



Background Chromium and Groundwater

Message from PG&E:

Pacific Gas and Electric Company (PG&E) is committed to cleaning up the environment, protecting public health and safety, and working with regulatory agencies and the community to restore the water quality in Hinkley. We are also serious about making sure that the information that we provide to the community is accurate.

This fact sheet presents information about the background level of chromium-6 established by the Lahontan Regional Water Quality Control Board for Hinkley, drinking water standards for chromium, and the levels of chromium-6 found in drinking water wells throughout the state of California.

What is chromium?

Chromium is a metallic element found naturally in rocks, plants, soil and volcanic dust. Common forms of chromium include trivalent (chromium-3) and hexavalent (chromium-6), both of which can occur naturally.

What does the term “background” mean when used to describe chromium levels?

The background level of a substance, like chromium, is the level that occurs naturally in soil or water.

Why is the background level of a substance important?

Background is important because it helps to determine where chemicals are present in the environment naturally and where they are present as a result of human activities. Background is also important because it is used by regulatory agencies to determine cleanup standards. Cleaning to background levels restores the environment to its natural state by removing the substances that were added as a result of human activities.

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California Chromium Drinking Water Standard

← State of California allows up to 50 parts per billion (ppb) total of Chromium in Drinking Water

The natural background of chromium-6 in Hinkley is up to 3.1ppb. This is well below the State drinking water standard

Facts-at-a-Glance

✓	Background levels are those found in nature.
✓	Background levels allow regulators to determine where chemicals are present naturally and where they are present due to human activities.
✓	The Lahontan Regional Water Quality Control Board has established the background chromium concentrations in the Hinkley area are up to 3.1 parts per billion (ppb) chromium-6.
✓	All Hinkley wells used for drinking water are well below the current state drinking water standard for total chromium (50ppb).
✓	The state of California regulates drinking water sources in California. More than 2,200 drinking water sources in California have reported chromium-6 in the water; more than 11 percent of water sources in California have levels over 5ppb.
✓	The maximum background chromium-6 level in the Hinkley area is below the levels reported for the neighboring communities of Victorville, Apple Valley and Lucerne Valley.



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What is the goal of PG&E's Groundwater Remediation Program?

The goal of PG&E's Groundwater Remediation Program in Hinkley is to clean up chromium-6 in groundwater to background levels.

What is the natural background chromium level in Hinkley?

The Lahontan Regional Water Quality Control Board has established that the background chromium concentrations in the Hinkley area are up to 3.1ppb chromium-6.

How common is chromium-6 in drinking water in California?

The California Department of Public Health maintains data from approximately 7,000 regulated drinking water sources in California. About a third of them have reported some level of chromium-6 in the water. More than 20 percent of water sources have detected levels of chromium-6 of up to 5ppb, and 11 percent reported higher chromium-6 levels from 5ppb to 50ppb.

Are there any active drinking water wells in Hinkley where chromium-6 has been found at levels above the state of California drinking water standard?

No. There are no active drinking water wells in Hinkley with chromium-6 levels above the state drinking water standard.

What are the background levels of chromium in the western Mojave Desert?

A 2004 study by the U.S. Geological Survey found natural background chromium-6 ranging from non-detect to up to 60ppb within the western Mojave Desert groundwater.

How does the background level of chromium-6 in Hinkley compare to levels found in other California communities?

There are more than 1,400 drinking water sources in California with chromium-6 levels in the 1-5ppb range. More than 700 drinking water sources have levels between 5-50ppb. The chart below provides data from a few sample sources in California. Naturally occurring chromium-6 has been found at similar levels in many locations in California.

Source	Chromium-6 Level (ppb)
City of Davis (Well 01), Yolo County	19
Oak Trail Ranch Mutual Water (Well #2), Santa Barbara County	16
City of Sacramento (Well 154), Sacramento County	12.6
City of Sebastopol (Well 04), Sonoma County	9.7
California Water Service – Livermore (Well 09-01), Alameda County	7.5
City of Stockton (Well 19 – West Lane), San Joaquin County	5.9
West Palm Springs Village (Well 26), Riverside County	5.7
Golden State Water Co. – Lucerne (Sutter), San Bernardino County	4.6
Hinkley	3.1
Cal-Water Service Co. – Chico (Well 03_03), Butte County	2
Alameda County Water District (Mowry Well 06), Alameda County	1.5

Note: The levels of chromium-6 found in drinking water wells in other California communities presented in this chart were obtained from the monitoring reports found on the California Department of Public Health's website at <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6sampling.aspx>. The chromium-6 level shown for Hinkley represents the background level established by the Lahontan Regional Water Quality Control Board.

For More Information

For more information about PG&E's Groundwater Remediation Program, please contact us at [855-816-9722](tel:855-816-9722) (toll free) or by email at HinkleyInfo@pge.com.

For information about the regulatory oversight of PG&E's Groundwater Remediation Program, please visit the Lahontan Regional Water Quality Control Board's website at http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml.

For general information about chromium in drinking water, please visit the United States Environmental Protection Agency website at <http://water.epa.gov/drink/contaminants/basicinformation/chromium.cfm>.