

Survey finds consensus on shale drilling's biggest risks

June 20 2013, by Bob Downing, Akron Beacon Journal

Storage and treatment of liquid drilling wastes, air emissions of methane, water withdrawals for drilling, and site construction are among the biggest problems facing shale gas drilling.

Those four problems top a list put together by researchers Nathan Richardson and Hal Gordon of Resources for the Future, a [nonprofit group](#) based in Washington, D.C.

Their group surveyed 215 experts from government agencies, industry, academia or nongovernment organizations who were asked to rank 264 separate drilling threats from most serious to least serious.

Only 12 risks were ranked as a top priority by all four groups, Gordon told the audience at the National Academy of Engineering's [shale gas](#) conference in Severance Hall, the home of the Cleveland Orchestra.

The two-day session that wrapped up Wednesday drew 850 to the Case Western Reserve University campus.

Seven of the 12 threats all four survey groups cited were linked to surface water, two to air emissions, two to groundwater and one to the drilling site's construction, Gordon said.

The threat of earthquakes from [injection wells](#), community impacts of shale development and well cementing problems also were chosen, but less frequently, he said.

Gordon said public debate and concern does not necessarily reflect the risks the experts selected.

"Shale gas drilling is a contentious issue ... but a consensus does exist," he said, with the biggest risks mostly above ground, based on the survey results.

The survey, Gordon said, could help create dialogue among the parties to reduce the controversy around shale drilling.

The report, "Pathways to Dialogue: What the Experts Say About the Environmental Risks of Shale Gas Development," is available at www.rff.org/shaleexpertsurvey .

A closer look at chemicals used in [hydraulic fracturing](#), or fracking, also reflects a reduced risk to the public, said engineering professor Joseph Ryan of the University of Colorado.

Drilling companies might use between 600 and 1,000 different chemicals to crack the shale under pressure thousands of feet below the surface, along with large volumes of water and sand, he said.

The chemicals are added for specific reasons to aid the [drilling](#).

But the number of chemicals that are hazardous, persistent and mobile is only 28, and that reduces the threat from hundreds to under 30, he said. More needs to be done to analyze possible pathways for those hazardous chemicals to reach ground or surface waters.

Air pollution from methane leaks is a big issue that too often is overlooked, said Gabrielle Petron, an atmospheric scientist with the National Oceanic and Atmospheric Administration and the University of Colorado.

Methane contributes to unhealthy ozone levels and is a potent global warming gas, she said.

Utica shale development is having a growing impact in eastern Ohio, said Iryna Lendel, a Cleveland State University professor. She said 13 of the 20 counties with Utica wells saw their sales tax income jump by an average of 21.1 percent from 2011 to 2012.

Akron, Canton and Youngstown saw their combined sales tax incomes grow 17.3 percent from 2011 to 2012, in part due to Utica shale, she said.

Lendel said a typical Utica shale well creates 11.5 full-time jobs during construction and requires 410 workers in 150 different occupations to complete it.

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