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October 16, 2012

The Honorable Lisa Jackson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson,

We write today with concerns and questions regarding the Environmental Protection Agency's (EPA) forthcoming selection of an ad hoc Science Advisory Board panel to review the Agency's "Progress Report: Potential Impacts of Hydraulic Fracturing on Drinking Water Resources" (herein "Progress Report"). As the public nomination process closed on September 11, 2012, we strongly encourage EPA to consider balance, expertise, independence, and public participation requirements contained in the Federal Advisory Committee Act, EPA's Peer Review Handbook, and the Office of Management and Budget's Final Information Quality Bulletin for Peer Review in conducting the peer review for this "highly influential scientific assessment."[1]

According to the August 21, 2012 Federal Register notice seeking nominations, this ad hoc panel will not only provide advice on the status of EPA research provided in the Progress Report, but also review the 2014 final report of results, and "may also provide advice on other technical documents and issues related to hydraulic fracturing upon further request by EPA."[2] Given the importance of this study and the potential implications it could have for oil and gas production in the U.S., we urge EPA to ensure selection of a balanced panel with relevant technical expertise, and one that does not unnecessarily exclude nominees with relevant (and, in fact, essential) industry experience.

In 2010, Congress directed the EPA to undertake a study "on the relationship between hydraulic fracturing and drinking water, using a credible approach that relies upon the best available science, as well as independent sources of information."[3] Additionally, Congress stipulated that the study be "conducted through a transparent, peer-reviewed process that will ensure the

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[1] EPA Assistant Administrator Paul Anastas to Chairman Hall, January 5, 2012, http://science.house.gov/letter/letter-mr-hall-assistant-administrator-paul-anastas.
[2] 77 Federal Register 162, August 21, 2012, http://www.gpo.gov/fdsys/pkg/FR-2012-08-21/html/2012-20521.htm.
[3] Conference Report 111-316, Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010, http://www.gpo.gov/fdsys/pkg/CRPT-111hrpt316/pdf/CRPT-111hrpt316.pdf, p. 109.

validity and accuracy of the data." Furthermore, the importance of public comment and peer review as key components in this study process was reiterated during the FY 2012 appropriations process.[4] In February of 2011, the EPA released its *Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources,*[5] which was subsequently reviewed by an SAB ad hoc advisory panel convened for that purpose.[6]

Hands-On Expertise

The ad hoc panel convened in 2010 to assist with the review of the draft study plan was composed of 22 members selected by the SAB staff office from a larger list of nominees. Given the technical nature and continuous evolution of hydraulic fracturing techniques, it seems necessary, if not imperative, that such a panel would include persons with operational or hands-on experience with the hydraulic fracturing process. However, the 2010 panel as selected failed to include individuals with applied technical experience in hydraulic fracturing. During a Science, Space and Technology committee hearing in May of last year entitled, *Review of Hydraulic Fracturing Technology and Practices*, we heard from Dr. Michael Economides, that "... many of the 22-member Hydraulic Fracturing Study Panel are experts in their own area of groundwater, public health, etc., but almost all have no experience in hydraulic fracturing and no understanding of current industry practices. The panel excludes outright some of the most highly regarded individuals in the technical area of hydraulic fracturing."[7]

This decision to exclude individuals with industry experience runs counter to the SAB's own guidance document, "Overview of the Panel Formation Process at the Environmental Protection Agency Science Advisory Board" which states that "...a balanced panel is characterized by inclusion of the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors can be influenced by work history and affiliation), and the collective breadth of experience to address the charge adequately."[8]

Current National Academy of Sciences (NAS) guidance on advisory committee composition and balance articulates the usefulness of having a diversity of opinions, stating that "...it may be important to have an industrial perspective...because such individuals, through their particular knowledge and experience, are often vital to achieving an informed, comprehensive, and authoritative understanding and analysis of the specific problems and potential solutions to be

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[4] Committee Report 112-151, Department of the Interior, Environment, and Related Agencies Appropriations Bill, 2012, http://www.gpo.gov/fdsys/pkg/CRPT-112hrpt151/pdf/CRPT-112hrpt151.pdf, p. 59.

[5] "EPA Submits Draft Hydraulic Fracturing Study Plan to Independent Scientists for Review/The draft plan is open for public comment," February 8, 2012, http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/26195e235a35cb3885257831005fd9cd!OpenDocument.

[6] SAB, Hydraulic Fracturing Study Plan, http://yosemite.epa.gov/sab/sabproduct.nsf/0/d3483ab445ae61418525775900603e79!OpenDocument&TableRow=2.2.

[7] Dr. Michael Economides, Testimony before the Committee on Science, Space, and Technology, *Review of Hydraulic Fracturing Technology and Practices*, May 11,2011, http://science.house.gov/hearing/full-committee-hearing-hydraulic-fracturing-technology-0, p. 1.

[8] SAB, EPA, *Overview of the Panel Formation Process at the Environmental Protection Agency Science Advisory Board*, September 2002, http://yosemite.epa.gov/sab/sabproduct.nsf/WebFiles/OverviewPanelForm/$File/ec02010.pdf, p. 10.

considered by the committee."[9] Furthermore, the OMB's Final Information Quality Bulletin for Peer Review "requires agencies to adopt or adapt the committee selection policies employed by the" NAS "when selecting peer reviewers who are not government employees."[10]

1. What steps will EPA take to ensure that persons with technical expertise and operational experience in hydraulic fracturing will be included on the 2012 ad hoc panel?

2. Will EPA comply with the guidance noted above to ensure a balanced panel that includes a diversity of scientific perspectives? Will this include industry perspectives?

State Representation

The 2010 panel also suffered from meager state, local and tribal representation: one member from the California EPA and another from the Mohawk Valley Water Authority constituted the entirety of the state, local, and tribal input. This deficiency is not just limited to ad hoc advisory panels: at present, the only state representatives on the chartered SAB are two individuals from the California EPA.

3. What steps will EPA take to ensure that adequate state, local, and tribal expertise is represented on the panel? What steps will be taken to ensure that energy-producing and oil-and-gas states with decades of relevant technical and regulatory expertise will be represented on the panel?

Stakeholder Input

The SAB itself seems to understand the importance of broad stakeholder involvement in developing this report. In their 2010 review of EPA's scoping document for the report, the SAB urged EPA to consider a variety of perspectives from relevant stakeholders. In a letter to the Administrator, the SAB recommended "...developing a balanced, collaborative advisory group of stakeholders representing a broad range of perspectives, and engaging with this stakeholder group throughout the research process."[11] However, it is apparent that the EPA has not heeded this advice, to the detriment of the report. This failing was also identified by Battelle in its "*Review of EPA Hydraulic Study Plan*" which echoed SAB's recommendation in noting that "...greater industry involvement beginning with systematic planning and the DQO [data quality objective] process through study design and implementation and drafting of the reports would have made the study more robust."[12] Battelle further critiqued the lack of stakeholder input in the study plan, stating that "...given industry's extensive experience with the production of oil and

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[9] NAS, *Policy on Committee Composition and Balance and Conflicts of Interest, Committees Used in the Development of Reports*, May 12, 2003, http://www.nationalacademies.org/coi/bi-coi_form-0.pdf, p 3.
[10] Office of Management and Budget Final Information Quality Bulletin for Peer Review, December 16, 2004, http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-03.pdf, p. 2.
[11] SAB to EPA Administrator Lisa Jackson, *Advisory Report on EPA's Research and Scoping Document Related to Hydraulic Fracturing*, June 24, 2010, http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/CC09DE2B8B4755718525774D0044F929/$File/EPA-SAB-10-009-unsigned.pdf, p. 2.
[12] Battelle, *Review of EPA Hydraulic Fracturing Study Plan, November 2011,* June 2012, http://www.anga.us/media/251570/final_epa_study_plan_review_061112.pdf, p. 11.

gas from unconventional reservoirs, its unique expertise in the process of hydraulic fracturing and associated technologies, and its wealth of relevant data and information available to inform this effort, it is a weakness of the study plan, and likely its implementation, that significant industry collaboration is missing."[13]

4. Does EPA plan to implement this recommendation from the previous SAB review?

5. Does EPA plan to publicly accept or reject the recommendations that come from the upcoming ad hoc panel review?

6. Does EPA agree with the Battelle recommendation that greater industry involvement would have made the study more robust?

Public Pronouncements

The third edition of EPA's Peer Review Handbook provides clear guidance on panelists who have made public pronouncements or the appearance of previously having taken sides. It states, "as a general rule, experts who have made public pronouncements... on an issue, those who have clearly 'taken sides,' may have an appearance of a lack of impartiality... and should be avoided."[14]

Despite this clear requirement, a lead reviewer in the previous SAB review of the Draft Study Plan, Dr. Jerald Schnoor published an August 2010 article entitled "Regulate, Baby Regulate," in which he alleges that hydraulic fracturing "lacks adequate oversight and regulations" and characterizes the relationship between government regulators and the oil and gas industry as "cozy and sometimes corrupt."[15] Such a statement of opinion seems to qualify as a public pronouncement that demonstrates "an appearance of a lack of impartiality," especially given that the article was published a year prior to SAB submission of its review of the draft study plan. Of additional concern is the author's reference to the film, *Gasland*, in an attempt to provide anecdotal evidence in support of the argument for increased regulation. Specifically, Dr. Schnoor references a water tap being lit on fire allegedly as a result of oil and gas activity. Contrary to the film's assertion that this was presumably due to hydraulic fracturing, the Colorado Oil and Gas Conservation Commission determined that methane in the film's signature flaming water water well scene was "biogenic" in origin, and unequivocally stated in a report on the incident that "there are no indications of oil & gas related impacts to water well."[16]

7. What steps will EPA take to ensure that reviewers have not previously taken sides on the issues to be considered by the ad hoc and chartered SAB in this review?

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[13] Battelle, *op. cit.*, p. 10-11.
[14] EPA, Science Policy Council, *Peer Review Handbook, 3rd Edition*, http://www.epa.gov/peerreview/pdfs/peer_review_handbook_2012.pdf, p. 63.
[15] Jerald L. Schnoor, "Regulate, Baby, Regulate," *Environmental Science and Technology*, August 3, 2010, http://pubs.acs.org/doi/pdfplus/10.1021/es102534k, p. 6524.
[16] Colorado Oil and Gas Conservation Commission, Complaint Reports, Document Number 200190138, May 23, 2008, http://cogcc.state.co.us/cogis/ComplaintReport.asp?doc_num=200190138.

8. What is EPA's current policy and determining criteria for evaluating whether or not potential reviewers have previously taken sides?

EPA Grants and Appearance of a Lack of Impartiality

The addendum to the EPA peer review handbook provides further guidance on assessing "an appearance of a lack of impartiality," and identifies relevant activities and interests that can be used to gauge this.[17] The list, while not exhaustive, includes financial interests as one of the factors that can be considered. Among the panelists on the 2010 ad hoc SAB panel to review EPA's draft study plan, nearly one-third had received EPA National Center for Environmental Research grants since 2000. This raises questions about the degree of independence of these reviewers and the relationship between any EPA funded research they might undertake and the topics they are tasked with reviewing for the Agency.

9. Will EPA consider the current or past receipt of EPA grants to be an appearance of a lack of impartiality in reviewing EPA scientific products like the Progress Report? If not, on what grounds would EPA find this to be true or exclude a reviewer for this reason?

10. Is there a financial disclosure form that nominees or selected panelists must fill out in which relevant financial information, funding, grants, awards, and other pertinent information is disclosed? Is this form available on the Agency website? If not, please provide this form to the committee.

11. What assurances can EPA provide that persons who receive these grants still retain the independence necessary to serve as reviewers? How does the Agency ensure that persons who simultaneously receive EPA funding and review EPA work do not experience a conflict of interest?

Public Participation

During meetings of the 2010 peer review panel, the public was not given the opportunity to provide input or respond directly to the issues the review team was considering. Given the open and transparent nature of the peer review process required by Congress and EPA's commitment to transparency in the final Scientific Integrity Policy, we hope that the 2012 panel deliberations will be more amenable and open to stakeholder comment, especially given the designation of the 2012 and 2014 studies as "highly influential scientific assessments" as the Agency stated in their response to a letter from Chairman Hall in October of 2011.

12. How does EPA respond to, incorporate, or otherwise address the public comments it receives?

13. Will full transcripts of the meetings be made publicly available, in accordance with requirements of the Federal Advisory Committee Act? Please provide a date for when such transcripts will be posted to EPA's website.

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[17] EPA, Addendum to the Peer Review Handbook, 3rd Edition: Appearance of a Lack of Impartiality in External Peer Review, 2009, http://www.epa.gov/peerreview/pdfs/spc_peer_rvw_handbook_addendum.pdf.

14. What steps will EPA take to ensure that the recent SAB FY 2012 initiatives to enhance public involvement in advisory activities, formulated in response to suggestions EPA received at a June 2011 session on public involvement, will be followed? Specifically, how will EPA ensure that the SAB "Staff Office and advisory committees will not accept a charge from the agency that unduly narrows the scope of an advisory activity"? [18]

Timing

Additionally, we hope that the ad hoc review panel will have sufficient time to review the 2012 progress report in order to ensure the highest standards of scientific rigor and data quality have been met, prior to the official release of the report. The premature release of the EPA's Pavillion, Wyoming groundwater investigation and the Dimock, Pennsylvania drinking water investigation illustrated the pitfalls associated with rushing to release a product that has not yet been thoroughly scrutinized. Given that the Agency plans to utilize the panel's advice in the development of a report of final results which to be released in 2014, it is crucial that the process of reviewing the 2012 progress report takes place in a thoughtful manner.

15. Will the ad hoc panel's review of the progress report occur before or after that report has been released to the public? If the review occurs after the public release, should we expect an updated progress report that addresses and incorporates the panel's input?

16. What is the timeframe for review of the 2014 final report prior to its being made publicly available?

Given the substantial impact that hydraulic fracturing has had on our domestic oil and gas production, we urge you to take these concerns seriously when selecting the review panel to evaluate the hydraulic fracturing study. We also urge you to choose a balanced panel with the necessary expertise and practical, operational experience to thoroughly and prudently evaluate the Progress Report, and allow for ample time for review and opportunity for public comment, as we think the inclusion of such perspectives is vital in establishing the validity of the progress report as well as the final study in 2014.

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[18] "Public Involvement in Advisory Activities," http://yosemite.epa.gov/sab/sabproduct.nsf/WebSABSO/PublicInvolvement?OpenDocument.

Please provide written response by no later than November 1, 2012. If you have any questions regarding this request, please contact Ms. Ellen Scholl with the Subcommittee on Energy and Environment Majority staff at (202)225-8844.

Sincerely,

Rep. Ralph M. Hall
Chairman
Committee on Science, Space, and Technology

Rep. Andy Harris, M.D.
Chairman
Subcommittee on Energy & Environment

Rep. Dana Rohrabacher