



Montana Department of  
**ENVIRONMENTAL QUALITY**

Brian Schweitzer, Governor

P. O. Box 200901

Helena, MT 59620-0901

(406) 444-2544

Website: [www.deq.mt.gov](http://www.deq.mt.gov)

April 16, 2012

David Mahn  
All Montana Crematory  
1022 Lyon Avenue  
Lake City, MN 55041

Dear Mr. Mahn:

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to All Montana Crematory. The application was assigned Permit Application Number 4735-00.

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 May 16, 2012. 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,

Vickie Walsh  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-3490

Craig Henrikson P. E.  
Environmental Engineer  
Air Resources Management Bureau  
(406) 444-6711

VW:CH  
Enclosures

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

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* All Montana Crematory  
1022 Lyon Avenue  
Lake City, MN 55041

*Montana Air Quality Permit Number:* 4735-00

*Preliminary Determination Issued:* April 16, 2012

*Department Decision Issued:*

*Permit Final:*

1. *Legal Description of Site:* The All Montana Crematory (AMC) is located at the legal description of Section 3, Township 4, Range 11 West, Block 26, Lots 11-12 in Deer Lodge County, Montana.
2. *Description of Project:* AMC proposes to operate a 2012 U.S. Equipment Model 100 “Classic” multiple chamber human cremation unit with a maximum incineration capacity of 200 pounds per hour (lb/hr), and associated equipment. The crematory is fired on natural gas. The secondary chamber shall maintain a temperature of 1600 degrees Fahrenheit (°F), with no single reading less than 1575 °F and is managed by a programmable logic controller (PLC) that controls each cremation cycle. After the secondary chamber has been heated sufficiently, the cremator burner ignites and the cremation process is initiated.

Initial and supplementary combustion is provided by two burners fired by natural gas, one in the primary chamber and one in the secondary chamber, with a total maximum rated design capacity of 2,000,000 British thermal units per hour (Btu/hr).

3. *Objectives of Project:* The objective of the project is to generate revenue and provide a safe means of disposal of human remains.
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 AMC 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 Best Available Control Technology (BACT) analysis, would be included in MAQP #4735-00.
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 V and Section VI of the permit analysis, any emissions and resulting impacts from the project would be minor due to the low concentration of those pollutants emitted.

Further, the proposed crematorium would operate within a building addition located in an area zoned as commercial and currently used as a mortuary. 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 project would not be expected to affect water quantity or distribution in the project area. The crematorium operates within a building and does not discharge or use water during operation.

Emissions from the project may affect water quality in the project area due to air pollutant deposition. Warm Springs Creek is approximately 1200 feet north of the project site which flows into the Clark Fork as it migrates to the north and east. However, any emissions and resulting deposition impacts from the project would be very minor due to the low concentration of those pollutants emitted.

C. Geology and Soil Quality, Stability and Moisture

The project would not be expected to affect the geology, stability, and moisture of the project area. The proposed crematorium would be located in a building expansion to an existing facility and would operate within the building addition.

Proper crematorium operation would result in minor air pollution emissions to the ambient environment. These pollutants would deposit on the soils in the surrounding area. However, any impact from deposition of these pollutants would be very minor due to dispersion characteristics and the low concentration of those pollutants emitted.

D. Vegetation Cover, Quantity, and Quality

Air emissions from the project may affect vegetation cover, quantity, and quality in the project area. However, any emissions and resulting impacts from the project would be minor due to the dispersion characteristics and the low concentration of those pollutants emitted.

Further, the crematorium would operate in a building addition to an existing building. Overall, any impact to the vegetation cover, quantity, and quality of the proposed project area would be minor.

E. Aesthetics

The project would result in a minor impact to the aesthetic nature of the project area. The crematorium would operate within a building addition. Further, visible emissions from the source would be limited to 10% opacity. Therefore, the project would result in only a minor impact to aesthetics of the area.

F. Air Quality

The project would result in the emissions of various criteria pollutants and HAPs to the ambient air in the project area. However, it has been demonstrated by air dispersion modeling that any air quality impacts from the project would be minor and would constitute negligible risk to human health and the environment.

The Department conducted air dispersion modeling to determine the ambient air quality impacts from HAPs that would be generated by the crematorium. The SCREEN3 model was selected for the air dispersion modeling. The full meteorology option was selected to provide a conservative result. Receptors were placed in a simple terrain array and the maximum concentration identified from the source stack.

Stack parameters and emission rates used in the SCREEN3 model are contained in Section V of the permit analysis and are on file with the Department. Stack velocity and gas temperature were taken from data provided by the manufacturer of the crematorium. Due to the dispersion characteristics and 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

The current permit action could result in minor impacts to any existing unique endangered, fragile, or limited environmental resource in the proposed area of operation. However, the proposed crematorium would require only a limited amount of construction and would operate within a building addition located in an area zoned as commercial thereby limiting the potential for impact to any unique endangered, fragile, or limited environmental resource in the proposed location.

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operations, contacted the Montana Natural Heritage Program (MNHP) to identify any species of concern associated with the proposed site location. Search results concluded there are six species of concern within the defined area. These include the Westslope Cutthroat Trout, Bull Trout, Hoary Bat, Fisher, Wolverine, and the Clark's Nutcracker.

The Clark's Nutcracker, Fisher, and the Hoary Bat are each listed as state conservation status of S3, signifying a state-level rank of vulnerable. The global conservation status is G5, signifying a global-level rank of secure. Secure is defined by NatureServe.org as common; widespread and abundant. The Westslope Cutthroat Trout is listed as S2, and G4T3. The Bull Trout is listed as S2 and G3 with the Wolverine at S3 and G4. The S2 classification indicates imperiled with S3 indicating vulnerable. The G3 and G4 ranks are nearly synonymous with the state rank and indicate vulnerable and apparently secure, respectively.

Emissions from the proposed project could impact any existing unique endangered, fragile, or limited environmental resource located in the proposed project area. However, as detailed in Section VI of the permit analysis, any emissions and resulting impacts from the project would be minor due to the low concentration of those pollutants emitted. Overall, any impact to the unique endangered, fragile, or limited environmental resources of the proposed project area would be minor. Additionally, the species of concern report is generated for the survey section plus an additional one mile buffer which incorporates the foothills surrounding the town of Anaconda. Since the new incinerator will be constructed within an existing building, located within the town of Anaconda, the impact to the species of concern would be considered 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 Section 7.B and 7.F, respectively, of this EA. Further, as detailed in Section V and Section VI of the permit analysis, project impacts on air resources in the proposed project area would be minor due to dispersion characteristics and the low concentration of those 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.

#### I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed area of construction/operation. Search results concluded there are many previously recorded sites within the general area proposed for the project as the town of Anaconda has many historic buildings continuing to be used as both residences and places of business. However, it is understood this particular building is not one of the historic buildings included in the Cultural Resource Inventory. As the proposed project is not to be constructed within or as an addition to a recognized historic structure, any impact to the historical buildings of the area would be considered minor.

#### J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the environment in the immediate area would be minor. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #4735-00.

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 is to install a 200 lb/hr cremation incinerator for human remains at an existing mortuary business. The incinerator’s emissions would be extremely low on an industrial scale and opacity limitations of MAQP #4735-00 would require 10% or less opacity while operating. Any change to social structures or mores would be minor, if any.

B. Cultural Uniqueness and Diversity

The proposed project would cause a minor change in the cultural uniqueness and diversity of the area because the proposed incinerator is new but would be installed as part of an existing mortuary.

C. Local and State Tax Base and Tax Revenue

The proposed project may provide additional revenue for AMC, however; no need for additional employees would be expected as a result of this project. Therefore, minimal, if any, impacts to the local and state tax base and tax revenue are anticipated from this project except for the construction portion of the project which will require minor resources for the building addition.

D. Agricultural or Industrial Production

The proposed project would result in no reduction of available acreage of any agricultural land as the building addition footprint is located on the site of a previous parking lot. Furthermore, the potential-to-emit of the proposed project is extremely small. Based on the small amount of emissions and the dispersion of those emissions, no discernible impact would be expected to agricultural or industrial production in the area.

E. Human Health

As described in Section VI of the Permit Analysis, modeling and analysis of hazardous air pollutants showed negligible risk to human health. Furthermore, the potential-to-emit of conventional pollutants would be extremely small. Impacts to human health would be minor, if any discernible amount at all.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project is to install the incinerator at an existing place of business. No change to access of recreational and wilderness activities would be expected. Permit conditions would require opacity of the emissions to be 10% or less while operating. The potential-to-emit of the proposed incinerator would be very small. The town of Anaconda is approximately 14 air miles from the north-eastern boundary of the Anaconda-Pintler Wilderness. Therefore, minor, if any impact to the quality of recreational and wilderness activities would be expected as a result of this project.

G. Quantity and Distribution of Employment

No need for a change in the number of employees would be expected as a result of this project. Therefore, no impacts to the quantity and distribution of employment would be expected. Employees would be utilized from a separate local location.

H. Distribution of Population

No need for a change in the number of employees would be expected and no other factors affecting distribution of population would be expected to be present as a result of this project. The project proposes to install the incinerator in a building addition at an existing mortuary, yet utilize existing local employees' place of business. Furthermore, opacity limitations in the permit would require a 10% or less opacity of emissions. Therefore, no impacts to the distribution of population would be expected.

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. Overall, 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 crematorium would require only a limited amount of new construction, would operate within a building and would not result in additional industrial production. Overall, any impacts to industrial and commercial activity in the proposed area of operation would be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals this project may impact. 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 environment in the immediate area 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 would be outlined in MAQP #4735-00.

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 (incinerator). MAQP #4735-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, 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

EA prepared by: Craig Henrikson

Date: 03/29/2012