



Josh Patterson shows where shale rock has formed along a creek bed in southern Chatham County near the Lee County line. Photo by Wiley Brown, courtesy of the Sanford Herald.

Legislator moves ahead of curve on 'fracking' in NC

By PAUL THARP, Staff Writer 3/18/2011

State Rep. Mitch Gillespie described his bill to raise bonding permit fees on companies that want to drill for oil in North Carolina as "a one-issue place-holder bill."

While that bill, H. 242, is in the House's Standing Committee on the Environment, the Burke County Republican said he will publish a proposed committee substitute addressing the broader issues posed by the process of hydraulic fracturing, or "fracking."

Fracking is a process of natural gas extraction involving horizontal drilling and injection of water, sand and chemicals into shale formations deep underground. The resulting fissures in the rocks allow natural gas to rise to the surface.

The process has drawn public criticism and concern in other states, including New York, which recently passed a moratorium on the practice.



Rao

Dr. Vikram Rao, the executive director of the Research Triangle Energy Consortium, said fracking is safe if done correctly. The former Halliburton vice president and chief technology officer said the United States is home to some 150,000 shale gas wells.

"There are no issues with these wells if a proper casing and cementing program is adhered to," Rao said.

He said he has not studied the veracity of claims of contamination of drinking water aquifers in states like Pennsylvania, West Virginia, Virginia and New York, but he said water issues raised in the 2010 documentary "Gasland" should not occur if a well is drilled correctly. The film features scenes in which property owners are able to ignite water from their faucets with a match or lighter.

"The only reason for that kind of contamination would be if the company drilling the well screwed up," Rao said.

Gillespie said North Carolina would probably move toward drilling if it is safe, but that is still years away "These laws have not been dealt with since 1945," he said, referring to the Oil and Gas Conservation Act, which prohibits horizontal drilling and effectively outlaws fracking.

Gillespie said the broader committee substitute to his bonding bill "would probably require a review of the potential environmental impact of horizontal drilling, would study the water supply in Lee and Sampson counties to see if the water capacity would allow for fracking, and would study the infrastructure."



Gillespie

He said a new sewage plant would likely have to be built to handle discharge. Roads would have to be built to truck in millions of gallons of water required for fracking operations, or water could be piped in from afar.

Rao said the two central issues involving water relate to the high volume of withdrawal required to conduct fracking operations and that a third of the water injected into shale formations that returns to the surface. This water, called "flow-back," is steeped in chemicals.

When regulations are written and enacted, they should require full disclosure of both the names and relative benignity or toxicity of chemicals used, Rao said. "That will put some of the legacy issues pretty much put to bed."



Holman

Bill Holman, director of state policy at The Nicholas Institute for Environmental Policy Solutions at Duke University, said the state "needs to set standards to ensure that the flow-back water is treated and the solids - fracking chemicals, radioactive materials and other contaminants - are removed before the treated water is discharged to surface waters."

Holman noted that in some states, companies re-inject the flow-back water underground for long-term storage instead of discharging it.

"I believe we should study whether that option is safe for the geology and water supplies in North Carolina," Holman said. "I'm skeptical about the ability of conventional wastewater treatment plants to treat flow-back water and its associated wastes."

Ray Covington, one of the founders of Sanford-based North Carolina Oil and Gas, LLC, said there are some legitimate concerns that oil and gas companies will "be willing to cut corners to get better returns on their investment."

Covington noted concerns raised about fracking operations in other states about radioactive isotopes in flow-back. "This water is being sent to public treatment facilities that are not prepared to take care of some of these byproducts," he said. "There needs to be collaboration between government, industry and the public, and there needs to be transparency."

Holman said the gas industry should pay the costs of treating its waste.

"I believe the industry is already researching safer chemicals and better waste-management practices," he said. He added that strong state standards will provide the right incentive to develop new chemicals and new technology.

"There are a lot of folks downstream from the Deep River Basin [where the shale formations are located] that depend on the Cape Fear River for drinking water. They will be concerned about water quality and water withdrawals," Holman said.

Rao said there may be water available for fracking operations that won't affect drinking water supplies. "While we are in the stage of studying this issue, it may be beneficial to create a map of saline water aquifers to see their location relative to where natural gas production is intended," he said.

If water could be piped from saline aquifers, then water withdrawals would not affect drinking water supplies, he said.

Rao said North Carolina should learn from the experience of other states like Pennsylvania. "They started out not understanding the issues well, and they appear to have had some water discharges and other problematic situations," he said.

Gillespie said his bill will get North Carolina moving in the right direction. And even though any fracking operations may be years away, something needs to be done now to protect the public from drilling, he said.

"It wouldn't surprise me at any time if some people go down there and start drilling wells," he said. "They can't frack or drill horizontally, but they can drill vertically without much of any regulation as to the capping of a gas well."

If a vertical well isn't capped properly, natural gas could simply spew into the air, Gillespie said.

"Somebody better get a handle on this and do it fast," he said. "This is going to be an issue in North Carolina."