LAND

August 2011

Perchlorates in Duncan Ground Water

There is an area of contaminated ground water near the Halliburton North Facility on Osage Road. The facility, located in the southeast quarter of section 8 cleaned out missile casings under a contract with the Department of Defense from approximately 1965 to 1991. The main component of rocket fuel is ammonium perchlorate which is a salt. This salt dissolved and contaminated ground water locally. The area of ground water contamination has largely been identified.

Perchlorate affects the uptake of iodine by the thyroid. The most sensitive population is unborn children whose mothers have hypothyroidism (a thyroid with low function) or an iodide deficiency. Perchlorate is not known to be a cancer causing chemical. Perchlorate is not currently regulated by the Environmental Protection Agency (EPA) or the Department of Environmental Quality (DEQ). However the Environmental Protection Agency has issued a health advisory on perchlorate in drinking water. EPA advises that people not drink water with 15 ppb or above. EPA has begun the process to eventually regulate perchlorate in public drinking water under the Safe Drinking Water Act and that process generally takes several years. A February 2011 EPA Fact Sheet indicates the EPA is not currently imposing any requirements on public drinking water supplies regarding perchlorate. Halliburton is in the process of identifying private water wells near the Osage Road site that are impacted by perchlorate contamination. This is a voluntary effort. While neither EPA nor DEQ have regulatory jurisdiction over private wells, DEQ does have jurisdiction over ground water pollution. DEQ is overseeing the investigation and cleanup and is working with the City of Duncan and the rural water district to expedite extension of water lines to affected residences.

Halliburton is offering to supply drinking water to properties with contaminated well water and is attempting to provide hookups to local public water supplies. DEQ is not requiring that any private water well owners be connected to public water, or that they stop using their water. However, drinking contaminated water, particularly above the EPA advisory level, is not recommended. The risk from perchlorate is associated with drinking, eating or in some way swallowing the chemical. Perchlorate does not pass through the skin and inhalation is not considered a route of exposure for perchlorate. There are no current regulations or standards for perchlorate in water for bathing, watering lawns or agricultural use such as watering livestock. Halliburton has hired an expert in risk assessment that has recommended levels at which these kinds of uses should be avoided. These recommended levels are calculated to be very protective and again, are the recommendations of the Halliburton expert and are not mandatory under state or federal regulations.

DEQ does not currently have the equipment to analyze for perchlorate. If you would like information about private laboratories that can analyze for perchlorates, please contact us at the numbers below. EPA currently advises less than 15 micrograms per liter (parts per billion) as an acceptable long term level for drinking water. As a comparison, according to the Agency for Toxic Substances and Disease Registry (ATSDR), healthy volunteers who took approximately 35 milligrams per day for 6 months showed no signs of abnormal functioning of their thyroid gland or any other health problem.

Contact:

If you have health concerns regarding perchlorate, please discuss them with your doctor. If you have other questions please contact Ray Roberts at 405 702-5140, Monty Elder at 405 702-9132 or Jon Reid at 405 702-5121.

OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

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