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ONE HUNDRED EIGHTH CONGRESS

U.S. House of Representatives  
Committee on Energy and Commerce  
Washington, DC 20515-6115

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April 14, 2004

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Dr. Henry Falk  
Assistant Administrator  
Agency for Toxic Substances and  
Disease Registry  
Atlanta Federal Center  
61 Forsyth Street, S.W., 10th Floor  
Atlanta, Georgia 30303

Dear Dr. Falk:

I am writing in reference to the *Public Health Assessment for the U.S. Marine Corps Camp Lejeune Military Reservation*, issued on August 4, 1997, by the Agency for Toxic Substances and Disease Registry (ATSDR). The drinking water contaminants that were examined by the ATSDR were Volatile Organic Compounds (VOCs) consisting of TCE, PCE, DCE, Methylene Chloride, and Vinyl Chloride. The potential health effects for these VOC exposures were presented in Table 3 and the underlying assumptions are found in Appendix E-1. As a result of the public health assessment, I understand that the ATSDR will be conducting a full epidemiological study only in regards to children born to women who were pregnant with them while living on the base during 1968-1985. This will involve approximately 103 children, who were deemed relevant to the parameters of this study.

No follow up activity by the ATSDR appears to be ongoing with respect to children or adults who lived on the base during the period in question. The U.S. Marine Corps' Camp Lejeune information website contains the following information under the subject of "Frequently Asked Questions."

"1.8. What about health effects to adults and children who lived on base but were not conceived, carried, or born there?"

"In 1997, the ATSDR conducted a Public Health Assessment at Camp Lejeune. Within that assessment the ATSDR found that adverse health affects (sic) were unlikely to occur in adults who consumed drinking water later assessed by the ATSDR."

However, a review of the 1997 Public Health Assessment raises serious concerns about some of the assumptions used and their current validity today. I have detailed a number of my concerns in the questions presented below. Furthermore, there are recent scientific studies that provide new information about the adverse health effects with respect to certain contaminants involved in this assessment. For example, the 1999 *Public Health Goal for TCE in Drinking Water* prepared by the California Environmental Protection Agency that established a more stringent Public Health Goal for Trichloroethylene in drinking water.

Therefore, I request that the ATSDR perform a new public health assessment that updates the 1997 Public Health Assessment concurrent with the new scientific information available and that the ATSDR pursue any further studies warranted by this new assessment. In addition, I request responses to the following questions no later than Wednesday, May 5, 2004.

1. In Appendix E-1, the ATSDR lists the exposure factor for water ingestion for the population at Camp Lejeune as 0.57. This exposure factor is explained in the information below the chart as residents ingesting tap water four out of seven days per week or 208.6 days per year. However, the Environmental Protection Agency's policy for human health evaluation assumes that residents drink their tap water 350-365 days per year. This determination is found in Directive 9285.6-3, *A Risk Assessment Guidance for Superfund*. Furthermore, the ATSDR concurred with EPA's guideline of 350-365 days per year in other studies, including the *1999 Public Health Assessment of Iowa Army Ammunition Plant*. Finally, when communicating with military families who lived at Camp Lejeune in the relevant housing areas, these individuals informed my staff that they remember using their taps every day of the year. Do you agree that a more conservative value should be employed with respect to the exposure factor in Appendix E-1? What would the exposure factor be, using the EPA assumption of drinking tap water 350-365 days per year?
2. The National Toxicology Program, within the U.S. Department of Health and Human Services, created a *10th Report on Carcinogens* stating that "inhalation is the main route of potential environmental exposure to TCE (pg.3: TCE Information)." However, the ATSDR's Health Assessment only demonstrates calculations for ingestion of chemicals for Hadnot Point, Tarawa Terrace, and Holcomb Blvd (see appendix E-1). What would be the combined Cancer Risk if dermal and inhalation routes were included in the assessment?
3. On page 25 of the 1997 Public Health Assessment, the document asserts, "We also quantitatively consider the combined effects of the chemicals on the body when evaluating the likelihood of cancer." However, this evaluation does not appear to be present in the report. My staff asked the ATSDR's staff if a combined analysis had been done for each specific location (i.e., looking at the

combined effects of TCE, DCE, Methylene Chloride, and Vinyl Chloride at Hadnot Point). The ATSDR's staff has responded that there was no combined evaluation of chemicals done. Do you agree that a combined assessment should be done for each location? If you do not agree, please explain your reasoning.

4. In Appendix E-1, the ATSDR lists a cancer slope factor for Vinyl Chloride as unavailable. However, on EPA's Integrated Risk Information System (IRIS) website, the Weight of Evidence Characterization shows that in 1986 Vinyl Chloride was listed as a Class A carcinogen in the U.S. EPA Guidelines. The dose response data used to derive a slope factor was published in 1981 (Feron et al 1981). Why was the Cancer Slope Factor for Vinyl Chloride listed as Not Available in Appendix E-1? Do you agree that Cancer Risk from Vinyl Chloride should also be considered in the ATSDR Public Health Assessment? If not, please explain why not.
  
5. (A) On Table 3 (page 26) of the 1997 assessment, the ATSDR lists the increased cancer risk for children as "unknown." No further analysis is presented in the corresponding Appendix E-1. In contrast, the ATSDR conducted exposure and risk calculations for children for the Bourne Schools at the Massachusetts Military Reservation, Cape Cod, Massachusetts (*Bourne Schools Health Consultation* 2000). Why was the ATSDR able to calculate a risk estimate for children at the Bourne Schools but not for Hadnot Point, Tarawa Terrace, or Holcomb Blvd for children at Camp Lejeune?  
  
(B) Furthermore, even though the cancer risk is listed as "unknown" in Table 3, on page 17 the ATSDR concludes, "Even though the ATSDR determined that cancerous health effects are *unlikely* in children, not enough scientific information is available to rule out the possibility of cancerous effects from low-dose exposures to VOCs such as those at Camp Lejeune." Please show the calculations that led you to the conclusion that health effects from the contaminated water at Camp Lejeune were unlikely for children.  
  
(C) Based on the 1999 *Public Health Goal for TCE in Drinking Water* by the California Environmental Protection Agency, it is my understanding that certain cancers relevant to VOCs, including kidney or liver cancer, have cancer risks that are not relevant to the age of the individual. Would you agree that a cancer risk estimate should be assessed for non-age specific cancers and diseases relevant to the contaminants of concern? If not, please explain why not.
  
6. Recent scientific research appears to indicate that children cannot be adequately assessed as "little adults." Therefore, do you agree that children who were exposed to VOCs at Camp Lejeune should be separately assessed because of their

unique vulnerabilities (i.e., *Children's Health and the Environment: Public Health Issues and Challenges for Risk Assessment* by Landrigan et al (2004), *A Framework for Assessing Risks to Children from Exposure to Environmental Agents* by George Daston et al (2004), *Approaches to Environmental Exposure Assessment in Children* by Dr. Weaver et al (1998), *Chemical Wastes, Children's Health, and the Superfund Basic Research Program* by Dr. Landrigan et al (1999))? Please explain why a separate study focused on children exposed after childbirth should not be undertaken.

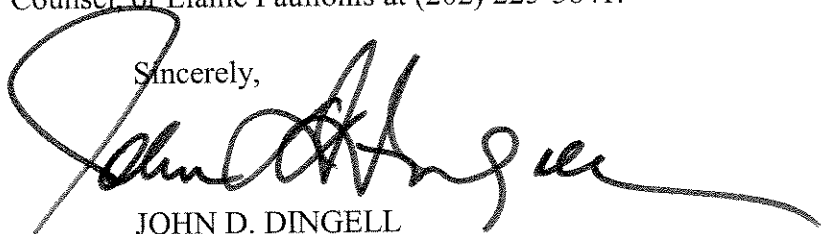
7. Table 3 on page 26 states that there is *no increase risk of cancer* for adults due to any of the exposures at Camp Lejeune at Hadnot Point, Tarawa Terrace, or Holcomb Blvd. Please demonstrate how you reached this conclusion. Should this conclusion be re-assessed in light of new scientific studies that show an increase health risk for these contaminants (i.e., the California EPA's 1999 *Public Health Goal for Trichloroethylene in Drinking Water, Trichloroethylene and Cancer: Epidemiologic Evidence* by Dr. Wartenberg et al (2000), *Perchloroethylene-Contaminated Drinking Water and the Risk of Breast Cancer: Additional Results from Cape Cod, Massachusetts, USA* by Dr. Aschengrau et al)?
8. The 1997 Public Health Assessment assumes a three-year exposure time frame for families that lived in the housing at Camp Lejeune. I am informed, however, that families could get permission to stay on the base while the service members served in Vietnam. Therefore, some military families may have resided at Camp Lejeune for a total of seven years: three years before a service member's tour in Vietnam, during the service member's one year tour, and three years after returning from Vietnam. Do you agree that this group's increased risk should be considered when making conclusions about the chance of increased cancer risk at Camp Lejeune? If not, please explain why not.
9. The Hadnot Point water system supplied the Camp Lejeune Naval Regional Medical Center (prior to 1983). Why was there no occupational health assessment done for the doctors, nurses, and other hospital workers who were exposed at Hadnot Point? Should this group's increased risk be considered when making conclusions about the chance of increased cancer risk at Camp Lejeune?
10. Is there any scientific link between reproductive problems and exposure to VOCs as a child? If so, has this relationship been assessed in regards to Camp Lejeune?
11. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Section 104(i) requires the Administrator of the ATSDR to "maintain a national registry of serious diseases and illnesses and a national registry of persons exposed to toxic substances." Is there a national registry for TCE and

PCE? Are military families who lived a Camp Lejeune during the period of contamination included in a national registry? Has the ATSDR considered whether to establish a Camp Lejeune specific registry of exposed persons as authorized by CERCLA section 104(i)(8)?

12. The 1997 Public Health Assessment (page 15) states, "Because of the results of the epidemiological studies suggest a possibility of cancer from exposure to VOC's at low doses, more studies are needed to adequately address the issue of human cancer association with low-dose VOC exposure." Has the ATSDR recommended a program of research to address this issue? If not, why not? Has the ATSDR recommended any other research efforts or programs to address scientific gaps that have come to light as a result of the drinking water contamination situation at Camp Lejeune? If not, please explain why not.
13. The Navy unsuccessfully attempted to reduce the scope of the ATSDR's proposed full epidemiological study for children exposed in utero. Please identify any issues raised by the Office of Management and Budget (OMB) with respect to the scope, methodology, timing, or funding of the ATSDR's proposed survey and epidemiological study. Please provide any documentation of OMB's comments with respect to the ATSDR's health assessment at Camp Lejeune or with respect to the proposed survey and epidemiological study for children exposed in utero.

If you have any questions about this request, please contact me or have your staff contact Richard Frandsen, Senior Minority Counsel, or Elaine Paulionis at (202) 225-3641.

Sincerely,



JOHN D. DINGELL  
RANKING MEMBER

cc: The Honorable Joe Barton, Chairman  
Committee on Energy and Commerce