



## **FRACK FREE BALCOMBE RESIDENTS ASSOCIATION**

### **Comments on Standard Rules for Environmental Permitting Regulations – Consultation No 11**

The Environment Agency has invited comments on the Consultation “Standard Rules for Environmental Permitting Regulations –Consultation No 11”. The stated purpose of the review is to invite interested parties to answer the following questions:

1. Do you agree with our approach to use standard rules for these onshore oil and gas activities?
2. Do you agree with the proposed new rules that we have set out in section 3 of this consultation?
3. Have we correctly identified all the risks for each activity, as described in the generic risk assessments associated with the consultation?
4. Are there any barriers to complying with the standard rules?
5. Do you think that the introduction of standard rules for these activities will have a significant financial impact overall on your operation? If you agree or disagree, please explain why, and provide evidence to support your view of the likely impacts.
6. Are there any other activities that you think would benefit from the standard permitting approach or future revisions?
7. Please tell us if you have any other views or comments on these proposed revisions that have not been covered by previous questions.

### **Specific Answers**

#### **Question 1**

**Do you agree with our approach to use standard rules for these onshore oil and gas activities?**

**In response: No.**

Standard practice is applied normally once extensive experience is gained in an activity, making best or good practice routine. The story so far in the UK for onshore oil and gas is of a young industry which has much to learn. These proposed standard rules will make it more likely important local conditions will be missed and accidents will occur. Yesterday FFBRA received confirmation from the HSE that hydrofluoric acid had never been used in drilling operations and yet its use is being included in this consultation.

Issuing of standard permits does not take into account the surrounding neighbourhood and how many other standard permits are issued in the locality. There is, therefore no inbuilt protection for communities concerning the number of wells that could be in the vicinity. This has serious implications for health, as outlined in section 3.

All sites and all communities around them are different. To assume that 'one size fits all' is utterly wrong.

These rules are slanted in favour of business over communities, even though it is communities that will surely suffer the greatest impacts.

These standard rules are completely unjustified, particularly involving the use of hydrofluoric acid.

## **Question 2**

**Do you agree with the proposed new rules that we have set out in section 3 of this consultation?**

**In response: No.** They are poorly worded, lack rigour, detail and clarity and there is not enough attention given to monitoring and independent assessment.

SR2015 No1 section 3 Emissions and monitoring demonstrates a very inadequate and unprofessional approach to checking for pollution. Monitored monthly by the operator and reporting every three months is clearly not enough as this would mean there could be three months of pollution before it was reported This emission monitoring should NOT be performed by the operator but an independent body (Cuadrilla for instance lost air samples at Balcombe). 3.3.1 This section is very woolly in its wording over pollution and odour and seems to suggest that as long as you can't smell the pollution it is allowable. That is clearly not the case as many dangerous chemicals, PAHs, particulate matter, radioactive emissions etc. may not smell and still be hazardous.

*"3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in Table 2.3 and in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions."*

Why excluding odour? Why are the substances not controlled by emissions limits? All emissions should be limited. Why were no emissions limits set for exploration at Balcombe? This paragraph seems to indemnify the company against any pollution to the air that may occur if it can prove it has taken appropriate measures.

Surely if pollution occurs something has failed and the company, the Environment Agency, the HSE and the local County Council must all be forced to take responsibility for a pollution that they have collectively allowed to occur. There doesn't seem to be any disincentive for failing; simply stop work and continue when you can again comply. The operator should be liable for the total costs of cleaning up after a failure plus compensation for those affected including businesses, individuals, and local government.

Under the proposed standard rules the operator is only required to monitor air samples for VOCs monthly. This is clearly not enough as spikes can happen at any time. Continuous monitoring and reporting of air quality should be made and made available to public scrutiny at all times. This monitoring should be not just of VOCs but PAHs, benzene, toluene, xylene levels, NOx, SOx, radioactivity levels generally. All of these should be under continuous monitoring by an independent body.

3.5 This section is entirely inadequate and uses woolly words like 'regularly' without specifying how often this is. It also says the operator only needs to undertake further monitoring if required to by the Environment Agency. Which also seems to suggest that if they are not specifically asked to undertake it, they don't need to. An extraordinarily weak approach.

*"3.2.3 Periodic monitoring shall be carried out at least once every 3 years for groundwater and for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination."* This is much too infrequent. Isn't three years about the productive life of a well in many cases? Monitoring the ground water should be on a daily basis if it is to protect the ecology. We still have had no answers about why a bright green fluorescent stream was coming up from a culvert in the ground near the well site at Lower Stumble. This was caused by an industrial tracer dye and indicates a breach of the well integrity. However according to the EA, Cuadrilla say 'they didn't use it' so that's enough? This monitoring should be done by independent bodies regularly. Are we learning nothing from the past two years' experience?

*"4.3.1C In the event of a breach of standard rule which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the standard rules has been restored. 4.3.2 Any information provided under standard rule 4.3.1 shall be confirmed in writing within 24 hours. 4.3.3 The Environment Agency shall be notified in writing, at least 21 days in advance or, where this is not possible, without delay, of the operator's intention to cease activities".* This seems to

suggest that the operator can still continue for three weeks if there is a problem. And once again there doesn't seem to be any disincentive for failing; the operator can simply stop work and continue when they can again comply without penalty.

Hidden in the Waste Management Plan on page 9 is reference to the use of Hydrogen Fluoride (HF). *"In sandstone formations the treatment will be composed of a 15% hydrochloric acid (HCl) preflush, a main treating fluid (HCl-Hydrofluoric acid (HF) mixtures) and an over flush."*

FFBRA enquired into the use of HF and have received on June 12 2015 the following response from the HSE: *"Hydrofluoric Acid (HFl) has not been used in oil and gas wells in the UK. This is because the geological conditions in the UK are such that it is not necessary"*.

Why is a dangerous substance that has not been used in the UK on well sites and of which therefore there is no experience or history, now being introduced as part of standard permitting? If it has not been used, there can be no data to support the assertion that it can be managed safely. When it is used industrially HF is kept and used under much more carefully controlled conditions. This is totally different from using it at open-air, self-regulated well sites. See the FFBRA response to question three for more detail on the dangers.

There is a lack of data on the properties of crude oil produced from UK shale. Although it is not specified, it suggests that produced oil may be stored in atmospheric tanks as a standard. The PHMSA (Pipeline and Hazardous Materials Safety Administration) in the US claim that Bakken crude has "higher gas content, lower flash point, lower boiling point and higher vapour pressure than other crude oils." What is the vapour pressure of the Kimmeridge region oil? Can it be safely stored in atmospheric tanks? There is a whole set of regulations that would have to be established around crude storage. It is not a trivial matter. If crude storage is to be 'standardised' data should be gathered on the crude oil properties.

For example at Lower Stumble there would be concern as to the proximity of the storage of large quantities of crude oil to the main London to Brighton railway line and the Cuckfield road. Site specific information needs to be considered.

The EA proposes to restrict the applicability of the standard rules to the storage of crude oil with a hydrogen sulphide content of < 10ppm. How could this be known before the well is drilled that the oil H<sub>2</sub>S content will be less than 10ppm and how one could prove it?

Cuadrilla, in respect of the Balcombe 2 well at Lower Stumble, provided no information on H<sub>2</sub>S content other than that "there is no H<sub>2</sub>S" despite the fact that the results from the drilling of the Balcombe 1 well show a sulphur content in the oil of 1.52%. (from Conoco Drilling Report SDX02098 Produced Fluid Analysis. Balcombe No1 well. Dead stock tank crude

18/12/86). This anomaly went unchallenged by the EA when they gave Cuadrilla their waste permit and demonstrates that regulation needs to be tightened not relaxed.

Also why does the standard rules not require a Crude Storage Permit for periods less than 6 months? Does crude not have to be stored safely and without impacting the environment during exploration activities, which rarely require extended crude storage? Does this mean an operator can put anything (H<sub>2</sub>S, VOCs) in the air as long as this is for less than six months?

In line with government assurances we should be looking for regulation that puts more, not less attention to detail. Particularly given that this is such a new industry in this country and there have been serious problems already with the little work that has been undertaken.

### **Question 3**

**Have we correctly identified all the risks for each activity, as described in the generic risk assessments associated with the consultation?**

**No.** The risks are many and various and have not been fully identified. For example:

#### **Risks in the Use of Hydrofluoric Acid**

The acceptance by the EA of the use of HF as a 'standard' acid neutralising fluid is a very dangerous position and should be challenged.

Hydrofluoric acid (Hydrogen Fluoride, HF) is probably one of the most toxic and corrosive substances known (ranked 1 of the most hazardous compounds to human health in five out of six accepted rankings). Solutions of HF are clear, colourless liquids, anhydrous HF is a gas at room temperature. Regardless of its physical state and concentration HF has an irritating pungent odour. HF differs from other acids due to the fluoride ions' ability to penetrate the skin, causing destruction to deep tissue layers. A 2% concentration of HF to the body can be result in fatality. In the body HF reacts with ubiquitous calcium and magnesium ions and can therefore disable many tissues and organs whose functions depend on these ions.

The exposure to HF may not be initially painful and symptoms may not occur immediately, sometimes taking several hours, but when the acid begins to react it attacks the calcium in the bones. Under most circumstances without treatment HF exposure results in severe or even lethal damage to the heart, liver, kidneys and nervous system. In all cases HF exposure requires immediate professional medical attention.

In the Risk Assessment under Groundwater it is stated that the "MWP (Mining Waste Plan) and rules also limits drilling fluids to non-hazardous and limits the specification of additives". HF, which is definitely hazardous, is not mentioned at all. This is a significant omission that

could change the consequence level from low to high and hence the Residual Risk to Groundwater.

Similarly, under "Target Formation the risk of Nitrogen lift leaving HCL left unreacted in the borehole" is identified. The consequence level of that will change if HCl is replaced by HF. Unreacted HF in the borehole is a much more serious concern than unreacted HCl.

Similarly under the "Road Vehicle" sub heading and "Accident with the release of waste onto highway" drilling material is considered as a pollutant but not HF (or HCl).

There is also an issue with storage of the HF solution on site, which should be stored in secure facilities to ensure no-one comes in contact with it inadvertently, and wildlife should be included in this.

In fact, HF is not mentioned anywhere in the Risk Assessment. The Risk Assessment is therefore incorrect and incomplete.

### **Health implications of toxic and radioactive air emissions.**

- The water from the acid wash will be radioactive, particularly with uranium hexafluoride if HF is used. No long-term study has been done anywhere in the world on the health effects of chronic exposure of human populations to the emissions from shale gas/oil extraction. Hence, the long-term risk is not known. However, it is known that extended exposure to the radioactive and chemical emissions typically associated with shale gas/oil operations poses a serious mortality and morbidity risk and this should be made clear.
- No emissions limits from flaring will be imposed on the operator by the Environment Agency if natural gas needs to be flared. There does not appear to be a requirement on The Operator to monitor atmospheric emissions from flaring.
- The risk to residents living close to a well pad and facing the prevailing wind may be very significant due to exposure to products of flaring, hydrofluoric acid fumes from the well. The long-term risk to such residents, particularly the ill and elderly, the young and the not-yet-born, is likely to be serious. There is significant and ongoing media coverage of pollution from vehicles in major UK cities and consideration is being given about adding charges for certain vehicles, and yet the EA is contemplating reducing regulation for much more dangerous pollutants.
- The atmospheric concentration of highly carcinogenic polycyclic aromatic hydrocarbons (PAHs) measured across an unconventional natural gas patch in Colorado (taken to represent a typical shale gas field) was  $15.5 \text{ ng/m}^3$ , 60 times that allowed in UK. This is likely to be the level of PAHs over an unconventional oil/gas field in the UK, and can be expected to have clinical significance. It is difficult to envisage how such a level could be reduced by other

than the most stringent regulation – which we do not have. A number of investigations reviewed by Colborn et al (Human and Ecological Risk 2011 vol.17 (5) p 1039-1056) highlight the health risk for those exposed to polycyclic aromatic hydrocarbons. The best known of these is carcinogenesis. Other studies consistently suggest that babies prenatally exposed to polycyclic aromatic hydrocarbons with a total concentration at much less than 15.5 ng/m<sup>3</sup> suffered developmentally. (Vandenberg L, Colborn T, Hayes T, et al. 2012. Endocrine Rev 33(3):378-455). It is not at all evident that the current regulatory regime in the UK (based on our experience in Balcombe) would either detect such emissions or control them. A very recent paper in the prestigious American Chemical Society Journal Environ. Sci. Technol., D. Helmig et al • DOI: 10.1021/es405046r Publication Date (Web): 13 Mar 2014 shows very high levels of atmospheric volatile carcinogenic organic chemicals from shale gas/oil wells in Utah, USA.

- The interaction components in emissions need to be investigated (whether they are fugitive or flare emissions). Laboratory investigations to determine safety limits typically measure exposure to one chemical at a time, while real-life conditions entail simultaneous exposure to a number of volatile chemicals, with interactions that cannot be predicted. Government standards are typically based on the exposure of a grown man encountering relatively high concentrations of a chemical over a brief time period, for example, during occupational exposure. They do not address the issue of low-level chronic exposure to many chemicals simultaneously.

- Extended low-level pollution from a wide range of chemicals is known to cause a variety of chronic illnesses – skin irritation, severe headache, eye irritation, sinus problems etc. (Steinzor et al. New Solutions 2011 Vol 23(1) p55-88). Estimates of the risk of damage for each chemical and human organs should be calculated, and the synergy between chemicals considered. Common illnesses induced by shale emissions should be listed, with likely prevalence in the neighbourhood of well pads. McKenzie, Witter, Newman, & Adgate (2012, Science of the Total Environment DOI: 10.1016/j.scitotenv.2012.02.018) examined neurological, respiratory, haematological and developmental effects in relation to proximity to a gas well and their findings are not consistent with an evaluation of 'low risk'. The National Institute of Environmental Health Sciences' report on Birth outcomes and maternal residential proximity to natural gas development in rural Colorado (2014) (<http://ehp.niehs.nih.gov/wp-content/uploads/122/1/ehp.1306722.pdf>) is also of national and strategic concern.

- Endocrine disruption through chronic exposure to airborne emissions is not considered. National emissions standards do not apply to exposure faced by individuals (including pregnant women, children, and the elderly) experiencing chronic, low-level exposure, 24 hours a day 7 days a week in natural gas/oil neighbourhoods. Emission limits in the UK do not take account of an atmospheric cocktail of endocrine-disrupting chemicals, which can be particularly harmful during prenatal development and childhood (Colborn et al (Human and Ecological Risk 2011 vol.17 (5) p 1039-1056), Dejmek J, Solansky, Benes I, et al.2000.

Environ Health Perspect 108:1159-64). The evidence of androgen and oestrogen receptor impacts from an unconventional oil/gas field published by the University Of Missouri 2013 (<http://medicine.missouri.edu/news/docs/en.2013-1697.full.pdf>) needs to be considered.

- Emissions and associated smog induced by ozone formed in the hydrocarbon/NO<sub>x</sub>- rich atmosphere over an unconventional oil/gas field may critically affect those already ill with a chronic condition such as respiratory or cardiovascular disease. Quantitate assessment of potential vehicle emissions must be made. The major cause of smog is the interaction of VOCs, NO<sub>x</sub> and sunlight.
- The risk of persistent organic chemicals/heavy metals entering the food chain is not discussed. Soil particularly will be contaminated with PAHs for long periods. Bamberger and Oswald (2012 New Solutions 22 (1) 51-77) pointed out the accessibility of toxins from gas fields to the human food chain, via meat and dairy produce, with implications for human health and agriculture. They state “Communities living near hydrocarbon gas drilling operations have become de facto laboratories for the study of environmental toxicology. The close proximity of these operations to small communities has created a variety of potential hazards to humans, companion animals, livestock and wildlife. .Animals, especially livestock, are sensitive to the contaminants released into the environment by drilling and by its cumulative impacts. Documentation of cases in six states strongly implicates exposure to gas drilling operations in serious health effects on humans, companion animals, livestock, horses, and wildlife. Without complete studies, given the many apparent adverse impacts on human and animal health, a ban on shale gas drilling is essential for the protection of public health”

### **Synergy of Emissions**

Government emissions standards are typically based on the exposure of a grown man encountering relatively high concentrations of a chemical over a brief time period, for example, during occupational exposure. They do not address the issue of low-level chronic exposure to many chemicals simultaneously i.e. synergy. Laboratory investigations to determine safety limits typically measure exposure to one chemical at a time, while real-life conditions entail simultaneous exposure to a number of volatile chemicals, with interactions that cannot be predicted. Residents near to the flare will be exposed to benzene, ethyl benzene, xylene, toluene, pyrene, benzantracene, anthracene, NO<sub>x</sub>, sulphur dioxide, carbon monoxide, radon, soot and many other combustion emissions. Hence, the synergy of the ill-health effects of the components of flaring emissions needs to be continuously monitored. The effect on children of exhaust fumes is known to be a serious concern. *‘Poor air quality affects people’s health. The national air quality objectives are based on health criteria. Even short term exposure can affect peoples’ breathing, whilst long term exposure can lead to damage to the lungs. Air pollution has been linked to worsening asthma, chronic bronchitis, heart and circulatory disease, and some cancers.’* (Warrington Borough Councils Emission Strategy 2014)

## **Monitoring and Mitigation of Emissions**

### **Risk of Radon**

There needs to be a clear plan in place to monitor all emissions and to guarantee that radon is monitored. The radon issue is skirted over in this report despite the fact that it is chemically inert and cannot easily be separated from shale gas. Radon is a recognised public health hazard. Radon is a constituent of the flare emissions producing radioactive products which following inhalation can reside in the body for years causing cancer. Continuous radioactive monitoring of the flare emissions should be undertaken and the total radioactive count published.

The method of monitoring emissions should not be based on canisters or sorption tubes but on either Flame Ionisation Detection (FID) or Fourier Transform Infra-red Detection (FTIR). Non-continuous methods cannot record spikes in emissions levels and do not reflect fluctuations in concentrations of emissions.

If it is found that any emissions levels breach safe limits a strategy must be in place to immediately remedy this situation. The current regulatory regime and the trend towards self-monitoring by operators are not remotely stringent enough to prevent serious illness due to emissions from shale gas/oil extraction.

### **Health Risk associated with traffic**

HGV movements will disturb the community to a significant degree, and affect the health of some people in communities living close to well pads and/or HGV routes.

### **Risk of destruction to the landscape**

In terms of the impact on landscape, the idea that the site can ever return to what is before is fantastical and ill-informed. The “minor” effects to landscape and biodiversity will be permanent. It is unlikely that the landscapes and habitats which are subject to this physically and visually intrusive development can be restored to their former value and if so, it would take years to restore an ecosystem that has become established over many lifetimes.

The report states that “it is generally anticipated that landscape and visual impacts would be minor” but fails to detail how this minor status has been assigned or calculated.

Impacts are also likely to be of regional concern, where landscape character is adversely affected by the ‘clustering’ of drilling licenses in areas of reserve availability. In addition, this clustering around available sites is likely to facilitate the construction of urban elements

(concrete pad, steelwork, security fencing) in areas which were previously identified as rural landscape character zones, thus changing the regional perception and character of the area.

When issuing permits proximity to public rights of way will sites should be considered especially public footpaths and bridleways. Once again site specific conditions should be considered and not standard permitting.

### **Risk of Water Contamination**

The geological nature of the UK which has been identified as the biggest risk to water contamination. The fault lines will allow methane to migrate into aquifers. This cannot be mitigated or monitored. It is a risk that puts us at odds with international law. It is a risk that means the industry is too dangerous to proceed with onshore in the UK.

### **Risk to Wildlife**

The Policy recommendations to the Government for a robust regulatory framework for the shale gas industry in the UK made by a partnership of the Angling Trust, the National Trust, The Royal Society for the Protection of Birds (RSPB), the Salmon & Trout Association, The Wildlife Trusts and the Wildfowl & Wetlands Trust (WWT) should be fully adopted and implemented.

### **Risk to Local Prosperity**

Under the United Kingdom Onshore Operators' Group (UKOOG) (2013) Community Engagement Charter, benefits from shale gas exploration and production would be provided to host local communities and county/unitary authorities in the form of an initial community contribution of £100,000 per well pad where hydraulic fracturing takes place. However the recent re-definition of fracking in the Infrastructure Bill to no longer include the concept of pressure but to only refer to quantities of fluids means that few of these payments will be made.

Regardless of semantics, onshore drilling activities' impact on house prices would be far in excess of this. For example in the vicinity of the well site at Balcombe there are approximately 1000 properties (each valued on average £500,000- many are worth much more than this), if these were to undergo a fall in value of 25%, this will mean a drop in value of £125 million pounds.

Will insurance be available for farms to cover problems arising from mining? Also will house and health insurance be impacted? A study was done in 2014 by the government's Rural Community Policy Unit titled "Shale Gas Rural Economy Impacts" but it has been heavily redacted and the government has refused to make the information available to the public. Hence, there is no community benefit – there is a huge potential loss to individuals.

### **Risk of bankrupt operating companies not fulfilling financial obligations**

As mitigation to this risk a bond from the operator should be held in a fund for uninsurable damage caused to homes or people activities induced by drilling.

In conclusion the risks of this process are great and being seriously underplayed in favour of the industry.

### **Question 4**

#### **Are there any barriers to complying with the standard rules?**

**Not applicable.** This question is aimed at operators and not at communities. However, the operating companies' history of compliance and honesty is surely a barrier to future compliance. Can they be trusted to comply?

### **Question 5**

**Do you think that the introduction of standard rules for these activities will have a significant financial impact overall on your operation? If you agree or disagree, please explain why, and provide evidence to support your view of the likely impacts.**

**Not applicable.** This question is aimed at operators and not at communities.

### **Question 6**

**Are there any other activities that you think would benefit from the standard permitting approach or future revisions?**

**Not applicable.** This question is aimed at operators and not at communities

### **Question 7**

**Please tell us if you have any other views or comments on these proposed revisions that have not been covered by previous questions.**

**In Response** Standard permitting is not sensible in the UK for drilling onshore; these are not deserted areas, instead the UK is densely populated.

There is insufficient information available to fully assess the science and practice of well acidization treatment technologies using hydrofluoric acid or mixed acids including environmental, occupational, and public health hazards and risks.

There should be transparency and accountability to the public. Paramount concerns include well acidization, the handling, processing, and disposal of wastes including flaring and venting of natural gas, and radioactive materials in the spent acid wash.

There should be public disclosure of chemical information including quantities used as a requirement of being granted a waste permit. This should include information on the range of acid volumes applied per treated foot and total acid volumes used in treatments, types of acids, acid concentration, and other chemicals used in the treatments.

Before attempting to introduce standard rules involving HF there should be a scientific study to evaluate the hazards and risks and potential hazards associated with hydrofluoric acid treatments including the risks they pose to natural resources and public, occupational, and environmental health and safety. Data is now available of the wells where HF has been used in California.

Atmospheric emissions, should be considered including potential greenhouse gas emissions, the potential degradation of air quality, potential impacts on wildlife, native plants, and habitat, including habitat fragmentation, potential water and surface contamination, potential noise pollution, induced seismicity, and the ultimate disposition, transport, transformation, and toxicology of well acidization with hydrofluoric acid treatments.

Instead of issuing standard permits, the particular details of a locality must be ascertained and evaluated. This should include the geologic features present in the vicinity of a well, including the well bore. Only then should the design of a proposed well acidization be considered.

Also the proximity and condition of old and recent, abandoned wells should be considered.

The radioactivity of the waste water and recovered water in flowback fluid should be tested. Details of how radioactive waste water will be disposed of should be made available to the public.

A groundwater monitoring plan should be developed that would take into account the specifics of the site. This should be published and made available for public consultation so that independent hydrologists, conservation groups and anglers can check it for workability.

What role does local Government have in this? For example who will decide whether there are suitable routes for traffic carrying waste and incoming Hydrofluoric acid and other

materials? Where and who controls flaring and flare design? Flare characteristics can control to some extent the pollution produced (e.g. NO<sub>x</sub> and SO<sub>x</sub>).

Where is the requirement for a hazard plan? What if a well blowout or vehicle collision created a hydrofluoric acid plume over a populated area? Blinding or killing a few members of the public with HF vapour would do immense damage to the industry. Most engineers understand that if it can go wrong then it will go wrong.

Also considered should be the lack of emergency services in rural areas. It is unlikely that rural emergency services will be as sophisticated as those in major cities or be able to react as rapidly.

Trucks or storage facilities carrying or storing hydrofluoric acid can be used by criminals and extremists to severely harm the general public. These facilities would need constant scrutiny as would the staff and operators themselves.

Secrecy, neglect and subterfuge cost a lot more than good quality design and management. High quality procedures save money and can be open to public scrutiny. A high quality approach is better for the reputation of the Industry and the Regulators. It will help rebuild trust with the public that secrecy and doubtful practices have already damaged. Best practice should be compulsory practice.

Standard permits should only be considered after the industry has proved itself and its processes to be trustworthy.

*Date: 14 June 2015*

*Frack Free Balcombe Residents Association*

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