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U.S. Environmental Protection Agency
EPA Docket Center
Mail Code: 28221T
1200 Constitution Avenue, NW
Washington, DC. 20460

Re: Comments of the American Petroleum Institute on EPA's Notice of Extension of the Public Comment Period of the draft Research Report titled, "Investigations of Ground Water Contamination near Pavillion, Wyoming." (78 Federal Register 2396) – Docket ID No. EPA-HQ-ORD-2011-0895

Dear Docket Clerk:

The American Petroleum Institute (API) is a national trade association representing over 500 member companies involved in all aspects of the oil and natural gas industry in the United States. Our members have extensive experience developing America's oil and natural gas resources, including formations requiring hydraulic fracturing, in a safe and environmentally responsible manner. Furthermore, our members have extensive expertise related to soil and groundwater characterization including monitoring well design and installation, development and implementation of environmental sampling plans, laboratory quality assurance/quality control measures, chemical forensics, and chemical fate and transport. In fact, much of this experience has been developed over the last 30 years on projects performed under EPA's regulatory review and authority.

API has been actively engaged in formally commenting and providing technical input to the U.S. Environmental Protection Agency (EPA) relative to the Congressionally-requested study to review the relationship between hydraulic fracturing and drinking water resources (hereafter referred to as the "National HF Study"). Although not directly related to the National HF Study, we have been particularly concerned with the scientific work and analyses undertaken by EPA scientists and contractors in Pavillion, Wyoming for two primary reasons:

1. The Agency appears to have modeled some aspects of the National HF Study after this work.
2. The potential to negatively impact the validity, findings, and conclusions of the larger National HF Study.

Any effort that may steer national and international policy decisions (i.e., highly influential scientific assessments) should be well thought out, designed, and effectively implemented to answer relevant

questions. Unfortunately, EPA's Pavillion research, specifically as detailed in EPA's December 8, 2011 "Draft Investigation of Ground Water Contamination near Pavillion, Wyoming" (Draft Report) does not appear to have undergone this level of scientific rigor. Because of this failure, API continues to be concerned with the Draft Report and the associated flawed data.

In the most general of terms, our initial assessment of the Draft Report, included concerns about the methodologies employed by EPA in all facets of the deep monitoring well program resulting in unreliable sampling results, and study findings and conclusions. These concerns stemmed from apparent errors in well design, well installation, decontamination procedures, sampling procedures, and laboratory analysis. The incomplete information in the Draft Report also makes it difficult for all stakeholders to assess the validity of some of the draft results. EPA's apparent misrepresentation of key information along with its failure to seriously consider alternative explanations for the results of its investigation such as described above and detailed in API's Final Report[1] is very troublesome and of great concern.

With EPA's announcement in the early spring of 2012 that additional deep monitoring well testing would be conducted and that the Agency would be partnering with the U.S. Geological Survey (USGS) to clarify questions about the initial EPA monitoring results, API continued to closely examine the Agency's activities in Pavillion. After the release of separate USGS and EPA reports in the fall of 2012, API followed up with a meeting involving several representatives from both agencies on December 20, 2012. API technical experts shared their concerns regarding monitoring well drilling, construction, development, and sampling issues. In addition, the omission of a number of critical details and facts in the Draft Report, including the failure of EPA to disclose antifreeze, cement, and diesel fuel releases from their operations at the deep monitoring well drilling sites, was discussed; facts important to any potential peer reviewer or investigator. Two Fact Sheets[2] were submitted to both Agencies in late 2012 and early 2013 detailing API's concerns.

Today, API is submitting our Final Report to the formal docket on the EPA's Draft Report, from which the Fact Sheets were developed. API's evaluation Report focuses on the deep monitoring wells MW-01 and MW-02, samples from which EPA used to develop the conclusions and recommendations in its Draft Report. The API Final Report has identified many fatal flaws in the Pavillion study, any of one of which invalidates the data and conclusions.

API's key general findings include:

1) the monitoring wells were so poorly constructed, it is very probable the chemicals identified by EPA as groundwater contaminants associated with hydraulic fracturing were in fact introduced into the subsurface by the improper well installation and the construction materials of the monitoring wells themselves;
2) due to the flaws in the construction of these two monitoring wells, any groundwater quality data obtained from these monitoring wells is unreliable and invalid;
3) EPA should formally withdraw the December 2011 Draft Report and all associated data and conclusions related to these monitoring wells; and

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[1] *American Petroleum Institute's Review of EPA's Pavillion December 8, 2011 Draft Report with Focus on Monitoring Well Drilling, Completion, Development, and Sampling Activities Related to Deep Monitoring Wells MW-01 and MW-02*.

[2] *API's Review of Recent USGS Pavillion, Wyoming Reports Show USGS Groundwater Sampling Results Differ From EPA's Results in 2011 Draft Report* and *API's Review Shows EPA's Monitoring Wells at Pavillion, Wyoming are Improperly Constructed and Unsuitable for Groundwater Quality Assessment*.

4) the two EPA monitoring wells (MW-01 and MW-02) should be immediately abandoned since they are likely providing an ongoing source of groundwater impact, they cannot provide reliable data related to groundwater quality, and the wells cannot be remediated for future sampling efforts.

While API welcomed EPA's announcement on June 20, 2013 that the flawed water testing results from Pavillion, Wyoming would not be included as part of the National HF Study and that the Agency would not rely on any conclusions in the Draft Report, we strongly urge EPA to go further and formally retract both the Draft Report and the associated data. In addition, EPA should ensure the lessons learned from Pavillion are incorporated into the National HF Study.

Unfortunately, EPA's work at Pavillion joins that of Parker County, Texas and Dimock, Pennsylvania as examples of questionable science and flawed data leading to unsupported conclusions. This simply cannot be tolerated, particularly by the federal agency entrusted to protect human health and the environment by evaluating environmental risks based on the best available scientific information and sound scientific principles.

Until a formal retraction is undertaken, people in the United States and worldwide will continue to reference the EPA Pavillion work, making environmental policy decisions that are based on flawed data, even though the Draft Report will never be finalized nor formally peer reviewed although EPA has stated that they continue to standby this work and associated data. At best, the Draft Report can be used as a case study on how not to conduct an environmental investigation; at worst, it will perpetuate flawed science that will be used to develop flawed policy. Continued reliance on another fatally flawed water study could have significant impacts both domestically and internationally on developing energy resources.

Regards,

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Attachments

cc:

Robert Perciasepe, Acting Administrator, U.S. Environmental Protection Agency
Heather Zichal, Deputy Assistant to the President for Energy and Climate Change
Jeanne Briskin, Office of Research and Development, U.S. Environmental Protection Agency
Edward Hanlon, Designated Federal Officer, Science Advisory Board
Dr. Glenn Paulson, Science Advisor, Office of the Administrator, U.S. Environmental Protection Agency
Robert M. Sussman, Senior Policy Counsel, U.S. Environmental Protection Agency
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