Local Landowners Don't Want to Trade Water for Gas

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Recently Chesapeake Appalachia filed an "application for approval" with the Susquehanna River Basin Commission (SRBC). They are seeking approval to use water from local rivers and lakes for their drilling operations. According to their request they would like permission to remove some 2075 million gallons of water per day.

The large amount of water needed to drill through the Marcellus shale, a million gallons or more per well, has local landowners concerned. Farmers depend on Catatonk Creek for irrigation water, and fishermen for the trout and bass lurking in the shadows. They want assurance that drilling for gas will not endanger the river.

Landowners attending the July 2 community gas meeting at the Spencer Grange expressed concern about depletion of local aquifers as well as removal of so much water from local streams. One person suggested that landowners concerned about groundwater pollution might add language to their lease that would protect their drinking water. Such a clause could specify that drilling companies truck in any water they need, and deny storage of water or brine on site.

In addition to the quantity of water used, landowners were concerned about potential pollution from the fluids used in drilling operations. Drilling for gas in the Marcellus shale involves injecting a mix of water with sand and other chemicals into the well under pressure. The goal is to fracture the shale and allow the natural gas, trapped in the rock, to escape. The process is hydrofracturing, referred to in the business as fracturing.

The problem is that drilling companies don't want to reveal the ingredients in their fracturing mix. They claim that their list of ingredients is "proprietary information". Over 175 chemicals are used in fracturing fluid, including carcinogens such as benzene, naphthalene, arsenic, and lead. Many of those chemicals have not been tested for long-term health effects on humans, and nobody knows how the chemicals interact with each other.

"One issue is what happens to the wastewater after fracturing," said Spencer landownerAnnemarie Zwack. "They can hold it onsite for re-use or transport it to a treatment facility." An EPA study indicates that up to 40 percent of the fracturing fluid may remain in the shale. These chemicals may seep into the surrounding soil and groundwater, polluting drinking water. Fluid stored in pits on site may leak into the land if the pit liners are torn.

Zwack, who has been studying the issue, noted that landowners in the southwest (where the same exploration companies are extracting natural gas from the Barnett shale) are concerned about the safety of local drinking water.

"There are non-toxic alternatives," Zwack said. "When oil companies drill offshore they have to use non-hazardous fluids so as not to harm marine life."

In addition to the unspecified chemicals in the fluid, is the issue of radioactive compounds in the Marcellus shale located in the northeast. The radioactive compounds can potentially pollute the wastewater that comes out of a well, Zwack explained.

Candor landowner, Carrie Kerr reported that the current permits require the companies to transport their wastewater to a treatment facility near Philadelphia. But some companies may not be following the regulations outlined by their permits.

Ashur Terwilliger, a farmer and landowner advocate from Chemung County, has observed trucks driving away from drilling areas spreading water along roads around the town of Erin. He believes they do it to keep the dust down.

What is needed, said Zwack, is a commitment to "best practices" regarding water use and disposal for Marcellus exploration. DEC might look at the practices used by offshore drillers for ideas. In addition, both the DEC and landowners ought to have information on the chemicals used in the fracturing fluid.

Information on "Hydraulic Fracturing Best Practices" is available on the web at http://www.earthworksaction.org/FracingDetails.cfm.