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Philadelphia, Pennsylvania 19107-2994

HOWARD M. NEUKRUG, P.E.
Commissioner

February 28, 2011

Re: Comments on Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources

To whom it may concern:

One of the Philadelphia Water Department's (PWD) core missions is the provision of safe, high quality drinking water to our nearly two million customers in the Philadelphia region. Philadelphia's drinking water sources are the Delaware and Schuylkill Rivers, and our pledge to our customers extends to the stewardship of our region's water resources. Consequently, PWD is particularly concerned with the treatment and disposal of flowback and produced water and the implications for protecting Philadelphia's surface water drinking sources. PWD has embraced a watershed protection approach that tracks and evaluates events and practices that may cause immediate or long term impacts on water quality. To this end, PWD is closely following the discussions surrounding natural gas drilling, taking into consideration the potential long term repercussions of hydraulic fracturing on regional water resources.

PWD respectfully submits the following comments on "Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources", which provides a detailed overview of the EPA's study to evaluate the relationship between hydraulic fracturing and drinking water resources. The proceeding recommendations reflect improvements that would address key concerns for drinking water supplies, with a focus on the treatment and disposal of flowback and produced water. PWD also requests clarifications of the draft study to better understand the research scope.

RECOMMENDATIONS FOR EPA'S DRAFT PLAN TO STUDY THE POTENTIAL IMPACTS OF HYDRAULIC FRACTURING ON DRINKING WATER RESOURCES

1. Prioritize Research to Assess the Impact of Treated Wastewater on Surface Water Drinking Sources

The impacts of discharging treated wastewater from hydraulic fracturing on surface water and drinking water quality are unknown. Other states with similar shale formations use alternate methods of wastewater disposal, so data to evaluate the impact of discharging wastewater to surface waters are limited. Pre-treatment regulations in Pennsylvania established to address total dissolved solids do not directly deal with other parameters of concern found in natural gas wastewater, such as radionuclides. The ancillary effects of pre-treatment of these parameters, and ultimately on the quality of surface waters, have not been studied sufficiently. Additionally, no water quality criteria exist for many of the constituents found in natural gas wastewater, including certain metals. As a result, regulators are not able to develop permits that effectively protect water resources. For these reasons, PWD believes that EPA should place particular emphasis on determining both the efficacy of current treatment processes and the impact of treated wastewater discharges on drinking water sources.

2. Prioritize Research Related to Radionuclides

PWD recommends that the EPA place more emphasis on research related to the prevalence, impact and treatability of radionuclides in flowback and produced waters. While the study currently emphasizes the impact of chemical constituents that create disinfection byproducts on drinking water supplies, PWD suggests that emphasis also be placed on identifying and evaluating the potential impacts of radionuclides.

3. Create a Plan That Determines How the Existing Regulatory Framework Will Utilize Study Findings

PWD is in continual discussion with regulators regarding our water supply concerns relating to Marcellus Shale drilling. We have shared with our regulating partners that we expect complete respect by the natural gas industry of current and future regulations designed to protect our water resources and public health. Although the study specifically states that the EPA will not address the efficacy of the regulatory framework as part of this investigation, PWD suggests the study provide a general framework for how the EPA plans to utilize results from the study to inform future

regulatory actions. For example, the EPA may consider making recommendations to states based on study findings by highlighting aspects of the hydraulic fracturing process that require additional or more stringent regulations.

4. Utilize Existing Research from Various Water Research Organizations

In the study description, it is evident that the EPA will take steps to thoroughly review existing data and scientific literature relating to various aspects of the hydraulic fracturing process. PWD also recommends that the EPA carefully consider existing and proposed projects at water research organizations such as the American Water Works Association (AWWA) and the Water Research Foundation (WaterRF). The opportunity may exist to align research efforts and build upon the case study approach that is necessary for such a large-scale project.

REQUESTED CLARIFICATIONS OF EPA'S DRAFT STUDY

PWD requests several clarifications of the draft study in order to improve our understanding of the study's scope.

1. Clarification is needed in regard to the types of wastewater treatment processes that are going to be evaluated in this study. Will the standard treatment processes used at commercial/industrial wastewater treatment plants and POTWs be evaluated? Will treatment requirements in different states be compared? Will the EPA examine the efficacy of existing pre-treatment programs, or place more emphasis on treatment technologies that are not yet widely implemented?
2. The study states that the EPA may assess existing state regulations in a separate effort. Has a timeline been established for this assessment? Will this assessment take into account study findings?
3. Does the EPA plan to include all case study sites (retrospective and prospective) in each research initiative where a case study is indicated, or will less than the total number of case study sites be selected to answer specific research questions? The extent to which case study sites are used will affect the number of conclusions that can reasonably be drawn regarding local, regional and national vulnerabilities.

We look forward to continuing our longstanding partnership with the EPA and our other regulating partners as we address the many challenges to water quality in the Schuylkill and Delaware River watersheds. Thank you

for the opportunity to comment on the Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources. Please do not hesitate to contact me with any questions.

Sincerely,

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