FIELD HEARING
TESTIMONY OF
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EPA REGION 3

BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

November 14, 2011

Good morning, Chairman Manchin and Representatives Capito, Rahall and McKinley. I am pleased to be here today to discuss the EPA's role in ensuring that public health and water quality are protected during shale gas extraction and production activities.

Natural gas can enhance our domestic energy options, reduce our dependence on foreign supplies, and serve as a bridge fuel to renewable energy sources. If produced responsibly, shale gas has the potential to help improve air quality, stabilize energy prices, and provide greater certainty about future energy resources.

While shale gas holds promise for an increased role in our energy future, the EPA believes it is imperative that we access this resource in a way that protects drinking water sources and surface waters. As we listened to citizens at public meetings across the country last year, we heard the concerns many have for their families, their communities, and their water resources. We also heard from citizens who expressed how much their communities sorely need the income that could be gained from shale gas production.

We believe that this important resource can be – and must be – extracted responsibly and safely, in a way that secures its promise for the benefit of all. If improperly managed, shale gas extraction and production, including hydraulic fracturing, may potentially result in impacts to public health or our water resources. If we look at water issues across the entire shale gas extraction process, from water acquisition to wastewater treatment and disposal, some of the impacts on our water resources may include:

- stress on surface water and its uses and groundwater supplies from the withdrawal of large volumes of water used in drilling and hydraulic fracturing;
- potential contamination of drinking water aquifers resulting from faulty well construction and completion;
- compromised water quality due to challenges with managing and disposing of contaminated wastewaters, known as flowback and produced water, where contaminants could include organic chemicals, metals, salts and radionuclides.

The EPA has an important role to play in protecting water resources and in working with federal and state government partners to manage the benefits and risks of shale gas production. We must effectively address the potential impact of shale gas development on water resources using the best science and technology. To this end, we are working with stakeholders, including other federal s well as state agencies, the oil and gas industry, and the public health community, to evaluate and address the potential public health and water quality issues related to shale gas extraction. These actions are important pieces of the Administration's broader effort to ensure that natural gas production occurs in a safe and responsible manner, as laid out in the President's Blueprint for a Secure Energy Future. They are also consistent with the Secretary of Energy Advisory Board's recently released recommendations on steps to support the safe development of shale gas resources.

Research

At the direction of Congress, the EPA launched a study last year to better understand the potential impacts of hydraulic fracturing on drinking water resources. As part of this study, the EPA has engaged thousands of Americans across the country who live in areas where hydraulic fracturing is currently taking place. When complete, this peer-reviewed research study will help us better understand potential impacts of hydraulic fracturing on drinking water resources and the factors that may lead to human exposure and risks, while reducing scientific uncertainties about environmental impacts from those processes.

As part of this effort, the EPA has used information gathered during the many stakeholder outreach meetings the EPA held during development of the study plan. The draft study plan was recently reviewed by the EPA's Science Advisory Board and finalized on November 3, 2011. The EPA plans to release two reports, one in 2012 that will summarize existing data, intermediate progress regarding retrospective case studies, scenario modeling and laboratory studies; and one in 2014 that will provide additional scientific results on these topics and report on prospective case studies and toxicological analyses.

Examples of Authority to Protect Water Resources

While Congress specifically exempted selected oil and gas production activities from several environmental laws, a number of environmental protections continue to apply. The National Pollutant Discharge Elimination System (NPDES) program of the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA)'s Underground Injection Control (UIC) program are examples of authorities that states and EPA use to regulate certain oil and gas production activities to protect public health and water quality. Under these examples of authorities, the EPA has a number of activities underway, which I would like to outline for you. Additionally, it is important to also mention, Section 1431 of the SDWA

empowers the EPA to take action to protect human health from circumstances which may present an "imminent and substantial endangerment."

Examples of Activities to Protect Water Resources

Under the NPDES program of the CWA, the EPA and authorized states, including West Virginia, have the authority to regulate wastewater from oil and gas wells when they are discharged into waters of the United States. In addition, discharges to publicly owned treatment works (POTWs) must comply with applicable federal, state, and local requirements. This year, the EPA produced a Frequently Asked Questions (FAQ) document to assist state and federal permitting authorities within the Marcellus Shale region in addressing treatment and disposal of wastewater from shale gas extraction.[1] The document covers oil and gas extraction, centralized waste treatment, acceptance and notification requirements for publicly owned treatment works, pretreatment, and stormwater. The FAQs have assisted the EPA and state personnel as we have worked with the regulated community to address shale gas extraction wastewater.

In addition, the EPA is developing guidance to help states address water quality issues related to Centralized Waste Treatment Facilities or POTWs that accept oil and gas wastewater. As part of its effluent guidelines planning process under CWA section 304(m), the EPA recently announced its intent to modify the oil and gas pretreatment standards to address proper wastewater disposal into POTWs. Under SDWA's UIC program, the EPA is working expeditiously to ensure the SDWA programmatic requirements related to hydraulic fracturing when using diesel fuels are implemented appropriately. The EPA is developing guidance to provide information on permitting wells that inject diesel fuels during hydraulic fracturing. With regard to flowback and produced water, we are coordinating with our state

[1] This document is available at http://cfpub.epa.gov/npdes/hydrofracturing.cfm

and tribal UIC Program co-regulators to ensure proper management of flowback and produced water disposed of via underground injection.

The state of West Virginia has been making progress in updating its regulations to accommodate Marcellus Shale drilling and fracturing operations. The West Virginia Department of Environmental Protection filed an emergency rule related to the regulation of horizontal drilling in August of this year, which will help protect water quality and quantity. The rule is in effect for 15 months. In addition, the West Virginia Legislature continues to work on legislation that would further regulate the industry. EPA is currently reviewing the emergency rule as well as the progress of the draft bill and we intend to provide comments to help inform the state process.

The EPA is committed to using its authorities, consistent with the law and best available science, to protect communities across the nation from potential impacts to water quality and public health associated with natural gas production activities. Where we know problems exist, the EPA will not hesitate to protect Americans whose health may be at risk.

We will continue to work collaboratively with West Virginia officials who are on the front lines of protecting water resources and regulating natural gas production activities. By managing potential environmental impacts and addressing public concerns, we are ensuring that natural gas production proceeds in a responsible manner while protecting public health and enhancing our domestic energy options. We believe that as a nation, we can provide for the safe and responsible development of this significant domestic energy resource whose use brings a range of other important national security, environmental and climate benefits.

Thank you for the opportunity to testify, I would be happy to answer any questions.