



EPHRATA AREA JOINT AUTHORITY

124 South State Street
Ephrata, PA 17522-2411

Telephone (717) 738-9208

Information about Hexavalent Chromium and Drinking Water – Ephrata Area Joint Authority

Hexavalent Chromium, or Cr(VI), is one of the chemical forms of Chromium.

Chromium is a naturally occurring element, but can also be present in the environment due to industrial activities.

Total Chromium in drinking water is regulated by the U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (DEP) through the Safe Drinking Water Act. The existing Maximum Contaminant Level (MCL) for Total Chromium is 100 parts per billion (ppb), and was set in 1991/1992 based on scientific and health effect information at that time. More recently, EPA reviewed data from a 2008 long-term animal study that suggests Hexavalent Chromium is a probable human carcinogen. Research and investigations into the prevalence of and toxicity pathways for Cr(VI) are ongoing, and when completed, will allow EPA to decide if the current drinking water standard for Total Chromium needs to be updated and whether a standard (MCL) needs to be set for Hexavalent Chromium.

EPA, as part of the third Unregulated Contaminant Monitoring Rule (UCMR3), required all water systems serving more than 10,000 persons to monitor for Cr(VI) between January 2013 and December 2015. The minimum reporting level for Cr(VI) is 0.03 ppb. EAJA took 16 samples from our water supply entry points and within the water distribution system from April 2013 through January 2014. Hexavalent Chromium was detected in fourteen samples; the average concentration was 0.18 ppb and ranged from non-detectable to 0.32 ppb. These EAJA levels are very low (approximately 0.2% of the current MCL).

Cr(VI) is getting significant media attention, especially in California. California set a Public Health Goal (non-enforceable) for Hexavalent Chromium at 0.02 ppb in 2011, and in 2014, they established a standard (MCL) of 10 ppb. This is the lowest standard set by anyone in the world. The World Health Organization (WHO) guideline is 50 ppb as Total Chromium, and a soon to be released Canadian guideline for Hexavalent Chromium, which is based on the latest comprehensive peer reviewed science, will be 50 ppb. It's probable that EPA and DEP will establish a MCL for Hexavalent Chromium within the next few years. The standard will likely fall somewhere from 10 ppb to 50 ppb. Based on the results of our 2013/2014 testing, future compliance will not be an issue as all our sample results had much lower concentrations (3% or less) than the anticipated standard.

At the levels detected from our recent sampling, Cr(VI) is likely present solely from natural sources. We have a source water protection plan in place for our existing water supplies. The water we serve to a population of 24,500 in Ephrata Borough, Ephrata Township, Clay Township, and Akron Borough is safe based on existing and anticipated regulatory standards. The Authority will continue to be vigilant and protect our existing water sources from contamination, operate and maintain our treatment facilities to satisfy existing Safe Drinking Water Regulations, and monitor and comply with future regulations dealing with Hexavalent Chromium as they are promulgated.