



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

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WWII mustard gas pit to be dug up

Depot buried German bombs

By Tom Chartier
The Commercial Appeal

Day after hectic day, workers at the old Defense Depot Memphis battled intense heat and risked chemical burns as they unloaded, neutralized and buried German mustard gas bombs that had left a trail of chaos all the way from the Gulf Coast.

That was July 1946.

These days, overseers of the now-closed depot are preparing for an operation that no

work and safety plans for the operation. Because no one's sure exactly what the digging will turn up, the excavation area will be enclosed in a tent. Yet, for all the trouble involved in removing the chemical materiel, base officials acknowledge they've been unable to find any evidence that, left alone, it would present a significant danger. But there is an overriding reason for the removal, they say.

Along with some gas training kits, the remnants of Nazi mustard bombs are among the chemical-warfare materiel to be excavated at the depot this year. It's part of an effort by the Pentagon to get rid of "non-stockpile" chemical agents, including those buried at depots that are being transferred to nonmilitary uses.

Since fall, a Huntsville, Ala., contractor has been preparing

South Memphis has been dealing with a variety of real and potential environmental threats having nothing to do with chemical warfare materiel.

Those problems, first outlined in a 1992 report, include industrial solvents found in ground water and pollutants in soils and surface water. The excavation of contaminated ground water began last year, and officials are assessing broader plans to clean up hazardous wastes on the base.

Meantime, the federal Agency for Toxic Substances and Disease Registry has been

updating its studies of possible health problems facing residents living near the depot. So far, officials have found "nothing to suggest there's a causal relationship" with the facility, said Dr. Rueben Warren, associate administrator for urban affairs with the agency.

Concerns from neighboring residents helped ensure that the chemical warfare materiel would be removed.

"I think it should be dug up, but I think it should be done with caution," said Mondell Williams, a community leader

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who is co-chairman of the Restoration Advisory Board, which is participating in the cleanup planning.

During its nearly six decades of service, the depot was never a major storage or staging area for chemical weapons. But some agents ended up there literally by accident.

On July 13, 1946, eight rail cars filled with captured German mustard bombs were moved to a yard in Memphis while en route to Pine Bluff Arsenal in Arkansas. Although chemical agents weren't used in World War II, the Germans had stockpiled bombs containing mustard, an agent that can blister the skin, eyes and lungs.

The cars were part of a shipment of bombs that had left Theodore, Ala., a few days earlier. The bombs, improperly loaded and coated with thin-gauge metal, had a tendency to leak, according to records examined as part of the depot cleanup project.

Leaking bombs previously

had been dumped in the Gulf of Mexico, and, later, had resulted in injuries to workers and service personnel in Amory, Miss.

In Memphis, authorities discovered that three of the eight cars were leaking. They decided to move the cars to the depot, where workers — many wearing stifling protective suits — unloaded the bombs and began decontaminating the railroad tracks.

Under the direction of ordinance experts, crews then prepared a slurry of lime bleach to neutralize the mustard and dug a 30-foot-long, 12-foot-deep pit in Dunn Field, a disposal area on the north end of the depot. Workers placed bombs over the pit and shot holes in them to drain the mustard into the slurry.

At least 29 bombs were disposed of, the records show. A total of 21 rail and depot workers were hospitalized for burns and other injuries.

In addition to the bombs, the depot disposed of chemical agent identification kits in Dunn Field. The sets, used by the military from 1928 to 1969, typically consisted of glass vials or bottles containing low concentrations of such agents as mustard and lewisite gas.

"They would bring (soldiers) into an enclosed area, like a quonset hut," said Shawn Phillips, environmental coordinator at the depot.

"They'd break the vial and let the soldiers smell it. They'd say, 'If you smell this on the battlefield, don your chemical-warfare gear.'"

The chemical identification kits are buried at installations across the nation. At the request of the Army, the National Research Council is conducting a study of the environmental, technical and economic issues involved in the program to excavate and dispose of the kits.

Study director Tracy Wilson said the training sets shouldn't present a significant danger to public health or the environment.

"These . . . were not designed for lethal purposes. That certainly reduces the hazards right there," Wilson said.

"Typically, these things are in glass containers and sealed up pretty well."

Retired depot employee Charles E. Anderson, who worked as an inspector in the chemical warfare section, said the training kits were harmless.

Anderson, 75, was at the

depot when the sets were buried during the 1950s. After all the time that's passed, he's dubious about the excavation.

"I don't know what could be in there," he said.

The disposal or neutralization methods used on the chemical materiel will depend on what the excavation turns up, said Kim Gillespie, spokesman for the U.S. Army Engineering and Support Center in Huntsville.

So far, no chemical warfare materiel has been detected in extensive water and soil testing in nearby areas, meaning it seems to have stayed put.

"The Army still will remove that material, even though it's not migrating. That's to remove a liability on this property," Phillips said.

DeBack added that, except for the historical record, "we've seen very limited evidence that there's anything out there."

The Huntsville firm, UXB International, was awarded a \$2.7 million contract in September to guide the chemical materiel cleanup. The company will draft safety plans to be reviewed by several agencies. The plans will cover dangers to excavation workers as well as

the public.

Jordan English, division of Superfund manager for the Memphis office of the Tennessee Department of Environment and Conservation, said his biggest concern lies with the unknown condition of the chemical materiel.

It's not clear, he said, whether the mustard bombs were thoroughly neutralized or what the byproducts of the slurry process might be.

"Even if it worked properly, the aftermath of the slurry pit might be, for the environment, not good," English said.

Authorities also don't have definitive information on the

quantity of material in the buried training sets, English said.

Turpin Ballard, who is a remedial project manager for the U.S. Environmental Protection Agency, said there will be many safety features to the excavation and removal process.

"They're just being conservative because you never know what might not have gotten fully neutralized or broken," he said.

"In the event there's any kind of release, they'll be able to contain it inside the tent."

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