

Comments to the United States Environmental Protection Agency's Scientific Advisory Board (SAB)

June 14, 2016, Alexandria, Virginia

Hello, my name is Pete Miller. I am here today to offer comments on the SAB draft letter to EPA Administrator McCarthy dated April 26, 2016 which summarizes its technical review of the EPA's Draft Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources.

I am an employee of Range Resources – Appalachia, LLC, a leading U.S. natural gas producer. Our company is the most active developer of the Marcellus Shale in Pennsylvania, having drilled over 1,000 horizontal shale wells. I was also an active participant in the several onsite and teleconference meetings of the EPA study's Technical Roundtable and Workshop Committees.

Much of the SAB's concerns in this draft report are focused on a single phrase within the EPA's Executive Summary; the straight-forward, high-level conclusion statement from page ES-6 that *"We did not find evidence that these mechanisms have led to widespread, systemic impacts on drinking water resources in the United States."*

The SAB has expressed four separate concerns with the wording of this simple conclusion statement. The first is that *"the statement itself does not clearly describe the system(s) of interest"*. While this is true for the statement itself, page ES-3 of the same Executive Summary clearly defines the system(s) of interest as *"groundwater or surface water that now serves, or in the future could serve, as a source of drinking water for public or private use"*. In fact, this description in the Executive Summary is by its own admission is *"broader than most federal and state regulatory definitions of drinking water and encompasses both fresh and non-fresh bodies of water"*.

The second concern that the SAB expressed with the wording of the statement is that the statement itself does not clearly describe the scale of the impacts. Again while this is true for the statement itself, the scale of impacts are discussed in other parts of the Executive Summary as well as in the very next sentence following the statement of concern; *"Of the potential mechanisms identified in this report, we found specific instances where one or more mechanisms led to*

impacts on drinking water resources, including contamination of drinking water wells. The number of identified cases, however, was small compared to the number of hydraulically fractured wells”.

The third concern that the SAB expressed with the wording of the statement is that the statement itself does not clearly describe the definitions of “*widespread*” and “*systemic*”. These words have clear and concise meanings within the context of the assessment and will be readily understood by most reading the assessment.

For illustration, an example of “*widespread, systemic impacts*” in a similar context can be found in the results from Pennsylvania’s most recent *Bi-Annual Integrated Water Quality Monitoring and Assessment Report* from 2014. This report assesses the water quality of over 83,000 miles of streams and rivers and 80,000 acres of lakes in The Commonwealth. Agricultural activities and abandoned mine drainage were identified as the top 2 sources of stream impairment within the State; combined they impact over 11,000 miles or 13.6% of all assessed streams and rivers. That scale of impact clearly meets the definition of “*widespread and systemic*”. In contrast, impacts from all petroleum activities ranked 27th on the list and accounted for impacts to 0.076% of the assessed streams and rivers; and the majority of those streams had multiple impact sources listed.

Another example of “*widespread, systemic impacts*” in a similar context can be found in the *2009 Drinking Water Quality in Rural Pennsylvania and the Effect of Management Practices* by Penn State University. This study found that 41% of all wells sampled across Pennsylvania failed at least one safe drinking water standard. The primary causes of water contamination was found to be from poor well construction, on lot sewage systems, and agricultural practices.

Finally most members of the SAB panel conclude that the term “*impact*”, although concisely defined in Appendix J, requires additional clarification and explanation. The example given by the SAB was that they would like a discussion on what is meant by “*any observed change*”. Again, we believe that these words have clear and concise meanings.

As a participant in the original study’s Technical Roundtable and Workshop Committees I witnessed first-hand the amount of attention, multi-stakeholder

input, and careful evaluation utilized by the EPA throughout the process. I believe this same level of attention and evaluation was utilized by the EPA in crafting the high-level conclusion statement as well as the entirety of the draft assessment.

The statement in question: “*We did not find evidence that these mechanisms have led to widespread, systemic impacts on drinking water resources in the United States*” provides clarity and certainty; it is not confusing or unclear except to those who are not in agreement with it.

In 1978, Congress directed the EPA to establish this Science Advisory Board to provide scientific advice to the Administrator of the EPA. To that end we urge the SAB to limit its review of EPA’s draft assessment to technical errors and omissions rather than advocating for *low redefinition* of common, well understood terms. The result of which would actually create the opposite of their stated intent: less clarity, more confusion, and less certainty.

Thank you for considering our comments.

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