



Tapping natural gas could unleash uranium

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BUFFALO, N.Y., Oct. 25 (UPI) -- Plans to tap one of the largest sources of natural gas in the United States could release naturally trapped uranium into the environment, researchers say.

Proposals to drill into the Marcellus shale -- a massive rock formation that stretches from New York through Pennsylvania, Ohio and West Virginia -- have critics focusing on the effects of pumping millions of gallons of water and chemicals deep underground to fracture rocks to release the natural gas.

Researchers at the University of Buffalo in New York say the process, known as hydraulic fracturing or "fracking," could force uranium in the rocks to move into groundwater, a university release said Monday.

"Marcellus shale naturally traps metals such as uranium and at levels higher than usually found naturally, but lower than man-made contamination levels," Tracy Bank, UB assistant professor of geology, said. "My question was, if they start drilling and pumping millions of gallons of water into these underground rocks, will that force the uranium into the soluble phase and mobilize it? Will uranium then show up in groundwater?"

Bank and colleagues created a chemical map to determine the precise location in the shale of the organic compounds containing natural gas.

"We found that the uranium and the hydrocarbons are in the same physical space," says Bank. "We found that they are not just physically -- but also chemically -- bound."

When the millions of gallons of water used in hydraulic fracturing come back to the surface, it could contain uranium contaminants, potentially polluting streams and other ecosystems and generating hazardous waste, Bank said.

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