

Water may contain lead

Recent tests on water delivered by some Alaskan community water systems have revealed unsafe levels of lead in the water. Lead concentrations in excess of five parts per billion are considered unsafe, especially for children. Lead poisoning causes weakness, anemia, constipation, paralysis and depression.

Alaska's Department of Environmental Conservation has found excessive lead concentrations in community water systems at the western Alaska villages of St. Michael, Gambell and Shishmaref, and also at the interior village of Birch Creek. The cuprit, reports DEC engineer Stan Justine in a recent issue of "The Northern Engineer", is lead-containing solder used to join copper pipes in the water distribution systems.

Corrosive chemical action similar to that in a car battery occurs to release lead into the water.

This occurs for three reasons. Surface water often is used for water supplies. Being soft, this water promotes corrosion more than hard water. Secondly, water use is often at a low rate, so contaminants such as lead tend to build up. Thirdly, the water in distribution systems often is heated to prevent freezing, and this heating promotes corrosion.

However, as the distribution systems grow older, the excess lead gets eaten away from the pipes and after a few years, the problem diminishes. Users can avoid the highest lead concentrations by running a tap for a few minutes before taking drinking water from it.