

Hexavalent Chromium

Hexavalent chromium, also called chromium VI or hex chrome, came to the public's attention with the 2000 release of the movie *Erin Brockovich*, which focused on the contaminated drinking water of Hinkley, California. Hexavalent chromium is a heavy metal that has been used in producing pigments, leather tanning, electroplating, metal processing, wood preservation, and in alloys such as stainless steel. It was also used as a corrosion inhibitor in cooling towers — the use that contaminated the water in Hinkley, California. It reaches drinking water sources by leaks and discharges from industrial facilities and hazardous waste sites.

Despite the fact that it causes cancer, reproductive harm and other severe health effects, there is no national or state drinking water standard for hexavalent chromium. Therefore, drinking water suppliers don't have to monitor for or remove hexavalent chromium before it comes out of the tap. To fix that problem, the California legislature passed SB 351 (Ortiz) in 2001, requiring the Department of Public Health (DPH) to establish a drinking water standard *by 2004*. As a result of political and legal interference by industry, the process of establishing a Public Health Goal (PHG), on which legal drinking water standards are based, has been stalled.

It is now 2009 and California still does not have a drinking water standard for this dangerous chemical — the state is in violation of its own law.

In August 2009, the Office of Environmental Health Hazard Assessment finally released a draft PHG of .06 ppb for hexavalent chromium. Health and environmental organizations support this health goal because we believe it is a health protective level. We urge the Office of Environmental Health Hazard Assessment to finalize the health goal as quickly as possible, so that an enforceable drinking water standard can be set.

Health Impacts

Hexavalent chromium, which was added to California's Proposition 65 list in December 2008, is a known carcinogen and a reproductive toxicant. Exposure can occur through ingestion of contaminated water. Such ingestion can cause acute gastroenteritis, gastrointestinal hemorrhage, ulcers, kidney damage, and liver damage. One gram of potassium chromate — used to indicate the presence of chloride ions in salt solutions with silver nitrate — is considered a lethal dose. In addition, workers and those living near industrial facilities where hexavalent chromium is used are particularly at risk given their long term, high levels of exposure.

Impacted Communities

According to DPH, from 1997 through 2008 hexavalent chromium was detected in 2,208 drinking water supplies, across 52 out of 58 counties, including sources serving schools and hospitals*. This means that an estimated 33 million Californians in over 500 communities have hexavalent chromium in their tap water. Individual counties may have numerous impacted communities and show a wide range of contamination levels.

* California Department of Public Health, *Chromium 6 in Drinking Water Sources: Sampling Results*.
<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6sampling.asp>