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27 January 2017

**Dear Sirs**

Please take this letter as a Formal Complaint to the Advertising Standards Authority regarding the content of a supplement included with several Johnston Press newspapers in week commencing Monday 22nd January 2017

The print version is slightly different to a digital version provided by INEOS. The document below makes it clear where such differences exist in statements which are considered contentious.

The digital version can be accessed here

<http://editorial.jpress.co.uk/publication/supplement/frackingsupplement2.pdf>

A scan of the print version is attached. I apologise in advance for the poor quality but imagine that Ineos will be able to provide a hard copy on request.

As a general observation please note that the entire supplement has "FRACKING THE FACTS" in large type at the bottom of each page. It is inarguable therefore that every statement is therefore being presented to the public as a "fact" and not an opinion.

I have prepared below a list of no less than 40 statements, which I believe to breach the ASA code and my reasons for believing this.

In order to anticipate your objection that this is overwhelming I have listed the most egregious breaches first before the complete list.

I will look forward to your learning what action you intend to take in this matter.

Yours faithfully

John Hobson for Refractkion

## List of Principal Alleged Breaches:

21. “Gas is a fossil fuel, but is much less damaging to the climate and to air quality than coal or oil are. The move away from fossil fuels will take many years, so priorities must be set. Coal should be phased out first, then oil.”

The statement that “Gas .. is much less damaging to the climate and to air quality than coal or oil are” is the subject of fierce academic debate, centred around the issue of fugitive emissions from shale gas extraction and production, but this a subjective opinion presented here as fact.

As such this is in breach of the Code and specifically 3.6 (Subjective Claims) 3.1 (Misleading Advertising, and 3.7 (Substantiation)

28. “As recognised by the Intergovernmental panel on Climate Change, gas has about half the emissions as coal [and around 10% less than imported gas - not in print version], so we have an environmental duty to use gas rather than coal for energy during this period.”

The claim that gas “has about half the emissions as coal” “so we have an environmental duty to use gas rather than coal” is a subjective claim, which appears to ignore the issue of fugitive methane emissions and which is the subject of fierce academic debate. Carbon emissions are not the only emissions which have a detrimental impact on the environment. This a subjective and exaggerated opinion presented here as fact.

As such this is in breach of the Code and specifically 3.6 (Subjective Claims), 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

37. PRINTED VERSION ONLY - Q Why does the UK need shale gas?  
To be able to compete, we need UK shale gas and this country has huge reserves of it. We know if we don't address energy costs for heavy industry it will cease to exist in the UK.

This section clearly suggests that fracking will reduce energy costs, and that without such a reduction the entirety of UK heavy industry will cease to exist. Firstly, even representatives from the industry itself agree that UK fracking will not reduce gas prices. Secondly it is absurd to claim that heavy industry will simply disappear if we don't frack in the UK as gas is readily and plentifully available at prices below that at which UK shale could be produced at (according to estimates from a variety of sources including EY, The Oxford Institute for Energy Studies, Bloomberg and Centrica) As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.6 (Subjective) 3.7 (Substantiation) and 3.11 (Exaggeration)

39. Q: Will fracking reduce my house price?

a: There is no material reason why fracking should lower your house price. The process does not induce tremors that damage property, and developments only involve minor and temporary disruption that must conform to standard planning and environmental requirements, like any other.

As has been already argued in point 34, fracking does cause earthquakes - the magnitude 4.8 Fox Creek Alberta quake of January 2016, amongst others, gives the lie to this statement. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

## Complete List of Alleged Breaches:

1. *"We know that shale gas presents the UK with a **once-in-a-generation opportunity** to change the lives of people up and down this country for the better bringing energy security, new jobs, skills and investment."*

This is a misleading and exaggerated claim which cannot be substantiated. Shale gas is present in the geological formation today. It has been for millions of years. It will be for millions of years. To suggest that this is "a once in a generation opportunity" and that if the extraction of shale gas is not done now the opportunity will be missed is self-evidently false. The suggestion here is also that there will be a permanent change in the "lives" of people in the UK. There is general agreement that shale gas only makes sense as a transitional "bridge" to a low-carbon future, and is at best a temporary stopgap.

This claim is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

2. *"Coal is dirty; nuclear is expensive; importing gas means additional carbon emissions vs local gas, and means **we are dependent on getting supplies from some of the most unstable regions in the world**; and renewables simply don't provide enough energy all of the time."*

The suggestion that we are, or will be dependent on some of the most unstable regions in the world is exaggerated, misleading and incapable of substantiation. The UK has a wide and varied supply base for gas via pipeline and LNG supply. The majority of our imported gas comes from Norway, with other significant imports from Europe, via the Netherlands and Belgium. Liquefied gas sources include Qatar, Australia and the USA. INEOS themselves have started gas imports from the USA. However, they are using these imports not to improve the reliability of domestic supply - "keeping the lights on" but for use in their business of chemical and plastic production. To suggest we are "dependent" on "unstable regions" is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

3. *"I believe INEOS' shale gas plans offer a **once-in-a-lifetime opportunity** for the UK to become Europe's leader in this new and exciting industry and I would urge everybody to look at the issue with an open mind and see the huge potential for our nation and future generations."*

See complaint re "once in a generation" above. The validity of the complaint is upheld by the reference to "future generations". If the writer is suggesting that shale gas will last for generations this counters directly the argument that we have a one-off opportunity now. In reality shale gas can only be a short-term boom which postpones what we must do for the benefit of future generations. What shale gas would leave as legacy is the potential damage caused by thousands of wells which are guaranteed in time to decay and raise a potential pollution threat.

To suggest that this is "a once in a lifetime opportunity" is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

4. *"Exploration is needed to better understand the economics, but it's possible that shale gas could help invigorate and **rebalance the economy** for both our region and **the country as a whole**."*

The impact of shale gas on the economy as a whole will be relatively minuscule - A highly optimistic value of 10% recoverable of median BGS Gas In Place estimate 1300 tcf over 20 years is about £20 billion a year compared to UK economy valued, according to the Office of National Statistics, at £7 trillion. To suggest that it could rebalance the entire economy of the UK is clearly unsubstantiated, misleading and exaggeration, as such it is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

5. “Based on our estimates, a typical 10km by 10km development area would generate £375 million for the area over its lifetime.”

Based on today’s (27th January 2016) Gas Prompt price of 57 p a term and using the IOD’s average EUR of 3.2 bcf a 10 well pads would be worth about £182 billion in revenue. 6% of this is about £11 million. 10 pads in a 10 x 10 km square would therefore be worth about £110 million and not £375 million to the area. Any tax on profits would go to central government and not “the area”. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration).

6. “Shale gas is an opportunity that the Midlands and the UK cannot afford to overlook.”

This is a subjective statement presented as a fact. As such this is in breach of the Code and specifically 3.6 (Subjective Statement)

7. “Respected authorities such as the Royal Society and the Committee on Climate Change recognise that extraction can be managed safely whilst meeting our carbon reduction commitments.”

This claim is misleading. In the 2012 Royal Society and Royal Academy of Engineering report it was clearly stated that there had been no investigation of greenhouse gas or climate change potential effects of shale gas.

The summary states “Neither risks associated with the subsequent use of shale gas nor climate risks have been analysed. Decision making would benefit from research into the climate risks associated with both the extraction and use of shale gas. Further benefit would also be derived from research into the public acceptability of all these risks in the context of the UK’s energy, climate and economic policies”

Conversely, the CCC have examined the potential effects on climate change and had no brief to assess the safety of shale gas production.

The claim is misleading also in that it fails to state that the bodies it names made recommendations and conditions regarding safety and that the RS & RAE made ten major recommendations of steps to improve regulation of shale gas extraction. The government has only implemented one of these, and the effectiveness of that one (regarding seismic monitoring) is open to scientific challenge.

The Climate Change Committee did not say shale would help the UK meet carbon reduction targets. It warned the exploitation of shale gas on a significant scale would be incompatible with UK carbon budgets under which targets should be met, and the 2050 commitment to reduce emissions by at least 80 per cent, unless three conditions were met. Emissions must be “strictly limited” during shale gas development, production and well decommissioning. Shale gas production must reduce imports rather than add to gas consumption. (This requirement to not increase gas use affects the argument of coal replacement used later in the

document). Emissions from shale exploitation would need to be offset by emissions reductions in other areas of the economy. The CCC warned it was too early to know whether or not it is possible to meet these three criteria.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration).

8. "With the US and China extracting shale gas [and Germany recently issuing a draft law to enable exploratory fracking - not in digital version], the UK cannot afford to overlook this opportunity and risk being left behind."

Germany in fact issued a draft law imposing an outright ban on fracking with some test drilling under strict conditions - this is not "exploratory fracking" as would be understood in the UK context.

"A draft law passed by cabinet in April, drawn up by SPD Environment Minister Barbara Hendricks, imposed an outright ban on fracking for shale gas in the next few years and only allowed **scientific** test drilling **under strict conditions** to assess the risks and environmental impact."

<http://www.reuters.com/article/germany-fracking-idUSL8N0ZG25420150630>

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

9. "Natural gas (extracted from shale through fracking - not in digital version) is essential for the modern world and many of the benefits it brings cannot be replaced by renewables."

The hard copy version makes a suggestion that "*natural gas extracted from shale through fracking*" is "*essential to the modern world*". This is clearly NOT the case as the human race will survive quite happily without it. Even assuming that natural gas were essential it is available in abundance from various non fracked sources. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

10. "It is used for heating 22 million UK homes and without gas we would need to replace our gas-fired central heating systems at a cost of about £2,000 per household which is £44 billion in total."

Whilst it is somewhat duplicitous of INEOS to make this claim as they would use shale gas for industrial uses, we will merely point this out and not claim this as a breach of the code

11. "The fact that the Midlands has produced large quantities of coal also means it is likely to have substantial reserves of shale gas trapped in the rocks."

This is scientifically very dubious and is a statement of opinion expressed as a fact. As such this is in breach of the Code and specifically 3.6 (Subjective) and 3.7 (Substantiation)

12. "Shale gas is natural gas just like the gas we enjoy from the North Sea. It is simply gas trapped in shale rock rather than sandstone or limestone rock."

This is factually incorrect. Studies across the world suggest that fracked gas is more likely to bring radon into domestic environments than conventional sources of natural gas. ((<https://www.nirs.org/wp-content/uploads/radiation/radonmarcellus.pdf>) is just

one example) It is therefore not “*just like the gas we enjoy from the North Sea*”. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

13. “Jobs: The Institute of Directors estimates the industry will create **over 64,000 jobs directly**, and **protect 500,000 jobs** in industry.”

This is factually incorrect - In their report “Getting Shale Gas Working” , which we assume Ineos are incorrectly referring to here, the IoD have estimated that fracking could create 74,000 jobs but that is an estimate for the total of direct, indirect and induced employment, not just direct jobs. The IoD do not provide a breakdown of how they split direct jobs from indirect and induced but their 74,000 figure is based on a scenario of 100 40 well pads. Ineos make it clear that they are only proposing 10 wells per pad. In this scenario the IoD estimated just 406 FTEs per pad at peak. For their 100 well scenario this would only translate to 40,600 as a total for direct, indirect and induced employment, even assuming employment was not shared between pads (as it obviously will be).

Later in this document even Ineos themselves state “ a recent report estimated that **the shale gas industry could directly create 6,000 jobs** and support between 64,500 and 74,000 in the UK alone (IoD 2013 & EY, 2014).” (The report references provided there are the wrong way round)

The only claim made publicly by the IoD relating to safeguarding job is that “In petrochemicals alone, replacing our dwindling domestic supply of chemical feedstocks (such as ethane, butane and propane) could safeguard up to 100,000 jobs” This is just 20% of the claim made by Ineos on their behalf here.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration).

14. “The fracking operation **takes around a week** once the well has been drilled.”

This claim would appear to be unsustainable given the evidence in Cuadrilla’s planning application for Preston New Road which makes it clear that Hydraulic Fracturing of each well (including mobilisation and demobilisation of rig) would take 3 months (12 weeks not one week).

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

15. Gas is the lowest carbon emitter of the fossil fuels and will **help bridge the gap** until electricity supplies from renewables is reliable.

This statement directly contradicts the argument made in Tom Pickering’s “letter” at the start of this document shale gas has “huge potential” for “future generations” for future generations. You may be able to claim that it is either a bridge fuel or an opportunity for generations to come, but it is a nonsense to claim both in the same document. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), and 3.7 (Substantiation)

“16. Wind turbines don’t work when there is no wind or indeed too much wind. Solar power only works during daylight.”

This statement is misleading, by omission. The technological challenge is now underway to develop storage facilities to eliminate this problem. The also omit to

mention tides which do just keep coming in and out. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising).

17. "The fracking operation takes place once the well has been drilled. **It takes around a week for each well.**"

This claim would appear to be unsustainable given the evidence in Cuadrilla's planning application for Preston New Road which makes it clear that Hydraulic Fracturing of each well (including mobilisation and demobilisation of rig) would take 3 months (12 weeks not one week).

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

18. "Once the gas begins to flow some of the frack fluid returns to the surface where it is captured in sealed tanks and either reused in another fracking operation or sent away to a licensed facility for treatment to remove contaminants before being safely disposed of."

This paragraph undermines the one which precedes it. Returned fracking fluid can be re-used but there is no system to declare the content of this fracking fluid, therefore the suggestion that the content is fully known and declared content is misleading, and certainly such fracking fluid would contain elements not acceptable in a home environment. (See analysis of flowback at Daveyhulme from Cuadrilla's well a Preese Hall). As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

19. "2. Site with a rig a drilling rig is assembled . This can be in place for around 3 months. **It is then removed from the site altogether.**"

This is very misleading. INEOS present a scenario of 10 wells per pad in this document. It is inconceivable that 10 wells could be drilled and fracked in a period of just 3 months. For reference Cuadrilla estimate the duration required for drilling a single well Well – pilot hole and lateral (including set up and demobilisation) - as 4-5 months ([http://www.cuadrillaresources.com/wp-content/uploads/2014/06/PNR\\_PL\\_Planning-Statement\\_Exploration-Works.pdf](http://www.cuadrillaresources.com/wp-content/uploads/2014/06/PNR_PL_Planning-Statement_Exploration-Works.pdf) Page 45)

Ineos themselves confirmed to residents in Derbyshire that their drilling rig for just a vertical test bore at Eckington "will be operational for approximately three months before it is dismantled and removed from the site."  
(<http://www.thestar.co.uk/news/we-will-not-give-up-residents-vow-to-stop-fracking-in-derbyshire-village-1-8356726>)

It is therefore inevitable that a drilling rig would need to be on site on a 10 well site for much longer than 3 months. Even if it were removed and returned for each well it would be very misleading to state that it is removed "altogether" as it would have to return several times.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising) and 3.7 (Substantiation)

20. "3) Site with the fracking vehicles on site hydraulic fracturing equipment is brought on each site. each stage takes around an hour. **A typical well requires up to 20 hours of hydraulic fracturing spread over a period of 7-20 days.** then this equipment is removed."

Again this is very misleading. INEOS present a scenario of 10 wells per pad in this document. It is inconceivable that 10 wells could be fracked in a period of just 7-20 days. For reference Cuadrilla estimate the duration required for the Hydraulic Fracturing of a single well (including mobilisation and demobilisation of rig) as 90 days (3 months) ([http://www.cuadrillaresources.com/wp-content/uploads/2014/06/PNR\\_PL\\_Planning-Statement\\_Exploration-Works.pdf](http://www.cuadrillaresources.com/wp-content/uploads/2014/06/PNR_PL_Planning-Statement_Exploration-Works.pdf) Page 45)

It is therefore inevitable that fracking equipment would need to be on site on a 10 well site for much longer than 20 days.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising) and 3.7 (Substantiation)

21. “Gas is a fossil fuel, but is much less damaging to the climate and to air quality than coal or oil are. The move away from fossil fuels will take many years, so priorities must be set. Coal should be phased out first, then oil.”

The statement that “Gas .. is much less damaging to the climate and to air quality than coal or oil are” is the subject of fierce academic debate, centred around the issue of fugitive emissions from shale gas extraction and production, but this a subjective opinion presented here as fact.

As such this is in breach of the Code and specifically 3.6 (Subjective Claims), 3.1 (Misleading Advertising), and 3.7 (Substantiation)

22. “There can indeed be local impacts, so all shale gas activity must be firmly regulated – which did not happen in the US under the Bush administration. Inadequate regulation can also lead to higher greenhouse gas emissions if methane is allowed to leak out of wells.”

The specific reference to the Bush administration is clearly intended to suggest that since then shale gas activity has been effectively regulated. The staggering increase in volume of peer reviewed research demonstrated in the Compendium compiled by the group “Concerned Health Professionals of New York” <http://concernedhealthny.org/compendium/> clearly demonstrates that regulation did not suddenly become effective under the Obama administration. Things are unlikely to improve under President Trump.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising) and 3.7 (Substantiation)

23. “The country already imports more than 50% of its gas from overseas. We believe that producing gas from deep underground in the UK makes much more sense for the nation than costly imports. [ and is better for the environment with lower carbon emissions - not in digital version]”

The claim that domestic production of shale gas is “*better for the environment with lower carbon emissions*” is a subjective claim which is the subject of fierce academic debate, centred around the issue of fugitive methane emissions from shale gas extraction and production. Carbon emissions are not the only GHG emissions which have a detrimental impact on the environment. This a subjective opinion presented here as fact. As such this is in breach of the Code and specifically 3.6 (Subjective Claims)

24. “Shale gas is natural gas **just like that we enjoy from the North Sea** that is piped into our homes for heating and cooking.”

This is factually incorrect and repeated several times in this document. Studies across the world suggest that fracked gas is more likely to bring radon into domestic environments than conventional sources of natural gas. (<https://www.nirs.org/wp-content/uploads/radiation/radonmarcellus.pdf> is just one example) It is therefore not “*just like the gas we enjoy from the North Sea*”. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

25. “PRODUCTION: The wells will silently produce gas for up to 20 years with **little maintenance**. INEOS has promised to share 6% of gas revenues with landowners and local communities. “

The statement of “little maintenance” ignores the possibility of refracking which is extremely likely to be needed. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising) and 3.7 (Substantiation)

26. “**Shale gas extraction has been used in the oil and gas industry for more than 50 years** and could bring huge opportunities to the East Midlands

This statement is very misleading Whilst gas has been extracted from shale for some decades the techniques proposed for High Volume Hydraulic Slick Water Fracturing in the UK are on a massively different scale. The techniques used 50 years ago will not bring any benefit to the East Midlands. The first economical shale fracture using the slick-water fracturing technique took place as recently as less than twenty years ago (1998). As such this is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

27. “The Government has recognised that shale gas has the potential to provide the UK with energy, jobs and growth. **Shale gas is the same as North Sea gas.**”

This is factually incorrect. Studies across the world suggest that fracked gas is more likely to bring radon into domestic environments than conventional sources of natural gas. (<https://www.nirs.org/wp-content/uploads/radiation/radonmarcellus.pdf>) It is therefore not “*just like the gas we enjoy from the North Sea*”. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

28. “As recognised by the Intergovernmental panel on Climate Change, gas has about **half the emissions** as coal [**and around 10% less than imported gas - not in print version**], so we have an environmental duty to use gas rather than coal for energy during this period.”

The claim that gas “*has about half the emissions as coal*” “*so we have an environmental duty to use gas rather than coal*” is a subjective claim, which appears to ignore the issue of fugitive methane emissions and which is the subject of fierce academic debate. Carbon emissions are not the only emissions which have a detrimental impact on the environment. This a subjective and exaggerated opinion presented here as fact.

As such this is in breach of the Code and specifically 3.6 (Subjective Claims), 3.1 (Misleading Advertising, 3.7 (Substantiation) and 3.11 (Exaggeration)

29. It is estimated shale gas extraction could create more than 64,000 jobs in the UK and **protect 500,000 jobs in industry**. Producing our own shale gas will also make us less (**dependent on volatile regions. - not in digital version**)

This is clearly another reference to their previous IoD claims. However the only claim the IoD has made relating to safeguarding job is that *"In petrochemicals alone, replacing our dwindling domestic supply of chemical feedstocks (such as ethane, butane and propane) could safeguard up to 100,000 jobs"* This is just 20% of the claim made by Ineos on their behalf here.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

30. **"The potential hazards associated with onshore oil and gas are well understood**, and appropriate design is the primary mechanism to control all potential hazards which are then addressed through the UK regulatory planning and permitting process."

This statement is incredibly misleading. The potential hazards are not understood. This is a young industry. We have only to look at how the Blackpool seismic event came as a surprise to Cuadrilla to recognise that hazards have gone either unknown or unreported.

The health hazards are inadequately understood. Public Health England looked at only a limited range of health issues - radioactive and chemical emissions. Much new data has emerged since the PHE report and continues to emerge from the US. It will take many years, and many epidemiological studies, before the true health outcomes of shale gas exposure are known.

Even where risks are admitted, e.g. the radon risk, regulation is not there to protect the public. The failure of the government to implement PHE recommendations regarding baseline monitoring of Lancashire fracking sites clearly demonstrates this.

As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

31. "The objective and outcome of the planning process is that **any potential hazards are removed**, or controlled such that there is no potential for health risk 'avoidance' ."

This statement is misleading as it is impossible to "remove" the potential hazards, they can only be managed. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), and 3.7 (Substantiation)

32. Where this is not possible, the regulatory regime controls and minimises emissions in order to achieve a high level of protection for the environment **and human health 'mitigation'**.

This suggestion is misleading. The current regulatory regime ignores the health impact of stress, noise, traffic and other factors which affect human health. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), and 3.7 (Substantiation)

33. On this basis, design serves to sever the source-pathway receptor linkage, thereby **removing and reducing potential risk**.

This statement is misleading as it is illogical. You can either remove or reduce risk, you can't have it both ways. All wells will degrade in time, however controlled the

construction. Cement cracks and steel corrodes, as Professor Davies of Newcastle has pointed out on more than one occasion. No monitoring of pollution from abandoned wells, as he recommended, has been adopted as a regulatory principle by the government. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), and 3.7 (Substantiation)

**33. “INEOS all you need to know”**

There is a clear sin of omission below which is extremely misleading. They clearly try to give the impression (with 6 references to “UK) that they are a UK company whereas in fact Ineos is based, for tax purposes in Switzerland. They make no mention of this very important fact. This might be forgivable if the section were not entitled “INEOS all you need to know”. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

**34. “Fracking can cause small tremors deep underground but these are very rare and too small to pose any risk to property or people.”**

The suggestion that seismic activity associated with fracking is limited to small tremors is factually incorrect. Whilst such instances may be rare fracking has caused earthquakes as large as the magnitude 4.8 quake in Fox Creek Alberta in January 2016. To suggest that a magnitude 4.8 quake is “small” and “too small to pose any risk to property or people.” is therefore misleading. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

“35. It is the view of the Royal Society and Royal Academy of Engineering that this issue can be managed safely and the UK has put in place strict regulation to ensure this. **Extractors are required to monitor seismic activity and stop operations if anything above magnitude 0.5 is recorded.**”

Whilst the statement above may be factual it omits to mention that some geologists have warned that larger seismic events are not necessarily preceded by smaller warnings. This renders the “traffic light” system fallible. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising).

**36. “Drilling for natural gas has been undertaken safely for some 40 years, both onshore and offshore, in the UK. We know that by using established industry engineering designs and procedures throughout our drilling operations, we can safely manage methane”.**

Whilst drilling for natural gas has indeed been undertaken for some 40 years in the UK, the differences in technology between what was used 40 years ago in extracting gas from conventional resources and what is proposed now are so huge that the suggestion that using “established industry engineering designs and procedures throughout our drilling operations” somehow guarantees safety is grossly misleading. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.6 (Subjective) 3.7 (Substantiation) and 3.11 (Exaggeration)

**37. PRINTED VERSION ONLY - Q Why does the UK need shale gas?**

...

**To be able to compete, we need UK shale gas and this country has huge reserves of it. We know if we don't address energy costs for heavy industry it will cease to exist in the UK.**

This section clearly suggests that fracking will reduce energy costs, and that without such a reduction the entirety of UK heavy industry will cease to exist. Firstly even representatives from the industry itself agree that UK fracking will not reduce gas prices. Secondly it is absurd to claim that heavy industry will simply disappear if we don't frack in the UK as gas is readily and plentifully available at prices below that at which UK shale could be produced at (according to estimates from a variety of sources including EY, The Oxford Institute for Energy Studies, Bloomberg and Centrica) As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.6 (Subjective) 3.7 (Substantiation) and 3.11 (Exaggeration)

38. "Locally sourced shale gas will improve security of supply and **lessen the risk of high and volatile prices due to uncertainty about gas imports.**"

Gas is readily and plentifully available at prices below that at which UK shale could be produced at (according to estimates from a variety of sources including EY, The Oxford Institute for Energy Studies, Bloomberg and Centrica). These sources suggest that the extraction costs of UK gas are in fact so high that importing may be considerably cheaper. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.6 (Subjective) 3.7 (Substantiation) and 3.11 (Exaggeration)

**39. Q: Will fracking reduce my house price?**

a: There is no material reason why fracking should lower your house price. **The process does not induce tremors that damage property**, and developments only involve minor and temporary disruption that must conform to standard planning and environmental requirements, like any other.

As has been already argued in point 34, fracking does cause earthquakes - the magnitude 4.8 Fox Creek Alberta quake of January 2016, amongst others, gives the lie to this statement. As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

**40. Q: Fracking is seen as controversial. Should we believe what we hear?**

a: There has been a huge amount of misinformation about this industry online and in the media. For instance, **the Gasland movies**, which show gas coming out of household taps, **has no basis in fact** and it has been shown that this is actually naturally occurring methane, not associated with shale gas production.

Whilst there is some debate about the single scene in Gasland 1 which shows methane being ignited from tap water it is totally unreasonable to suggest that this means "the Gasland movies, which show gas coming out of household taps, has (sic) no basis in fact". There are many other parts of the two films which are factually non-contentious." As such this is in breach of the Code and specifically 3.1 (Misleading Advertising), 3.7 (Substantiation) and 3.11 (Exaggeration)

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