

Testimony of Dusty Horwitt, JD

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**Oversight Hearing on the Continued Examination of Hydraulic Fracturing,
including the NYSDEC and DRBC Processes
Before the New York City Council Committee on Environmental Protection
Tuesday, March 1, 2011 at 1:00 p.m.**

Chairman Gennaro, distinguished members of the committee:

Thank you for the opportunity to testify today on the draft regulations issued by the Delaware River Basin Commission (DRBC) and the review process for the New York State Department of Environmental Conservation (NYSDEC). As you know, the Commission's proposal and a decision to allow drilling by the NYSDEC could allow for natural gas drilling in the Delaware River Basin (DRB), which includes much of the watershed for New York City's drinking water supply.

My name is Dusty Horwitt, and I am Senior Counsel at Environmental Working Group (EWG), a nonprofit research and advocacy organization based in Washington, D.C., with offices in Ames, Iowa and Oakland, California.

Environmental Working Group has testified before the council on three previous occasions, and we are here again today because of the great importance of this issue and because the city council's leadership has helped avert the kinds of widespread environmental contamination we are witnessing just across the border in Pennsylvania. Your efforts have made a difference, and we stand ready to assist you in any way we can.

In my previous testimony, I warned about the serious risks to drinking water posed by natural gas drilling. It is EWG's position that no drilling should be allowed near the city's drinking water supplies or near other drinking water supplies in New York state. We stand by our previous testimony, and our concerns about drilling pollution have only increased following last Sunday's alarming article in *The New York Times*, a recent Congressional investigation on the use of diesel in hydraulic fracturing and our continuing research at Environmental Working Group.

Currently, the DRBC is nearing a March 16 deadline for comments on its draft regulations for gas drilling in the Delaware River Basin, and New York State's June 1 deadline for issuing a draft environmental impact statement for gas drilling is not that far off. With these dates approaching, we are concerned that the DRBC and New York State might issue drilling regulations that would allow companies to continue violating federal law and to drill too close to irreplaceable drinking water sources. We are also concerned that the DRBC and New York State will promulgate these rules before regulators can adequately mitigate drilling risks or assess exactly what the risks are.

Issuing Regulations Now Would Reward Violations of Safe Drinking Water Act

Neither the DRBC nor New York state should issue any regulations for drilling at a time when the industry appears to be violating with impunity the federal Safe Drinking Water Act (SDWA), one of the nation's most important environmental laws. The Environmental Protection Agency (EPA) has yet to show any real interest in enforcing this law when it comes to drilling for natural gas and hydraulic fracturing.

Congress passed the Safe Drinking Water Act in large part to protect underground sources of drinking water. In 2005, Congress amended this law to generally exempt hydraulic fracturing, the drilling process that today is used in more than 90 percent of natural gas and oil wells. It is certain that this technology will be extensively used in the Delaware River Basin if drilling is permitted.

“Fracking,” as it is known, involves injecting a mix of water, sand and chemicals into a well under high pressure in order to fracture underground rock formations and unlock trapped gas and oil. Importantly, when Congress changed the law in 2005, Congress made an exception for diesel fuel. That means that drillers must obtain a permit before they use diesel fuel as part of the mix in their hydraulic fracturing operations.¹ Congress did not specify a reason for singling out diesel for concern, but legislators likely based the action on EPA's 2004 finding that “the use of diesel fuel in fracturing fluids poses the greatest threat to” underground sources of drinking water. EPA specifically noted that diesel contains four toxic compounds, known collectively as BTEX, that would exceed the allowable contaminant level at the point of injection when used in fracking.² BTEX refers to benzene, toluene, ethylbenzene and xylene, which are toxic in water at very low concentrations.

EWG highlighted this legal provision in our 2010 report, *Drilling Around the Law*, which found that companies were injecting diesel fuel and related petroleum products, known as distillates, in their hydraulic fracturing operations. We surveyed state and federal regulatory offices in New York, Pennsylvania, Montana, Texas and Wyoming and were told that none of the offices had issued permits for fracturing with diesel.³

In January of this year, investigators for the Energy and Commerce Committee of the U.S. House of Representatives reported that from 2005 to 2009, oil and gas service companies had injected more than 32 million gallons of diesel fuel, or fluids containing diesel fuel, in hydraulic fracturing operations in 19 states. They also found that no state or federal regulators had issued the required permits for this use of diesel fuel, an apparent violation of the Safe Drinking Water Act. The investigators said that one of the states where companies had injected diesel was Pennsylvania, which includes part of the Delaware River Basin.⁴

¹ The Safe Drinking Water Act (SDWA). 2009. 42 USC 300h (2011).

² U.S. Environmental Protection Agency, Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs, Final, June 2004, at 4-11. Accessed online February 28, 2011 at http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_coalbedmethanestudy.cfm.

³ Environmental Working Group, *Drilling Around the Law*, January 20, 2010. Accessed online February 28, 2011 at <http://www.ewg.org/drillingaroundthelaw/pressrelease>.

⁴ Letter from U.S. Reps. Henry A. Waxman, Edward J. Markey, and Diana DeGette to Lisa Jackson, U.S. Environmental Protection Agency Administrator (Jan. 31, 2011).

In response to the investigation, the industry did not deny that companies had injected diesel without the required permits. Instead, the industry said that it could not comply with the law because the Environmental Protection Agency had never issued regulations to implement the measure.⁵ The law, however, is clear. It says that companies may not inject diesel in hydraulic fracturing operations without a permit. Yet this is exactly what they have done -- to the tune of 32 million gallons in 19 different states including Pennsylvania.

Having flouted a major federal environmental law, the industry now wants to drill in the Delaware River Basin, which provides drinking water for 15 million people, including about seven million in New York City and northern New Jersey. The only conceivable answer to the industry's request is, NO.

To allow the industry to drill now would be to reward its blatant disregard of federal law and to put the health of millions of people at risk. This is an industry that won exemptions from almost every piece of federal environmental law except the requirement to obtain permits if it used diesel in fracking fluids, yet drilling companies can't even comply with this limited provision.

Before the DRBC or New York State allows drilling in their jurisdictions, industry and EPA must, at a minimum, show clearly how the industry will comply with the Safe Drinking Water Act and how this compliance will be enforced. The industry must also disclose where it has injected diesel fuel without permits, and scientists must test water sources near those injections for benzene, toluene, ethylbenzene and xylene. Only in this way can citizens and regulators know what risks they might encounter from drilling.

Unfortunately, however, the DRBC's draft regulations make no mention of diesel fuel or the Safe Drinking Water Act's requirement that companies obtain a permit before injecting diesel.⁶

Setback Distances in the DRBC Draft Regulations are Inadequate

The DRBC's setback requirements would allow drilling too close to water sources. The DRBC has proposed that well pads must be located at least 500 feet from water bodies, wetlands, surface water supply intakes and water supply reservoirs.⁷ These are wholly inadequate distances that would put water supplies at great risk.

This is not just a theoretical risk. In 2004, for example, drillers working for EnCana Corp., a natural gas company, hydraulically fractured an improperly cemented well in Garfield County, Colorado. Gas escaped from about 7,000 feet underground, entered a natural fracture about 3,000 feet below the surface and traveled laterally about 3,500 feet to contaminate Divide Creek, a nearby stream. The resulting contamination forced area residents to drink bottled water.⁸ The lateral distance that gas traveled is

⁵ Tom Zeller Jr. A Gas Drilling Technique Is Labeled a Violation, *The New York Times*, Feb. 1, 2011 at B1.

⁶ Delaware River Basin Commission, Draft Natural Gas Development Regulations. Accessed online http://www.state.nj.us/drbc/notice_naturalgas-draftregs.htm.

⁷ See id at 49.

⁸ Gargi Chakrabarty, Toxic Bubbles Trouble Silt; Divide Creek Tainted by Natural Gas Leak, Toxic Benzene, *Rocky Mountain News*, April 13, 2004, at 1B; Gargi Chakrabarty, Regulators Seek Record Fine for Gas Seep, *Rocky Mountain News*, August 17, 2004, at 1B; Gargi Chakrabarty, Commission OKs Record Fine for EnCana Gas Seep, *Rocky Mountain News*, Aug. 18, 2004, at 3B; Colorado Oil and Gas Conservation Commission, Library, Public Presentations, Materials Related to the July 14-15, 2009 Commission Hearing in Glenwood Springs, West Divide Creek by Geoffrey Thyne.

seven times greater than the setbacks proposed by the DRBC in many cases.

One day after residents noticed unusual bubbles in the creek, state inspectors found high levels of benzene in Divide Creek. The exact concentration was 99 parts per billion, nearly 20 times the safe level of five parts per billion. One resident, Lisa Bracken, described the creek as having so many bubbles it looked like a “popped can of soda.” Another resident, Steve Thompson, said, “I came down with a funnel and scooped some of the biggest bubbles with it... I lit the bubbles with a match, and they burned like gas. It even melted my funnel.”⁹

A report prepared for Garfield County found that the contaminants in Divide Creek included methane gas and the BTEX chemicals.¹⁰ In August 2004, the Colorado Oil and Gas Conservation Commission (COGCC) concluded that Encana’s drilling had caused the contamination, levied the highest fine in its history on the company (\$371,200) and imposed a moratorium on drilling within a two-mile radius.¹¹ For at least four years thereafter, EnCana operated a so-called “air sparge” decontamination system that injects air into the creek to dissipate benzene into the atmosphere.¹²

Other Evidence Points Toward Caution

EWG is doubly concerned about the rush to allow drilling in or near vulnerable watersheds considering new information that has come to light recently -- or will come to light soon. The *New York Times* story on Sunday painted a picture of massive regulatory failure in Pennsylvania, where companies are dumping high levels of radioactive wastewater into waterways and regulators are rarely testing for these contaminants in drinking water pulled from the very same waterways. In fact, The *Times* reported that this testing typically occurs only once every six or nine years. The EPA has indicated that it has serious concerns over this radioactive wastewater, but the agency has not intervened.¹³ Given this regulatory failure in Pennsylvania generally, how can we have confidence that there will not be similar problems in the Delaware River Basin?

The EPA is currently conducting a national study of hydraulic fracturing and drinking water as well as an ongoing study of water contamination and gas drilling activity in Pavillion, Wyoming. Until recently, remarkably, there have been few, if any, scientific studies on this topic. Indeed, EWG learned through a Freedom of Information request to New York State in 2008 that the state had not conducted a single test to determine whether hydraulic fracturing might be a threat to the state’s drinking water.¹⁴ The EPA’s

Accessed online Oct. 22, 2009 at <http://cogcc.state.co.us/>; Telephone interview with Geoffrey Thyne (Oct. 22, 2009); G. Thyne, Review of the Data for the West Divide Creek Gas Seep. Prepared for Garfield County, by Science Based Solutions Inc. Aug. 6, 2004.

⁹ See id.

¹⁰ G. Thyne, Review of the Data for the West Divide Creek Gas Seep. Prepared for Garfield County, by Science Based Solutions Inc. Aug. 6, 2004.

¹¹ Supra note 8.

¹² Telephone interview with Geoffrey Thyne (Oct. 22, 2009), Colorado Oil and Gas Conservation Commission, Library, Public Presentations, Materials Related to the July 14-15, 2009 Commission Hearing in Glenwood Springs, West Divide Creek Gas Seep Overview by EnCana. Accessed online Oct. 22, 2009 at <http://cogcc.state.co.us/>; U.S. Environmental Protection Agency (EPA Sparge), 2009. Underground Storage Tanks, Air Sparging. Accessed online Oct. 22, 2009 at <http://www.epa.gov/swrust1/cat/airsparg.htm>.

¹³ Ian Urbina, Regulation Lax as Gas Wells’ Tainted Water Hits Rivers, The New York Times, Feb. 27, 2011 at A1.

¹⁴ Environmental Working Group, New York State Admits Ignoring Threat to City’s Drinking Water, February 20, 2009. Accessed online February 28, 2011 at <http://www.ewg.org/release/ny-state-admits-ignoring-threat-city-s-drinking-water>.

current studies are some of the first of their kind, and the study in Pavillion has already found contaminants in water wells that may have come from drilling operations. (The federal government's Department of Health and Human Services, which has been working closely with the EPA on the Pavillion study, has recommended that people in the Pavillion area using private well water use other water for cooking and drinking.)¹⁵

We are cautiously optimistic that the EPA will finally bring scientific standards to the topic of drilling and hydraulic fracturing, in contrast to the EPA's deeply flawed 2004 study of hydraulic fracturing that included no on-the-ground testing and was criticized by an internal whistleblower for its lack of scientific rigor and a review panel stacked with industry representatives.¹⁶ It would simply be common sense for the DRBC and New York to wait and at least see what the EPA's studies conclude before allowing an inherently risky process such as gas drilling in a watershed serving 15 million people.

The DRBC and New York State have the power – and the responsibility -- to protect clean water for millions of citizens. Given what we know of gas drilling's recent track record, the risks are still too great to allow drilling near water supplies. Both regulatory bodies should insist that the industry obey the law, increase setback distances from water supplies and wait for more evidence about drilling risks before moving forward with regulations that would allow drilling to begin in their jurisdictions.

Thank you for this opportunity to testify. I look forward to your questions.

¹⁵ U.S. Environmental Protection Agency, Pavillion, Wyoming Groundwater Investigation, January 2010 Sampling Results and Site Update. Accessed online March 1, 2011 at <http://www.epa.gov/region8/superfund/wy/pavillion/index.html>.

¹⁶ Weston Wilson. Letter from Weston Wilson, EPA Employee, Denver Colorado to U.S. Senator Wayne Allard et al., Oct. 8, 2004. Accessed online November 8, 2010 at <http://www.earthworksaction.org/publications.cfm?pubID=372>.