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Related to Access to Safe Drinking Water and Sanitation.
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Dear Ms. Alburquerque:

The Center for Constitutional Rights and Columbia Environmental Law Clinic submit this letter to provide background on hydraulic fracturing in the United States. The Center for Constitutional Rights is dedicated to advancing and protecting the rights guaranteed by the United States Constitution and the Universal Declaration of Human Rights. CCR is based in New York but works throughout the United States and internationally to promote and protect human rights. Supervised by clinical faculty, Columbia Environmental Law Clinic students represent local, regional and national environmental and community organizations working to solve critical environmental challenges facing the New York metropolitan region as well as other parts of the world. The Clinic is part of a team of lawyers from local, state and national organizations who bring their legal resources to address impacts of gas drilling in the Marcellus Shale, a shale formation that cuts across New York and Pennsylvania. This joint letter with background and recommendations identifies substantial deficiencies in the U.S. Government's regulation and monitoring hydraulic fracturing.

In the last several decades the United States has experienced political and economic pressure to decrease its dependence on foreign fossil fuels and increase domestic fossil fuel production. New technological developments have allowed the fossil fuel industry to extract natural gas from shale resources previously thought too expensive and difficult to tap. One such development, hydraulic fracturing, has been used in the industry for over 60 years and is now utilized in around 90 percent of the nation's oil and gas wells.[1] The process involves injecting water, chemicals and natural materials into the well to release trapped gases. Unfortunately, government regulators and industry leaders have historically ignored the substantial health and

[1] Riverkeeper Report, *Fractured Communities: Case Studies of the Environmental Impacts of Industrial Gas Drilling*, 3 (Sept. 2010) *available at* http://www.riverkeeper.org/wp-content/uploads/2010/09/Fractured-Communities-FINAL-September-2010.pdf.

welfare costs associated with the process.[2] Government regulators and industry leaders have historically ignored the substantial health and welfare costs associated with the process. Residents living in areas near fracturing sites have higher incidents of cancer and have reported that water itself is often discolored, pungent and contains bubbles because of the high levels of methane gas.[3]

The most substantial risk associated with hydraulic fracturing is massive water source contamination in regions where the process is employed. Residents in such jurisdictions have reported drinking water contamination in every state where hydraulic fracturing wells exist; sometimes so severe that flammable tap water caused homes to explode.[4] In a two and a half year period, hydraulic fracturing operations committed around 1,500 violations of Pennsylvania oil and gas law alone, all of which potentially endangered local water quality and many of which went un-publicized.[5] State and Federal agencies have declared the drinking water in several rural towns, like Dimock, Pennsylvania and Pavilion, Wyoming undrinkable due to chemical contaminants used in near-by hydraulic fracturing operations.[6]

The impacts of such contamination risks disproportionately affect rural, economically underdeveloped communities throughout the country. Water withdrawal and contamination disproportionately impacts farmers and fishermen. Politics and economics make it substantially more likely that hydraulic fracturing wells will be located in rural regions. Local communities in rural areas throughout the United States are more likely to agree to the environmentally destructive practices of the fossil fuel industry in exchange for the promise of economic stimulation because they have less diverse economies. Large urban metropolises are better equipped to resist pressure from the natural gas industry. For example, despite the existence of valuable Marcellus Shale Resources in the region, the New York City Department of Environmental Protection has declared that, "hydraulic fracturing poses an unacceptable threat to the unfiltered water supply of nine million New Yorkers and cannot safely be permitted with the

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[2] *See* Environmental Protection Agency, *Hydraulic Fracturing Research Study Fact Sheet* (June 2010) *available at*, www.epa.gov/safewater/uic/pdfs/hfresearchstudyfs.pdf. The final EPA Report's anticipated release is in 2012.

[3] E.g., Laura Amos, *Garfield County, Co: Family's Water well was contaminated after hydraulic fracturing near home*, EARTHWORKS, http://www.earthworksaction.org/cvLauraAmos.cfm (last visited Feb. 22, 2011).

[4] The Ohio Department of Natural Resources Determined that a December, 2007 explosion at a Bainbridge, OH home was cause by a high-volume hyadraulic fracturing operation in the nearby "Clinton" sandstone formation. Natural Gas migrated through the fractures into nearby acquifers and then into local water wells fed by the aquifers. Report on the Investigation of the Natural Gas Invasion of Aquifers in Bainbridge Township of Geauga County, Ohio (Sept. 2008), *available at* http://www.dnr.state.oh.us/bainbridge/tabid/20484/Default.aspx.

[5] Riverkeeper Report, *supra,* note 1 at 5.

[6] For a discussion of major reported instances of water contamination nationwide, *see* Riverkeeper Report, *supra*, note 1.

New York City watershed."[7] One of the strategies employed by the City of New York to preserve the quality of water is to acquire key plots of land surrounding the watershed so they may be protected from hydraulic fracturing operations. This might prove too costly for other municipalities, especially those in economically disadvantaged areas.

The placement of natural gas extraction in rural areas increases the likelihood that the water contamination will go undetected because rural water supplies are difficult to monitor. The Environmental Protection Agency (EPA) of the United States has more stringent water quality reporting requirements for suppliers providing to 10,000 or more consumers (metropolitan suppliers),[8] and the EPA lacks jurisdiction to monitor private water wells.[9] As a result, contamination due to hydraulic fracturing can go largely undetected in rural areas.

The negative effects of hydraulic fracturing may also disproportionately affect indigenous populations. Many of the largest shale deposits with developmental potential reach into tribal lands, which tend to be rural, underdeveloped and susceptible to promises of economic development. Even if wells are not drilled on tribal lands, wells in neighboring rural lands could still impact the water supply of tribes. Many tribes have expressed a deep moral opposition to the practice of hydraulic fracturing.[10]

While state and municipal regulation of hydraulic fracturing does exist, federal law is severely deficient. In 2005, Congress exempted hydraulic fracturing in the oil and gas industry from being regulated under the Safe Drinking Water Act.[11] This is the only industry allowed to

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[7] Press Release, New York City Department of Environmental Protection, Department of Environmental Protection Calls for Prohibition on Drilling in the New York City Watershed (Dec. 23, 2009), *available at* http://www.nyc.gov/html/dep/html/press_releases/09-15pr.shtml.

[8] Safe Drinking Water Act of 1974, 42 U.S.C. §300g et. seq. (2004).

[9] 42 U.S.C § 300g; US Environmental Protection Agency, Report on the Environment: Drinking Water Quality (accessed Feb. 22, 2010), http://cfpub.epa.gov/eroe/index.cfm?fuseaction=list.listBySubTopicDiscuss&lv=list.listByChapter&ch=47&s=203 ("Private wells, cisterns, and other non-public water supplies are not subject to federal regulation…no national infrastructure, and few if any systematic state efforts, currently exist to collect data on trends in the quality of these supplies.").

[10] For example, the Haudenosaunee Environmental Task Force, a comprehensive indigenous response organization, has stated that, "The Haudenosaunee have a unique spiritual, cultural, and historic relationship with the land…when humans tinker more and more with the natural balance, we do so at the peril of our grandchildren. In few cases is this more apparent than the proposed method of natural gas drilling known as hydraulic fracturing or 'hydrofracking'." Haudenosaunee Statement on Hydrofraking, http://www.hetf.org/index.php?option=com_content&view=article&id=57:haudenosaunee-statement-on-hydrofracking&catid=37:hydrofracking&Itemid=57.

[11] Energy Policy Act of 2005, Pub. L. No. 109-58, § 1(a), 119 Stat. 594 (2005). Paragraph (1) of section 1421(d) of the Safe Drinking Water Act (42 U.S.C. 300h(d)) is amended to read as follows: (1) UNDERGROUND INJECTION - The term 'underground injection' - (A) means the subsurface emplacement of fluids by well injection; and (B) excludes - (i) the underground injection of natural gas for purposes of storage; and (ii) the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities.

inject known toxins into the ground near water supplies without any federal oversight. Wastes generated during the production of natural gas are categorized as "special wastes" and thus are exempt from regulations that cover "hazardous wastes" under the Safe Drinking Water Act. Furthermore, many of the chemical mixtures injected into ground water supplies are protected by laws governing "trade secrets", making it impossible to definitively identify the hydraulic fracturing as the cause of the deterioration of water quality.

Recommendations:

- Without further regulation of hydraulic fracturing practices, the United States is failing to fulfill its obligation to ensure clean and safe water for its citizens. In order to close loopholes in the current regulatory system, Congress should pass the Fracturing Responsibility and Awareness of Chemicals Act (the FRAC Act) (H.R. 2766) (S. 1215), which aims to repeal the exemption for hydraulic fracturing under SDWA and would require complete disclosure of chemicals used in the hydraulic fracturing process. The Bill was introduced to both houses on June 9, 2009.[12]

- State governments must continue to actively monitor and regulate the industry and the EPA must seek to ensure maximum monitoring of water contamination in hydraulic fracturing regions. The U.S. Government should increase and supplement current monitoring of water sources near coal bed methane sites where increasing levels of methane have been documented.

- Congress should repeal the exemption for hydraulic fracturing from the purview of the Safe Water Drinking Act (SWDA), and regulate hydraulic fracturing under section 1425 of the SWDA, since all other extractive industry injection activity has been regulated under the flexible terms of that provision for decades.

- Congress should ensure greater transparency on all levels of the industrial and regulatory processes, by requiring public disclosure of chemicals used in hydraulic fracturing, which currently is considered a trade secret.

- Congress should ratify the International Covenant on Economic, Social, and Cultural Rights (ICESCR) protecting the right to water.[13]

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[12]The summary and status of this bill in both houses can be found at http://thomas.loc.gov/cgi-bin/bdquery/z?d111:H.R.2766 (House); and http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S1215 (Senate).

[13] The United Nations Human Rights Council derived the right to water implicitly in the Article 11 right to "an adequate standard of living, particularly since it is one of the most fundamental conditions of survival." U.N. Comm'ee Econ. Soc. & Cultural Rights, Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights, General Comment No. 15, U.N. Doc. E/C.12/2002/11 (2003), *available at* http://www.unhchr.ch/tbs/doc.nsf/0/a5458d1d1bbd713fc1256cc400389e94/$FILE/G0340229.pdf.

Please contact Susan Kraham with any further questions or concerns at (212)854-5008 or skraha@law.columbia.edu. Thank you for your attention to this matter.

Sincerely,

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