

Soil Freezing Option Considered at Detrick

By Krista Brick
News-Post Staff

Fort Detrick officials may use soil freezing to remove chemical waste from Area B, a process that will cost \$4.8 million.

Three options for removing the chemical waste buried in pits of Area B, including the preferred freezing method will be discussed at a June 1 public hearing at 6 p.m. at Waverly Elementary School.

The pits, reported to be 15 feet deep, 12 feet wide and 20 feet long are located in Area B, which is bordered by Shookstown Road, Kemp Lane and Rocky Springs Road. They were used to dispose of a variety of chemical wastes from Fort Detrick, the U.S. Bureau of Standards and the Walter Reed Army Medical Center from 1955 to 1970. The material is a likely source of continued groundwater contamination in the area, according to studies.

To remove the chemicals from the pits, officials at the base are hoping to use a method that would freeze the soil surrounding the pits as a containment system, said Lt. Col. Jeffery Springer, chief of safety and environment at Fort Detrick.

He described the process of surrounding the pit with frozen soil much like the sink. Pipes would first be installed using directional drilling at an angle beneath the chemical pits. Then, super-chilled salt water would be continuously pumped and recycled back through the pipes to freeze a four-foot thick layer of the soil beneath and on the sides of the pits, according to Lt. Col. Springer.

"The ice is impermeable," Lt. Col. Springer said. Once the frozen soil casing is created, excavation of the pits should take about 60 days and will also include the removal of the top level of the frozen soil.

A temporary structure will be built over the top of the construction area complete with an air filtration system so the public will not be exposed to any dust or fumes that could be released from the pits, Lt. Col. Springer said.

Chemicals brought up from the ground will be placed on a separate impervious surface where workers in protective clothing will sort through and analyze them. The chemicals will then be put into separate hazardous waste containers.

Broken debris and contaminated soil will be disposed of in specially designed containers for transfer to licensed hazardous waste incinerators. Lt. Col. Springer said he believes the waste will be taken out of state because he does not know of any such incinerators in Maryland.

"This project will remove the contaminants causing the existing groundwater problem," Lt. Col. Springer said. Homes in the area have been linked to Frederick City water or have been attached to water filtration systems.

"A future project still in the planning stages will address just the groundwater," Lt. Col. Springer. Details on that project are not yet available.

The soil freezing removal method will cost an estimated \$4.8 million, and is anticipated to start in February and take four months to complete.

Other options for removing the chemicals include erecting the safety structure over the construction site and digging out the pits without providing a containment system.

"We would just begin digging and hope we dig fast enough. We saw that method as not protective of human health and the environment," Lt. Col. Springer said.

That method has a \$4.6 million pricetag.

Another option would use grout, a chemical similar to mortar, to create a protective casing around the pits before removing the chemicals.

Lt. Col. Springer said mortar application could be risky because it is not consistent in texture. That option is also the most expensive choice, coming at an estimated \$5.7 million.

All three methods include incineration of the chemical waste.

Although Fort Detrick and state environmental officials have agreed that the soil freezing method will most likely be the best process, the public can comment on all the options.

“We are looking at all the options and are evaluating all the positive and negatives to pick the most protective for human health and the environment,” Lt. Col. Springer said.

The proposed and related technical documents can be reviewed at the Fort Detrick Library, 1520 Freedman Drive in Fort Detrick and at the C. Burr Artz Public Library, 5340 Spectrum Drive, Suite A, in Frederick.

A copy of the plan is also available by contacting the Fort Detrick public affairs office at 301-619-2018.

Written comments on the plan may be submitted to: U.S. Army Garrison, Environmental Management Division, Attn: MCHD-SFE/Douglas Warnock, 1500 Porter Street, Fort Detrick, Md. 21702-5000.