS searches, the area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Due to the minor amounts of construction that would be required, the low levels of pollutants that would be emitted by the proposed project, dispersion characteristics of pollutants and the atmosphere, and conditions that would be placed in MAQP #3236-03, the Department determined that the chance of the project impacting any species of special concern would be minor.

H. Demands on Environmental Resource of Water, Air, and Energy:

The proposed project would result in minor demands on environmental resources of water and air as discussed in Sections 7.B and 7.F of this EA. In addition, as summarized in Section 7.F of this EA and detailed in Sections VI, VII, and VIII of the permit analysis, the project's impacts on air resources in the proposed project area would be minor due to dispersion characteristics of pollutants and the atmosphere and the low concentration of pollutants emitted. Finally, because the project is small by industrial standards, little energy would be required for operation, and the resulting impact on energy resources would be minor. Overall, the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites:

In an effort to identify any historical and archaeological sites near the proposed project area, the Department reviewed the results of the record search at the time of the last incinerator addition to the site. According to the Montana Historical Society, State Historic Preservation Office (SHPO), there have not been any previously recorded historic or archaeological sites within the proposed area. The building was originally constructed in 1977; therefore, the Department determined that the project would have no impact on historical and archaeological sites in the area.

J. Cumulative and Secondary Impacts:

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the operation. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #3236-03.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores:

The proposed project would not have any effect on any native or traditional lifestyles or communities (social structures or mores) of the proposed area of operation because the project is small by industrial standards. The predominant use of the surrounding area would not change as a result of the proposed project.

B. Cultural Uniqueness and Diversity:

The proposed project would not have any affect on cultural uniqueness and diversity of the proposed area of operation because the project is small by industrial standards. The predominant use of the surrounding area would not change as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue:

The proposed project would have a minor impact on the local and state tax base and tax revenue. The project is small by industrial standards; thus, any economic impact to the area would be minor. Further, the project would require only minor, if any, amounts of construction and a limited amount of employees/operators for normal operations.

D. Agricultural or Industrial Production:

Because the proposed project would operate within an existing building, the project would not displace any land used for agricultural production and would require only limited, if any, amounts of additional industrial construction. Further, the nature of the project would dictate that no additional industrial production would result from the proposed project.

E. Human Health:

The peak annual ambient impact from the operation of cremation Unit 1 would be 0.0025 $\mu\text{g}/\text{m}^3$. The peak annual ambient impact from the operation of cremation Unit 2 would be 0.0021 $\mu\text{g}/\text{m}^3$. The predicted annual ambient impact of each individual HAP was determined by multiplying the peak annual ambient concentration by the emission rate of the HAP. The impacts calculated for each HAP are compared to the cancer and non-cancer levels specified in Tables 1 and 2 of ARM 17.8.770(1)(i). If the predicted ambient impact of a particular HAP is less than the level specified in the table and the inhalation pathway is the only appropriate pathway, that HAP can be excluded from the human health risk assessment. The table summarized in Section VIII of the permit analysis indicates the calculated ambient impacts of the HAPs, the cancer and non-cancer levels, and whether or not each HAP passes the screening criteria.

As detailed in Section VIII of the permit analysis, a health risk assessment was conducted to determine if the proposed crematorium would comply with the negligible risk requirement of MCA 75-2-215 and ARM 17.8.770. The emission inventory did not contain sufficient quantities of any pollutant on the Department's list of pollutants for which non-inhalation impacts must be considered; therefore, the Department determined that inhalation risk would be the only necessary pathway to consider. As defined in ARM 17.8.740(16), negligible risk is “*an increase in excess lifetime cancer risk of less than 1.0×10^{-6} for any individual pollutant, and 1.0×10^{-5} for the aggregate of all pollutants, and an increase in the sum of the non-cancer hazard quotients for all pollutants with similar toxic effects of less than 1.0 as determined by a human health risk assessment conducted according to ARM 17.8.767*”. For the purposes of determining the negligible risk of the crematorium, all pollutants were included in the human health risk assessment.

All of the individual pollutant concentrations for the ELCR meet the acceptable risk limit because they are less than 1.00E-06 for each pollutant and less than 1.00E-05 for the aggregate of all pollutants. Further, the sums of the chronic and acute non-cancer hazard quotients are less than 1.0. Therefore, the cremation units proposed for the All Paws facility meet the criteria of ARM 17.8.770 and operation of the incinerator would be considered a negligible risk to public health, safety, welfare, and to the environment. Overall, any impacts to human health in the proposed project area would be minor.

F. Access to and Quality of Recreational and Wilderness Activities:

Because the proposed project would operate within an existing building, the project would not affect any access to or quality of any recreation or wilderness activities in the area.

G. Quantity and Distribution of Employment:

The proposed project would require a limited amount of new employment in the area. The project would require only a single operator and possibly a support employee. Therefore, the proposed project would have only a minor impact on the quantity and distribution of employment in the area.

H. Distribution of Population:

The proposed project would not likely require any new employment in the area. Therefore, the proposed project would not be expected to have any impact on the distribution of population in the proposed project area.

I. Demands for Government Services:

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Demands for government services would be minor.

J. Industrial and Commercial Activity:

The proposed project would result in only a minor impact on local industrial and commercial activity because the proposed project would operate in an existing building, would require only limited, if any, amounts of additional industrial construction, and would not result in additional industrial production.

K. Locally Adopted Environmental Plans and Goals:

The Department is not aware of any locally adopted environmental plans or goals in the immediate area affected by the proposed project. The state standards would be protective of the proposed project area.

L. Cumulative and Secondary Impacts:

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area due to the relatively small size of the operation. Due to the relatively small size of the project, the industrial production, employment, and tax revenue (etc.) would not be significantly impacted by the proposed project. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #3236-03.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a crematorium. MAQP #3236-03 includes conditions and limitations to ensure that the facility would operate in compliance with all applicable rules and regulations. In addition, as detailed in the above EA there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program.

EA prepared by: Craig Henrikson
Date: July 20, 2013