



Agency for Toxic Substances
and Disease Registry
Atlanta, GA 30333

February 10, 2009

Barbara Taylor, Director
Office of Environmental Health Services
Bureau for Public Health
West Virginia Department of Health and Human Resources
Capitol and Washington Streets
One Davis Square
Suite 200
Charleston, West Virginia 25301

Dear Ms. Taylor:

This letter is in response to your request to the Agency for Toxic Substances and Disease Registry (ATSDR) for an evaluation of the public health issues related to using water contaminated with perfluorooctanoate (PFOA) to reconstitute baby formula. This evaluation additionally considers the more general issue of water consumption by communities in the area around the Washington Works Facility (Wood County, West Virginia). As you are aware, since your request (letter dated January 18, 2006 and our subsequent response dated February 7, 2006), we have been engaged in ongoing health education and technical review activities. Much of the information contained in this letter has been communicated previously through verbal updates with your staff.

Completed and ongoing studies involving area residents have shown that communities near the Washington Works Facility have elevated serum levels of PFOA. These elevated PFOA levels are primarily a result of using contaminated drinking water.

Defining a safe health-based level of PFOA in the water near the Washington Works Facility has been very difficult. A number of issues contribute to this problem, including: (1) an incomplete characterization of the exposures leading to elevated PFOA levels in the area residents, (2) limited research on the health effects of PFOA in humans, and (3) difficulties relating the pharmacokinetic data obtained from test animals to humans. Due to the scientific limitations and uncertainties, ATSDR has not established a health-based guidance value, a "Minimal Risk Level" that may be used to help define a safe level of PFOA in drinking water.

Occupational studies have reported that highly exposed workers, with serum PFOA levels similar to or higher than those seen in area residents, did not show obvious clinical abnormalities associated with the PFOA exposures. However, effects in young children have not been adequately studied. We note that local children and elderly persons living in areas near the Washington Works Facility have higher PFOA levels than do middle-aged adults who live in the community. Two recent studies reported that background level exposures to PFOA were associated with lower birth weights in infants. However a third study of births from the general area north of the Washington Works Facility could not confirm those findings. While the scientific debate on these studies continues, we must remain open-minded about potential associations between PFOA exposures and developmental endpoints in humans. At the present time, ATSDR considers developmental effects to be the most sensitive adverse response to PFOA exposures.

Based on our evaluation, ATSDR provides the following site-specific recommendations:

Because of concerns for potential adverse effects in vulnerable groups, persons such as pregnant women, women of child-bearing age, children, and the elderly living in the vicinity of the Washington Works Facility should reduce local water exposures to levels that are as low as reasonably achievable.

In addition, ATSDR concurs with previous verbal advice given by the West Virginia Department of Public Health; that it is prudent public health practice for caregivers in the area near the Washington Works Facility to reduce drinking water exposures to infants by using premixed baby formula.

We note that efforts to mitigate the possible effects associated with PFOA exposures in the area of the Washington Works Facility have included: (1) providing bottled water to area residents; (2) filtering PFOA from publicly-supplied water; and (3) installation of at-home filter systems for households supplied by PFOA-contaminated wells. We understand that all publicly-supplied water in the area is currently filtered to reduce PFOA to extremely low levels. EPA has recently confirmed that the vast majority of, if not all, private drinking water well owners in the affected area have been contacted to conduct well water testing, and to install filters if needed. It is important that monitoring of the effectiveness of these drinking water treatment systems be continued. In addition, educational campaigns for both physicians and area residents have raised awareness of the potential problems, and have provided information about how to reduce exposures to PFOA.

Because of the site-specific data gaps and the scientific limitations and uncertainties in the toxicological and epidemiological studies of PFOA, the advice presented in this letter may be revised when new data or study results become available.

Page 3 – Ms. Barbara Taylor

ATSDR will work with the State of West Virginia to provide area residents with information about the local drinking water issues. ATSDR will also work with the State of West Virginia to ensure that well water users in the vulnerable groups are aware of the potential risks as well as the measures to reduce/eliminate those potential risks.

Clement Welsh, ATSDR Headquarters, and Lora Werner, ATSDR Region 3, will assist the West Virginia Department of Public Health in ensuring that area residents understand the public health recommendations provided in this letter. Please contact Lora Werner, ATSDR Region 3 at (215)-814-3141, with any questions regarding information presented in this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Howard Frumkin, M.D., Dr. P.H.", written in a cursive style.

Howard Frumkin, M.D., Dr. P.H.
Director, National Center for Environmental Health/
Agency for Toxic Substances and Disease Registry

cc:

Lora Werner, Region III
Bill Cibulas, DHAC
Tina Forrester, DRO