Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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August 1, 2012

Major Kenton Hickethier
Montana Highway Patrol
812 14th Street North
Great Falls, Montana 59401

Dear Major Hickethier:

Montana Air Quality Permit #4742-00 is deemed final as of August 1, 2012, by the Department of Environmental Quality (Department). This permit is for a portable incinerator. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Charles Homer
Manager, Air Permitting, Compliance and Registration
Air Resources Management Bureau
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Ed Warner
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CH:EW
Enclosure

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
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# FINAL ENVIRONMENTAL ASSESSMENT (EA)

*Issued To*: Montana Highway Patrol
14th Street North
Great Falls, MT 59401

*Montana Air Quality Permit Number (MAQP)*: 4742-00

*Preliminary Determination Issued*: 6/13/12
*Department Decision Issued*: 7/16/12
*Permit Final*: 8/01/12

1. *Legal Description of Site*: The initial location of the Montana Highway Patrol (MHP) portable incinerator would be in the NW¼ SW¼ Section 6, Township 20 North, Range 6 East, in Cascade County, Montana. However, MAQP #4742-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less ($PM_{10}$) nonattainment areas.

2. *Description of Project:* MHP proposes to operate a portable liquid propane-fired Inciner8 Model M-60 incinerator with capacity per batch load rating of 50 kilograms (kg) and an approximate incineration time per load of 2.5 hours. This unit is used to incinerate unwanted and expired prescription drugs, illegal substances, and materials that law enforcement deems necessary to burn. The incinerator utilizes a secondary combustion chamber with an auxiliary afterburner to facilitate complete combustion of volatile emissions. Initial and supplementary combustion is provided by two burners fired by liquid propane, one in the primary chamber and one in the secondary chamber. The secondary chamber shall maintain a temperature of 850 degrees Celsius (˚C) (1,562 degrees Fahrenheit (˚F)), with no single reading less than 812 ˚C (1,462 ˚F). After the secondary chamber has been heated sufficiently, the primary burner may be ignited and the incineration process can begin.

3. *Objectives of Project*: The objective of the project is to provide a safe means of disposal of unwanted or expired prescription drugs and other illegal substances that law enforcement deems necessary to burn.

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 MHP 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 #4742-00.

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 initial project area. The incinerator is a source of air emissions and its operation would result in an increase in air pollutants. 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 incinerator would not require the construction of any facilities and would operate within the MHP facility grounds in a secure, gated space. 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 incinerator 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. The Missouri River is approximately ½ mile north of the project site. 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 incinerator would not require any facility construction and would operate on an existing concrete pad.

Proper incinerator 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 incinerator would operate within an existing secure, gated space on a concrete pad. 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 incinerator would operate outside and would be visible. Any 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 incinerator. The SCREEN3 model was selected for the air dispersion modeling. The full meteorology option was selected to provide a conservative result. Receptors were placed from 5 to 50,000 meters in a simple terrain array.

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 incinerator or assumed based on available information. MHP has accepted federally enforceable permit conditions limiting the amount of time per day that the incinerator can be used to combust materials in order to reduce potential air emissions. 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 because the it is a new source of air emissions in the area. However, the proposed incinerator would not require any facility construction and would operate within a secure, gated space on an existing concrete pad. The initial project area is within Great Falls city limits in a developed area with very little potential for impact to any unique endangered, fragile, or limited environmental resource in the proposed location. 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 this unique endangered, fragile, or limited environmental resource of the proposed project area would be minor.

In an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operations, the Department contacted the Montana Natural Heritage Program (MNHP) to identify any species of concern associated with the proposed site location. Search results concluded there are 7 species occurrence reports for 5 species of concern within the vicinity of the proposed project area. These species include the amphibian species of Plains Spadefoot; the bird species of Bald Eagle; the nonvascular plant species of Entosthodon Moss; and vascular plant species of Little Indian Breadroot and Many-headed Sedge.

The species occurrence report for the amphibian species of Plains Spadefoot is located to the northeast of the proposed project location near the banks of the Missouri River. While the MNHP Montana Field Guide indicates that little is known about specific habitat information, this species is usually found in areas with soft sandy/gravelly soils near permanent or temporary bodies of water. These habitats are not found within the proposed project area.

The species occurrence report for the bird species of Bald Eagle is also located to the northeast of the proposed project location along the Missouri River. The preferred habitat for the Bald Eagle is among forested areas along rivers and lakes. These habitats are not found within the proposed project area.

The species occurrence report for the nonvascular plant species of Entosthodon Moss is along the north bank of the Missouri River to the northeast of the proposed project location. The MNHP Montana Field Guide does not provide any habitat information; however, the proposed project location is not along any river or water body shores and presumed to have little to no impact on the surrounding habitats for this species.

The species occurrence reports for the vascular plant species of Little Indian Breadroot and Many-headed Sedge encompass a large area that includes much of the city of Great Falls. Because the initial project area is within a developed area inside the city limits of Great Falls, it is presumed to have little to no impact on the surrounding habitats for these species.

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

The proposed project would result in no demands on the environmental resource of water and minor demands on the environmental resource of 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 that there have been a few previously recorded sites and cultural resource inventories done within the vicinity of the area proposed for the project. According to correspondence from SHPO, there is a low likelihood that cultural properties will be impacted. Therefore, a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project the SHPO office must be contacted and the site investigated. The proposed project would not require any construction or land disturbance; therefore, there is no perceived impact to historical and archaeological sites.

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 MAQP #4742-00.

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 would not have any impact on social structures and mores because it would not require any construction or land disturbance to operate. In addition, the initial location is within a developed site inside the city limits of Great Falls.

B. Cultural Uniqueness and Diversity

The proposed project would not impact the cultural uniqueness and diversity of the area because the initial location of the incinerator is within an existing developed location.

C. Local and State Tax Base and Tax Revenue

The proposed project is not intended or expected to generate revenue for MHP. MHP has indicated that there is no need for additional employees as a result of this project. The operation of the equipment would require the use of liquid propane as fuel which the purchase of would contribute towards some tax revenue. Therefore, minimal, if any impacts to the local and state tax base and tax revenue are anticipated from this project.

D. Agricultural or Industrial Production

The proposed project would not impact any agricultural land because its initial location is within a developed location inside the city of Great Falls. There is no industrial production associated with the operation of the incinerator. 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 amount of 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. MAQP #4742-00 contains enforceable conditions limits designed to minimize the impacts of potential air pollutant emissions. 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 initially operate the incinerator at an existing developed location inside the city limits of Great Falls. There is no current access to recreational or wilderness activities at the proposed initial location. No change to access of recreational and wilderness activities in the surrounding area 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. Therefore, no discernible impacts to the access to 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.

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 initially operate the incinerator in an existing developed location and would not require any construction or land disturbance. 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 not result in any impact to the local industrial and commercial activity because the incinerator would not require any new construction, would operate within existing developed location, and would not result in additional industrial production or commercial activity.

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 #4742-00.

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 an incinerator to dispose of unwanted and expired prescription drugs, illegal substances, and other materials that law enforcement deems necessary to burn. MAQP #4742-00 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: Ed Warner
Date: 5/30/2012