

**Written Summary of
Comments of V. Bruce Thompson
President of the American Exploration & Production Council
Before the EPA Chartered Science Advisory Board Public Meeting for the
Review of EPA's Draft Assessment Report on the Potential Impact of Hydraulic
Fracturing for Oil and Gas on Drinking Water Resources
June 14, 2016**

Mr. Chairman and members of the Chartered Science Advisory Board, thank you for the opportunity to deliver my comments on a subject that is critical to both the future of our nation.

My name is Bruce Thompson and I am the President of the American Exploration & Production Council ("AXPC"), a national, Washington DC-based trade association representing 28 of America's most active natural gas and oil exploration and production companies with operations in 22 states and several foreign countries. Our members are independent in that their operations are limited to the exploration for and production of natural gas and crude oil. That is to say, our operations are limited to drilling and completing the wells. We do not refine or market. AXPC members, driven by their unique position as large independent operators, are leaders in the development and application of the innovative and advanced technologies necessary to continue to explore for and produce natural gas and crude oil. Specifically, AXPC members have substantial expertise in the hydraulic fracturing process, both as pioneers of the technology as well as being the primary drivers of the continuing research and development and constant improvement of this incredible, high-tech process.

How did we get here? In 2010 Congress directed EPA to study the impact of hydraulic fracturing on drinking water. Over 5 years later in response to this Congressional mandate the Hydraulic Fracturing Panel (the "Panel") of EPA's Science Advisory Board (the "Board"), after a comprehensive review of the records, including over 900 separate studies, released its draft report prepared in response to the 2010 Congressional mandate and in its press release dated June 4, 2015 accompanying the release of the draft report stated that "hydraulic fracturing activities have not led to widespread, systemic impacts to drinking water resources". Given such a thorough and obviously deliberate process that reached a conclusion based on science and the extensive review of relevant data from multiple sources, one would think that would be the end of the process. However, because the conclusion was clearly disappointing to some, the process and the search for a more "acceptable", but not necessarily science-based conclusion, continues. Now, over 6 years later we are still spending time and resources apparently searching for the politically-based conclusion as opposed to one based on science.

Nevertheless, AXPC continues to participate in the process in the hope that the science will eventually prevail. We have submitted 3 extensive comment letters since the release of the draft report. Our first letter was dated August 28, 2015. In that letter we stated that AXPC fully supports the ultimate conclusion of the draft report, which was, we believe reached in spite of several flaws in the process. First, the scope of the term "hydraulic fracturing" and therefore of the report itself was expanded to include additional steps in the well construction and completion process that have nothing to do with hydraulic fracturing. This is misleading and will inevitably lead to confusion, misinformation and misunderstanding of the hydraulic fracturing process itself. Moreover, it leads to misconceptions concerning the regulation and subsurface physics of the process, and whether or not it poses any threat to the health and safety of the public and to the environment/drinking water. Nevertheless, our industry passed this expanded scope with flying colors. AXPC is supportive of a draft report with the expanded scope provided that the expansion is clearly explained and proper context is provided in the final report so that the public fully understands how safely our operations are conducted.

Secondly, we note that the definition of "drinking water" in the draft report is overly broad. EPA, instead of using the definition in its own regulations and that was intended by Congress, devised a new definition of drinking water for purposes of this study. In order for a definition to be meaningful, it must be based on objective, measureable standards and criteria. Without these criteria, it is impossible to determine whether a given source of water could ever feasibly serve as a source of drinking water. Again, the result is confusion and misleading information in the public domain. The purpose of the study must be to inform, not confuse.

Despite these flaws that clearly resulted in an overly broad study and an expansion of the operational universe being studied, the draft study still resulted in the conclusion that "hydraulic fracturing activities have not led to widespread, systemic impacts to drinking water resources".

Our second comment letter was submitted on January 12, 2016. In it we addressed our concerns with the comments made in response to criticisms of the ultimate conclusion of EPA's draft report quoted above. In particular, the Panel's Chairman was quoted in an E&E article discussing the scientific conclusion of the report that hydraulic fracturing activities "have not led to widespread, systemic impacts to drinking water resources" as saying that there "was agreement that the sentence needs to be modified" and may now be "ambiguous and requires clarification". It is difficult for me to understand what is ambiguous about this statement. Not only is it clear in its meaning but it is also supported by the overwhelming scientific consensus on hydraulic fracturing as is evidenced by the several peer-reviewed studies that have consistently demonstrated hydraulic fracturing to be of extremely low risk to drinking water. (Several of these

studies are cited in IPAA's letter dated December 11, 2015 which is attached to our January 12 comment letter as an exhibit.) I would urge this Board, despite the push from a number of parties to politicize the process, to maintain the science-based nature of its work and to stick with its carefully derived, science-based conclusions.

It must added that the various states have for decades provided excellent and constantly evolving regulation of our operations, including of hydraulic fracturing. The geology of each state is different, which is one of many reasons why it is important that the states maintain the ability to regulate these activities within their borders. Should the Panel's initial conclusion be modified as suggested by the majority of the Panel, it can be seen only as a pretext for the federalization of the regulation of our industry. Such a result would have a chilling impact on our operations, which is, presumably, the ultimate goal of many of those that are urging that the Panel change its conclusion.

AXPC's most recent comment letter was submitted on June 2, 2016. In it we thank the Panel for its efforts and express our profound regret that the Panel has now recommended that its science-based conclusion be clarified, modified or eliminated. After over 5 years of digging and review of peer-reviewed studies, factual evidence as well as anecdotal offerings, the Panel reached a conclusion that apparently disappointed those on the anti-hydraulic fracturing side of the debate. It would be contrary to the mission of this Board for it to yield to political pressure without a basis in science and alter the conclusion of the Panel. There is no science to support a change and to proceed otherwise is to say we must continue the endless search for evidence to support a conclusion that is hoped for but that does not exist. Proving a negative is impossible. Should this Board decide to modify, clarify or eliminate the Panel's conclusion, this is precisely the position in which AXPC members and others who operate in this industry would be placed.

We therefore strongly urge this Board to adopt the Dissenting Opinion of the Panel that the conclusion reached in the initial draft report is sound, science-based and supported by numerous findings of the academic community, government agencies and professional societies and does not, therefore, require modification or additional explanation.

Again, my thanks to the Board for providing this forum for AXPC and others to provide their perspectives on this critical issue.