

**Proposed Modification of the
Hazardous Waste Storage and Treatment Permit
for the
Umatilla Chemical Agent Disposal Facility (UMCDF)
(Permit No. ORQ 000 009 431)**

**Permit Modification Request No. UMCDF-07-006-DFS(3)
Minimum Temperature Limit Change on the DFS**



State of Oregon
Department of
Environmental
Quality

**Umatilla Chemical
Demilitarization Program**

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Introduction

In February 1997, the Oregon Environmental Quality Commission (EQC or Commission) and the Oregon Department of Environmental Quality (Department or DEQ) issued a Hazardous Waste Storage and Treatment Permit (HW Permit) to the U.S. Army to build and operate the Umatilla Chemical Agent Disposal Facility (UMCDF). (There are currently two permittees named on the UMCDF HW Permit. The U.S. Army Umatilla Chemical Depot as owner/operator and the Washington Demilitarization Company, LLC [the Army's construction and operations contractor] as co-operator of the UMCDF.) Construction of the UMCDF was completed in 2001, and chemical munitions/bulk item treatment operations were commenced September 2004.

On January 24, 2007, the UMCDF Permittees submitted a Class 3 Permit Modification Request (PMR) UMCDF-07-006-DFS(3) entitled "Minimum Temperature Limit Change on the DFS." The UMCDF is requesting to modify the minimum automatic waste feed cut-off (AWFCO) temperature setpoint on the Deactivation Furnace System (DFS) during the processing of projectiles.

This fact sheet describes the proposed modification and provides background information about the UMCDF and the basis for the proposed modification. Because the Department has made a tentative decision to approve the PMR with conditions, this fact sheet also includes a discussion of the significant factual, legal, and policy questions the Department considered in reaching its tentative decision. Information on how to provide comment on the proposed modification is provided on page 3 and in Attachment A.

A copy of the public notice distributed December 11, 2007, to persons on the Department's Umatilla Chemical Demilitarization Program mailing list is provided in Attachment A to this fact sheet. The public notice contains detailed information concerning information repositories and the dates of

the scheduled public comment period related to the proposed modification. The changes proposed to the HW Permit (just the pages to which revisions are proposed) are provided in Attachment B.

Process for a Class 3 PMR

Regulations regarding the permitting and operation of hazardous waste treatment, storage, and disposal facilities are known as the "Resource Conservation and Recovery Act" (RCRA) regulations. They are contained in Title 40 of the Code of Federal Regulations (CFR). In accordance with the RCRA regulations, the State of Oregon has been authorized by the U. S. Environmental Protection Agency to implement its own hazardous waste program. Oregon has adopted RCRA regulations as Oregon administrative rules.

Because a hazardous waste permit is expected to be modified over the life of a facility, RCRA regulations identify three "classes" of permit modifications, each with its own public notification and/or participation requirements. Class 1 modifications are the least significant of permit modifications and involve only minor changes to a permit, such as correction of typographical errors, updates to addresses or telephone numbers, or an upgrade of equipment. Class 2 modifications are considered significant changes to the permit and are used primarily to address improvements in technology and management of the facility. Class 3 modifications are considered very significant changes to the permit and are used only for major changes to the facility or its operation or for changes the administrator has cause to believe to be of significant public concern. Both Class 2 and 3 permit modifications require opportunities for public comment. This permit modification request was submitted to the DEQ on January 24, 2007, as a Class 3 modification.

As required by the regulations for a Class 3 permit modification request, an initial 60-day public-comment period was held open from January 16, 2007, through March 19, 2007. The UMCDF permittees held a public information meeting on January 31, 2007, in Hermiston, Oregon. At the close of the comment period, the DEQ had received three comments concerning this permit modification request. The Permittees provided supplemental information to this PMR November 15, 2007, to address comments received during the public comment period.

After reviewing the public comments and the supplemental information provided by the permittees, the DEQ made a tentative decision to approve the proposed modification with changes. Accordingly, the Department has prepared this fact sheet and the revised UMCDF HW Permit language for public review and comment.

In accordance with the RCRA regulations for Class 3 permit modification requests, the DEQ is requesting comments from the public on the proposed revision to the HW Permit. A public comment period on the proposed modification will be open from December 11, 2007, through close of business on January 25, 2008. You may submit written comments to the DEQ any time during the open comment period. Please see Attachment A for details about the public comment period, public hearings, and how you can submit comments to the DEQ.

At the conclusion of this public comment period, the Department will consider all comments received during both the first and second comment periods before making its decision on whether the UMCDF HW Permit should be modified as proposed.

Description of the UMCDF

The UMCDF is located in Northeastern Oregon on the Umatilla Chemical Depot, about seven miles west of Hermiston, Oregon (175 miles east of Portland, Oregon). The address is 78072 Ordnance Road, Hermiston, OR 97838.

The UMCDF is a hazardous waste storage and treatment facility that utilizes four incinerators to destroy the stockpile of chemical warfare agents that has been stored at the Umatilla Chemical Depot (UMCD) since 1962. The UMCDF is owned by the U.S. Army and operated by Washington Demilitarization Company, LLC. A hazardous waste storage and treatment permit for the UMCDF was issued February 12, 1997.

The chemical agent stockpile at the UMCD originally included about 3,717 tons of nerve agents (“GB” and “VX”) and blister agent (“mustard” or “HD”) in liquid form. The chemical agents are contained in munitions such as rockets, projectiles, and land mines and in bulk containers such as spray tanks, bombs, and “ton containers.” The HD is stored only in ton containers. All of the chemical warfare agents are highly toxic.

The “demilitarization” process used by the UMCDF has four basic steps: 1) transportation of the chemical weapons from the storage areas at the UMCD to the UMCDF Container Handling Building, 2) unloading the transport containers and placing the weapons/containers onto a processing line, 3) draining the liquid chemical agent from the weapons/containers, and 4) destroying the chemical agent and explosives and treating the remaining metal parts to destroy any residual chemical agent. The UMCDF has four incinerator systems, each with two combustion chambers known as primary and secondary chambers (the secondary chamber is often referred to as an afterburner in some systems). There are two liquid injection incinerators to destroy the liquid nerve and blister agents, a “deactivation furnace” (a specialized type of rotary kiln) to destroy explosives, and a metal parts furnace to treat empty metal munitions casings and bulk containers under high temperatures to destroy residual chemical agent. The processing of the munitions and containers will produce a variety of “secondary wastes” that are either stored for later treatment at the UMCDF or shipped off-site for final disposal (once they are determined to be agent free).

Each of the four furnace systems has its own pollution abatement system (the systems are identical) to cool the exhaust gases from the incinerators, remove particles, and neutralize the “acid gases.” Each pollution abatement system consists of five main components: a quench tower, venturi scrubber, scrubber tower, mist eliminator vessel, and a set of carbon filter banks that serve as a final pollutant-removal step. There is a large blower located at the end of the carbon filters that pulls the exhaust gases from the furnaces (called “induced draft”) through the pollution abatement system and then exhausts the cleaned gases to the atmosphere through a common stack.

Description of PMR UMCDF-07-006-DFS(3)

This PMR proposed revision of the Permit to modify the minimum automatic waste feed cut-off (AWFCO) temperature setpoint on the Deactivation Furnace System (DFS) during the processing of projectiles. Trial burn data from other sites was provided by the Permittees in support of this request; however, it was insufficient to support the requested changes. Therefore, in order to substantiate the requested changes, the Department is requiring the Permittees to conduct a DFS trial burn on VX projectiles demonstrating the lower temperature setpoints will not result in excess emissions. The data from the trial burn will determine whether the requested lower temperature AWFCO setpoints will be approved.

Attachment B shows the affected permit conditions and the proposed changes.

The DEQ’s tentative approval decision

The DEQ has made a tentative decision to approve with conditions the Class 3 Permit Modification Request UMCDF-07-006-DFS(3) “Minimum Temperature Limit Change on the

DFS.” If approved, the UMCDF HW Permit will be revised so that the proposed changes are integrated into Module VI of the UMCDF Hazardous Waste Permit.

Significant considerations in reaching a tentative decision

The DEQ made its tentative approval decision after consideration of the permit modification request, the supplemental information provided by the permittees, and the public comments received during the first 60-day public comment period. The most significant issues the DEQ considered in making its decision are discussed below.

a. Reduce the AWFCO setpoint of the DFS rotary kiln exhaust from 1,000°F to 950°F during projectile processing

Presently, the permit specifies a minimum AWFCO setpoint for 16-TALL-182 of 1,000°F for exhaust gas exiting the DFS kiln. This setting was established through trial burns at the UMCDF. This setting is above the melting point of aluminum, and has thus caused operational problems as a result of aluminum buildup in the rotary kiln during projectile processing. These operational problems have resulted in alternative operating schemes to remove the aluminum from the kiln as well as unplanned shutdowns of the furnace to manually remove the aluminum. These shutdowns represent an increased risk to workers tasked with entering the system to manually remove aluminum as well as a nominal increased risk to the public by prolonging the storage of munitions. While reduction of this setpoint will alleviate operational difficulties, the setpoints were established during trial burn activities at the plant. These trial burns demonstrated compliance with regulatory emissions standards. The Permittees must demonstrate that operation at these modified settings will not result in excess emissions from the facility.

b. Lower the AWFCO setpoint of 16-TIC-08 to 875°F during projectile processing

Instrument Tag No. 16-TIC-08 is a process variable input controller that receives information from two different temperature elements. One of these elements is located downstream of a quench spray system. As a result, 16-TIC-08 will register a lower temperature measurement as compared to 16-TIC-182. The requirement to keep 16-TIC-08 at a temperature greater than the temperature of 16-TIC-182 nullifies the benefits experienced by reducing the AWFCO setpoint of 16-TIC-182. While a reduction in this setpoint will alleviate operational difficulties, the same reasoning applies as to the issue above, and the Permittees must demonstrate that operation at these modified settings will not result in excess emissions from the facility.

How to submit your comments to the DEQ on the proposed permit modification

The Department is inviting public comment on this proposed modification to the UMCDF HW Permit. The **public comment period** on this proposed permit modification will remain open from **December 11, 2007 through close of business (5:00 p.m.) on January 25, 2008**. Written comments may be submitted by e-mail, fax, or regular mail anytime during the comment period, provided the comment is received by the Department no later than 5:00 p.m. on January 25, 2008. E-mail comments should be submitted to cdp@deq.state.or.us and include the words “Public Comment” in the subject line. Comments submitted by facsimile transmission should be addressed to Richard C. Duval, Administrator, Chemical Demilitarization Program, 256 East Hurlburt, Hermiston, Oregon 97838.

What happens next?

The Department will review and consider all written comments received during the comment period. Based on its review, the Department may decide to modify the HW Permit as proposed, with changes, or may decide against modifying the HW Permit.

For more information

For more information about this permit modification or for other information on the UMCDF, please contact Richard C. Duval, Administrator, Chemical Demilitarization Program, Hermiston office of the DEQ (Phone [541] 567-8297, ext. 22 or toll-free in Oregon [800] 452-4011) or e-mail to cdp@deq.state.or.us. The Department’s Chemical Demilitarization Program has prepared numerous fact sheets about the chemical weapons destruction process at the UMCD that are available upon request.

Attachments

- A** Public Notice: Request for Comments
- B** Change Pages for the Proposed Modification of the UMCDF HW Permit

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Public Notice: Request for Comments

Minimum Temperature Limit Change on the DFS

Permit Modification Request UMCDF-07-006-DFS(3)
(Hazardous Waste Permit Number ORQ 000 009 431)

The purpose of this notice is to invite you to provide written comments on this proposed change to the UMCDF Hazardous Waste Permit (HW Permit).

DEQ's Role:

The Oregon Department of Environmental Quality (DEQ) is responsible for protecting and enhancing Oregon's water and air quality, for cleaning up spills and releases of hazardous materials, and for managing the proper disposal of hazardous and solid wastes. One way the DEQ does this is by requiring permits for certain activities. The DEQ has issued a HW Permit to the UMCDF to regulate the type and amount of wastes that may be stored and treated. All proposed revisions to the HW Permit are submitted by the UMCDF to the Department for review and decision/acceptance via the permit modification process.

Notice issued: December 11, 2007

Written comments due:

5 p.m. January 25, 2008

Oral comments:

If you would also like an opportunity to provide oral comments, you may submit your written request for a public hearing, including the nature of the issues proposed to be raised in the hearing, via e-mail to cdp@deq.state.or.us or by facsimile transmission or regular mail to Richard C. Duval, Administrator, Chemical Demilitarization Program, 256 East Hurlburt, Hermiston, Oregon 97838.

Where can I send my comments?

The DEQ will accept written comments by mail, fax, or e-mail (see below):

Richard C. Duval, Administrator
DEQ Chemical Demilitarization Program
256 E. Hurlburt Avenue
Hermiston, OR 97838
Phone: (541) 567-8297 or
(800) 452-4011 (toll-free in Oregon)

Fax: (541) 567-4741

E-mail: cdp@deq.state.or.us

(Please include "Public Comment" in the subject line. E-mail comments will be acknowledged as soon as possible. The DEQ is not responsible for delays between servers that result in missed comment deadlines.)

How do I get more information and review pertinent documents?

In accordance with applicable regulations, the DEQ has prepared a much more detailed fact sheet with information related to this permit modification request and the reasons for the DEQ's tentative decision to recommend approval. You can review the detailed fact sheet and other documents related to Permit Modification Request UMCDF-07-006-DFS(3) via the DEQ Chemical Demilitarization Program web page

(<http://www.deq.state.or.us/umatilla/cdpsearch/cdpSearch.asp>), at the Hermiston DEQ office (please call ahead for an appointment), or at one of the following information repositories:

Hermiston Public Library

235 E. Gladys Avenue
Hermiston, OR 97838
(541) 567-2882

Portland State University Library

951 S.W. Hall, Fifth Floor
Portland, OR 97204
(503) 725-4617

You can also call, write, or e-mail the Hermiston DEQ office and request information be sent to you. Interested parties are invited and encouraged to provide comments on this proposed change to the UMCDF HW Permit.



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What is proposed?

On January 16, 2007, the UMCDF Permittees submitted Class 3 Permit Modification Request UMCDF-07-006-DFS(3) titled, "Minimum Temperature Limit Change on the Deactivation Furnace System (DFS)." The PMR proposed to reduce the minimum automatic waste feed cut-off (AWFCO) setpoint of the DFS rotary kiln exhaust temperature from 1,000°F to 950°F measured on an instantaneous basis during the treatment of projectile energetic components. The PMR also proposed to eliminate a Department-issued condition of approval of PMR UMCDF-05-041-DFS(1R) pertaining to the DFS kiln exhaust temperature during hazardous waste operations.

An initial public comment period on this permit modification request was held open from January 16, 2007 to March 19, 2007. A public information meeting was held on January 31, 2007, in Hermiston, Oregon. The DEQ received three comments concerning this permit modification request.

After consideration of the public comments and review of the information submitted by the UMCDF related to this permit modification request, the DEQ has made a tentative decision to conditionally approve the permit modification request. The purpose of this notice is to invite you to provide comments to the DEQ on this proposed change to the UMCDF HW Permit.

Why has the change been proposed?

The permit modification request proposed 1) reducing the minimum automatic waste feed cut-off (AWFCO) setpoint of the DFS rotary kiln exhaust temperature from 1,000°F to 950°F measured on an instantaneous basis during the treatment of projectile energetic components and 2) eliminating a Department-issued condition of approval of PMR UMCDF-05-041-DFS(1R) pertaining to the DFS kiln exhaust temperature during hazardous waste operations. The purpose of these temperature reduction modifications is to alleviate difficulties with aluminum buildup encountered during the 8-inch GB projectile campaign.

Where is the facility located?

The UMCDF is located in Northeastern Oregon on the Umatilla Chemical Depot, about seven miles west of

Hermiston, Oregon (175 miles east of Portland, Oregon). The address is 78072 Ordnance Road, Hermiston, OR 97838.

What kind of facility is the UMCDF?

The Umatilla Chemical Agent Disposal Facility (UMCDF) is a hazardous waste storage and treatment facility that utilizes four incinerators to destroy the stockpile of chemical warfare agents that has been stored at the Umatilla Chemical Depot (UMCD) since 1962. The UMCDF is owned by the U.S. Army and operated by Washington Demilitarization Company, LLC. A hazardous waste storage and treatment permit for the UMCDF was issued February 12, 1997.

The chemical agent stockpile at the UMCD originally included about 3,717 tons of nerve agents ("GB" and "VX") and blister agent ("mustard" or "HD") in liquid form. The chemical agents are contained in munitions such as rockets, projectiles, and land mines and in bulk containers such as spray tanks, bombs, and "ton containers." All of the chemical warfare agents are highly toxic.

What happens next?

After completion of the public comment period, the DEQ will review and consider written comments received during the comment period. Based on this review, the Department will make a final decision on whether to approve the permit modification as proposed, approve the modification with revisions, or to deny the modification request.

The DEQ anticipates its final decision will be made by February 25, 2007, and will respond to all significant comments received during both the first and second comment periods.

Accessibility information

The DEQ is committed to accommodating people with disabilities. Please notify the DEQ of any special physical or language accommodations or if you need information in large print, Braille, or another format. To make these arrangements, contact Shilo Ray in the DEQ Hermiston office (541) 567-8297, ext. 21, or toll-free in Oregon at (800) 452-4011, fax to (541) 567-4741, TTY (503) 229-6993, or e-mail to deqinfo@deq.state.or.us to request an alternate format.

Attachment B

Change Pages for the Proposed Modification of the HW Permit Permit Modification Request No. UMCDF-07-006-DFS(3) Minimum Temperature Limit Change on the DFS.”

Permit Module	Comments
Module VI (“Short-Term Incineration – Shakedown, Trial Burn and Post-Trial Burn”)	
Condition VI.A.5.ii (Deactivation Furnace System, Trial Burn Plan and Data Submission)	Add subitem d to read: “The Permittees shall submit a DFS VX projectile emissions demonstration plan or withdraw Permit Modification Request UMCDF-07-006-DFS(3) no later than January 31, 2008.

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