

Government studies inconclusive on health impact of chemical contaminants at Fort Detrick, Md.

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Two government-issued studies are unable to demonstrate whether people were harmed by groundwater contaminated with toxic pollutants from Area B of Fort Detrick, Md., says a new report by the National Research Council. Furthermore, it is unlikely that additional studies could establish a link, because data on early exposures were not collected and cannot be obtained or reliably estimated now, the report notes.

The committee that wrote the report was charged with reviewing two studies: one conducted by the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) and another by the Maryland Department of Health and Mental Hygiene and the Frederick County Health Department (MDHMH/FCHD). The committee was not asked to perform its own assessment of possible health effects of the contamination, exposures that might have occurred in Area A of Fort Detrick, potential exposures to [Agent Orange](#), or risks from infectious diseases studied at the biocontainment laboratories. The ATSDR assessment examined whether a [public health threat](#) was posed by contaminated groundwater in Fort Detrick's Area B, which was used to bury [biological materials](#), test animals, radiologic tracer materials, and [toxic chemicals](#) including perchloroethylene (PCE) and trichloroethylene (TCE). The MDHMH/FCHD study reviewed cancer incidences in the communities surrounding Fort Detrick and whether the data indicated unusual patterns. The Maryland agencies did not collect or evaluate exposure information.

The Research Council committee found limitations that undermined the scientific soundness of ATSDR's assessment, noting that groundwater measurements before 1992 were sparse. Without such data, it would be impossible to reconstruct residents' past exposures with sufficient scientific certainty or determine when exposures began. ATSDR concluded that past exposure was "unlikely to have produced any harmful health effects, including cancer," but the committee determined that the data were inadequate for ruling out health consequences from possible past exposures. Therefore, it said, a more appropriate conclusion would have been that the groundwater presented an "indeterminate public health hazard" -- a category ATSDR uses when a judgment about the level of a hazard cannot be made because critical information is lacking.

The MDHMH/FCHD study found no evidence to suggest a cancer cluster in the communities surrounding Fort Detrick and that the rates of all cancers in those communities and in Frederick County were not different from those in Maryland as a whole. However, a higher incidence of lymphoma was found in the communities closest to Fort Detrick when compared with the expected incidence based on statewide data. These findings were scientifically sound and of high quality given the typical limitations of cancer surveillance data from state registries, the committee said. It noted that some follow-up steps could enhance the study and supported the Maryland agencies' plans to conduct supplemental analyses of the data to better understand the finding regarding lymphoma.

The committee also explored whether additional studies might be helpful in determining a link between any [health effects](#) and contaminated groundwater in Area B. It concluded that additional studies would not be useful in assessing hazards unless contaminant measurements from the past are discovered, because it is unfeasible to sample for exposures that may have occurred in the past. Other reasons arguing against the

usefulness of additional studies include the very small population subjected to known release, relatively low and poorly documented concentrations in those releases, time elapsed since exposure began, and lack of a "fingerprint" cancer specific to chemical exposures.

In addition, the committee suggested that the Army could be more effective in communicating results of the reports to stakeholders and addressing their health concerns. One of the reasons why many Fort Detrick neighbors consider the Army responsible for their ailments is a legacy of mistrust, the committee said. When the Army relays the findings of health evaluations to the Fort Detrick community, it should focus on evidence that is easily comprehensible, ensure that evidence is publicly available, and engage in activities beyond [health](#) reviews that build trust with the community.

Provided by National Academy of Sciences

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