



Highlights of [GAO-07-276](#), a report to congressional committees

Why GAO Did This Study

In the early 1980s, volatile organic compounds (VOCs) were discovered in some of the water systems serving housing areas on Marine Corps Base Camp Lejeune. Exposure to certain VOCs may cause adverse health effects, including cancer. In 1999, the Department of Health and Human Services' (HHS) Agency for Toxic Substances and Disease Registry (ATSDR) began a study to examine whether individuals who were exposed in utero to the contaminated drinking water are more likely to have developed certain childhood cancers or birth defects. ATSDR has projected a December 2007 completion date for the study.

The National Defense Authorization Act of Fiscal Year 2005 required GAO to report on past drinking water contamination and related health effects at Camp Lejeune. In this report GAO describes (1) efforts to identify and address the past contamination, (2) activities resulting from concerns about possible adverse health effects and government actions related to the past contamination, and (3) the design of the current ATSDR study, including the study's population, time frame, selected health effects, and the reasonableness of the projected completion date. GAO reviewed documents, interviewed officials and former residents, and contracted with the National Academy of Sciences to convene an expert panel to assess the design of the current ATSDR study.

www.gao.gov/cgi-bin/getrpt?GAO-07-276.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Marcia Crosse at (202) 512-7119 or crossem@gao.gov.

DEFENSE HEALTH CARE

Activities Related to Past Drinking Water Contamination at Marine Corps Base Camp Lejeune

What GAO Found

Efforts to identify and address the past drinking water contamination at Camp Lejeune began in the 1980s, when Navy water testing at Camp Lejeune detected VOCs in some base water systems. In 1982 and 1983, continued testing identified two VOCs—trichloroethylene (TCE), a metal degreaser, and tetrachloroethylene (PCE), a dry cleaning solvent—in two water systems that served base housing areas, Hadnot Point and Tarawa Terrace. In 1984 and 1985 a Navy environmental program identified VOCs, such as TCE and PCE, in some of the individual wells serving the Hadnot Point and Tarawa Terrace water systems. Ten wells were subsequently removed from service. Department of Defense (DOD) and North Carolina officials concluded that on- and off-base sources were likely to have caused the contamination. It has not been determined when contamination at Hadnot Point began. ATSDR has estimated that well contamination at Tarawa Terrace from an off-base dry cleaner began as early as 1957.

Activities related to concerns about possible adverse health effects began in 1991, when ATSDR initiated a public health assessment evaluating the possible health risks from exposure to the contaminated drinking water. The health assessment was followed by two health studies, one of which is ongoing. While ATSDR did not always receive requested funding and experienced delays in receiving information from DOD for its Camp Lejeune-related work, ATSDR officials said this has not significantly delayed their work. Former residents and employees have filed about 750 claims against the federal government. Additionally, three federal inquiries into issues related to the contamination have been conducted—one by a Marine Corps-chartered panel and two by the Environmental Protection Agency (EPA).

Members of the expert panel that the National Academy of Sciences convened generally agreed that many parameters of ATSDR's current study are appropriate, including the study population, the exposure time frame, and the selected health effects. ATSDR's study is examining whether individuals who were exposed in utero to the contaminated drinking water at Camp Lejeune between 1968 and 1985 were more likely to have specific birth defects or childhood cancers than those not exposed.

DOD, EPA, and HHS provided technical comments on a draft of this report, which GAO incorporated where appropriate. Three members of an ATSDR community assistance panel for Camp Lejeune provided oral comments on issues such as other VOCs that have been detected at Camp Lejeune, and compensation, health benefits, and additional notification for former residents. GAO focused its review on TCE and PCE because they were identified by ATSDR as the chemicals of primary concern. GAO's report notes that other VOCs were detected. GAO incorporated the panel members' comments where appropriate, but some issues were beyond the scope of this report.