

**Sullivan Area Citizens for Responsible Energy Development**  
**PO Box 913**  
**Smallwood, New York 12778**

February 26, 2011

***Via Overnight Mail***

***Copy by E-Mail to [hanlon.Edward@epa.gov](mailto:hanlon.Edward@epa.gov)***

Environmental Protection Agency  
The Science Advisory Board Staff Office  
Ronald Reagan Building  
1300 Pennsylvania Avenue, NW  
Suite 31150  
Mailcode 1400R  
Washington, DC 20004  
Attn: Mr. Edward Hanlon  
Designated Federal Officer

***Re: Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources***

Dear Mr. Hanlon:

Thank you for the opportunity to comment on the Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources (the “Draft Plan”) released on February 7, 2011.

We represent over 250 residents and homeowners in Sullivan County, New York who remain extremely concerned about the potential adverse impacts of hydraulic fracturing operations on the environment, including but not limited to drinking water, our families’ health and the character of our communities. Our supporters, all families living above the Marcellus Shale play, are relying on the EPA—despite what may be enormous limitations being placed upon the agency—to undertake a rigorous scientific study free of undue industry influence and conflicts of interest. We do not want to be part of a “sacrifice zone” as part of our nation’s continued addiction to fossil fuels.

First and foremost, we want to praise the Draft Plan for encompassing the full life cycle of the gas extraction process. Anything less than a full life-cycle approach would not be responsive to the thousands of claims of water contamination raised by individuals across the nation. Excellent too is the definition of “drinking water resource” which includes sources for private as well as public water supplies, and, of course, both underground and surface water sources. Since hydraulic drilling is not being limited to industrial areas but is now being conducted within residential and agricultural districts—literally in backyards and schoolyards—including private well water sourcing is important and necessary. The Draft Plan’s investigation of the chemicals used, their degradates and/or reaction products as well as naturally occurring substances that may be released or mobilized as a result of fracturing is also extremely important. The evaluation of all of the foregoing impacts on human health must be a critical component of the Draft Plan.

NORMs may be of particular concern in the Marcellus Shale play. As such, we urge you to consider the effects of drilling cuttings and potential contamination from drill cuttings' storage and transportation. These cuttings often contain heavy metals, metallic salts, contaminants such as biocides, lubricants and surfactants as well as NORMs. Since these can contaminate ground and surface water through runoff, we urge that these also be included in any comprehensive plan to study hydraulic fracturing's effects on drinking water.

In the scenario evaluations, special concern should be accorded to potential modes of failure to assess areas of vulnerability. Inevitable human errors and management pressures on workers to expedite the process and otherwise cut costs can lead to BP-like "perfect storm" situations with unexpected but significant consequences. The thousands, if not tens of thousands, of relatively small drilling sites in each state will frequently receive minimal oversight from understaffed regulatory agencies (in likely contrast to the sites selected for this study by the EPA). This situation will more likely lead to the environmental or human health equivalent of "death by a thousand cuts" (i.e. numerous incidents of "small" spills and explosions of fracking fluids or produced water) than the enormity of a BP-like catastrophe which captures the nation's and federal government's attention. Nonetheless, these could have terrible consequences for our drinking water and public health, particularly for pregnant women and their unborn children and infants and small children for whom toxic exposures are particularly dangerous.

We are particularly concerned about the integrity of well construction over time given that 60-90% of fracking fluids will remain underground after drilling is completed and the well capped. The Draft Plan needs to address and assess the intermediate and long-term potential impacts of hydraulic fracturing on drinking water. Will there be natural deterioration of well casings over decades of time that will permit migration through natural or drilling created fissures to our drinking water sources?

And, since well casings do fail and other contaminating incidents do happen with unfortunate regularity, we ask that the Draft Plan address any available and reasonably anticipated remediation techniques. If there is no current method to decontaminate an aquifer, is there any emerging technology to do so?

Currently, well construction and gas extraction operations are regulated by the states and yet the states have very different regulatory environments. Some, like Pennsylvania's, seek to be industry-friendly, resulting in less stringent requirements and increased number of contaminating incidents. The EPA is in the unique position of comparing the relevant state regulations in the states of selected case studies and determining which are more protective of drinking water and public health and, further, what regulations are needed to ensure the most stringent protections to drinking water and public health.

Thank you for considering these comments.