

Core Information

There are many potential risks associated with fracking. The core points that are relevant where legal action appears to be needed due to unacceptable levels of risk are as follows:

Myth 1: “Fracking has been used for 60 years”

The modern fracking proposed for the UK (and already carried out at Fylde) has *not* been around for 60 years. The technique of high pressure hydraulic fracturing (commonly referred to as ‘fracking’) has only developed since the 1990’s, and its use in a combination of 4 new technologies has only been used in unconventional gas exploitation since 2002. A much simpler form of ‘traditional fracking’ *has* been used for 60 years, with far fewer risks and impacts.

Myth 2: “No documented cases of contamination”

The industry makes this statement referring only to the one-day fracking process, so it does not include the known impacts of all the other activities that follow on from this, such as gas leaking upwards after fracking process or as a result of well casings failing. In addition the use of legally binding NDAs (Non Disclosure Agreements) appears to have been widely used in the USA by the fracking industry to suppress the harms people have experienced, for example in exchange for either clean water or money.

Myth 3: “Best regulations in the world”

This statement is certainly misleading, and with the strengthening of regulation in some US states may also be untrue. The question is whether the UK system of regulation is safe and sufficient for the UK situation – and expert perspective suggests it is not. Mike Hill (an independent oil and gas industry engineer) has researched the system, found many significant weaknesses, and has provided recommendations to government that new or additional industry-specific regulations are needed. Most of his recommendations have been ignored by government.

Mike Hill emphasizes that there is little or no point in having regulations if there is no independent monitoring or insufficient capacity or resources to assess and actively enforce regulations.

The existing regulations were largely developed 25 years ago intended for the offshore oil and gas industry, with the primary focus on protecting workers. Within this context, Government is actively ‘streamlining’ (i.e. reducing) time periods and opportunities for consultation or objection to unconventional gas proposals, to facilitate expansion of the industry. If the UK’s are the best, this simply shows the shocking state of regulation elsewhere in the world!

Known Technical Problems

Technical problems well known to the oil and gas industry that have not yet been solved include:

1. **Cement well-casing failure:** it is widely accepted that around 1 in 20 oil and gas wells

worldwide have casing failures in the short term – in the USA research has shown that around 35% of fracking wells have leaked in the short, medium or longer term.

2. **Contamination and pollution:** known contamination problems include:
 - a. **gas migration into water table** - the upward flow gradient of gas to the weakest formation, which is usually the water table;
 - b. **leakage of slickwater containing harmful chemicals**, and non-recovery of around 50% of slickwater, which is left in the ground after the well ceases operations;
 - c. **release of Naturally Occurring Radioactive Materials (NORMS)** into the aquifer and waste fracking fluid (there is no treatment for NORMS).
3. **What to do with hazardous slickwater waste arising from the production phase:** Mike Hill (independent oil and gas industry engineer) states in his objections to Cuadrilla's disposal plans at Fylde that on certain dates the waste slickwater contained, according to the Environment Agency, the following levels of harmful substances in comparison with mains water:
 - 90 times the permissible level of NORM (Naturally Occurring Radioactive Material)
 - 1438 times the level of lead
 - 150 times the level of cadmium
 - 2,297 times the level of bromide
 - 636 times the level of chromium
 - 197 times the level of aluminium
 - 20 times the level of arsenic

The Environment Agency currently considers this waste as 'non-hazardous'.

Fracking and Contaminated Water Sources

Evidence (US) shows that many fracked wells contaminate water sources with methane (due to problems that haven't been solved) and there is evidence that the closer fracked wells are to a water source the more likely a water source is to be contaminated (Osborn et al, 2011).

The above information suggests that there is sufficient evidence to suggest that the government and Environment Agency are demonstrating a lack of due diligence in relation to public and environmental safety. Clearly where legal action is to be pursued much more detailed evidence is needed than we can supply here, although work is ongoing to help provide support to legal actions where they seem necessary to protect citizen and environmental safety.