State of Oregon
Department of Environmental Quality Memorandum

Date: Sept. 26, 2011

To: Environmental Quality Commission

From: Dick Pedersen, Director

Subject: Agenda item B, informational item: Umatilla Chemical Demilitarization Program status update
Oct. 20-21, 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.

Program news

Agent processing at the Umatilla Chemical Agent Disposal Facility

DEQ approved the final HD mustard trial burn report and the operating parameters permit modification request for the liquid incinerators. Thus, the facility is now allowed to operate at 100 percent of the liquid incinerator permitted feed limits. The facility is already at 100 percent metal parts furnace operations.

As of Sept. 11, 2011, the facility has destroyed 220,321 munitions, which represents 99.9 percent of all Umatilla munitions and bulk containers and 93.1 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 Sept. 11, 2011, the facility has treated 2,352 ton containers containing 2,083 tons of mustard agent.

The metal parts furnace is used during ton container processing, which limits availability of the furnace to process potentially agent-contaminated secondary wastes. 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 mustard ton container rinsates in the liquid incinerators was completed in August 2011, and DEQ is waiting for the test results. Solid heels have formed in the bottom of the HD mustard ton containers. Many of the solid heels 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

Aug. 1, 2011, through Sept. 14, 2011

The facility did not submit any permit modifications and is in a permitting "black-out" period while the final renewal permit is being prepared.

Permit modification request approvals or acceptances by DEQ			
#	Title	Received	Decision
10-023	Post-HD ATB Operational Parameter Changes for LICs 1 and 2	10/22/10	08/23/11

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[2]	11/15/11

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

Acronyms/Abbreviations:
ATB = Agent trial burn
LIC = Liquid Incinerator

DEQ's work to renew the facility's hazardous waste permit continues. DEQ issued the draft renewal permit May 31, 2011. The 45-day public comment period closed July 15, 2011. In late August, the permittees submitted information required to issue the permit. DEQ has scheduled meetings for the week of Sept. 12, 2011, to review the final changes with the Umatilla facility before the permit is issued.

Umatilla Chemical Depot RCRA permitting activity

August 1, 2011, through September 14, 2011

Permit modification request approvals or acceptances by DEQ			
#	**Title**	**Received**	**Decision**
11-002	Incorporation of the UMCD RCRA Closure Plan	05/04/11	08/04/11

Significant events at other facilities

The Chemical Materials Agency has eliminated 89 percent of the national stockpile as of Aug. 31, 2011.

Tooele Chemical Agent Disposal Facility, Utah

The Tooele facility mustard disposal campaign started August 2006 and ended May 2011. The Tooele facility has destroyed 99 percent of its original stockpile tonnage.

The Tooele facility completed HD ton container treatment. Treatment of the small stockpiles of GA (Tabun) nerve agent and Lewisite blister agent is scheduled to begin in October 2011. Treatment will not take place at the demilitarization facility but in the depot's Area 10 liquid incinerator.

About 340 overpacked "leaker" munitions and 47 Deseret Chemical Depot mustard agent samples also remain. Due to the delays in readying the DAVINCH detonation chamber, the Tooele facility incinerators will be restarted. The Tooele facility will use parallel processing with both the incinerators and the DAVINCH system operating to catch up to the facility's intended schedule.

Anniston Chemical Agent Disposal Facility, Alabama

The Anniston facility began processing HT and HD mustard 4.2-inch mortars July 2, 2009. It is currently processing HD 155mm projectiles. As of May 26, 2011, the facility has destroyed 99.8 percent of the original tonnage.

Anniston started using the DYNASAFE static detonation chamber in April 2011 to destroy leaking and rejected mustard-filled projectiles and mortars. As of Aug. 17, 2011, the facility has treated 1,705 projectiles and 368 mortars, and stockpile destruction operations are on pace to end September 2011.

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. 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 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 Chemical Materials Agency transferred the property to the Department of the Army Base Realignment and Closure 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. Construction is more than 30-percent complete. The facility is scheduled to begin chemical agent operations in 2018, and to be completed by 2023.

Testing is being conducted to determine if installation of the igloo filtration system on the Blue Grass igloos will provide safe storage and working conditions for employees as well protect public health and the environment.

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 is complete, the facility will shut down its operational facilities and ship all temporary structures and equipment 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 constructed and are being prepared for use. Work continues inside the enhanced reconfiguration building and the agent processing building as workers focus on installing first-of-a-kind equipment and completing pipe routing pieces to the equipment. The construction crew recently turned over the electrical power distribution system to the start-up group. Facility construction is scheduled to be completed by March 2012, with startup targeted early 2015.

Based on the U.S. Army's commitment to treat all agent-contaminated secondary wastes onsite versus offsite shipment, as was done at Newport, all hydrolysates will be processed onsite.