

Congress of the United States

House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

2321 RAYBURN HOUSE OFFICE BUILDING

WASHINGTON, DC 20515-6301

(202) 225-6371
www.science.house.gov

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Dr. David Dzombach, Chair, Hydraulic Fracturing Research Advisory Panel
Dr. David Allen, Chair, Science Advisory Board
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dr. Dzombach and Dr. Allen,

As the Environmental Protection Agency's (EPA) Science Advisory Board (SAB) and Hydraulic Fracturing Research Advisory Panel begin examination of the Agency's Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources, I write with additional areas for inquiry by the Panel and Board. The Environmental Research, Development, and Demonstration Act of 1978 states that "[t]he Administrator of the Environmental Protection Agency shall establish a Science Advisory Board which shall provide such scientific advice as may be requested by... the Committee on Science, Space, and Technology..."¹ The Science Advisory Board's Charter also establishes that the Board shall respond to requests from this Committee to "have the SAB address a particular issue."² Consistent with SAB's policy that "advisory committees will not accept a charge from the agency that unduly narrows the scope of an advisory activity,"³ I am writing with additional questions for the Hydraulic Fracturing Research Advisory Panel and SAB.

Purpose & Scope

Within the agency's study plan, EPA clearly defines hydraulic fracturing as "the process of using high pressure to pump fluid, often carrying proppants into subsurface rock formations in order to improve flow into a wellbore." In addition, EPA states "the overall purpose of this study is [to] elucidate the relationship, if any, between hydraulic fracturing and drinking water resources."

- Using the agency's definition for hydraulic fracturing, has EPA expanded its research beyond its stated purpose to non-fracturing oil and gas activities?

¹ 42 USC § 4365.

² <http://yosemite.epa.gov/sab/sabproduct.nsf/WebBOARD/currentcharter?OpenDocument>.

³ <http://yosemite.epa.gov/sab/sabproduct.nsf/WebSABSO/PublicInvolvement?OpenDocument>.

- Given EPA's finite resources and time, as noted in the SAB Environmental Engineering Committee's recommendations,⁴ would a more focused study have provide more valuable information and scientific evaluation of the process of interest (i.e., hydraulic fracturing) and its relationship, if any, to drinking water?

"Risk characterization at EPA is considered to be a conscious and deliberate process to bring all important considerations about risk, both the likelihood of the risk but also the strengths and limitations of the assessment and a description of how others have assessed the risk into an integrated picture."⁵ According to the EPA Risk Characterization Handbook, "[t]he goal of risk characterization is to clearly communicate the key findings and their strengths and limitations so its use in decision making can be put into context." The Agency has acknowledged, however, that the expected study results will have significant limitations in "providing results that can then be used to assess the potential risks to drinking water resources from hydraulic fracturing." Notwithstanding this acknowledgement, the agency is prematurely claiming its results will "provide policymakers at all levels with high-quality scientific knowledge that can be used in decision-making."

- Have all aspects of the hydraulic fracturing study been designed in a manner that will provide an integrated picture and appropriate level of context (i.e., likelihood, severity, human exposure), as described in EPA's Risk Characterization Handbook, necessary for policy-makers to make informed decisions regarding the hydraulic fracturing process?
- Based on EPA's definition of hydraulic fracturing, has the Agency selected research questions and projects that are specific and unique to the hydraulic fracturing process?
- How are water withdrawals associated with hydraulic fracturing different or unique in comparison to potential impacts from water withdrawals by other users?

Earlier this week, EPA announced that it is "extending its deadline for the public to submit data and scientific literature to inform EPA's research on the potential impacts of hydraulic fracturing on drinking water resources from April 30, 2013 until November 15, 2013,"⁶ raising concerns about the timeline for the study.⁷

- What impact will this change have on the Board and Panel's review of EPA's ongoing research?
- When does the Board and Panel plan to meet and accept public comments between now and the intended completion of draft study results in December 2014?

Resource Constraints

I strongly support research related to unconventional oil and gas production, including the process of hydraulic fracturing, because it is important to the U.S. economy and energy

⁴[http://yosemite.epa.gov/sab/sabproduct.nsf/368203f97a15308a852574ba005bbd01/CC09DE2B8B4755718525774D0044F929/\\$File/EPA-SAB-10-009-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/368203f97a15308a852574ba005bbd01/CC09DE2B8B4755718525774D0044F929/$File/EPA-SAB-10-009-unsigned.pdf)

⁵ <http://www.epa.gov/spc/pdfs/rchandbk.pdf>

⁶ [http://www.ofr.gov/\(S\(3nize4nqzpy0aj1a3ekofzqi\)\)/OFRUpload/OFRData/2013-10154_PI.pdf](http://www.ofr.gov/(S(3nize4nqzpy0aj1a3ekofzqi))/OFRUpload/OFRData/2013-10154_PI.pdf)

⁷ *Inside EPA*, "EPA Delays Fracking Risk Study Until November, Adding to GOP Concerns, April 29, 2013, <http://insideepa.com/201304292432520/EPA-Daily-News/Daily-News/epa-delays-fracking-risk-study-until-november-adding-to-gop-concerns/menu-id-95.html>.

security. However, the U.S. government is currently facing budget constraints and it is prudent to continually assess allocation of financial resources.

- Considering the SAB Environmental Engineering Committee's past recommendations¹ to EPA to conduct a study specific to hydraulic fracturing and exclude well-understood issues (e.g., site development), what research activities could be removed or effort reduced from the Agency's plan with insignificant impact on achieving the research study's purpose?

Data

EPA acknowledged research data limitations within the 2012 progress report, including in the spill and environmental justice sections.

- How did EPA's lack of a systematic planning process (e.g., Data Quality Objectives) impact its ability to identify, gather and assess appropriate information to answer research questions?

Study Design

- Has EPA provided within the study plans a consistent approach that will be used to describe and calculate uncertainty in a manner that is transparent, reliable and reproducible for all aspects of the agency's hydraulic fracturing research?

Highly Influential Scientific Assessment

A scientific assessment is considered "highly influential" if the administering agency or the OIRA Administrator determines that its dissemination could have a clear and substantial impact on important public policies (including regulatory actions) or private sector decisions with a potential effect of more than \$500 million in any one year or that its dissemination involves precedent setting, novel and complex approaches, or significant interagency interest.⁸ EPA has designated the 2014 hydraulic fracturing study final report of results as "highly influential."

- If the compilation of the parts is "highly influential", should all study results, parts or components (i.e., individual reports) that are intended to be included in the 2014 final report also be classified as "highly influential?"⁹

Background & Baseline Information

- Has EPA incorporated an appropriate level of background and baseline data collection and assessment activities within the general and project specific study plans? Specifically, based on the retrospective study quality assurance project plans and 2012 progress report, has the Agency designed the study in a manner that will enable it to

⁸ http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/peer_review041404.pdf

⁹ Within the Progress Report, EPA has differentiated the "final report of results," which has been designated as "highly influential," from "individual reports and papers." This appears to be a loophole that would allow EPA's results to be finalized and released to the public without undergoing prudent and necessary technical scrutiny.

attribute perceived drinking water impacts to a specific natural or anthropogenic source with an appropriate level of certainty?

- Has EPA designed all aspects of the study in a manner that would enable it, if necessary, to attribute perceived drinking water impacts to a specific phase (i.e., hydraulic fracturing), aspect or factor associated with oil and gas development?

Approach

- Has EPA appropriately integrated its research to describe the relationship between the “hydraulic fracturing water life-cycle” phases? For example, has the Agency considered the operational relationship between fracturing additive properties and quantity, produced water (i.e., formation water and flowback process water) reuse or recycling, and fresh water acquisition?

In accordance with the Environmental Research, Development, and Demonstration Authorization Act and the SAB’s Charter, the Panel and Board should consider these questions as it begins its review of EPA’s hydraulic fracturing research in May 2013. If you have any questions related to this request, please contact Todd Johnston or Clint Woods, Subcommittee on Environment, at 202-225-8844.

Sincerely,

Rep. Chris Stewart
Chairman
Environment Subcommittee

CC: Edward Hanlon, SAB Designated Federal Officer
Bob Perciasepe, Acting Administrator, EPA
Fred Hauchman, Director, Office of Science Policy, EPA