**DECC’s Comments on written answers to questions asked by Councillor Paul Andrews 29th Jan 2015**

I have read through the answers of DECC. I set out my comments below, referring my comments to each numbered question. These comments are brief notes and are not intended to be fully comprehensive nor are they exclusive, and I reserve the right to add to or change the comments in the light of subsequent information, following discussion with others. The fact that I may not have commented on a statement should not be taken to mean I agree with it. Where similar points are made in respect of more than one reply to a question, I have taken the view that I do not need to keep on repeating the same comments

**As regards reply to Question 1:**

The question is not answered. We are told that UK regulation is so much better than US regulation but we are not told why France and other European countries have decided to ban fracking rather than to regulate it. Are we really so arrogant as to imagine that other countries are incapable of producing a regulatory system as good as ours?

Yes, we have been regulating gas and oil for many years – but on-shore fracking is a completely different type of operation to conventional oil and gas extraction.

**As regards Reply to Question 2,**

Accepted that coal seam gas extraction in Australia is different from shale gas extraction.

Noted that it is agreed that there are legitimate concerns about environmental and safety risks of shale gas extraction in the USA. Whether one would describe what has happened there as “environmental disasters” is a matter of opinion – the films I have seen would seem to justify that opinion.

**As regards reply to Question 3:**

This is only an answer to half of the question. Yes, HSE and EA may be able to recover their costs for issuing permits, but if their staff and budgets are cut, they will be unable to effectively monitor compliance with the conditions of the permits during operation.

**As regards reply to Question 4:**

There is a copy of a text of a draft of the TTIP leaked to a German newspaper on the web. This is difficult to understand, but as far as I can see the section on oil and gas extraction only applies where this is allowed. So it would appear that states which are to be bound by the agreement do have the option to ban fracking completely, but if fracking is allowed, the TTIP will apply. Perhaps this is why some states have banned fracking rather than take on board the risks of regulating it.

Articles in the Guardian and the Independent are explicit that the impact of the TTIP will be to limit the scope of member states to regulate industries, and that the purpose is to do away with regulations which restrict or prevent companies from making money – so as to encourage such companies to “invest”. DECC would seem to agree with this in that they say the TTIP “will demonstrate continued EU and US commitment to trade liberalisation based on fair rules and regulations.” It is difficult to see how this statement can be reconciled to their assurance that TTIP will not lower standards.

Reference is made to “key areas of the EU position” where it is stated that there will be no compromise on environmental protection. However DECC go on to say that “the objective for the TTIP negotiations is to identify how the US and EU can improve the cooperation and coordination of their environmental objectives”. This would seem to mean that the TTIP could result in a change in environmental standards and requirements, which could result in a lowering of UK standards even if there is no intention of harmonising the different regulations of different states.

In any event, wouldn’t it be better to wait until TTIP is finalised and see what it says before committing UK to something which could have unfortunate consequences which should have been foreseen and guarded against?

**As regards the answer to Question 5**

Noted, but once the well is drilled, the well can continue horizontally below anybody’s land without permission of the land-owner.

**As regards the answer to Question 6:**

Noted that DECC do not deny the figures in regard to well failure in the USA, and agree that well integrity is a key issue. It is astonishing that DECC are prepared to support fracking without having obtained and studied and analysed the reasons for such a high proportion of well failures.

The references to well-failure possibly being linked to failures of the lining or casing is not surprising, bearing in mind the pressures applied in fracking operations, the depth of the pipes and their vulnerability to fracture by even the slightest minor earth tremors and the effect on the steel lining of corrosive chemicals used in the fracking process and the risk of oxidation or rusting of the steel linings arising from contact with oxygenated gas, water or air.

However, we cannot know the reasons for these well-failures in the US and DECC can’t tell us because “they have not seen the analysis behind the statistics” or (presumably) any other analysis on well-failure in the US.

References to the ReFINE report on wells drilled is not relevant because onshore fracking is a very recent development, and that report can only have relevance to “conventional” gas extraction.

It is difficult to understand how an effective regulatory system can be established without first making a comprehensive study of the reasons for so many well-failures in the USA. How else are HSE and EA able to assess what can go wrong.

**As regards to the answer to Question 7:**

 It is not understood how HSE and EA can say in reply to Q 6 that they have not seen the analysis behind the statistics provided, and then say they’ve got all the information they require from reports etc. from USA. Either they know the causes of well-failure in the USA and have all the info, or they don’t. In any event, if they have all the necessary info, why weren’t they able to reply to questions at the DECC meeting instead of saying they did not know the answers.

DECC emphasise their role in approving applications, giving permissions etc. However, this is to *“give assurance to the operator company that the well is being constructed, operated and abandoned in accordance with the industry and the operator’s own standards and the relevant regulations are being complied with”.* Note the assurance is for the operator’s benefit and not for the benefit of the public, and that the standards which have to be complied with are standards set by the industry and not by EA or HSE.

Note that the operator appoints his own independent well examiner and pays him. My experience is (based, inter alia on a certain planning application for a superstore) that, where money is involved, he who pays the piper calls the tune. The examiner will not be seen to be truly independent if he is appointed by the person he is required to examine.

So what we have here is a regulatory situation where the industry (and not HSE or EA) regulates itself. Noted that it is the task of HSE and EA to ensure that the operator complies with regulations, but the question has to be asked against what criteria and standards compliance with the regulations will be judged. Where the regulations have specific requirements, there will be no difficulty in EA enforcement. Regulations however, are not always so specific, but rely on the interpretation of general and generic words and phrases. So, for example we know that regulations will require there to be three casings around pipes which go through aquifers, but we don’t know how the type of steel or concrete used for those casings might be determined. I have not seen the regulations but it is possible that the regulations may be drafted or interpreted so that such matters might be determined by “industry standards”.

 Similarly members were informed that “non-hazardous” fluids will be used. How will “non-hazardous” be defined? We were told at the DECC meeting that the fluids will be determined according to an “industry-approved list” So, one suspects “non-hazardous” will be defined in terms of what the industry considers to be “non-hazardous”. It follows that when members were informed in the DECC meeting that what the EA and HSE would do was to approve fluids which are on an “industry approved” list, they may have been told something nearer the truth than what we are now being led to believe.

Noted that any reasons of well failure in the UK will be investigated and well understood. What a pity that we can’t get a full understanding of what has happened in the USA before drilling starts!!

**As regards Reply to Question 8,** I am not sure that all the matters raised in that document have been answered.

**As regards Reply to Question 9:**

Please refer to my comments on the reply to Question 7.

It would seem that there is no approved list – not even an “industry approved” list – chemicals are simply notified and assessed by EA on a case by case basis. What criteria are used for the assessment? According to what we have been told in regard to the answer to Q7, it would seem that the criteria would be the industry criteria.

Noted that the allegation that that waste water has been found to contain carcinogens and chemicals like arsnic, benzene, lead and radioactive materials is not denied.

Noted that EA assesses hazards on a “case by case” basis, and will not permit the use of chemicals hazardous to groundwater where they may enter groundwater and cause pollution”. The implication is that such hazardous substances will be permitted where it is deemed they will not enter groundwater and cause pollution. The criteria for the “case by case analysis” are presumably the industry’s criteria.

**In regard to answer to Question 10:**

The requirements for disposal are listed, but apart from leaving waste in the well, and on-site treatment, we are not advised of any place in the UK which is licensed or has planning permission for such disposal.

Three questions are left to be answered by Third Energy – who have not replied to the questions to date, as far as I know.

**As regards the answer to Question 12:**

Noted that the casing is “mostly” made of steel, and that it is left to the operator (not AE or HSE) to determine the risks associated with pressure or corrosion. Presumably this would be in accordance with “industry standards” – presumably those currently applicable to the failed wells in the USA.

One must bear in mind that corrosive fluids (eg sulphuric acid) are included in the fracking fluid. Even in small quantities over time these are bound to have a corrosive effect. Also the well pipe will be in contact with oxygenated gas, water and air, and this can cause rust. In such circumstances, when one takes into account the hydraulic pressures applied, it should not be surprising if the number of well-failures in the USA are as stated in the info provided by Frackfree Ryedale. If, as appears from the answer to Question 6, the same “industry” standards are applied to UK as in the US, it would be surprising if there is not the same proportion of well-failures in the UK

**In regard to the answer to Question 13:**

As regards well-failure, DECC refer to their answer to Q6. I would refer to my comments thereon – in regard to Q6, Q7 and Q12.

As regards the risk of fluids migrating upwards or escaping, we are told about the specification of the concrete around the pipe, and the “shoe” joints between sections of pipes. All these items are to be designed so as to “manage” these risks (but not so as to prevent them). As all concrete eventually crumbles, it is difficult to see how this risk can be eliminated, and to be fair DECC don’t say it will be eliminated – the risk will simply be “mitigated”. Further the “independent” well examiner will inspect the design – but we know the well examiner is not truly independent, as he is appointed and paid by the company. The emphasis is on the “management” of risks and not of their prevention or elimination. Presumably this will all be assessed in accordance with “industry standards” – presumably the same standards which apply in Texas and California etc.

I will not repeat my concerns about the TTIP.

All this gives me no confidence at all.

.Reference is made to the UK having no problems in regard to decommissioned wells. Well no, we wouldn’t, because to my knowledge the UK has no decommissioned fracking wells – the only decommisisioned wells we have are wells used for the conventional extraction of gas.

As regards financial guarantees etc., I thought we were given to understand by third Energy that it was not usual to require such a guaranty for a period in excess of five years after the decommissioning of a well. This is something which needs checking with other people who heard Mr. Dewar’s presentation. Note the qualification of guarantees to cover restoration and after care costs that “this will only be justified in exceptional circumstances”. Bearing in mind the high rate of well-failure in USA, one would have thought it should be the norm to require such guarantees – and for a much longer period than five years.

Noted the negotiation with UK Onshore Oil to give a back up guaranty – but the outcome of this is unknown.

**As regards answer to Question 14:**

Please refer to previous comments on TTIP and on the “independent” well examiner.

**As regards the answer to Question15**

Noted that EA will not permit the use of chemicals hazardous to groundwater where they may enter the groundwater and cause pollution. Presumably such chemicals will be used where industry standards prescribe that there is no risk that such substances may enter the groundwater.

As regards well-design and monitoring, we have already established that HSE will check that the design complies with regulations and industry standards – presumably the same standards which apply in Texas and California etc.

Note again reference to an “independent well-examiner” who is to be appointed and paid by the company.

**As regards reply to Questions 16 and 17:**

I leave these for others to comment on.

 **As regards the reply to Question 18:**

Reliance is placed on existing wells where it is said there has been no reduction in land values – but these have been used for conventional extraction – they are not fracking wells.

My understanding is that fracking wells have caused land values to fall in Australia and the USA and also in the Uk at Fylde and East Yorkshire. As the answers to the questions suggest that fracking in the UK will be in accordance with the same industry standards as apply in the USA, why should the impact on land values be any different in the UK to the impact on land values in the USA?

Cllr. PAUL ANDREWS 30TH JANUARY 2015