

**EPA Science Advisory Board
Hydraulic Fracturing Research Advisory Panel
Public Teleconference December 3, 2015
Oral Statement by Hugh MacMillan**

From: Hugh Macmillan
Sent: Thursday, December 03, 2015 5:00 PM
To: Hanlon, Edward <Hanlon.Edward@epa.gov>
Subject: Good afternoon

Hi Ed,

Attached are the comments I read, in case audio interference made it difficult for some panelists to hear. Thank you!

Hugh

Comments made by Hugh MacMillan, Senior Researcher, Food & Water Watch during the EPA SAB hydraulic fracturing research panel teleconference, December 3, 2015

Thank you. I'm an applied mathematician.

I earned a PhD in 2001 from the University of Colorado, and after nine years in academia, I began to work at the interface of science and policy, first as a AAAS fellow in the U.S. Senate, and now with Food & Water Watch.

First, it is very important that this panel has taken issue with the agency excluding three high-profile cases of contamination — namely the Dimock, Pavillion and Parker County cases — the investigations of which the agency separately abandoned. We continue to urge EPA to revisit these cases.

Second, I am pleased that this panel has emphasized the disconnect between the topline finding of “no widespread, systemic impacts,” on one hand, and the data limitations and uncertainties, on the other hand, that actually preclude estimates of the frequency and severity of impacts.

Ten years ago, citing the passage of the Halliburton Loophole, the EPA Inspector General under the second Bush Administration dropped its investigation of political interference and industry influence on the agency's first study of hydraulic fracturing, which had concluded, in 2004, that no further study of the issue was needed.

Fast forward to today, and the Obama EPA is faced with reconciling its own drift in tone from the body of the assessment to the misleading topline finding of no widespread systemic impacts.

It is imperative that the full EPA Scientific Advisory Board convey the concerns of this panel with fidelity, and that the EPA be responsive to the panel's concerns.

Now, I would like to make a brief point on the preliminary summary responses:

In response to charge question 4b: There's mention of accounting for "new technologies recently implemented"... and mention that "methods for well completion have improved over time to help mitigate" stray gas migration...

And in response to charge question 8a, it's stated: the "synthesis should summarize practices that have mitigated the frequency and severity of impacts."

However, lacking data on the frequency and severity of impacts from any number of points in the hydraulic fracturing water cycle, this cannot be done.

Will submit additional comments in writing, and would like to just reiterate that the most important thing upper-level decision makers at the EPA can do in this study is be candid as far as where the science stops, and where the policy considerations start.

What would have constituted "widespread, systemic impacts" for any of the mechanisms identified? 5 percent of the time? 20 percent of the time? At what severity? The EPA doesn't say.

The terms "widespread" and "systemic" were not defined explicitly. Rather, these terms are merely defined implicitly as levels of damage above and beyond what are currently impacting communities. I'm pleased that you will have the chance to hear from many individuals in these communities this afternoon.

Thank you.