

Statement FWE at Shale Gas Roundtable – June 18, 2013

Check against delivery

I want to make a short statement about the two topics on the agenda of this Roundtable today.

For starters, while well integrity and chemicals are two major issues for shale gas development, let's remember that there are many other ones as well: Treating large volumes of heavily contaminated flowback, planning for the major land use involved, limiting air emissions associated with this activity, etc. Given the multitude of risks, limited experience among European regulators with large-scale onshore oil and gas extraction – unconventional fossil fuels in particular – and greater population density, Food & Water Europe is deeply skeptical about our ability to manage this wide range of 'risks'. This is why we campaign for a ban on hydraulic fracturing in the EU.

Allow me a few comments about well integrity. Industry insists that there is no proven link between groundwater contamination and the process of hydraulic fracturing. We can probably agree that creating fractures in shale rocks at a depth of 3 to 4 kms is unlikely to directly affect aquifers, close to the surface. Though fracking at lower depths or in the vicinity of natural faults and karstic aquifers could significantly increase the risk of gas migration.¹

However, the key point is that the wellbore – in order to arrive at the shale formations – must pass through the overlying formations, where groundwater *is* present. And that SCVF or Sustained Casing Vent Flow and related problems of well integrity are commonly encountered in the oil and gas industry. Many industry publications² and peer-

¹ Myers, T. (2012). Potential Contaminant Pathways from Hydraulically Fractured Shale to Aquifers. *Ground Water*, 50(6), 872–882. doi:10.1111/j.1745-6584.2012.00933.x Available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6584.2012.00933.x/abstract>

² ExxonMobil's site EuropeanUnconventionalGas.org states the following: "There have been limited incidents where fracturing fluid and flowback water have been released on the surface due to wellbore integrity and surface facility water handling issues that were not related to the

reviewed research document the phenomenon, when – I quote a scientific article by Watson & Bachu – “gas enters the exterior production-casing annulus from a source formation below the surface-casing shoe and flows to the surface or builds gas pressure at surface”.³

To prevent this from happening, the oil and gas industry has one chance to install a cementing system during the well construction. During the drilling phase of a well, the cement sheath must withstand the continuous impact of the drill, particularly with directional wells. During well completion, the lower pressure can cause de-bonding at the casing-cement and/or cement-formation interfaces. The cement sheath must resist cracking from the extreme pressure created by the hydraulic fracturing operation.⁴

The challenge of well integrity is one of the problems that is common in both conventional and unconventional gas drilling. However, the higher number of wells involved in unconventional gas and the higher pressures used are likely to significantly increase the risk of damaging the wells and lead to fluid and/or gas migration. Asked about a risk matrix by the Center for Energy Economics and Policy, more than 200 experts identified cement failure and casing failure as the two top accident priorities to be addressed.⁵

In other words, this is far from an imaginary or emotional problem. Industry’s speaking point that there are “zero reported cases of groundwater contamination linked to fracking” is interesting, but only from the point of view of semantics. Such statements do little to advance an informed debate among the concerned public about the risks and real-world impacts of large-scale hydraulic fracturing. Food & Water Europe re-asserts that there is sufficient and strong evidence available that drilling for shale gas has been

hydraulic fracturing process itself. While limited in scope, these instances are regrettable, as they can be avoided with good design and work practices”.

³ Watson, T.L. and Bachu, S. 2009. Evaluation of the Potential for Gas and CO₂ Leakage Along Wellbores. *SPE Drill & Compl* **24** (1): 115-126. SPE-106817-PA. Available at <http://www.spe.org/ejournals/jsp/journalapp.jsp?pageType=Preview&jid=EDC&mid=SPE-106817-PA>

⁴ Nygaard, R. (2010) Well Design and Well Integrity. Wabamun Area CO₂ Sequestration Project (WASP). Available at <http://www.ucalgary.ca/wasp/reports.html>

⁵ Polish media have already reported how the cement used by Polish operators cannot withstand the pressure from the hydraulic fracturing operations. Source: <http://www.tvn24.pl/czarno-na-bialym%2c42%2cm/jest-ale-drogi%2c318856.html>

implicated in the contamination of water supplies across the United States. We disagree with industry that such gas and fluid migration is limited in scope and are skeptical about the proposed technological fixes (e.g. triple casings).⁶

A couple of words about the European FrackFocus, NGSFacts.org. We know little about how NGSFacts will be different from Frackfocus. However, we know the following about 2 years of experience with FrackFocus. In 2011, 5 years after the Halliburton loophole was passed by congress and after tens of thousands of fracked wells were drilled, the shale gas industry felt compelled to respond to public concerns by launching a voluntary registry. This is what the Harvard Law School had to say about the initiative: "Our evaluation of FracFocus suggests that reliance on the registry as a regulatory compliance tool is misplaced or premature".⁷ The report points out three major flaws.

1. States cannot enforce timely disclosures;
2. FracFocus does not review the accuracy of submissions and states do not receive the disclosure forms;
3. Operators have sole discretion to claim that the mix of chemicals used is a trade secret, resulting in inconsistent trade secret assertions.⁸

Research by American NGO Skytruth demonstrated that just 43% of chemicals in all the fracks in Pennsylvania are actually being disclosed. And chemicals used in 2 out of

⁶ Several other elements contribute to our blurred view of the environmental impacts on large-scale hydraulic fracturing:

- US state regulators were unprepared to monitor the shale gas drilling boom, resulting in poor monitoring of its impacts. Exemptions from key pieces of federal legislation in the US further exacerbated this problem.
- By using mutual non-disclosure agreements, the energy companies have been paying complainers for silence about possible cases of environmental pollution.

⁷ Konschnik, K., Holden, M., & Shasteen, A. (2013). *Legal Fractures in Chemical Disclosure Laws*. (p. 15). Harvard Law School. Retrieved from http://www.law.harvard.edu/news/2013/05/03_hls-study-finds-legal-fractures-chemical.html

⁸ Another major concern is the accessibility of the data, as no bulk download of data of chemicals use is not possible. FrackFocus does not allow searching across forms, readers are limited to opening one PDF at a time.

every 3 wells drilled in the State of West Virginia remain a complete mystery to the public.⁹

While a commitment by industry to transparency is to be welcomed, Food & Water Europe insists that such voluntary registries do not in any way absolve public authorities from setting up a mandatory disclosure system that overcomes the FrackFocus shortcomings, organizing unannounced inspections to well pads and taking their own samples, developing a strategic monitoring capacity in the areas with shale gas development, etc. Data gathering about injected chemicals, its disclosure and analysis in the public interest is a job for public authorities. Self-regulation by an industry whose public acceptability is extremely limited is not an option.

To conclude, we don't see eye-to-eye with industry about the scale of the problems related to air and water pollution and the resulting impacts on local residents. We seem to be handling two different sets of data and obviously disagreeing about the conclusions that can be drawn from them.

This is why we decide to launch our own site, namely NGSFacts.com, to distribute an – in our view, more realistic– presentation of the realities involved in large-scale shale gas drilling. NGSFacts.com can serve as an alternative source of information for EU citizens.

Thank you for allowing me to make this statement.

Geert Decock
Policy Officer - Food & Water Europe
Tel: +32 (0)2 893 10 45
Mobile: +32 (0)484 629 491
Email: gdecock@fweurope.org
Twitter [@FoodWaterEurope](https://twitter.com/FoodWaterEurope)
Website: <http://www.foodandwaterwatch.org/europe/>

⁹ Skytruth (2012, October). West Virginia Fracking: State and Industry Fail to Keep Public Informed. *SKYTRUTH: using remote sensing and digital mapping to educate the public and policymakers about the environmental consequences of human activities*. Retrieved from <http://blog.skytruth.org/2012/10/west-virginia-fracking-state-and.html>