



Brian Schweitzer, Governor  
Richard H. Opper, Director

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August 8, 2012

Todd Everts  
Environmental Quality Council  
Capitol Complex  
Helena, MT 59620

**Subject: Final Environmental Assessment for Malmstrom Air Force Base, Great Falls, Montana**

Dear Mr. Everts:

Enclosed is the final Environmental Assessment for the above-referenced facility. The draft EA was sent to your office in June 2012. If you have any questions, please contact me at 406/444-2876 or the e-mail address listed below.

Sincerely,

Rebecca Holmes  
Environmental Science Specialist  
Waste and Underground Tank Management Bureau  
Permitting and Compliance Division  
e-mail: [rholmes@mt.gov](mailto:rholmes@mt.gov)

Enclosure

cc: HW facility file: MAFB – Public Participation #1 (w/o enclosure)



# Montana Department of **ENVIRONMENTAL QUALITY**

Montana Department of Environmental Quality  
Permitting and Compliance Division  
Waste and Underground Tank Management Bureau  
1520 East 6<sup>th</sup> Avenue  
P.O. Box 200901  
Helena, Montana 59620-0901

## **Final Environmental Assessment**

**Montana Hazardous Waste Permit Number:** MTHWP-12-01

**Issued to:** Malmstrom Air Force Base  
39 78<sup>th</sup> Street North  
Malmstrom AFB, Montana 59402-7536

**Legal Description:** Sections 1, 2, 3, 10-15, Township 20 North, Range 4 East; and Sections 6 and 7, Township 20 North, Range 5 East, Cascade County

**Issued by:** Hazardous Waste Section  
Waste and Underground Tank Management Bureau  
Permitting and Compliance Division  
Montana Department of Environmental Quality

### **Purpose of the Environmental Assessment**

The Montana Department of Environmental Quality (DEQ) is required under the Montana Environmental Policy Act (MEPA) to conduct an environmental assessment (EA) on the proposed permit action described in this document. An EA details all reasonable alternatives to DEQ's action; and outlines the potential impacts to the human environment resulting from DEQ's permitting action and reasonable alternatives to that action.

Based on the impact analysis and professional judgment, DEQ makes a decision on the proposed permit action and summarizes the decision in the EA. If the decision significantly impacts the human environment, a more detailed environmental review, called an environmental impact statement (EIS), must be conducted by DEQ.

### **Public Comment Period**

The public was provided 45 days to review and comment on the draft EA and the proposed permit reissuance. The comment period extended from May 30, 2012 to July 13, 2012. No comments on the EA were submitted to DEQ. Comments on the draft permit pertained only to permit conditions; therefore, no changes were made to the EA.

### **Montana Hazardous Waste Regulations**

Rules administering hazardous waste management in Montana are set forth in the Administrative Rules of Montana (ARM), Title 17, Chapter 53, Sub-Chapters 1 through 12. Federal regulations for hazardous waste management are set forth in Title 40 of the Code of Federal Regulations (CFR), Parts 124 and 260 through 279, and are incorporated by reference in ARM. For ease of reading this document, when federal regulations under Title 40 of the CFR have been incorporated by reference into ARM, only the federal citation is used.

### **Description of Project**

DEQ is proposing to reissue a hazardous waste permit to Malmstrom Air Force Base (MAFB) in Great Falls, Montana. The proposed reissued permit will contain requirements for operation of an on-site hazardous waste storage facility and continued implementation of facility-wide cleanup of contaminated areas. Hazardous waste permits issued to facilities in Montana are in effect for ten years and must be re-issued or terminated at the end of that period. This proposed permit would be the third hazardous waste permit issued to MAFB.

The Malmstrom Air Force Base is located on the eastern city limits of Great Falls, Montana. The base was established in 1942 and encompasses 3,500 acres. A Minuteman Missile Complex of 150 missiles is under the control of the 341<sup>st</sup> Strategic Missile Wing at MAFB.

Various types of hazardous waste are generated by activities on the Air Force Base itself and by the missile control facilities. The State of Montana issued a hazardous waste permit to MAFB in 1989 to allow storage of hazardous waste in an on-site storage building for greater than 90 days. At that same time, the U.S. Environmental Protection Agency (EPA) issued MAFB a permit under the Hazardous and Solid Waste Amendments to the federal Resource Conservation and Recovery Act (RCRA). The EPA permit required that MAFB conduct remedial investigation and cleanup of contaminated areas throughout the facility.

The MAFB hazardous waste permit was reissued in 2001. Because DEQ received oversight authority for facility-wide cleanup from EPA, the reissued hazardous waste permit included requirements for operation of the on-site storage building and for facility-wide cleanup.

In December 2010, MAFB submitted an application for a second reissuance of its hazardous waste permit. The application was submitted within the regulatory timeframe and, after review, deemed complete by DEQ.

### **Objectives of Proposed DEQ Action**

DEQ is charged with administering the provisions of the ARM. The objective of the proposed action is to comply with the ARM provisions pertaining to hazardous waste permits and facility-wide corrective action. DEQ must ensure conditions of a hazardous waste permit are in

accordance with ARM and the portions of 40 CFR Part C which are incorporated by reference in ARM. In addition, conditions of the permit must ensure appropriate and compliant management of hazardous waste, as well as implementation of remedial activities that are protective of human health and the environment.

### **Alternatives Considered**

#### Alternative 1: No Action

The No Action alternative provides a baseline for analyzing other alternatives. Under the No Action alternative, DEQ would deny the MAFB permit application and would not issue MTHWP-12-01.

40 CFR 264.101, as incorporated by reference in ARM 17.53.1201, requires that a facility with an operating or post-closure hazardous waste permit must address releases from solid waste management units present at that facility. MAFB has completed investigation and remedial activities at all but one solid waste management unit. Corrective measures at the remaining unit are required under the current MAFB permit to remediate contaminated groundwater. The No Action alternative would not comply with the requirement of 40 CFR 264.101. In addition, MAFB has submitted a timely permit application for reissuance of its hazardous waste permit and has been in substantial compliance with Montana hazardous waste regulations throughout the 20-year duration of its two previous permits. MAFB is in compliance with regulations pertaining to a permit application and to general hazardous waste management and disposal; therefore, there is no regulatory reason to deny the MAFB permit application. DEQ has determined the No Action alternative is not reasonable and, therefore, is not considered further in this EA.

#### Alternative 2: Issuance of an administrative order for corrective action and deny the operating permit for the hazardous waste storage facility (HWSF)

Under this alternative, an administrative order would be issued and the operating permit for the HWSF denied. MAFB is required by the MHLWA to implement and complete facility-wide corrective action, which may be accomplished through an alternative enforceable mechanism such as an administrative order on consent. To meet the corrective action provisions of 40 CFR Part C, as incorporated by reference in ARM 17.53.1201, DEQ must issue a permit or administrative order to MAFB for continued implementation of corrective action. An administrative order would contain the same or similar corrective action conditions as the proposed operating and corrective action permit.

The operating permit pertains to operation and management of a greater-than-90-day storage facility. Large quantity generators of hazardous waste may not store hazardous waste on-site for more than 90 days without a permit. MAFB has operated an on-site storage facility for hazardous waste under hazardous waste permits issued in 1989 and 2001. MAFB has submitted a complete application requesting reissuance of the permit allowing storage of hazardous waste on-site for greater than 90 days.

Denial of the permit reissuance for operation of an on-site storage facility would mean MAFB must ship wastes for off-site disposal within 90 days of generation. DEQ does not have statutory or regulatory authority to issue administrative orders for storage of hazardous waste for greater

than 90 days. The Malmstrom Air Force Base and its missile control facilities generate a wide variety of hazardous wastes. Quantities per month are generally small; therefore, consolidation of wastes is an economical and efficient way to dispose of hazardous wastes generated throughout a given year.

Alternative 2 will be considered further in this EA; however, the alternative is not preferred for the following reasons:

- 1) The HWSF provides an efficient and cost-effect way to manage hazardous waste at the facility;
- 2) MAFB has submitted a timely permit reissuance application;
- 3) MAFB has been in substantial compliance with Montana hazardous waste regulations throughout the duration of its two previous permits; and
- 4) An administrative order would contain the same or similar corrective action conditions as the proposed operating and corrective action permit.

**Alternative 3: Proposed action - Reissuance of the hazardous waste operating and corrective action permit**

Under this alternative, DEQ would reissue a hazardous waste operating and corrective action permit to MAFB, after considering all comments received during the public comment period. The HWSF would continue to accept hazardous waste generated at MAFB and other operations under its control. MAFB would be required to implement and complete facility-wide corrective action.

MAFB has submitted a timely hazardous waste permit application requesting reissuance of the permit, which DEQ determined to be adequate and complete. Use of the greater-than-90-day storage facility enhances MAFB's ability to manage hazardous waste on-site and send these wastes off-site to appropriately permitted off-site hazardous waste disposal facilities. MAFB has been in substantial compliance with hazardous waste permit conditions and hazardous waste regulations with regards to the hazardous waste storage facility during the 23-year duration of the previous two permits.

**Stipulations and Controls**

For operation of the HWSF, the proposed hazardous waste permit contains conditions for proper management, handling, storage, and disposal of hazardous wastes generated by the MAFB facility and any other facilities controlled by MAFB. Plans for emergency preparedness and contingency plans for releases from the storage facility are also requirements and are incorporated into the permit. The HWSF is subject to at least annual inspection by staff from the Hazardous Waste Section of DEQ.

For facility-wide corrective action, the MAFB hazardous waste permit requires submission of work plans and progress reports to DEQ for all corrective action activities. Work plans must detail engineering requirements for treatment technologies and monitoring well installation, safety procedures, and quality assurance for sampling and analysis. Progress reports include evaluation of progress towards meeting cleanup standards, as well as the efficacy of any remedial action at the facility. All work plans and reports will be subject to DEQ's review and approval.

Non-compliance with permit conditions and/or hazardous waste regulations is subject to enforcement by DEQ.

### **Analysis of Regulatory Impacts on Private Property Rights**

Because MAFB is a federal facility, a Private Property Assessment Act Checklist was not completed for DEQ's proposed action on the remedy selection.

### **Summary of Impacts**

Potential human environmental impacts from implementation of Alternatives 2 and 3 are rated in Tables 1 and 2. The human environment includes those attributes, such as biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment. Impacts may be adverse, beneficial, or both. The following criteria are used to rate the impacts:

- ◆ The severity, duration, geographic extent, and frequency of occurrence;
- ◆ The probability the impact will occur if the proposed action occurs;
- ◆ Growth-inducing or growth-inhibiting aspects of the impact;
- ◆ The quantity and quality of each environmental resource or value effected;
- ◆ The importance to the State and society of each environmental resource or value effected;
- ◆ Any precedent set as a result of an impact from the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- ◆ Potential conflict with local, state, or federal laws, requirements, or formal plans.

The following are definitions for major, moderate, minor, none, and unknown impacts on the human environment:

Major: A significant change from the present conditions of the human environment. Major impacts are serious enough to warrant preparing an environmental impact statement (EIS).

Moderate: Not a major or minor change from the present condition of the human environment. A single moderate impact may not warrant preparing an EIS; however, when considered with other impacts, an EIS may be required.

Minor: A slight change from the present condition of the human environment. Minor impacts are not serious enough to warrant preparing an EIS.

None: No change from the present conditions of the human environment.

Unknown: An EIS must be conducted to determine the effects on the human environment if impacts are unknown.

**Table 1. Potential Impacts on Physical and Biological Environment**

Alternative 2 – ■

Alternative 3 – ★

Resources		Major	Moderate	Minor	None	Unk now n	Discussion Attached
A.	Air Quality				■ ★		
B.	Water Quality, Quantity, and Distribution			■ ★			●
C.	Geology and Soil Quality, Stability, and Moisture			■ ★			●
D.	Historical and Archaeological Sites				■ ★		
E.	Aesthetics				■ ★		
F.	Terrestrial and Aquatic Life and Habitats				■ ★		
G.	Vegetation Cover, Quantity, and Quality			■ ★			●
H.	Unique, Endangered, Fragile, or Limited Environmental Resources				■ ★		
I.	Demands on Environmental Resource of Water, Air, and Energy				■ ★		
J.	Cumulative and Secondary Impacts				■ ★		

## **Description of Potential Impacts on Physical and Biological Environment**

### **B. Water Quality, Quantity, and Distribution**

One area at MAFB, a closed landfill, is undergoing corrective measures to remediate contaminated surface and ground water. The remedial technology biodegrades contaminants in shallow groundwater, which will improve water quality in both surface and groundwater. Alternatives 2 and 3 would have the same impacts on these resources.

The HWSF is an enclosed building with cement floors. Operation of the HWSF would not impact water resources.

### **C. Geology and Soil Quality, Stability, and Moisture**

A vegetative cap on the closed landfill described above must be maintained as part of the corrective measures. Impacts of Alternatives 2 and 3 to soil quality, stability and moisture would be minor.

The HWSF is an enclosed building with cement floors. Operation of the HWSF would not impact geology and soil quality, stability or moisture.

### **G. Vegetation Cover, Quantity, and Quality**

A vegetative cap on the closed landfill described above must be maintained as part of the corrective measures. Impacts of Alternatives 2 and 3 to soil quality, stability and moisture would be minor.

The HWSF is an enclosed building with cement floors. Operation of the HWSF would not impact vegetative cover quality, stability or moisture.

**Table 2. Potential Impacts on Social, Economic, and Cultural Environment**

Alternative 2 – ■

Alternative 3 – ★

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

## **Description of Potential Impacts on Social, Economic, and Cultural Environment**

### I. Demands for Governmental Services

Both a permit and administrative order would require submittal of work plans, reports and completion certification documentation for corrective action activities. These submittals would be reviewed by DEQ. In addition, staff of DEQ's Hazardous Waste Section would, at times, conduct inspections of corrective action activities. Therefore, a minor impact to government services is anticipated. Impacts would be the same for Alternatives 2 and 3.

A minimum of annual inspections of the hazardous waste storage facility by staff of DEQ's Hazardous Waste Section are required by a Performance Partnership Agreement between EPA and DEQ. The inspections would result in resources spent on staff time for inspections, report writing, and enforcement activities, if necessary. Therefore, a minor impact to government services is anticipated. Alternative 2 does not include a permit for the HWSF; therefore, this impact would only affect Alternative 3.

### J. Industrial and Commercial Activity

Alternative 2 would have minor negative impacts with regard to the hazardous waste storage facility. MAFB would be required to ship hazardous wastes to an off-site permitted treatment, storage, and disposal facility (TSDF) within 90 days of generation. This action would result in some loss of efficiency and an increase in staff time and cost resources.

Alternative 3 would have minor positive impacts with regard to the hazardous waste storage facility. The ability to store hazardous wastes for longer than 90 days prior to shipment to a TSDF would increase efficiency in transportation costs and staff time.

Impacts on industrial and commercial activity would be the same for Alternatives 2 and 3 and would be the same as impacts from the two previous MAFB hazardous waste permits. MAFB hires environmental consulting firms to implement the remedy, sampling, technical evaluations, and work plan and report development for remedial activities. Samples for analytical evaluation would continue to be sent to an external analytical laboratory for analysis.

### K. Locally Adopted Environmental Plans and Goals

Corrective action requirements in either an administrative order or permit (Alternatives 2 or 3) would require MAFB to implement institutional measures to control or prevent present and future on-base and off-base use and access to contaminated shallow groundwater. For on-base controls, MAFB's General Plan consolidates plans and programs related to management and development of Air Force lands, facilities, and resources. The plan would be updated to incorporate institutional controls to prohibit current and future use of ground and surface water, and restrict land use of contaminated areas on the MAFB facility. MAFB currently has a perpetual easement for off-base properties within 1,000 feet of the base boundary that precludes human habitation and building for human occupancy. Further off-base institutional controls may be required, including easements and administrative agreements with adjacent landowners. Changes to the MAFB General Plan and agreements with adjacent landowners are expected to have minor impacts on local environmental plans and goals.

Under Alternative 3, impacts of the HWSF to locally adopted environmental plans and goals would be minor and would occur at closure of the unit. MAFB intends to clean close the HWSF. If confirmatory sampling shows no residual contamination is present in the building or soils, no institutional measures will be necessary. However, if residual contamination is present and not able to be remediated to levels that pose no risk to human health or the environment, institutional controls to restrict use of the building or land would be required.

**Individuals or Groups Contributing to EA**  
Montana Department of Environmental Quality

**Draft EA Prepared**  
Rebecca Holmes  
May 21, 2012

**Final EA Prepared**  
Rebecca Holmes  
August 6, 2012

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**Recommendation**

Based on the EA analysis, impacts of Alternative 2 and 3 on Physical and Biological Environment, and Social, Economic, and Cultural Environment are minor. Alternative 3 would have positive impacts on industrial and commercial activity. Based on the EA analysis, regulatory requirements, and professional judgment, DEQ recommends Alternative 3, issuance of an operating and corrective action hazardous waste permit. DEQ has taken into account all comments received during the public comment period.

The EA analysis demonstrates that this State action will not be a major action significantly affecting the quality of the human environment. Therefore, the EA is an adequate level of environmental review and an EIS is not required.