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Baltimore District

The Corps'pondent

a newsletter by the U.S. Army Corps of Engineers for the residents of Spring Valley

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Army to begin destruction of chemical munitions in May

by Gary Schilling
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Later this month, Army experts will use a mobile system, known as the Explosive Destruction System or EDS, to safely treat and neutralize onsite the chemical agent fill of the recovered World War I military chemical munitions discovered during the Corps' investigation and cleanup of the Spring Valley neighborhood.

The Environmental Protection Agency, the D.C. Department of Health and the Department of Defense Explosives Safety Board have reviewed and approved the plans for the onsite destruction of these munitions using the EDS.

The EDS was presented to the Spring Valley Restoration Advisory Board at the board's April 8 meeting as the safest and most expedient method for removing recovered chemical warfare materiel from the neighborhood.

The Army-developed EDS treatment process has been successfully used to destroy recovered chemical munitions at Rocky Mountain Arsenal in Colorado, Edgewood Arsenal in Maryland and at the former Camp Sibert in Gadsden, Ala. This is the first time the EDS will be used at the Spring Valley site.

The treatment process involves a number of steps to destroy the recovered chemical munitions one at a time.

First, a commercial explosive is placed on the munition and it is then put inside the EDS's 50-gallon stainless steel containment vessel. The vessel is sealed, and the explosives are remotely detonated. This opens the outer casing of the munition. The containment vessel prevents the release of metal fragments and chemical agent into the environment.

Next, neutralizing chemicals are pumped into the containment vessel, which react with the chemical agent in the munition to form a less toxic substance.

Heaters within the containment vessel are turned on, and the hydraulic oscillation subsystem mixes the reacting chemicals to ensure complete neutralization.

The resulting liquid is drained into drums and trucked to a permitted facility for disposal.

Trucking procedures will follow appropriate Department of Transportation regulations and local D.C. government transportation guidelines.

After detonation, the air inside the containment vessel is filtered using a carbon filter before being released into the environment.

Both the EDS's containment vessel and fragment suppression system are mounted on the bed of a small flat trailer that is transported to sites where chemical munitions are found.

Officials stress that the onsite use of the EDS significantly reduces the risks associated with the storage, handling and transportation of chemical filled munitions.

As an added measure of safety during the use of the EDS, the Army will erect a metal vapor containment structure over the EDS, similar to the one used during excavation of the burial pits on Glenbrook Road.

As with the EDS, the vapor containment structure contains a filtering system designed to prevent the release of a chemical agent should an unplanned release occur during the handling of the munitions.

The munitions to be treated in the EDS are being stored in a facility known as the Interim Holding Facility, or IHF.

For current operations, the IHF will be enhanced by adding an air filtration system to address the fact that some recovered chemical munitions may contain a very small quantity of explosive known as a burster. This modification to the IHF allows the Corps to continue to provide the greatest level of safety possible.

In keeping with this desire, the Corps is also evaluating other solutions for siting the IHF. One possibility is to relocate the structure further away from inhabited buildings, parking areas and roads.



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Other project activities

In other activities, the first group of buried anomalies were excavated and field cleared in the area known historically as the Spaulding/Captain Rankin Area, which is comprised of a small strip of land on American University and several properties on Woodway Lane.

Ninety-five anomalies were removed in this first group. No ordnance-related items or recovered chemical warfare materials were found.

The excavation of a second group of anomalies at this location will begin later this month.

The larger effort to investigate other Spring Valley properties for potentially buried World War I munitions is under way.

The latest group of these properties, consisting of 12 properties, have been surveyed using geophysical equipment designed to locate buried metal objects. The survey data from these properties is being evaluated by ordnance experts to determine if any follow-on work will be needed. This group included properties on Sedgwick Street and in the Spaulding/Captain Rankin area. The next group of 10-12 properties will likely be surveyed next fiscal year.

To date, soil removal and backfilling has been completed on 19 of the 150 properties and lots containing grids above the arsenic cleanup level of 20 parts per million.

RAB applications

The Corps received six applications from residents expressing interest in serving on the Spring Valley Restoration Advisory Board. The RAB's nomination committee will review these applications, conduct interviews if needed and make recommendations for new members at the RAB's May 13 meeting.

The Corps welcomes applications at any time. Applications are held and considered when open seats need to be filled.

RAB meetings are held the second Tuesday evening of every month at St. David's Episcopal Church, 5150 Macomb Street, N.W. Meetings are open to the public.

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