Chromium and Chromium-6

In January 2011, the U.S. Environmental Protection Agency (EPA) recommended that water systems monitor for chromium-6 due to reports raising concerns about the presence of chromium-6 in drinking water supplies in various areas throughout the country. At American Water, we take water quality and safety very seriously and are pleased to provide our customers with information about chromium and chromium-6.

Water Quality Reports

American Water provides customers with the following water quality reports:

• The Basic Water Quality Summary includes the water quality information that customers most commonly request

• The annual Consumer Confidence Report contains more detailed information including information on where the water comes from, any contaminants that were detected, and additional educational information.

• These reports will include chromium-6 results if this voluntary testing has been performed for your system.

Click here to search for water quality results for your system

Frequently Asked Questions

What is chromium and how does it get into drinking water?

• Chromium is an odorless and tasteless metallic element. It is found naturally in rocks, plants, and soil and also found in humans and animals.

• There are two common forms of chromium:

  • Chromium-3 is an essential human dietary element found in vegetable, meats, fruits, grains and yeast. Chromium-3 can be found in most multi-vitamins.

  • Chromium-6 (also known as hexavalent chromium) can be generated from natural deposits of chromium in soils as well as produced by industrial processes such as steel manufacturing and pulp mills.

Is chromium in drinking water regulated?

• Yes. The EPA sets national drinking water standards and established a limit for total chromium of 100 parts per billion (ppb) in 1991 based on the best available science at the time. The total chromium limit includes all forms of chromium (e.g., chromium-3 and chromium-6).

• The state of California has set a more stringent standard for total chromium; the California enforceable limit for total chromium is 50 ppb.

• To put this in perspective, one part per billion is about the same as 1 second in 32 years.

• If a water system exceeds the established limit, customers must be notified and the system must take action to address the high levels.

• Water provided by American Water is already lower than the total chromium standard, so there are no special actions that American Water or our customers need to take.

Is chromium-6 in drinking water regulated?

• Yes. Chromium-6 is regulated under the total chromium drinking water standard, which is 100 ppb (50 ppb in California).

What about the California Public Health Goal for chromium-6?

• California adopted a Public Health Goal (PHG) of 0.02 parts per billion for chromium-6 in July 2011. This is a state-specific goal and does not impact the rest of the country.

• As stated on the California website:

  "A PHG is NOT a boundary line between a "safe" and "dangerous" level of a contaminant. Drinking water can still be acceptable for public consumption if it contains contaminants at levels higher than the PHG. A PHG is a health-protective level of a contaminant in drinking water that California's public water systems should strive to achieve if it is technically and economically feasible."

• California uses the PHG as the starting point for developing a regulatory standard. This process usually takes several years.

• Most public health goals are set significantly lower than the final drinking water limit because the final drinking water limit in California must take into account all relevant factors – health risks from exposure to the chemical, detectability, treatability, and costs of treatment to reduce the chemical's presence in drinking water.

• This often results in an enforceable drinking water limit that is higher than the Public Health Goal. (Enforceable limit is another term for regulatory limit or standard.) For example, California set a final Public Health Goal of 0.004 parts per billion for arsenic in drinking water and set their final enforceable limit 2,500 times higher at the Federal limit of 10 parts per billion.

• More information on California's Public Health Goal and its efforts to set a limit for chromium-6 is available at http://www.oehha.ca.gov/water/phg/pdf/HexChromfacts082009.pdf and http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx.

What does it mean if the results for my water system show chromium-6 levels over the California Public Health Goal?

• As indicated above, a Public Health Goal is NOT a boundary line between a “safe” and “dangerous” level of a contaminant, so having chromium-6 levels above the PHG of 0.02 parts per billion does not mean that you should be concerned about the quality of your water.

• A Public Health Goal is a health-protective level of a contaminant in drinking water that California’s public water systems should strive to achieve if it is technically and economically feasible. American Water and others in the drinking water industry are currently working with EPA to determine if it is possible to treat for chromium-6 to such a low level, and if so, how much it would cost to do so.

What about home water treatment devices and bottled water?

• Water provided by American Water is already lower than the total chromium standard, so there are no special actions that American Water or our customers need to take.

• There are home treatment devices that are certified by industry organizations to remove chromium-6. It is important to note that these certification programs are based on the current federal drinking water standard of 100 ppb for total chromium. (This is the standard that American Water’s drinking water is already below.)

• Regulations for chromium in bottled water (which are enforced by the Food and Drug Administration) also include a standard of 100 ppb for total chromium just like drinking water. Bottled water manufacturers may have specific information on chromium-6 levels for their products.

Will the EPA be revising the total chromium limit or setting a standard for chromium-6?

• That is yet to be determined. EPA regularly reviews drinking water standards as new science becomes available and is currently reviewing new chromium-6 health effects information.

• Once the review is completed, EPA will carefully review the conclusions and consider all relevant information to determine whether the drinking water standard for total chromium needs to be updated or if a new standard for chromium-6 is needed.

• American Water and others in the drinking water industry are working with EPA to review all relevant information on chromium-6 including health effects, occurrence, and treatment options. This work will help support EPA in its decision-making process.

• EPA has posted information about chromium in drinking water at http://water.epa.gov/drink/contaminants/basicinformation/chromium.cfm and additional information on chromium-6 at http://water.epa.gov/drink/info/chromium/index.cfm

• More information on the federal regulation development process is available at http://water.epa.gov/lawsregs/rulesregs/regulatingcontaminants/index.cfm

• It is also possible that some states might develop their own standard for chromium-6. California has already begun the process of developing a standard (more information on their efforts is available at http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx

What is American Water doing related to chromium-6?

• Based on guidance from EPA, American Water has initiated sampling for chromium-6 in our water systems. Some systems have already been sampled, while others are in the process of scheduling and collecting samples. By sampling for chromium-6 now, we will be better prepared to respond if a drinking water standard is established in the future.

• **Click here to search for water quality results for your system**

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• Our nationally renowned laboratory in Belleville, Illinois, which serves all American Water systems, is now able to detect chromium-6 at very low levels.

• American Water and others in the drinking water industry are working with EPA to review all relevant information on chromium-6 including health effects, occurrence, and treatment options. This work will help support EPA in its decision-making process.