



American Water Works Association

The Authoritative Resource on Safe Water SM

May 12, 2011

U.S. Environmental Protection Agency
Science Advisory Board
1100 Pennsylvania Ave. NW
Washington, DC 20460

RE: EPA's Hydraulic Fracturing Study Plan

Dear Sir or Madam:

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to the improvement of drinking water quality and supply. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our 55,000-plus members represent the full spectrum of the drinking water community: treatment plant operators and managers, environmental advocates, engineers, scientists, academicians, and others who hold a genuine interest in water supply and public health. Our membership includes more than 4,000 water systems that supply roughly 80 percent of the nation's drinking water. AWWA and its member utilities are dedicated to safe water. Regulations to ensure safe water must be developed through a transparent process, be based on good science, and provide meaningful risk reduction in an affordable manner.

AWWA appreciates the opportunity to provide additional information on the above referenced Plan, as we submitted comments previously. Hydraulic fracturing is increasing at a rapid rate in many areas of the country, and AWWA and its member utilities want to ensure that source water protection is the highest priority when evaluating all of the factors surrounding hydraulic fracturing. Protection drinking water should trump everything!

We continue to hear as a defensive posture that there is no evidence of hydraulic fracturing contaminating community water systems, or the studies that show such contamination are "flawed". The energy companies and the drilling companies need to step up to the plate and conduct the necessary research, and then institute the appropriate management practices to ensure that drinking water sources are protected. Once the source water is contaminated, it is too late to conduct the research or change practices!

As we have previously commented, surface water systems in Western Pennsylvania are being impacted by hydraulic fracturing in the Marcellus Shale. Bromide concentrations in the Allegheny River have increased, and now, several water systems that use this river as their source have increased levels of disinfection by-products (DBPs). These systems are seeing increased concentrations of the brominated DBPs (considered to be more toxic compared to

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chlorinated DBPs). These systems will be in violation of the Stage 1 DBP Rule this summer and never had compliance problems prior to the hydraulic fracturing in the Marcellus Shale.

Dr. Stanley States, Director of Water Quality and Production at the Pittsburgh Water and Sewer Authority (PWSA) recently presented the enclosed presentation that details the increased bromide and brominated DBP concentrations at the Annual Conference of the Pennsylvania Section-AWWA in Hershey on April 21st. Researchers at PWSA and University of Pittsburgh have been monitoring bromide and Total Dissolved Solids (TDS) in the Allegheny River watershed, investigating a possible link to Marcellus Shale operations. Research has been conducted at PWSA and other water utilities on the Lower Allegheny River to understand the effect of excess bromide on the concentrations of Total Trihalomethanes (TTHMs) and the percent contribution of bromoform. Bromide and TDS have been monitored upstream and downstream of several industrial wastewater treatment plants treating produced water from the Marcellus Shale operations. Bromide is not removed from conventional drinking water treatment plants. This research has found increased bromide concentrations downstream of these industrial wastewater treatment plants leads to increased TTHM concentrations and increased concentrations in bromoform and other brominated DBPs in treated drinking water.

This monitoring is continuing, as the intent is to complete a full year of the monitoring, complete the data analysis, and then submit this research to a peer-review journal for publication. But the evidence is anecdotal no more, as monitoring data from community water systems shows a linkage between hydraulic fracturing and drinking water contamination.

Another study from Duke University that was recent published in *Proceedings of the National Academy of Sciences* found a link between methane contamination of drinking water wells and their proximity to shale gas drilling sites. This growing body of evidence points to the need to step up the protection of drinking water sources in these areas!

In summary, AWWA supports protecting of sources of drinking water under any and all circumstances, including hydraulic fracturing. We appreciate the agency's consideration of our comments. If there are any questions about these comments, please direct them to Alan Roberson, AWWA,

Yours Sincerely,

Thomas W. Curtis
Deputy Executive Director

cc: Nancy Stoner—USEPA OW
Cynthia Dougherty—USEPA OGWDW