

# KIRKLAND ALERT

March 2010

## EPA Announces Study on Hydraulic Fracturing Practices Used in Gas and Oil Production

On March 18, 2010, United States Environmental Protection Agency (“EPA”) issued a *Federal Register* notice announcing a meeting of the Science Advisory Board on **April 7-8, 2010**.<sup>1</sup> The Science Advisory Board will be “commenting on EPA’s proposed approach to study the potential public health and environmental protection issues that may be associated with hydraulic fracturing.” That same day, EPA also announced that it will conduct a \$1.8M study of the impacts on water quality and public health associated with hydraulic fracturing.<sup>2</sup>

Hydraulic fracturing (also known as “fracking” or “fracing”) is the process of drilling vertical or horizontal wellbores underground while simultaneously pumping highly pressurized liquids called “fracturing fluids” and sand into the wellbore to create and hold open fissures or “micro fractures” in the rock formation. The fracking process facilitates oil and gas extraction. Hydraulic fracturing has been used for decades to stimulate the production of oil and gas wells; recently, it has come into even wider use as a technique for harvesting natural gas from shale reservoirs, such as Barnett in Texas, Marcellus in Pennsylvania, and Haynesville in Louisiana.

Energy Secretary Steven Chu recently indicated his support for hydraulic fracturing as an important technique when “done responsibly.”<sup>3</sup> Greater use of the Nation’s abundant natural gas supplies has been touted as a strategy to reduce greenhouse gas emissions and to promote energy independence. However, critics of hydraulic fracturing have raised concerns about the practice based on a number of recent studies and reports indicating that hydraulic fracturing may cause damage to underground water sources by creating fissures in the groundwater aquifers that then permit the intrusion of the fracturing fluids into drinking water resources.<sup>4</sup>

In 2004, EPA completed a study that concluded that the injection of hydraulic fracturing fluids into coalbed methane production wells presented only a minimal threat to underground sources of drinking water.<sup>5</sup> Following EPA’s 2004 finding, fracking was exempted from the Safe Drinking Water Act (“SWDA”) under the Energy Policy Act of 2005,<sup>6</sup> although the exemption does not apply if diesel fuel is included in the fracturing fluid. Generally, oil and gas exploration and production wastes are also exempt from regulation as hazardous wastes under Subtitle C of the federal Resource Conservation and Recovery Act (“RCRA”).<sup>7</sup>

Recently there has been significant attention given to the potential design and issuance of new fracking legislation. In 2009, two identical bills were introduced in the United States House of Representatives and the Senate, called the Fracturing Responsibility and Awareness of Chemicals Act (the “FRAC Act”).<sup>8</sup> The FRAC Act is designed to remove the fracturing exemption from SWDA and require drilling companies to disclose the chemicals used in their fracturing fluids. In January 2010, Representative Henry Waxman, Chairman of the House Energy and Commerce Committee, announced that he was launching a new investigation into hydraulic fracturing and was publicly demanding information from certain companies involved in hydraulic fracturing, including Halliburton, BJ Service, and Schlumberger.<sup>9</sup> Following that information request, counsel for BJ Services are said by a House Subcommittee memorandum to have acknowledged that the company used diesel-based slurry in two dozen coalbed manufacturing projects from 2005 to 2007 in Arkansas and Oklahoma, in violation of a 2003 “Memorandum of Agreement” with EPA in which the companies agreed not to use diesel-based slurry in coalbed methane wells.<sup>10</sup>

Due to the lack of federal regulation, the States are currently the principal regulator of hydraulic fracturing. Not surprisingly, the type of regulations imposed by the States varies greatly. In Pennsylvania, where a large portion of the Marcellus Shale formation is located, the Governor recently announced proposed rules that would require energy companies to restore or replace water supplies affected by drilling, oblige operators to notify regulators of any leakage of gas into water wells, and direct drillers to construct well casings from oilfield-grade cement designed to prevent the leakage of fracking fluids into underground water supplies.<sup>11</sup>

In May 2009, the Ground Water Protection Council (“GWPC”) undertook a review, funded by the U.S. Department of Energy, of the state laws in effect for the regulation of oil and gas production.<sup>12</sup> The study argued that “enactment of national regulations on oil and gas exploration and production would be costly to the states, duplicative of state regulation, and ultimately ineffective because such regulations would be too far removed from field operations. Current state regulation of oil and gas activities is environmentally proactive and preventive.”<sup>13</sup> The study recommended the development of state-specific best management practices and additional localized regulations.

EPA’s study may portend an interest by the current Administration in creating a more uniform federal regime for the regulation of fracking. Companies currently engaged in fracking or considering projects where fracking will be used will need to closely monitor the current state of play as to both regulatory proposals and the most recent scientific studies of the practice. Especially for energy companies that agree with the DOE-funded GWPC study’s basic conclusion that the *status quo* system of federalism leads to appropriately tailored local regulation of fracking by the States, particularly given the wide variety of geological formations present in different regions of the country, it will be important to track these developments and to take advantage of all regulatory and technical commenting opportunities.<sup>14</sup> And, of course, interest by Congress in establishing a new regulatory regime should also be closely watched for further developments.

The effects of an uncertain regulatory future for hydraulic fracturing can be seen in the merger agreement between ExxonMobil and XTO, a Texas energy and natural gas firm.<sup>15</sup> The merger agreement provides that the continuing legality of fracking was an important condition of the deal.

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- 1 *Science Advisory Board Staff Office; Notification of a Public Meeting of the Science Advisory Board; Environmental Engineering Committee Augmented for the Evaluation and Comment on EPA’s Proposed Research Approach for Studying the Potential Relationships Between Hydraulic Fracturing and Drinking Water Resources*, 75 Fed. Reg. 13,125 (Mar. 18, 2010), available at <http://www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480ac0044>.
  - 2 United States Environmental Protection Agency, *EPA Initiates Hydraulic Fracturing Study: Agency Seeks Input from Science Advisory Board* (Mar. 18, 2010), available at <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/ba591ee790c58d30852576ea004ee3ad!OpenDocument>.
  - 3 *Exxon, XTO to Testify to Congress on Merger*, Reuters (Jan. 15, 2010), available at <http://www.reuters.com/article/idUSTRE60E59R20100115>.
  - 4 Abraham Lustgarten, *Natural Gas Drilling: What We Don’t Know*, PROPUBLICA (Dec. 31, 2009), available at <http://www.propublica.org/feature/natural-gas-drilling-what-we-dont-know-1231>.
  - 5 United States Environmental Protection Agency, *Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs*, (June 2004), available at [http://www.epa.gov/ogwdw000/uic/wells\\_coalbedmethanestudy.html](http://www.epa.gov/ogwdw000/uic/wells_coalbedmethanestudy.html).
  - 6 42 U.S.C. § 300h.

- 7 42 U.S.C. § 6921(b). See *Clarification of the Regulatory Determination for Waste from the Exploration, Development, and Production of Crude Oil, Natural Gas and Geothermal Energy*, 58 Fed. Reg. 15,284 (Mar. 22, 1993), available at <http://www.epa.gov/waste/non-haz/industrial/special/oil/og93wp.pdf>.
- 8 *Fracturing Responsibility and Awareness of Chemicals Act*, H.R. 6766, introduced June 9, 2009 (111th Cong.), available at <http://www.govtrack.us/congress/billtext.xpd?bill=h111-2766>.
- 9 United States House of Representatives Committee on Energy and Commerce, *Energy and Commerce Committee Investigates Potential Impacts of Hydraulic Fracturing*, (Feb. 18, 2010), available at [http://energycommerce.house.gov/index.php?option=com\\_content&view=article&id=1896:energy-a-commerce-committee-investigates-potential-impacts-of-hydraulic-fracturing&catid=122:media-advisories&Itemid=55](http://energycommerce.house.gov/index.php?option=com_content&view=article&id=1896:energy-a-commerce-committee-investigates-potential-impacts-of-hydraulic-fracturing&catid=122:media-advisories&Itemid=55).
- 10 Memorandum issued by Chairman Henry A. Waxman and Subcommittee Chairman Edward J. Markey to Members of the Subcommittee on Energy and Environment Regarding Examining the Potential Impact of Hydraulic Fracturing, (Feb. 18, 2010), available at [http://energycommerce.house.gov/Press\\_111/20100218/hydraulic\\_fracturing\\_memo.pdf](http://energycommerce.house.gov/Press_111/20100218/hydraulic_fracturing_memo.pdf).
- 11 Jon Hurdle, *Pennsylvania Plans More Gas Drilling Regulation*, Reuters (Jan. 28, 2010), available at <http://www.reuters.com/article/idUSN2812147220100128>.
- 12 Ground Water Protection Council. *State Oil and Natural Gas Regulations Designed to Protect Water Resources* (May 2009), available at <http://www.gwpc.org/e-library/documents/general/State%20Oil%20and%20Gas%20Regulations%20Designed%20to%20Protect%20Water%20Resources.pdf> [hereafter “GWPC Study at \_\_\_”].
- 13 GWPC Study at 37.
- 14 However, the GWPC study recognized that hydraulic fracturing in shale reservoirs is a fairly “recent activity” and thus further studies should be conducted “to determine the relative risk to water resources from the practice of shallow hydraulic fracturing.” GWPC Study at 39.
- 15 Form 8-K SEC Filing by ExxonMobil Corporation (Dec. 14, 2009) (see definition of “Company Material Adverse Effect”), available at <http://ir.exxonmobil.com/phoenix.zhtml?c=115024&p=irol-SECText&TEXT=aHR0cDovL2NjYm4uMTBrd2l6YXJkLm-NvbS94bWwvZmlsaW5nLnhtbD9yZXBvPXRlbmsmaXBhZ2U9NjY1MTUyNCZhdHRhY2g9T04mc1hCUkw9MQ%3d%3d>.

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