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Comments of America's Natural Gas Alliance

Environmental Protection Agency's Draft Hydraulic Fracturing Study Plan

America's Natural Gas Alliance (ANGA) appreciates this opportunity to comment on the Environmental Protection Agency's (EPA or Agency) Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources (Draft or Draft Plan) that was released on February 8, 2011.

ANGA is an educational and advocacy organization dedicated to increasing appreciation for the environmental, economic, and national security benefits of North American natural gas. ANGA's members include many leading, North American independent natural gas exploration and production companies. Their collective natural gas output of approximately nine trillion cubic feet per year comprises more than 40 percent of the total annual U.S. natural gas supply.

As acknowledged by EPA's March 2010 proposed drinking water study scoping materials, the safe and environmentally responsible development of our domestic stores of natural gas has been and, increasingly, will be, an important component of America's energy supply and economic health. Adapting hydraulic fracturing methods to develop shale based natural gas resources has materially increased the available domestic natural gas supply. Natural gas is a clean-burning, efficient, and cost-effective fuel that offers the potential both for significantly decreasing air pollution and promoting America's energy independence.

Fracturing technology has been used safely at more than one million domestic gas wells. The states regulate hydraulic fracturing in order to sustain that positive record. History demonstrates that hydraulic fracturing can generate abundant, secure energy supplies, without adverse consequences to drinking water, if conducted with appropriate environmental and engineering controls. ANGA supports EPA's effort to design an objective and scientifically valid study to confirm what its members long have observed in practice, and previous studies have confirmed—that hydraulic fracturing, as a method for developing natural gas, may be conducted in safe and environmentally responsible manner with no unacceptable risks posed to drinking water supplies.

In that regard, ANGA submitted comments to EPA regarding the Agency's March 2010 proposed drinking water study scoping materials, and the June 2010 report on those materials prepared by the

EPA Science Advisory Board (SAB). In those comments (which are attached), ANGA supported the SAB's recommendations that the EPA focus its study on drinking water concerns specific to hydraulic fracturing, and continue to engage a broad and balanced range of stakeholder perspectives to help inform the review process.

ANGA is pleased that the Agency has somewhat more closely aligned the scope and objective of its Draft Plan with the request of Congress by modifying its proposed research plan, and continuing to engage stakeholders in this process. Additional modifications by EPA to more closely align its Draft Plan with the request of Congress would further improve the Draft. Based on its review of the Agency's Draft Plan, ANGA offers these additional preliminary comments.

Proposed Study Objective and Scope

In general, ANGA supports EPA's intention to further refine its research questions to focus on water use during hydraulic fracturing operations, rather than conduct a formal lifecycle assessment. This aspect of the Draft Plan more closely aligns with the request forwarded by Congress, which sought a study of the "relationship between hydraulic fracturing and drinking water," and takes into account the SAB's recommendation that a formal lifecycle assessment was not necessary. EPA's analysis should focus on water use as it relates to drinking water quality.

ANGA applauds EPA on certain of the improvements made to the Draft in terms of general tone and objectivity. In order to insure that the end product is viewed as the result of a neutral process, however, additional improvements in these areas may be necessary. The Congressional request did not presume any relationship between hydraulic fracturing and drinking water quality. Unfortunately, the tone and approach incorporated into several aspects of the Draft appears to assume such a relationship, and furthermore assumes that the relationship is negative. As EPA would no doubt agree, the public is best served if any plan carried out by EPA were drafted, implemented and reported in an objective manner. To that end, ANGA urges EPA to make every effort to maintain balance and integrity in all aspects of the Draft, including data gathering from neutral sources together with objective analysis and reporting.

Hydraulic fracturing is used in various types of formations, but it appears that the primary focus of EPA's proposed research is hydraulic fracturing in shale plays. ANGA respectfully requests that EPA clarify whether the focus of its proposed research is hydraulic fracturing generally, or hydraulic fracturing in shale plays.

Structure of Draft Plan Should Emphasize Science, not Policy

The Draft Plan incorporates an extensive literature review that appears to focus more on policy considerations than science. ANGA submits that science, not policy, is the appropriate driver for the evaluation contained in the Draft Plan. For example, the Draft Plan states that the "EPA estimates that approximately 35,000 wells are fractured each year across the United States. Assuming that the majority of these wells are horizontal wells, the annual water requirement may range from 70 to 140 billion gallons. This is equivalent to the total amount of water used each year in roughly 40 to 80 cities with a population of 50,000 or about 1 to 2 cities of 2.5 million people." ANGA recommends that EPA tailor its study plan to focus on a scientific evaluation of the relationship between hydraulic fracturing and drinking water. Moreover, as noted below, EPA should be diligent and impeccably principled with respect to any data relied upon in its Draft. Certain sources cited in the Draft Plan are well known as advocates, including with respect to issues that will be relevant to the outcome of the EPA study. Such sources would not survive even the most cursory peer review in an analysis grounded in science.

Information provided by such individuals or entities should not be used in the Draft Plan, and any references to data provided by them should clearly disclose the originator's public positions so that the general public will have the opportunity to objectively evaluate information offered in the Draft.

Case Studies

Retrospective Studies: ANGA supports EPA's plan to conduct retrospective case studies. ANGA respectfully requests that EPA clarify that retrospective case studies will examine alleged instances of drinking water resource contamination. The present language in the draft improperly presumes those allegations are accurate.

Prospective Studies: ANGA supports EPA's plan to conduct prospective case studies. ANGA respectfully requests that EPA clarify that prospective case studies will examine possible impacts of drinking water resource contamination, and not known or established impacts of drinking water resource contamination.

Scenario Evaluations: ANGA supports EPA's plan "to explore realistic, hypothetical scenarios . . . that may result in adverse impacts to drinking water resources." To conduct these evaluations, EPA plans to include "a reference case involving typical management and engineering practices . . . based on . . . minimum requirements imposed by state regulatory agencies." ANGA recommends that EPA also include in the reference case all other appropriate elements applicable to the industry (e.g. best practices). An approach that fails to account for such factors will be of little value, and subject to criticism as not objective.

ANGA supports EPA's plan to model "potential modes of failure, both in terms of engineering controls and geologic characteristics" to "represent various states of system vulnerability," but recommends that EPA include "reasonableness" as a criterion for modeling modes of failure.

Comparative Data

The Draft Plan does not include data that puts the gas industry's water use of water in hydraulic fracturing in context with other water uses. For example, the Draft Plan discusses the potential impacts of water withdrawals on water quality. These potential impacts may, however, be equally or disproportionately attributable to the water withdrawals of other water users. ANGA respectfully recommends that to the extent that the Agency continues to include data about the estimated scale of the gas industry's water use in connection with hydraulically fracturing wells, it also include comparative data about other water uses to provide a basis to fairly characterize the gas industry's overall impact on drinking water resources. It is well documented that other energy sources use significantly greater amounts of water on a lifecycle basis than the natural gas industry.

Quality Assurance

ANGA supports EPA's plan to ensure the quality of its research through compliance with Agency Quality Assurance Program Plan (QAPP) requirements. The Agency should continue to refine its quality assurance and control plan for the project to ensure that the Agency has quality information and data at all stages of implementing the Draft Plan. For purposes of example only, EPA should not rely on entities that regularly and publicly advocate as opponents of hydraulic fracturing as a process for developing natural gas; nor should EPA rely, without qualification, on those known to advocate for competing industries and energy sources as authorities regarding the future production profile of any shale play.

Proposed Research

Water Availability: With regard to the impact of water withdrawals on water availability, ANGA recommends that EPA focus its research efforts on the potential impacts to long-term ground or surface water flows. Any water withdrawal will have some short-term impact on ground and surface water flows. Water withdrawals for hydraulic fracturing are temporary, which may allow for ground and surface water flows to recover in flow and volume.

Water Quality: With regard to EPA's plan to evaluate the impact of water withdrawals on water quality relating to drinking water, ANGA recommends that EPA specifically address the quality of water evaluated for its research.

Chemicals: With regard to EPA's plan to evaluate the potential impacts of releases of fracturing fluids on drinking water resources, ANGA respectfully requests that EPA identify the details of the methodologies it plans to use, for example, to differentiate naturally occurring potential sources of contamination, and evaluate the fate and transport of chemicals that may be used in hydraulic fracturing operations. ANGA also requests that EPA communicate with hydraulic fracturing service providers to ensure that the Agency has up to date information about the chemicals used in hydraulic fracturing operations.

Wastewater Treatment and Waste Disposal: The Draft Plan overly emphasizes wastewater treatment at POTWs as a waste disposal option. That may mislead the public. ANGA respectfully requests that the EPA make clear that the possible use of POTWs as a disposal option is primarily limited to the Marcellus Shale region, and is rarely available even for consideration there, as states and local authorities continue to regulate and limit the discharge of hydraulic fracturing wastewater.

Disclosure

ANGA supports EPA's plan to limit the disclosure of chemical information in accordance with rules intended to protect confidential business information. EPA and other agencies have successfully informed the public and other stakeholders about important information they needed under a variety of programs, while also according appropriate protection to information developed and maintained as confidential. The EPA should continue to ensure that all proprietary data compiled and used by the Agency during its review are protected from inappropriate disclosure.

Possible Bias and Impacts to Relevance from the Timing of Study Results and Reports

The Draft indicates that EPA expects to release an interim report by 2012 which will focus on the results of the retrospective case studies and scenario evaluations. A final report is not expected until 2014, which will include the results of planned prospective case studies, and other data collected during the course of the Agency's review. The retrospective studies are to focus on incidents where hydraulic fracturing activities are alleged to have had an influence on drinking water quality. Even if those assessments are accurate, relying only on such a small number of exceptional examples in a 2012 report, and ignoring the thousands of historic examples of fracturing conducted without any claim of environmental injury, is likely to alarm the public unnecessarily and may irreparably taint the process. Despite the well established record, the current plan to include retrospective studies necessarily will lead to a bias against the environmental integrity of the hydraulic fracturing process. ANGA recommends that the EPA accelerate its work to include the results of the prospective case studies in its 2012 report. Not doing so places industry in the position of disproving the negative at a few, retrospective case study locations, and does not provide policymakers the benefit of new information

learned from a holistic review of the hydraulic fracturing process. In the alternative, all case studies could be reported simultaneously at a later date.

The Draft Plan does not include a process by which EPA can update its research findings as technology advances. For example, the hydraulic fracturing service industry is continuously working to improve treatment and disposal methods to reduce the environmental risk associated with produced water and flowback fluid. ANGA recommends that EPA develop a process by which it can periodically update its research findings to account for technological advances.

Regulatory Framework

The Draft Plan states that “EPA does not expect to address the efficacy of the regulatory framework as part of this investigation. However, EPA may assess existing state regulations in a separate effort.” ANGA respectfully requests, however, that EPA review the existing regulatory framework, including guidance and other requirements used to regulate the industry, to the extent necessary to understand the mechanisms in place to prevent adverse impacts to drinking water resources. An analysis that fails to do so will be of little relevance or value, and will not address the questions underlying the request from Congress.

Socioeconomic Considerations

ANGA respects EPA's efforts to ensure the “fair treatment and meaningful involvement of all people” by evaluating the socioeconomic implications of hydraulic fracturing and its potential impacts on drinking water resources. ANGA respectfully requests, however, that EPA reconsider its decision to collect and analyze such data as part of this study. First, as noted above, the Draft Plan should be tailored to focus on the scientific relationship between hydraulic fracturing and drinking water, and not on such policy considerations. Second, an evaluation of socioeconomic impacts has no connection with Congress' request. Finally, collecting and analyzing unnecessary data, if any exist, necessarily will consume time, personnel resources, and money that the Agency does not have; EPA will be challenged to find adequate resources to complete the draft even if it does not expand into this new area. At this time, EPA should focus its assessment only on the influences of hydraulic fracturing on drinking water resources.

Follow-Up Studies

The EPA has identified in the Draft Plan additional areas of concern that are outside the scope of the Draft, including possible hydraulic fracturing influences on air quality and seismic stability, that may trigger additional reviews by the EPA. Mentioning such possible areas of inquiry, without further qualification at this stage, may lead to unfounded concerns by those who rely on EPA's study. As requested by Congress, EPA should focus its assessment only on the influences of hydraulic fracturing on drinking water resources. Speculation about future plans will only serve to dilute the findings of this study.

Stakeholder Input

ANGA applauds EPA's efforts to engage various stakeholders reflecting a broad and balanced range of perspectives and technical expertise throughout the research process. ANGA encourages EPA to continue to reach out to stakeholders with diverse views and technical expertise, including experienced industry groups such as ANGA. In that regard, EPA should carefully review the public records and biases of all persons and entities whose information and data EPA relied upon or referred to at any

phase of the Draft Study. Failing to do so could unnecessarily skew the result of EPA's study and may substantially reduce the value of the resulting reports. EPA also should regularly confer with those individuals with the relevant expertise to assist the Agency in developing methodologies, conducting case studies, and evaluating the results of the research.

ANGA respectfully requests that the EPA continue to provide opportunities for stakeholder input, and promptly publish more information about specific opportunities for that input. It is unclear, for example, when stakeholders next would have an opportunity for input, following the scheduled SAB review of the draft study plan and technical workshops.

ANGA is prepared to expand on or further explain these comments, should EPA so request. ANGA may submit further comments, as the proposed study advances.

If you have any questions, please contact me

Sincerely,

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and Regulatory Affairs