

History of Current Public Debate Regarding Chromium-6

Hexavalent chromium (also known as chromium-6) is currently a topic of national debate and research. Hexavalent chromium first came to the public's attention in Hinkley, Calif., where Ms. Erin Brockovich and others helped discover industrial hexavalent chromium contamination in the town's drinking water. In that city – which was made famous by Julia Roberts' role of Brockovich in the movie *Erin Brockovich* – chromium-6 levels were found at 580 part per billion (ppb).

Again, as a comparison, the U.S. Environmental Protection Agency (EPA) regulates chromium-6 as part of the “total chromium” drinking water standard under the Federal Safe Drinking Water Act (SDWA) since 1992. This standard addresses all forms of chromium, including chromium-6. The current drinking water standard sets the maximum contaminant level (MCL) of total chromium allowed in drinking water at 100 parts per billion (ppb), also equivalent to 100 micrograms per liter (ug/L).

A 2007 National Toxicology Program study found that rats and mice that consumed drinking water, with chromium-6, formed a significant number of tumors. This study indicated that cancer risk from ingestion of chromium-6 is a *chronic one*, not an *acute one*. Chronic health risk levels are calculated assuming 30 years of exposure in a 70-year lifespan with a person drinking two liters of water per day.

In the summer of 2009, Ms. Brockovich announced the discovery of chromium-6 at levels of 5,280 ppb in the drinking water of at least 40 homes in Midland, Texas. On December 20, 2010, the Washington-based Environmental Working Group released a study that detected chromium-6 in 31 out of 35 cities, at ultra-low levels well below EPA standards for total chromium. Subsequent to that work, the EPA Administrator, Lisa Jackson, announced that the EPA would undertake a review of chromium-6 and advised water systems to voluntarily test for chromium-6 in the interim.

On July 27, 2011, the California Office of Health Hazard Assessment adopted a *Public Health Goal* for Chrome-6 of 0.02 parts per billion (ppb). As a clarification, a *Public Health Goal* is considered to be the level of any contaminate in drinking water that a person could consume for an entire lifetime with little to no risk of any adverse health effects. It is not a drinking water standard, or a line of demarcation separating a “safe” level from an “unsafe” level. While any contamination below a Public Health Goal is unlikely to pose a health risk, it's probable that levels above the Public Health Goal also do not pose a health risk.

The EPA's chromium-6 risk assessment is currently underway. Based on the current draft assessment, which has yet to undergo scientific peer review, the EPA noted that it was likely that new drinking water standards to address the perceived health risks posed by chromium-6 would be proposed. When this scientific review is finalized in 2012, the EPA will carefully review the conclusions and consider all relevant information to determine if a new standard is necessary.