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Pavillion water study released by EPA, controversy follows

By MJ Clark



East Pavillion resident Jeff Locker at the site of one of the EPA's test wells. An active Encana well is to his right, his house is hidden in the trees behind him.

Ernie Over photo for the Wyoming Business Report.

WASHINGTON, D.C. - Today, the U.S. Environmental Protection Agency released the draft findings of the Pavillion ground water investigation for public comment, as well as independent scientific review.

According to the release and statements by EPA Administrator Lisa Jackson, "The draft report indicates that ground water in the aquifer contains compounds likely associated with gas production practices, including hydraulic

fracturing."

Hydraulic fracturing, commonly referred to as fracking, is a means of liberating natural gas from rock formations by drilling into the formations, then injecting a mixture of water, chemicals and a proppant (typically sand) under high pressure. The high pressure cracks the rock, the sand props open the tiny fissures, and the solvents help the gas flow.

The report has generated great interest among opponents of fracking, as the gas field in Pavillion has been using fracking since 2000, the dawn of the shale gas revolution. If the connection of water pollution to fracking - which is still a matter of debate - is proven, it would strengthen the case against fracking across the country.

Wyoming Governor Matt Mead called for additional testing in Pavillion before naming a source for the pollutants. Specifically, Wyoming and other members of the Pavillion Working Group have raised questions about the lack of replication of testing (typically findings from only two sampling events suggest that more sampling is needed before conclusions can be drawn).

Members of the working group also have questions about the compound 2-Butoxyethanol (a compound used in fracking), which was found in 1 sample out of 4 that were taken, and why it was only found in results from one lab, while other labs tested the exact same water sample and did not find it.

"More sampling is needed to rule out surface contamination or the process of building these test wells as the source of the concerning results," Tom Doll said. Doll is the Wyoming Oil and Gas Conservation Supervisor and a member of the Pavillion Working Group.

Governor Mead said he was pleased to hear that the EPA would be willing to partner with Wyoming and industry to do the necessary further testing. Wyoming will take part in the peer review of the draft.

"My takeaway message is that both the EPA and Wyoming believe this is only the beginning of the process to understand the cause and scope of what was found. There are too many questions raised by what we have seen so far to not pursue further information," Governor Mead said.

The EPA examined the water in two kinds of wells in Pavillion: deep water monitoring wells and drinking water wells. The deep well results detected "synthetic chemicals, like glycols and alcohols consistent with gas production and hydraulic fracturing fluids, benzene concentrations well above Safe Drinking Water Act standards and high methane levels."

The drinking water well results were consistent with earlier tests and included "methane, other petroleum hydrocarbons and other chemical compounds," which were consistent with migration from areas of gas production. Detections in drinking water wells are generally below established health and safety standards.

However, in the fall of 2010, the U.S. Department of Health and Human Services' Agency for Toxic Substances and Disease Registry reviewed EPA's data. The agency recommended that affected well owners take several precautionary steps, including using alternate sources of water for drinking and cooking, and ventilation when showering. Those recommendations remain in place, and Encana has been funding the alternate water supplies.

The EPA's latest release went on to state, "The draft findings announced today are specific to Pavillion, where the fracturing is taking place in and below the drinking water aquifer and in close proximity to drinking water wells - production conditions different from those in many other areas of the country."

Fracking advocate and U.S. Sen. James Inhofe, R-Okla., blasted the EPA, calling its conclusions "not based on sound science, but rather political science," and that they were "part of President Obama's war on fossil fuels and his determination to shut down natural gas production."

Inhofe, the ranking Republican on the Senate Environment and Public Works Committee, called for rigorous oversight over the EPA's process. Because this study is a new scientific inquiry and these methods will be used nationwide, "I strongly believe that it should be considered a Highly Influential Scientific Study (HISA) and undergo the required objective peer review process," he said.

For more information on EPA's Pavillion groundwater investigation, watch for the December issue of the Wyoming Business Report or visit www.epa.gov/region8/superfund/wy/pavillion/index.html