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Check Texas Commission on Environmental Quality figures here and then read the information below

In order to obtain the right water system to search, look at your water bill to find the correct name. For instance, many residents who have a mailing address in “Katy, TX ” actually obtain their water from smaller water systems or municipal utility districts, not from the “City of Katy.”

Enter your water system/supplier

Search

[Click here](#) to download results for radiation tests performed for water providers in Texas since 2004. Source: TCEQ

What your numbers mean

Gross alpha

Alpha particles are a type of ionizing radiation ejected by the nuclei of some unstable atoms. They are typically emitted from the elements uranium, radium, plutonium and thorium. The MCLG (federally recognized public health goal) for alpha particles is ZERO, however the legal limit (MCL) is set at 15 pCi/L (picocuries per liter). The EPA instructs water systems to “subtract” uranium from its “gross alpha” readings before they are reported to you on an annual water quality report. This searchable database includes all results where Gross Alpha was reported in excess of 3.00 pCi/L.

Gross beta

Beta particles are another form of ionizing radiation. They are smaller in size than alpha particles but can penetrate deeper into the body if consumed. The EPA says, “It is their excess energy, in the form of speed, that causes harm to living cells. When transferred, this energy can break chemical bonds and form ions.” Some examples of the different types of elements that give off beta particles are strontium-90 and tritium. The federally recognized public health goal (MCLG) for beta particles is zero. However, the legal limit (MCL) is set at 50 pCi/L (picocuries per liter). This searchable database includes all results where gross beta was reported in excess of 4.00 pCi/L.

Uranium

Uranium is a naturally-occurring radioactive element and can be enriched to make nuclear weapons. All uranium isotopes are radioactive. The main use of uranium in the civilian sector is to fuel commercial nuclear power plants, where fuel is typically enriched. People who live near federal government facilities that made or tested nuclear weapons, or facilities that mine or process uranium ore or enrich uranium for reactor fuel, may have increased exposure to uranium. The EPA states, “Since uranium tends to concentrate in specific locations in the body, risk of cancer of the bone, liver cancer, and blood diseases (such as leukemia) are increased. Inhaled uranium increases the risk of lung cancer.” Uranium is also toxic to the kidneys, as it's also considered a toxic metal. The federally recognized public health goal (MCLG) for uranium is zero. However, the legal limit (MCL) is set at 30 mg/L (micrograms per liter).

Radium

Radium is a naturally-occurring radioactive metal. Its most common isotopes are radium-226, radium 224 and radium-228. Radium is a radionuclide formed by the decay of uranium and thorium in the environment. The EPA does not currently test for radium 224. The federally recognized public health goal (MCLG) for radium is zero. However, the legal limit (MCL) for all types of radium “combined” is set at 5 pCi/L (picocuries per liter). The

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alpha radiation from radium is included in the gross alpha reading as described above. This searchable database includes all results where radium 228 was measured in excess of 1.00 pCi/L.

Facts you should know

The above is a TCEQ database of every raw radiation test result for every water system in Texas, dating back to 2004. However, KHOU-TV has discovered that for decades the Texas Commission on Environmental Quality has under-reported many of these radiation readings to utilities and their communities. This under-reporting took place for all radioactive contaminants in drinking water (known as radionuclides) and did not stop until 2009, after an EPA audit. Hence, the above raw readings may not match those found in the annual water quality report, called a Consumer Confidence Report, you receive from your water company.

In addition, you may actually have more alpha activity and other forms of radiation in your water than what your annual water report states, because of rules set up by the U.S. Environmental Protection Agency. Specifically, the EPA instructs the nation's water systems not to include in its "gross" alpha readings the radiation in your water that comes from radioactive uranium, even though uranium gives off radioactive alpha particles. Consequently, uranium readings are subtracted from the raw alpha particle activity you may see reported above, before the readings are reported to you.

Many water systems in Texas and across America come very close to achieving the federally recognized public health goal for ionizing radiation in drinking water, which is set at zero (This is called the MCLG). The EPA maintains there is a "zero threshold" allowance for ionizing radiation in your drinking water as it pertains to potential health concerns. This is different than other MCLGs the EPA set for other contaminants such as selenium, copper, fluoride or even chlorine residuals in water (these MCLGs are set above zero).

The EPA has also set a "legal" limit, which it calls the MCL (maximum contaminant limit) above zero for radioactive materials. That legal limit is the amount of radiation that could trigger enforcement action, and scientists caution that having amounts below that limit in your water does not mean there are no known adverse health effects that may arise. It is important to note, the presence of radiation in your water does not mean you will definitely develop a health problem or cancer. The TCEQ argues it takes a certain level of exposure over a period of 70 years for the typical levels of radiation found to create an impact on human health.

Other environmental scientists and toxicologists maintain that any amount of exposure does immediately increase your risk for illness or, in rare cases, developing cancer. The more exposure you get, they argue, the greater your chances of developing a health problem. While all radionuclides have different risk exposures, the EPA set its Maximum Contaminant Limit for items such as uranium at 30 micrograms/liter of water.

The EPA has said that a community that is exposed to uranium in its drinking water at the level of the MCL, over a lifetime of drinking water, "will typically correspond to a lifetime radiogenic cancer risk of slightly less than one in 10,000." That calculation does not take into effect if a person is exposed to other radionuclides or carcinogenic contaminants in their water.

For more information from the EPA on radionuclides, [click here](#).

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