Zimmerman & Associates

Environmental Litigation, Mediation, Enforcement & Compliance, Counseling

March 29, 2010

By Electronic and First Class Mail

Mr. Edward Hanlon
Designated Federal Officer
EPA Science Advisory Board (1400F)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Evaluation and Comment on EPA's Proposed Research Approach For Studying the Potential Relationships Between Hydraulic Fracturing And Drinking Water Resources (FRL-9128-2)

Dear Mr. Hanlon:

On behalf of my clients, Damascus Citizens for Sustainability and Friends of the Upper Delaware River, I am pleased to submit the following comments and suggestions to the Environmental Engineering Committee of the EPA Science Advisory Board in connection with the *Scoping Materials for Initial Design of EPA Research Study on Potential Relationships Between Hydraulic Fracturing and Drinking Water Sources* ("Scoping Materials") prepared by the Office of Research and Development of the U.S. Environmental Protection Agency.

We have a number of suggestions concerning the proposed Scoping Materials. We are pleased to see that the "Potential Elements of Research Study" will include field studies during which a variety of samples will be collected and analyzed. However, we strongly urge that the scope of sampling include all water wells located within areas where HF gas development has already begun or been established. This should include not only community water supply systems but also individual water wells of residents in the vicinity of HF wells. We have not suggested a specific radial limit for such sampling as this should be a matter evaluated as part of this study. One of the objectives of this study should be to determine how far environmental contamination may extend from the terminus of a horizontal well bore that has been hydraulically fractured and what conditions may contribute to greater horizontal or vertical migration of HF chemicals as well as brines and dissolved or suspended metals and chemicals

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present in the gas producing strata. This well sampling should include both wells producing water for human consumption and wells used for domestic animals and livestock.

This well sampling component of the field studies should include all incidents and locations where gas and other chemicals have been found in water wells. Among these areas are Pavilion, WY, Weld and Garfield Counties, CO, Divide Creek also in Garfield County, CO, Dish and Fort Worth, TX, eastern and northeastern Ohio, Wetzel County, WV, Greene, Washington, Tioga, Lycoming, Susquehanna, and Wayne Counties, PA, and Chenango, Schuyler and Stueben Counties, NY. Additional sources of information on potential contamination from HF gas development should be investigated including incidents reported to the EPA "Eyes on Drilling" tip line (1-877-919-4EPA and/or eyesondrilling@epa.gov). In addition to these sources of information about potential contamination incidents, various academic institutions have started data bases to collect such information including the University of Pittsburgh's Center for Healthy Environments and Communities (CHEC). Citizen groups such as Damascus Citizens for Sustainability, National Alliance for Drilling Reform, and the Oil and Gas Accountability Project also have collected information on a substantial number of contamination incidents. All of these and similar sources of information on potential contamination from HF gas development should be accessed and the information investigated.

We also are pleased to see that the "Framing the Research Questions" portion of the Scoping Materials incorporates Potential Health and Environmental Risks that include health risks and key exposure pathways such as air, water, food and environmental exposures. Among the air emissions issues that should be considered are the emissions of green house gases, air toxics, and national ambient air quality standards substances from the entire gas exploration, production, and distribution system. Only by examining the entire natural gas production cycle can a true representation of the cumulative environmental impacts of such natural gas energy be developed. Included with the air emissions, waste management, and water quality and quantity impacts must be an objective and complete evaluation of the assimilative capacity of the full spectrum of environmental resources that will be affected by shale gas development.

We also support the inclusion of potential impacts to aquatic life and biological endpoints that can be used to assess ecological risks. Among the air impact information that should be included in this study is the January 2009 assessment of the air emissions from natural gas production in the Barnett Shale area by Dr. Al Armendariz of Southern Methodist University (now Regional Administrator, USEPA Region 6). There are a number of incidents involving aquatic life that should be included in this study. Among these are the production brine fish kill incidents in Dunkard Creek and Cross Creek Park both in southwestern Pennsylvania, the fracturing fluid spill and fish kill incident in Dimock township in north central Pennsylvania, and

the area wide contamination of a nine square area in Susquehanna County also in Dimock township.

Finally, it is essential that those advising the ORD research team through the stakeholder process must represent a balanced panel of individuals with knowledge and experience in the topics and resources involved in the study. The academic institutions and citizen organizations, that are collecting information on contamination incidents potentially linked to shale gas development, should be included in the stakeholder group with which the research team will be working. It is very important to incorporate effective grassroots level information sources to continuously inform the investigative process involved in this study.

We appreciate this opportunity to provide a few initial thoughts concerning the scoping of this vitally important study. We will continue to offer information to and interact with the ORD team conducting this study.

Sincerely,

Jeff Zimmerman

cc: Damascus Citizens for Sustainability
Friends of the Upper Delaware River