U.S. finds water polluted near gas-drilling sites

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Why this is important in Central New York:

Fortuna Energy refused to state for the record that this chemical 2-BE would NOT be a component of the chemicals to be injected into the Mallula test well in Van Etten..

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By Jon Hurdle

PHILADELPHIA, Aug 27 (Reuters) - U.S. government scientists have for the first time found chemical contaminants in drinking water wells near natural gas drilling operations, fueling concern that a gas-extraction technique is endangering the health of people who live close to drilling rigs.

The Environmental Protection Agency found chemicals that researchers say may cause illnesses including cancer, kidney failure, anemia and fertility problems in water from 11 of 39 wells tested around the Wyoming town of Pavillion in March and May this year.

The report issued this month did not reach a conclusion about the cause of contamination but named gas drilling as a potential source.

Gas drilling companies say the gas drilling technique called hydraulic fracturing, or "fracking," is safe, but opponents contend it pollutes groundwater with dangerous substances.

Evidence of a link between gas drilling and water contamination would set back development of a clean-burning fuel promoted by the Obama administration as crucial to the future of U.S. energy production.

Some experts believe the United States holds more than 100 years worth of natural gas reserves. The new findings may raise questions about the process companies such as EnCana Corp (ECA.TO), Halliburton Co (HAL.N) and others commonly use to pump the gas from deep geological formations. Encana, Canada's biggest energy company, is drilling in Pavillion.

"There may be an indication of groundwater contamination by oil and gas activities," said the 44-page report, which received little public attention when released on Aug. 11. "Many activities in gas well drilling (and) hydraulic fracturing ... involve injecting water and other fluids into the well and have the potential to create cross-contamination of aquifers."

Among the contaminants found in some of the wells was 2-butoyethanol, or 2-BE, a solvent used in natural gas extraction, which researchers say causes the breakdown of red blood cells, leading to blood in the urine and feces, and can damage the kidneys, liver, spleen and bone marrow.

Greg Oberley, an EPA scientist who has been testing the water samples, said the agency did not set out to prove that hydraulic fracturing caused groundwater contamination, but was responding to complaints from local residents that their well water had become discolored or foul-smelling or tasted bad.

The investigation was the EPA's first in response to claims that gas drilling is polluting water supplies, he said. Testing will continue.

LINK TO GAS INDUSTRY?

While the EPA team has not determined how the chemicals got into the water, many are associated with gas drilling, Oberley said in a telephone interview.

"The preponderance of those compounds in the area would be attributable to the oil and gas industry," he said.

In hydraulic fracturing, energy companies inject a mixture of water, sand and chemicals a mile (1.6 km) or more underground at high pressure, causing rock to fracture and release natural gas.

Drillers such as EnCana are not required to disclose the chemicals they use because of an exemption to the federal

Safe Drinking Water Act, granted to the oil and gas industry in 2005.

In the U.S. Congress, concern about the safety of fracking led to the introduction in June this year of a bill that would require disclosure of fracking chemicals.

Industry representatives say fracking chemicals are heavily diluted and are injected thousands of feet below drinking-water aquifers through steel and concrete shafts that prevent the escape of toxic substances into water supplies.

Randy Teeuwen, a spokesman for EnCana, said the substances found by the EPA had been "tentatively identified." He said many were naturally occurring and some are commonly found in household products and agricultural degreasers.

He said EnCana was working with the agency to identify possible sources of the contamination. "One of those sources could be oil and gas development," Teeuwen said.

Teeuwen said EnCana, which operates 248 wells in the area, stopped using 2-BE in spring 2009 because of concerns about its health effects.

"It's a banned substance as far as EnCana is concerned," Teeuwen said.

John Fenton, a farmer in Pavillion, a rural community of about 150 people, said residents blame gas drilling for a range of illnesses including rare cancers, miscarriages and nervous system disorders.

Families with contaminated water wells have been advised by the U.S. Centers for Disease Control and Prevention not to drink the water, which in some cases was black and oily, with a petroleum-like sheen, and a smell of gas, Fenton said.

"The stress is incredible," Fenton told Reuters. "People have built their lives and businesses here. What's it all worth now?" (Editing by Daniel Trotta and Mohammad Zargham)