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28 October 2002

Joan Harrigan-Farrelly, Chief  
Underground Injection Control, Prevention Program  
Office of Ground Water and Drinking Water  
Environmental Protection Agency, Mail Code 4101  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
Email address: [OW-Docket@epa.gov](mailto:OW-Docket@epa.gov)

**RE: EPA's draft study report *Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs***  
Federal Register: August 28, 2002, Volume 67, Number 167, Page 55249-55251  
**Water Docket ID No. W-01-09-II**

Dear Ms. Harrigan-Farrelly,

We appreciate the opportunity to submit comments on EPA's draft study report *Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs*. The public interest organizations listed below work to protect public health, the environment, drinking water, and consumers and represent {millions} of members throughout the United States. We are very concerned about the potential that toxic chemicals used in hydraulic fracturing fluids have for contaminating underground sources of drinking water (USDW). Remediation of contaminated ground water is very difficult, extremely expensive, and often impossible. A precautionary strategy is therefore the most intelligent approach to protecting our current and future drinking water supplies.

This report concludes that the risk of contaminating underground sources of drinking water is low and suggests that further investigation, Phase II collection and analysis of ground water samples, is not necessary. However, these conclusions are not consistent with the information and concerns presented in the report. Furthermore, these conclusions are based on limited

information about concentrations of toxic chemicals and their subsurface behavior. It is imperative to proceed with more meaningful field investigations in order to adequately protect underground sources of drinking water and prevent contamination. We strongly urge the EPA to reconsider this conclusion and complete the final phases of the study.

The report's presentation of the following information undermines the report's conclusions and gives us great concern for not proceeding with meaningful field investigations:

- EPA identifies the known health effects and alarming concentrations of toxic chemicals used in hydraulic fracturing fluids;
- Even with the suspicious dilution calculations – the estimated concentrations of benzene and other chemicals still exceed drinking water standards in ground water;
- Most CBM wells are subjected to multiple hydraulic fracturing treatments;
- Cites studies indicating that 39-75% of fracturing fluids remain in the ground;
- Reveals that 10 of 11 coal basins likely lie, at least in part, with USDWs;
- Facts in report describe the likelihood of fractures to break through rock barriers to adjacent USDWs;
- Most of the 11 coal basins exist in mountainous areas where tectonic forces created systematic fracturing and faulting that likely serve as conduits for faster and more extensive ground water migration;
- Describes plans for staggering numbers of planned new coalbed methane wells;
- EPA even urges the industry to remove any threat whatsoever from injection fluids – especially to discontinue the use of diesel fuel in hydraulic fracturing fluids.

Members of Congress are concerned about EPA staff's efforts to recalculate the estimated initial and subsurface concentrations of toxic chemicals used in hydraulic fracturing fluid after concerns were raised about several chemicals, including benzene, exceeding drinking water standards. We share their concerns. In two recent letters to Administrator Whitman, Congressman Waxman provided detailed criticism of EPA's "altering scientific and policy conclusions to accommodate Halliburton's interest in promoting the oil and gas drilling practice of hydraulic fracturing" and the fact that EPA recalculated estimated chemical concentrations based on feedback from industry sources.

Very small quantities of toxic chemicals such as benzene are capable of contaminating millions of gallons of water. For example, only 28 tablespoons of MTBE could contaminate millions of liters of ground water. MTBE has rendered underground sources of drinking water unusable at concentrations far below the health-based drinking water standard. This study should proceed in order to avoid all the problems caused by MTBE contamination of drinking water sources.

If reworking the numbers to achieve lower estimated chemical concentrations was not bad enough, a peer review panel that is dominated by the oil and gas industry further undermines the report's credibility. Halliburton – one of the world's largest hydraulic fracturing companies – employs one panel member.

We strongly encourage EPA to withdraw its conclusion, complete the final phases of the study, and recruit a peer review panel that is free of conflict of interest.

Thank you for your careful consideration of our comments.

Sincerely,

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