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Pollution an Enduring Legacy at Old Missile Sites

By THE ASSOCIATED PRESS

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CHEYENNE, Wyo. (AP) -- As U.S. Air Force officials marked the 50th anniversary of the deployment of nuclear missiles to sites in the rural United States this past week, residents in some of these communities are still grappling with another legacy -- groundwater pollution from chemicals used to clean and maintain the weapons.

The U.S. Army Corps of Engineers is identifying and cleaning up dozens of former nuclear missile sites in nine states.

To date, the corps has spent $116 million at 44 former Atlas and Titan intercontinental ballistic missile -- or ICBM -- sites and 19 former Nike anti-aircraft missile sites from the early Cold War. The missile sites include 14 in Kansas, 10 in Nebraska, seven in Wyoming, seven in Colorado and two in Oklahoma. California, New Mexico, New York and Texas have one contaminated site each.

Total cleanup costs are projected to cost $400 million, according to corps spokeswoman Candice Walters.

The problem is a chemical called trichloroethylene, or TCE, which was used to keep missiles clean and ready to rumble on short notice. Long before environmentalism went mainstream, the men who maintained the missiles didn't think twice about dumping used TCE into the silos' blast pits.

Exposure to high concentrations of the chemical could cause nervous system problems, liver and lung damage, abnormal heartbeat, coma and death, according to the Department of Health and Human Services' Agency for Toxic Substances and Disease Registry. TCE also may cause cancer, other government agencies say.

TCE may have polluted many more missile sites than the corps is aware.

The corps has evaluated a total of 395 former ICBM and Nike missile sites since the Formerly Used Defense Sites, or FUDS, program began in the early 1980s. But the corps didn't identify TCE as a high priority until the U.S. Environmental Protection Agency adopted a drinking water standard for the chemical in 1989.

"As new contaminants are identified, then we have to go back and look at some of the sites we have and say, 'Ooh, maybe this is something we should be looking for,'" Walters said.

One advocate for more aggressive cleanup of TCE said the FUDS program is too underfunded for the corps to look harder for the chemical.

"They don't look too hard for new contamination because if they do, they have tell people they have to clean it up," said Lenny Siegel, executive director of the Center for Public Environmental Oversight at the Pacific Studies Center in Mountain View, Calif.

The FUDS program gets $306 million a year for cleanup work at more than 9,000 former defense sites nationwide that is projected to cost $17.8 billion, Walters said.

Deciding which contaminated missile sites to clean up depends in part on how many people nearby could be exposed to TCE, said Jeff Skog, TCE remediation manager for the corps office in Omaha, Neb. "So it sort of depends on what's available during any given year and how high on up the list it is for priority projects," he said.

The most common use for TCE -- especially in decades past, before it was identified as toxic -- was as a degreaser and lubricant. TCE also has been used in model airplane glue, whiteout and dry-cleaning chemicals.

"It's a rather remarkable chemical," Siegel said. "But the evidence is it's bad for you."

The National Toxicology Program has determined that TCE is "reasonably anticipated" to be a human carcinogen and the International Agency for Research on Cancer has said that TCE is "probably carcinogenic" in people. Large-scale studies of health effects from TCE in drinking water however have been inconclusive.

In southeast Wyoming and northern Colorado, the corps has identified TCE pollution at 11 former Atlas D and Atlas E missile sites that were overseen by F.E. Warren Air Force Base before being decommissioned and sold off in the mid-1960s. Most of those sites are remote, making them low priorities for cleanup.

One site north of Fort Collins, Colo., is close to a river. An environmental group says a planned reservoir that would partly cover the site could contaminate the Poudre River and municipal water supplies downstream.

"If the TCE plume gets to the river, it will be a dangerous chemical pollutant that the water providers have to deal with," said Gary Wockner with SaveThePoudre.org.

The city of Cheyenne has been using four water wells about 10 miles west of town and eight miles east of the second ICBM site that was built in the American heartland. The wells are located within an unusually large, eight-mile-long plume of TCE within the Ogallala Aquifer.

TCE was first detected in the city wells in the 1990s but levels mostly remained below the EPA's drinking water standard of 5 parts per billion. Aeration at the city's water treatment plant broke down the TCE and made it undetectable in the city's drinking water, said plant manager Bud Spillman.

Since last December, however, two wells have had TCE as high as 40 ppb -- eight times the EPA standard -- prompting the corps to install a filter on one well. Meanwhile, the corps has been looking at more elaborate cleanup measures including pumping contaminated water from the aquifer at a cost of up to $15 million, Skog said.

Hank VanGoethen, who lives west of Cheyenne, said he's not convinced that drinking his well water for 27

years did him any harm. TCE in his well recently increased from 4.5 ppb to 28 ppb, he said, prompting the corps to install a filter on his well earlier this year.

He said he drank bottled water for months until the work was finished.

"So far it hasn't cost me anything but aggravation, waiting for them to get it done and watching them do it," he said. "It was definitely a government job."