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**United States Senate**  
 COMMITTEE ON ARMED SERVICES  
 WASHINGTON, DC 20510-6080

THE HONORABLE STAFF DIRECTOR  
 MARCO S. LITAL, STAFF DIRECTOR FOR THE MINORITY

October 30, 2000

Thomas A. Townsend

Dear Mr. Townsend:

Thank you for your letters dated July 21, 2000 and August 22, 2000, regarding the issue of drinking water contamination at Camp Lejeune, North Carolina. I regret that it has taken me so long to respond to your letter, but I needed to take that time to conduct my own inquiries into this matter.

Based on my review, it is evident that in the early 1980's the groundwater and two drinking water distribution systems at Marine Corps Base (MCB) Camp Lejeune were determined to contain compounds that were used in dry cleaning and degreasing operations. These compounds, known as volatile organic compounds (VOCs), consisted primarily of trichloroethylene (TCE) and its breakdown products dichloroethylene (DCE) and tetrachloroethylene (PCE). The Navy is not certain when the drinking water systems first became contaminated with these compounds, however, by February 1985, all contaminated drinking water wells (12) had been located and shut down. The contaminated wells have not been used since.

One source of the groundwater contamination (primarily PCE) was a private, off-base dry cleaning business, ABC Cleaners. Solvents migrated from ABC Cleaners onto MCB Camp Lejeune and contaminated two drinking water wells that provided water to residents of the Tarawa Terrace Housing area. ABC was listed on the Environmental Protection Agency (EPA) National Priorities List (NPL) in 1989, and is currently being cleaned up by EPA, Region IV.

In 1983, MCB Camp Lejeune conducted an initial assessment of potentially contaminated areas on base. As a result of the assessment, the EPA listed Camp Lejeune on the NPL in 1989. In 1991, the MCB Camp Lejeune entered into a Federal Facilities Agreement (FFA) with EPA Region IV, and the North Carolina Department of Environmental and Natural Resources, which included schedules and milestones for cleanup of the contaminated sites. Since that time, MCB Camp Lejeune has continued to conduct environmental investigations and cleanup pursuant to the FFA and

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the Department of the Navy Installation Restoration Program. Currently, five groundwater cleanup systems are operating throughout Camp Lejeune to remove VOCs from water sources. Moreover, the water sources on base are regularly tested in accordance with federal and state regulations, and consistent with existing safety standards. A complete administrative record of the cleanup actions taken at the base can be reviewed on-line at: <http://www.bakerenv.com/camplejeune/>.

In order to be responsive to your original inquiry, I would like to provide you with an overview of some of the details that you may find at the on-line address provided above. Past maintenance and degreasing operations on MCB Camp Lejeune resulted in solvents migrating into some of the water wells that supplied the Hadnot Point Drinking Water Distribution System, which provided drinking water to the Hospital Point Housing area and Hadnot Point Industrial area. The family housing areas served by the Holcomb Boulevard Water Distribution System may have also been exposed to VOC contamination as a result of an emergency connection to the Hadnot Point Water Treatment Plant. During the 12 days that the Holcomb Boulevard Distribution System was connected to the Hadnot Point Water Treatment Plant, residents of the Paradise Point, Watkins Village, Berkeley Manor, and Midway Park housing areas were potentially exposed to VOC contamination.

The Holcomb Boulevard Water Distribution System was not constructed until the early 1970's. Prior to that time, family housing areas currently served by the Holcomb Boulevard system (including Paradise Point, Watkins Village, and Berkeley Manor) were served by the Hadnot Point Water Distribution System, however, it is not clear when the Hadnot Point Water Distribution System first became contaminated. As a result, the Navy has not been able to definitively determine the duration of exposure to VOC contamination within the above referenced family housing areas.

In January 1985, diesel fuel from an underground storage tank leaked into the groundwater and Holcomb Boulevard water supply. The underground storage tank site is currently being cleaned up under the Underground Storage Tank Program through the use of air sparging/soil vapor extraction system.

As required by federal environmental law, the Agency for Toxic Substances and Disease Registry (ATSDR) initiated in 1991 the Public Health Assessment (PHA), U.S. Marine Corps Camp Lejeune (August 4, 1997, CERCIS # NC6170022580). The PHA is available at the following on-line address: <http://www.atsdr.cdc.gov/HAC/PHA>. The purpose of the PHA is to evaluate potential public health impacts that may have resulted from possible

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exposures to environmental conditions at the base. Based on preliminary findings in the PHA, in 1995 ATSDR initiated data collection for a separate study to examine VOCs in drinking water and birth outcomes. They published an interim report of the study's findings prior to completing the PHA. Both the PHA and the Volatile Organic Compounds in Drinking Water and Adverse Pregnancy Outcome (NTIS Publication # PB98-156540, August 1998) reports contained the following conclusions regarding potential health effects at MCB Camp Lejeune: (1) there is not an increased risk of cancer in adults based on estimated exposure levels; (2) cancerous health effects in children are unlikely, but more information would be necessary to rule it out, and the effects on fetuses was not been evaluated; (3) there may be an association between exposure to VOCs in drinking water and adverse pregnancy outcomes related to birth weight and gestation period, but ATSDR cautioned that the results need cautious interpretation; and (4) ATSDR did not account for important confounding factors such as maternal smoking or maternal alcohol use, and other variable such as maternal height, weight, diet, race, or common diseases.

Based on a desire for further information, ATSDR initiated a telephone Health Survey in September 1999, to determine if there is sufficient data available to conduct a study on the association between childhood illness and exposure to solvent-contaminated water at MCB Camp Lejeune. The survey group consists of 16,500 women who either conceived or gave birth at Camp Lejeune from 1968 to 1986, and may have been exposed to solvent-contaminated drinking water. Eighty percent (13,100) of these women must respond in order for a statistically valid study to be conducted. To date, approximately 6,000 women have responded and further inquiries have been complicated by the inability to locate the remaining candidates. The Navy is working with ATSDR to develop a credible action plan to find other likely candidates for the survey.

Several claims were filed after ATSDR initiated the MCB Camp Lejeune Health Survey. As of September 5, 2000, 17 claims were filed under the Federal Torts Claims Act related to past drinking water contamination at the MCB Camp Lejeune: (1) 11 claims allege adverse health effects related to a child conceived or born at the base; and (2) 6 claims are on behalf of adults claiming adverse health effects due to exposure to contaminated drinking water while stationed or living at the base. Three of the claims filed by adults seeking compensation for alleged adverse health effects were denied under *Feres v. United States*, 340 U.S. 135 (1950). The *Feres* doctrine bars claims under the Federal Torts Claims Act if initiated by current or former service members alleging injuries that occurred incident to their active duty service. The denied claimants were serving on active duty in the

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