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December 14, 2015

Via E-Mail

Mr. Edward Hanlon
Designated Federal Officer
EPA Science Advisory Board Staff Office (1400R)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Comments of the American Petroleum Institute (API) on the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Hydraulic Fracturing Research Advisory Panel's Peer Review of EPA's Draft Report, *Assessment of Potential Impacts of Hydraulic Fracturing for oil and Gas on Drinking Water Resources* (May, 2015 External Review Draft, EPA/600/R-15/047) -- Docket ID Number EPA-HQ-OA-2015-0245

Dear Mr. Hanlon:

The American Petroleum Institute (API) is a national trade association representing more than 650 member companies involved in all aspects of the oil and natural gas industry in the United States. Our members have extensive experience with the drilling and completion techniques used in shale development and in producing America's oil and natural gas resources in a safe and environmentally responsible manner.

From the outset, API has been an active stakeholder engaged with the U.S. Environmental Protection Agency (EPA or Agency) in its response to the 2010 House Appropriations Committee Report that urged the Agency to conduct a study to review the potential impacts of hydraulic fracturing on drinking water resources. We have provided input at every possible opportunity, which includes submitting extensive technical comments to the EPA Docket on August 28, 2015 on the June 4, 2015 Draft Assessment Report and participating in the most recent public meetings and public teleconference of this Science Advisory Board (SAB) Hydraulic Fracturing Research Advisory Panel (Advisory Panel).¹

¹ Public meetings were held on October 28-30, 2015 and the follow up public teleconference held on December 3, 2015.

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As stated in our August 28, 2015 comment package, industry has an unflinching commitment to provide a sound technical perspective vital to ensuring the scientific merit of EPA's five-year research effort. A combination of API's member company subject matter experts, academics, and consultants reviewed and critiqued the Draft Assessment Report, the supporting published scientific reports, the retrospective case studies, the laboratory studies, and the scenario evaluations in great detail. Our 140-page technical submission included hundreds of factual corrections and suggested improvements offered to the Advisory Panel during its peer review process, in order to make the Final Assessment Report more accurate, complete, and readable to a broader audience.

Based on all the technical work as well as "the facts on the ground," the Advisory Panel has no basis to question the Draft Assessment Report's main conclusion – ***"the Assessment shows hydraulic fracturing activities have not led to widespread, systemic impacts to drinking water resources."*** This conclusion is sound.

There have been many negative public comments about this statement being prominently placed in the June 4, 2015 EPA Press Release as well as its inclusion in various chapters of the Draft Assessment Report, most notably in the Executive Summary. However, that is exactly where the statement should be included. Why? Because extensive peer reviewed work to substantiate the statement *does* exist. API provided the Advisory Panel with a copy of Ramboll ENVIRON's *Hydraulic Fracturing and Water Resources: A Literature and Regulatory Review with Discussion of Key Issues*. This report includes an appendix of over 35 unique publications of the published literature on the relationship between hydraulic fracturing and water resource from 2008 to 2014. This number does not include reports released in 2015 such as the California Council on Science and Technology (CCST) and Lawrence Berkeley National Laboratory volumes of work; the EPA's Office of Inspector General Report titled "Enhanced EPA Oversight and Action can Further Protect Water Resources from the Potential Impacts of Hydraulic Fracturing" (Report No. 15-P-0204); the study published in the October 2015 Proceedings of the National Academy of Sciences titled, "Elevated Levels of Diesel Range Organic Compounds in Groundwater near Marcellus Gas Operations are Derived from Surface Activities;" and numerous other studies from the US Geological Survey (USGS) researchers, the Susquehanna River Basin Commission, and others finding no impacts on water quality based on data from the Marcellus Shale (including studies from northeastern and southwestern Pennsylvania, West Virginia, and eastern Ohio involving samples from thousands of drinking water wells), the Bakken Shale, and the Denver-Julesburg Basin. Thus, ample work has already been undertaken to support the conclusion that there is no link between hydraulic fracturing and drinking water impacts.

There have also been suggestions that the Draft Report's main conclusion should be revised because the terms are vague. "Widespread" and "systemic" are not vague, and the Draft Assessment Report uses these terms properly.² While anti-fracking activists and ideologues may argue otherwise, the evidence is overwhelming. There exists no drinking water contamination in the Marcellus, the Utica, the Barnett, the Permian, the Eagle Ford, the Woodford, the Fayetteville, the Haynesville, the Bakken, the Denver-

² As defined by Webster's New Unabridged Dictionary (1996) – 1) "widespread" – *adjective: spread over or open, or occupying a wide space; distributed over a wide region* and 2) "systemic" – *adjective: of or pertaining to a system.*

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Julesburg, the Piceance, the Raton, or any other shale formation where oil and gas resources are being developed through hydraulic fracturing. There are no examples of systemic operational issues that result in contamination in any of these formations, let alone many examples of widespread contamination in any formation. If such contamination from hydraulic fracturing did exist, surely the activist community would have based their testimonies on such facts, rather than the stale innuendos and diversions presented to you. In fact, according to the U.S. Department of Energy, “More than 4 million oil and gas related wells have been drilled in the United States since development of these energy resources began nearly 150 years ago. At least 2 million of these have been hydraulically fracture-treated, and up to 95 percent of new wells drilled today are hydraulically fractured, accounting for more than 43 percent of total U.S. oil production and 67 percent of natural gas production.” (emphasis added.) The industry drills and hydraulically fractures thousands of oil and natural gas each year and there is simply no evidence of widespread or systemic contamination. There are reasons no such widespread or systemic contamination exists: namely the widespread and systemic application of proven engineering technologies and industry risk management practices, coupled with a complex web of federal and state regulatory regimes. In fact, in 1999, the Department of Energy identified hydraulic fracturing as an advanced technology that provides environmental benefits in a report entitled *Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology*. API stands ready to discuss these issues with the SAB Advisory Panel at any time, beyond the technical information already provided via our participation and extensive comments to date.

Based on this evidence, no additional case study work needs to be undertaken as part of EPA’s Assessment effort. In particular, the recommendation to include an explicit summary of the studies in Dimock, PA, Parker County, TX, and Pavillion, WY is startling. It is important to note that in EPA’s 2011 Study Plan (page 63) and 2012 Progress Report (page 127) details were provided on how the retrospective case study sites were selected and the sampling and analysis planned for each site:

EPA invited stakeholders from across the country to participate in the identification of locations for potential case studies through informational public meetings and the submission of electronic or written comments. Following thousands of comments, over 40 locations were nominated for inclusion in the study. These locations were prioritized and chosen based on a rigorous set of criteria, including proximity of population and drinking water supplies, evidence of impaired water quality, health and environmental concerns, and knowledge gaps that could be filled by a case study at each potential location. Sites were prioritized based on geographic and geologic diversity, population at risk, geologic and hydrologic features, characteristics of water resources, and land use (US EPA, 2011e). Five retrospective case study locations were ultimately chosen for inclusion in this study and are shown in Figure 27. (from page 127 of Progress Report).

While API initially questioned the potentially biased site selection process, EPA nonetheless had an established process for determining the five retrospective case study sites. To now question that approach after five years and consider adding additional sites – sites which did not undergo a similar type of analysis or review – does little to help focus, fine tune, or add sound science to the final Assessment Report. Instead, if the SAB Advisory Panel wants to learn more about the details and

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agency decisions made with regard to the three sites mentioned above, it needs to apply a balanced approach and directly contact the state regulators who made the final determination or continue to work toward final determinations (on December 3, 2015 the Texas Railroad Commission provided the Advisory Panel with its May 23, 2014 investigation report for the Parker County, TX water well complaints). Taking action based on citizens' opinions with no sound technical basis, fails to contribute in any way to EPA's overall goal of "sound scientific data, analyses, and interpretations."

API reminds the Advisory Panel of its initial charge, as outlined in the June 2, 2015 *Addendum Memorandum to the March 25, 2013 Memorandum: Formation of Science Advisory Board Hydraulic Fracturing Research Panel*,

ORD requested a consultation of the status of the research described in its Progress Report. The panel will also provide advice and peer review on other EPA technical documents and issues related to hydraulic fracturing upon further request by EPA.

Regardless of how well intentioned, it is not the role of the public to redefine the mission of the Advisory Panel nor is it the role of the Advisory Panel to "decontaminate EPA." As stated clearly on the SAB website, a key priority for EPA is to base Agency actions on sound scientific data, analyses, and interpretations. The SAB provides a mechanism for the Agency to receive peer review and other advice designed to make a positive difference in the production and use of science at EPA. Personal attacks and impassioned pleas make for good sound bites, but this Panel certainly realizes that its difficult, but important, peer review task must be based on fact and not supposition.

This last point is very important, as API heard numerous public comments during both the October meeting series and the December 3, 2015 teleconference that run counter to a sound science approach. API supports a transparent and open public process to reach a Final Assessment Report, but unsubstantiated accusations and threats against federal and state agency personnel, indictments against industry as to its motivations and supposed manipulation of the regulatory process, and use of words and phrases such as "collusion," "sham," "illegal dumping," and "thuggish behavior" have no place in a scientific review and discussion.

Finally, with regard to the state regulators and in specific response to Charge Question #2 (Water Acquisition/Chapter 4), Charge Question #3 (Chemical Mixing/Chapter 5), and Charge Question #7 (Chemicals Used or Present in Hydraulic Fracturing Fluids/Chapter 9), API is providing a recently released paper published in Energy Policy titled "The Real Value of FracFocus as a Regulatory Tool: A National Survey of State Regulators." This information can help in understanding the background and context of how state regulators are relying on FracFocus and in recognizing that third party data collection sites such as FracFocus can provide considerable support to regulators, inform the public, as well as provide consistency to a regulated community that operates nationwide.³

³Dundon, L., Abkowitz, J., Camp, J. 2015. The Real Value of FracFocus as a Regulatory Tool: A National Survey of State Regulators. *Energy Policy* 87 (2015), 502.

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API continues to offer to the Advisory Panel industry experts to address specific technical areas of interest or to answer any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Erik Milito', with a stylized flourish at the end.

Erik Milito
Group Director
Upstream and Industry Operations
American Petroleum Institute

cc: Christopher Zarba, Director, Science Advisory Board Staff Office

Attachment