

## **Evaluation of Bis(2-chloroethyl) Ether and Chloromethane in Finished Water**

### **Bis(2-chloroethyl) ether**

Bis(2-chloroethyl) ether (BCEE) was found in finished water collected on 8/21. BCEE is a colorless, nonflammable liquid that is used as a solvent for some lacquers and oils, and as a chemical synthesis intermediate. The concentration found in water was very low, 13.7 µg/L, just above the detection limit of 10 µg/L. Someone who drank water containing this chemical at this concentration over a period of years could have an increased risk of cancer. However, this chemical is not regularly found in drinking water. Drinking water with this amount of BCEE over a period of days would not harm people's health. If people were exposed to BCEE at this concentration, it was likely for a very short time period, since this sample was taken the day the Do Not Use advisory was issued.

### **Chloromethane**

Chloromethane was found at very low concentrations (2.38 µg/L) in one sample collected on 8/22, the day after the Do Not Use advisory. Chloromethane is volatile and moves rapidly to the air, and in a moving body of water such as a river has a half-life of about 2.5 hours. There are no health-based standards for drinking water with chloromethane. Chloromethane is rarely found in drinking water and is primarily an inhalation hazard. To determine whether these concentrations in water could be a health hazard, the Agency for Toxic Substances and Disease Registry (ATSDR) SHOWER Model was used to evaluate health risks from ingestion of water, dermal exposure, and inhalation of chloromethane volatilized during normal household use. Using the model's standard assumptions, it was estimated that in an acute exposure scenario, non-cancer health risk just exceeded the hazard ratio of 1 for average household water use, and for the highest likely exposure the hazard ratio was 2.3. A hazard ratio exceeding 1 does not mean that there is a risk to health, but that exposure should be evaluated further. Since this sample was taken after the Do Not Use advisory was issued, it is not likely that people were actually exposed to water containing this concentration of chloromethane. Additionally, chloromethane was found in only one of the tanks tested. In subsequent samples, chloromethane dropped back below the detection limit.