Frack Attack—Environmentalists and Hollywood Renew Attacks on Hydraulic Fracturing

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Environmental groups have been trumpeting a new study by the US Geological Survey (USGS), which they claim “proves” the US Environmental Protection Agency’s (EPA’s) concerns about hydraulic fracturing, or “fracking.” In a September 30, 2012, press release, for example, the Sierra Club—an environmental group whose motto could be “whatever it is, we’re against it”—claimed that the USGS study “strongly suggests that as a result of fracking, gas is seeping into” the water supply in the town of Pavillion, Wyoming.

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These latest attacks on fracking raise several important issues, although Hollywood releasing yet another “business is eee-vil” movie is probably not one of them. What is important is the apparent mischaracterization by the Sierra Club and other environmental groups regarding the EPA’s water-quality studies and what the most recent USGS study means.

SPILLED ON THE GROUND OR BUBBLING UP FROM BENEATH?

If one is going to address groundwater contamination, it helps to first determine the source of the contamination. In the case of fracking, there are two potential sources: (1) contamination from surface water, such as fluid leaking from the well-drilling equipment; and (2) contamination because either fracking fluids or natural gas (and natural gas liquids) migrate from drilled wells into groundwater above.

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In April/May of this year, the USGS tested the two monitoring wells that the EPA had drilled to determine whether some of the fracking-related chemicals found by the EPA were still present. The USGS designed a data-collection system to test the two wells in order to "provide an independent perspective of the quality of groundwater pumped from two USEPA monitoring wells located near Pavillion, Wyoming." The USGS reported its findings. Curiously, the Sierra Club did not reference either of these two reports. Instead, it referenced a memorandum summarizing the results of the USGS report, which was prepared by an independent consultant hired by the Sierra Club, Earthworks, and the Natural Resources Defense Council to analyze the USGS data and provide his own conclusions. The consultant concluded, "The new data does not disprove the hypothesis made by the EPA that natural gas drilling activities, including fracking, have contaminated the Wind River aquifer near Pavillion WY." Although the consultant’s language is consistent with how statisticians often explain the results of hypothesis testing, converting a finding that a hypothesis cannot be disproved into “Fracking Contaminating Groundwater and Poisoning Residents. We are all DOOMED unless fracking is banned” is perhaps a logical leap too far.

Of the two wells drilled by the EPA, there is agreement that the second well, MW2, was useless because it had too little water to provide representative water samples. As to the first well, MW1, there is disagreement as to what the USGS analysis showed. The consultant, concluding that the evidence for contamination had been strengthened by the USGS, stated: “The organic chemistry at MW01 has not changed substantially since the EPA sampled the well; some constituents have increased and some have decreased, as would be expected with organic contaminants discharging from a series of events, the hydraulic fracturing of..."
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sensationalism, rather than sound science, energy prices will soar and further damage the US economy.

With the EPA helping to shut down coal mining and coal-fired generation, natural gas is the only fossil fuel that can meet growth in the demand for electricity.

No one is suggesting that shale gas development and well drilling should proceed on a “devil-may-care” basis that allows for indiscriminate disposal of drilling waste. But the scientific flaws in the EPA’s Pavillion research should not be allowed to derail an emerging industry. As for Matt Damon, perhaps someone should remind him that the theaters showing his movie use electricity, which may well be generated by shale gas.

NOTES
1. With apologies to the late Groucho Marx, who sang “Whatever it is, I’m against it” in the 1932 movie Horse Feathers.
3. Dimock was the setting for the 2010 antifracking documentary Gasland, which portrayed water from faucets burning because of the natural gas it was contaminated with and attempted to link that contamination to fracking activity by Cabot Oil and Gas Company. EPA testing of residents’ drinking water found no contamination.
5. Ibid., p. 33.
9. Ibid., p. 5.
10. Ibid. p. 1 (emphasis added).