

Meeting to cover cleanup plan for former nuke missile site

June 30 2015

The U.S. Army Corps of Engineers plans to hold a public meeting about a proposal to use vegetable oil to stimulate the growth of naturally occurring bacteria that would clean up groundwater at a former nuclear missile site.

The project, expected to cost \$36 million and take at least 200 years, is for the former Atlas D missile site 15 miles southeast of Cheyenne that was in service only for a few years in the early 1960s. The U.S. Air Force turned to newer missiles that rendered the Atlas D, among the first intercontinental ballistic missiles deployed in the U.S., obsolete.

The Corps has documented a plume of trichloroethylene, or TCE, in the groundwater directly beneath and three-quarters of a mile east of the 330-acre site. The plume measures about 1.5 miles long, 2,000 feet wide and 180 feet deep.

The federal Centers for Disease Control links TCE—long used as a degreaser and in products ranging from plastic cement to typewriter-correction fluid—to certain kinds of cancer.

Few homes are near the salvage yard that now occupies the missile site. The TCE plume isn't nearly as big as a more than 8-mile-long plume associated with an Atlas D site west of Cheyenne.

The maximum concentrations of TCE in the Atlas D site's plume are up to two-and-a-half times higher, however, topping out at 17,000 parts per

billion. The U.S. Environmental Protection Agency's maximum contaminant level for TCE in treated municipal drinking water is 5 parts per billion.

The Army Corps of Engineers has proposed seven approaches to the site, ranging from doing nothing to a combination of treating the plume with both bacteria and oxidizing chemicals to break down contaminants. Costs would range as high as \$109 million.

Under each scenario, cleanup would take no fewer than 200 years and as long as 1,000 years if nature were allowed to take its course without human intervention.

The Corps' preferred plan would involve pumping emulsified [vegetable oil](#) into the center and leading edge of the contaminated aquifer. The goal would be to stimulate growth of bacteria that would break the TCE down into harmless substances.

A public comment period for the cleanup plans ends July 6. The comment period originally was set to close May 6, but the Corps extended it at the request of the Wyoming Department of Environmental Quality and others. "There was concern that not enough members of the public had received the information in time to make their comments," said Lily Barkau, a program manager for the department.

The department plans to submit comments on the plan, Barkau said Monday. "We provide more of the technical review and ensuring it's going to make sure it's going to be protective of human health and environment," she said.

The Atlas D site consisted of an underground command center and three missiles housed horizontally in concrete, coffin-style bunkers. A lid over each bunker slid sideways so the missile could be raised vertically in

anticipation of launch.

After fueling exercises, the Air Force would drain the rocket fuel back into underground tanks. The missile crew then would use about 25 gallons of TCE to flush out the rocket's parts.

The used TCE wasn't recovered but dumped into the site's blast pits.

The meeting is scheduled for 6-8 p.m. Tuesday at the Cheyenne public library.

© 2015 The Associated Press. All rights reserved.

Citation: Meeting to cover cleanup plan for former nuke missile site (2015, June 30) retrieved 25 April 2024 from <https://phys.org/news/2015-06-cleanup-nuke-missile-site.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.