

FORMER U.S. DEPARTMENT OF AGRICULTURE GRAIN BIN PROJECT

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Abstract

The U.S. Environmental Protection Agency (EPA) Region 7, in cooperation with the U.S. Department of Agriculture (USDA) and state agencies, continues to conduct groundwater, well water, soil, and soil gas sampling at known locations of former USDA/Commodity Credit Corporation (CCC) grain storage facilities in Region 7. The purpose of this sampling is to look for carbon tetrachloride and related chemicals that may be contaminating the groundwater. The source of the potential contamination is from a grain fumigant formerly used by the CCC and others in the 1950s, 1960s, and 1970s called "80/20," that contained 80% carbon tetrachloride. This grain fumigant may have migrated into the groundwater and could be contaminating public and private wells nearby. Carbon tetrachloride is a probable human carcinogen. Its use as a grain fumigant was banned by the EPA in 1985.

Over the last several years, similar sampling efforts have been conducted at 829 former USDA/CCC storage facilities in Iowa, Kansas, Missouri, and Nebraska. Those sampling efforts have resulted in the discovery of carbon tetrachloride-contaminated groundwater at 130 locations. At 61 of those locations, the contamination level exceeded the EPA's established drinking water standard for carbon tetrachloride, of five micrograms per liter or five parts per billion. Levels exceeding the drinking water standard could pose an increased health risk over a lifetime, if contaminated water continues to be used for drinking, cooking, and showering. Steps have been taken at each site where contamination has been discovered to provide alternative water for affected users. Efforts to remediate the contaminated groundwater at these locations have focused on implementation of innovative technologies.

Key words: carbon tetrachloride, fumigant, contamination, carcinogen