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# This Scientific Development Could Impact Fracking Litigation

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The New Year brings a renewed focus on scientific issues concerning the potential impact of hydraulic fracturing on the environment. These scientific developments may soon support or accelerate environmental and toxic tort litigation concerning hydraulic fracturing in Texas and other jurisdictions.

Of particular note, the U.S. Environmental Protection Agency is pressing forward with its multi-year "Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources." The draft assessment report from this study was scheduled for release in December 2014. The EPA did not meet that schedule, but the report is now widely expected to be released soon.

This EPA study began as the response to a 2009 request by the U.S. House of Representatives that the EPA conduct scientific research to examine the relationship between hydraulic fracturing and drinking water resources. According to the EPA, the purpose of the study was "to assess the potential impacts of hydraulic fracturing on drinking water resources, if any, and to identify the driving factors that may affect the severity and frequency of such impacts."

The EPA has already designated the upcoming report as a "highly influential scientific assessment," which will undergo peer review by the agency's Science Advisory Board. Representatives of the EPA have publicly stated that the report is intended by to be a "state of the science" report on the potential impacts of hydraulic fracturing on drinking water resources, including the effect on current typical practices, as well as potential and actual accidents or unintended events. The report is expected to examine these potential impacts at multiple scales: Single wells, clusters of wells, watershed and shale plays.

The release of the EPA report has the potential to provide significant new evidence in lawsuits concerning hydraulic fracturing. This litigation includes environmental and toxic tort lawsuits around the nation in which landowners have sued producers claiming that hydraulic fracturing has contaminated, or threatened, a drinking water well or other nearby water source, as well as litigation between producers and municipalities over zoning or ordinances prohibiting hydraulic fracturing.

At the center of this litigation is the express or implied assertion that hydraulic fracturing has impacted, or has the potential to impact, drinking water supplies. So far there has been little evidence to support such claims. For this reason, many of the environmental and toxic tort lawsuits by landowners against producers have been dismissed following the entry of case management orders, or motions for summary judgment, that have required the plaintiffs to present scientific evidence to support their claims.

There is no reason to expect the industry and others will accept the EPA's findings. In a much publicized matter, the EPA issued an ex parte emergency administrative order stating that Range Resources had caused or contributed to an alleged endangerment of Steven Lipskys' water well. One year after the Railroad Commission concluded Range was not guilty of any wrongdoing, the EPA withdrew its order.

However, the scientific landscape for fracking litigation needs to be closely watched. Recently, a team of U.S. and French scientists published an article in which they claim to have developed geochemical tracers that can identify hydraulic fracturing flowback fluids that have been spilled or released into the environment.

The October 2014 study, published in the journal "Environmental Science and Technology," claims to have developed geochemical fingerprinting technology as a new method to trace leaks and spills of fracking fluids in the environment. The study finds that fracking flowback water can be identified, fingerprinted, and traced by the presence of particular boron and lithium isotopes which exist only in water produced by fracking miles underground.

By looking for these geochemical tracers, the study claims that fracking flowback water can be identified in the environment and distinguished from other types of wastewater, including wastewater from conventional oil and gas wells. If true, this new technology could provide a forensic tool for litigants to prove—or disprove—that hydraulic fracturing has impacted a water supply. However, one noteworthy limitation of this new technology is that it cannot identify fracking flowback water by drill site—it can only distinguish fracking flowback water in general from waste water produced from conventional oil and gas operations or other sources.

The publication of the EPA draft assessment report later this year may provide new scientific evidence to support—or refute—the claims of private litigants who are claiming that water resources have been contaminated by hydraulic fracturing. It is not hard to imagine future litigants using the findings of the EPA report, along with new technical developments like geochemical tracing, as evidence in future cases concerning hydraulic fracturing.

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