State of Oregon
Department of Environmental Quality Memorandum

Date: August 4, 2011

To: Environmental Quality Commission

From: Dick Pedersen, Director

Subject: Agenda item H, Informational item: Umatilla Chemical Demilitarization Program status update
August 25-26, 2011, EQC meeting

Purpose of item

This item will inform the commission about program updates, permitting activities, and project status at the Umatilla Chemical Agent Disposal Facility as of July 17, 2011.

Program news

Agent processing at the Umatilla Chemical Agent Disposal Facility

As of July 17, 2011, the facility has destroyed 220,030 munitions, which represents 99.7 percent of all Umatilla munitions and bulk containers and 86.2 percent of the original Umatilla stockpile by agent weight.

HD (Mustard) operations

The mustard agent campaign began June 4, 2009. There were 2,635 ton mustard containers in the original stockpile. This represents one percent of all facility munitions and bulk containers and 63 percent of the original stockpile by agent weight. As of July 17, 2011, 2,061 ton containers have been treated containing 1,825 tons of mustard agent.

DEQ completed its review of the final HD mustard trial burn report for the liquid incinerators, and is working with the facility to correct errors in the associated permit modification request. This request will update the operating parameters for the liquid incinerators that were demonstrated during the HD trial burn. Once the permit modification is approved, the UMCDF will be allowed to increase to 100 percent of the liquid incinerator permitted feed limits. The UMCDF is already at 100-percent metal parts furnace operations.

The metal parts furnace is used during ton container processing, which limits availability of the furnace to process potentially agent-contaminated secondary wastes. Therefore, the Army is storing potentially agent-contaminated wastes in containers and transporting them to J-Block permitted storage to be treated as the availability of the metal parts furnace increases, presumably at the completion of mustard agent ton container processing.

The emissions demonstration test for the treatment of HD ton container rinsates in the liquid incinerators is scheduled to begin Aug. 5, 2011. Many of the solid heels that have formed in the bottom of the HD ton containers exceed the metal parts furnace waste feed limit. Rinsates are generated when the solid heel is treated with high-pressure, hot-water sprays to reduce the heel size.

GB (Sarin) operations
The facility completed sarin munitions and bulk items processing in July 2007. Sarin munitions and bulk items comprised 21.4 percent of the total Umatilla stockpile by agent weight. The facility destroyed 155,539 munitions and bulk containers filled with 2,028,020 pounds of sarin nerve agent. This represented 70.5 percent of all Umatilla munitions and bulk containers and 21.4 percent of the original Umatilla stockpile by agent weight. The only remaining sarin-related waste is used filter system carbon.

VX operations
The facility completed VX munitions processing Nov. 5, 2008. VX munitions and bulk items comprised 9.8 percent of the total Umatilla stockpile by agent weight. The facility destroyed 14,519 VX rockets and warheads, one VX ton container, 156 VX spray tanks, 32,313 155mm VX projectiles, 3,752 eight-inch VX projectiles, and 11,685 VX mines filled with over 720,000 pounds of agent.

Except for carbon, the facility has treated all VX-related wastes previously stored in J-Block igloos.

Umatilla Chemical Agent Disposal Facility RCRA permitting activity

May 26, 2011, through Aug. 1, 2011

The UMCDF did not submit any permit modifications and the DEQ did not make any decisions on permit modifications during this reporting period. The UMCDF is in a permitting "black-out" period while the final renewal permit is being prepared.

IN PROCESS The following permit modification requests are under DEQ review				
#	**Title**	**Received**	**Public Comment Period Close**	**Target Decision/ Review Date**
Requests				
09-006	Amend Closure Plan	09/25/09	11/24/09[1] 05/16/11[3]	09/01/11
10-023	Post-HD ATB Operational Parameter Changes for LICs 1 and 2	10/22/10	N/A	08/15/11

[1] Initial (permittee) public comment period.
[2] DEQ (draft permit) public comment period.
[3] 2nd permittee public comment period due to significant changes

Acronyms/Abbreviations:

CHB = Container Handling Building
DAAMS = Depot Area Air Monitoring System
DAL = Discharge Airlock
DMIL = Demilitarization
HVAC = Heating, ventilation, and air conditioning
LIC = Liquid Incinerator
MAO = Mutual agreement and order
MISC = Miscellaneous
MPF = Metal Parts Furnace
PAS = Pollution Abatement System
TANK = Tank

The DEQ is continuing the work to renew the UMCDF hazardous waste permit. The draft renewal permit was issued May 31, 2011, and the 45-day public comment period closed July 15, 2011. The DEQ is waiting for updated design documents from the UMCDF before issuing the final renewal permit, which is planned

for late August 2011.

Umatilla Chemical Depot RCRA permitting activity

May 26, 2011, through August 1, 2011

IN PROCESS The following Depot permit modification requests are under DEQ review				
#	**Title**	**Received**	**Public Comment Period Close**	**Target Decision/ Review Date**
Requests				
11-001	Incorporation of the UMCD RCRA Closure Plan	05/04/11	07/11/11[1]	09/01/11
[1] Initial (permittee) public comment period.				

Significant events at other facilities

During this reporting period the CMA achieved elimination of 88-percent of the national stockpile.

Tooele Chemical Agent Disposal Facility, Utah

The Tooele facility started mustard disposal August 2006 and completed the mustard campaign May 2011. The Tooele facility is now in closure, having destroyed more than 99 percent of Deseret Chemical Depot's original chemical agent munition stockpile over a 15-year period.

The remaining GA (Tabun) nerve agent and Lewisite blister agent-filled ton containers will be destroyed in a small-scale incinerator system currently being assembled and systemized.

The remaining overpacked HD "leaker" munitions (198 155mm projectiles and 135 4.2-inch mortars) as well as 47 Deseret Chemical Depot mustard agent samples will be destroyed using DAVINCH explosive detonation technology. DAVINCH detonation chamber treatment operations are scheduled from November 2011 through February 2012.

Anniston Chemical Agent Disposal Facility, Alabama

The Anniston facility completed its HT and HD mustard campaigns this year, and has destroyed more than 99 percent of its original chemical agent stockpile.

The Anniston facility started operating in April 2011 a static detonation chamber from the Swedish company DYNASAFE AB to process remaining mustard-filled munitions that are leaking or were rejected during demilitarization operations. The chamber is used to destroy these munitions as a means toward meeting the international treaty requirements. As of July 29, 2011, 1,303 105-mm projectiles and 73 4.2-inch mortars have been processed.

Pine Bluff Chemical Agent Disposal Facility, Arkansas

The Pine Bluff facility completed its chemical treatment operations November 12, 2010. An end-of-mission ceremony was held March 10, 2011.

The Pine Bluff facility is in closure. Destruction of the Pine Bluff facility began March 28, 2011. The facility has started closure of the deactivation furnace system, the container handling building, and the bulk drain station. Decontamination and dismantling of the facility and equipment is

expected to last approximately two years. Personnel have been trained on the Brokk 180 demolition machine. The Brokk is a hydraulic functioning/remote-controlled compact, light-weight machine designed for demolition activities including removal (scabbling) of concrete in toxic areas and the cutting of piping and steel.

Newport Chemical Agent Disposal Facility, Indiana
Newport was the third site to complete agent disposal operations, following Johnston Atoll Chemical Agent Disposal System in 2000 and Aberdeen Chemical Agent Disposal Facility in 2006. Closure has been completed. The CMA transferred the property to the Department of the Army Base Realignment and Closure (BRAC) July 18, 2010.

Blue Grass Chemical Agent Destruction Pilot Plant, Kentucky
The Blue Grass facility will use neutralization followed by supercritical water oxidation to destroy its 524-ton stockpile of nerve and mustard agents. The facility has neutralized three sarin ton containers, known as Operation Swift Solution, representing 0.2 percent of the stockpile. The facility is scheduled to begin chemical agent operations in 2018, recently extended from 2017, and to be completed by 2023. Construction is more than 30-percent complete, with startup projected for 2018.

Construction of the Blue Grass facility continues. The first structural steel for the control and support building was placed Sept. 17, 2009. In late April 2010, the final concrete mat foundation floor slabs were placed in the munitions demilitarization building. Currently, they are installing reinforcing steel and placing concrete in the munitions demilitarization building; installing metal walls studs and sheet rock in the control and support building; and starting the laboratory foundation work. The first two of three energetic neutralization reactors have been installed. The reactors will neutralize explosives that have been removed from munitions.

Based on the Army's commitment to treat all agent-contaminated secondary wastes onsite versus offsite shipment, as was done at Newport, the Army is processing all hydrolysates onsite. When treatment has been completed, the operational facilities will be shut down and the temporary structures and equipment will be shipped to Aberdeen Proving Grounds.

Pueblo Chemical Agent Destruction Pilot Plant, Colorado
The Pueblo facility will use neutralization followed by biotreatment to destroy its 2,611-ton mustard agent stockpile of artillery and mortar projectiles.

Nearly all the Pueblo facility buildings are up and enclosed and the medical and laboratory facilities are set and secured. Immobilized cell bioreactors, which will treat the hydrolysate generated during neutralization, are set on their pads in the biotreatment area. Facility construction is scheduled to be completed by March 2012, with startup targeted early 2015.

Litigation continues between the State of Colorado and the U.S. Army with regard to continued storage of the munitions and the required start and completion of destruction of the Pueblo stockpile.

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