

BARTON RENEWABLE ENERGY PLANT (BREP)

A stack emission scientist, with 10 years experience, has given his opinion on the correspondence received from Peel Energy. He has the relevant MCERTS level 2 qualification, and all 4 technical endorsements the EA require to carry out any testing stated in the EA technical guidance note M2 (which includes all the pollutants being released by BREP under the WID).

Concerns about Peel Energy's Statements:

Response to various correspondence that Peel Energy have sent to both Councillor Cordingley (dated 24/09/10), and MP Kate Green's letter (dated 04/08/10 & 27/09/10):

After carefully reviewing these letters, I believe they contain inaccuracies, vagueness, and misleading information. I would like to take this opportunity to remark upon Peel Energy's statements, then comment and raise questions about my own concerns on the abatement, testing, and compliance issues surrounding the plant.

The Waste Incineration Directive, otherwise known as the EC Directive 2000/76/EC came into force on the 28th December 2005. The directive repealed the old Municipal Waste Incineration Directives 89/429/EEC & 89/369/EEC. The directive also incorporated the Hazardous Waste Incineration Directive 94/67/EC. Further information on the legislation can be found at www.defra.gov.uk & www.mcerts.net.

Contained on page 1 in letter sent to Cllr Cordingley are the statement(s)

"...The emissions that remain are of very low concentrations..."

How low is low? This statement is very vague. Dioxin & Furan concentrations are toxic to humans at picogram level. There are 1,000,000,000,000 picograms in a gram. Are Peel Energy stating that their Dioxins & Furans emissions are below picogram levels? In their compliance reports, they will only report the levels in nanograms /m³. These are larger than picogram levels by a factor of 1000.

"...the contributions at source are much less than 10% of these standards..."

A selection of Emission Limit Values (ELVs) stated in WID are:

Cadmium & Thallium - 0.05mg/m³

Mercury – 0.05mg/m³

Hydrogen Flouride – 1mg/m³

Dioxins & Furans – 0.1ng/m³

Are Peel Energy stating that BREP will emit at worse case 10% of the ELVs of these pollutants? Are they expecting Dioxins & Furans concentrations to be below 0.01ng/m³? And Cadmium concentrations to be below 0.005mg/m³? I have carried out scores of monitoring campaigns at incinerators, with the same design and abatement as BREP and have never seen all the emission figures this low. I believe this statement is misleading.

"...This plant will be continuously monitored by the Environment Agency..."

Are Peel Energy going to send their CEMS (Continuous Emission Monitoring) Data to the EA on a minute? hourly? daily Basis?. Only a few pollutants can be continuously monitored, and these aren't the most toxic ones, which the

public are concerned about. I believe a more accurate statement would read “...have periodic meetings with the Environment Agency...”. Please refer to ‘problems with WID’, at the back of this letter.

“...Failsafe computer systems....”

Can these computers not be switched off? Manually overridden? Crash? I am no Bill Gates, but again believe this statement is misleading.

“...which would regulate the plant ahead of reaching the prescribed limits...”

This statement is repeated in the letter sent to Kate Green. Good plant regulation does not mean not reaching the prescribed limits. The only way to ensure this is by constant testing. Just because a plant is perceived to be running correctly does not mean it is. How are they going to know on at any time whether their ELVs are being exceeded? They are not. This is not an accurate statement.

“...emissions of key pollutants are monitored with 99.99% compliance in the UK...”

This statement is repeated in the letter to Kate Green. I would seriously check the credibility of this reference. I am one of up to 60 fully endorsed stack emissions testers, still actively testing, and competent to undertake WID testing. I am, or have been colleagues with up to 25 or so of these testers. This statement is not one shared in the industry. If the work were shared out evenly, I would have tested at least 1% of compliance monitoring, and can categorically state this is not the case. At a rough estimate of WID sites that I have tested at, around 40 – 50% of process operators have a ELV exceeded with at least one pollutant. Please refer to ‘problems with WID’.

“...monitoring of the plants shows a 99.99% removal efficiency of very small particles...”

What are very small particles? This statement is vague. The removal efficiency of ‘very small particles’ cannot be quantified. Under EA MCERTS testing, the smallest particulates that can accurately be measured from a stack are PM 2.5s. Burning wood releases up to 90% PM1s. Bag Filters are very inefficient at filtering particles of this size out. Only up to 10% of PM1s, and only up to 70% of PM2.5s.

“...Emissions will be continuously monitored, and action will be taken as soon as the emissions start to approach their emission limits to avoid their exceedance (sic)...”

This statement is misleading. Peel Energy will know that emissions of Dioxins & Furans, PCBs, PAHs, Heavy Metals, Mercury, Cadmium, Thallium, PM10s & PM2.5s will not be continuously monitored on this site. These are the most toxic, and the ones causing so much concern. These are unlikely to be monitored at any time during the commissioning of the plant, where ELVs of all pollutants are likely to be exceeded on a regular basis (this time will not be regulated under WID as this is described as ‘not normal operation’ (Section 3.99). These will only be tested 4 times in the first year of the plant, and only twice a year thereafter. Along with this, testing for PAHs, PCBs, PM10s & PM2.5 can be omitted from an environmental permit ‘at the regulators discretion’.

How are Peel Energy going to know at any time whether they are exceeding these limits? If a 6 monthly dioxin test detects a huge ELV fail, what will happen? This could have been like that for half a year (Incinerators have failed emitting 100s of times the ELV!). Will the public be informed? Will compensation be paid? It is too late to take action when these pollutants are in the atmosphere, and more seriously inside half the population of Manchester.

In Page 2 of the letter addressed to Kate Green, Peel Energy refer to a particulate size distribution table, with the reference ‘Source Apportionment of Airborne Particulate Matter in the United Kingdom’ January 1999. This reference is nearly 12 years old. Can Peel Energy state the uncertainty included in these results? I suspect the particulate sampling was carried using methodology BS 3405(1984) or BS 6069 (1992). This methodology alone carried an uncertainty of results as no better than 50%, and this was just the sampling, not the analysis. The two uncertainties combined, must surely make this data unusable in a modern proposal. The two particulate sampling

methodologies used in the modern era are BS EN 13284 (2002) and BS ISO 9096 (2003). These can give very small uncertainties, usually no greater than 10%.

“The contributions of the emissions from the Barton Plant are much less than 1% of this target value (referring to PM2.5s). This will be demonstrated in the Air Quality Assessment”.

How can a piece of computer software prove that this is the case? The only way to prove this will be to test the particulate releases. Peel Energy know that this can only happen when the incinerator is built. If this statement turns out to be incorrect, are they going to inform the public? Close the plant down? I very much doubt these figures.

On page 3 of the letter sent to Kate Green it states, “emissions from the (Methane Plant) scheme would not be released in sufficient quantities to raise the concentration of pollutants”.

Any release of pollutants would raise the concentrations of pollutants in the air. Are Peel Energy stating that the methane plant will not release any pollutants? This is the only way this statement could be regarded as correct. This is simply not the case. Emissions of pollutants from methane gas burning have (ELV) concentrations of: Carbon Monoxide 1500mg/m³, Oxides of nitrogen 650mg/m³, Volatile Organic Compounds 1750mg/m³. Source ‘The Environment Agency Landfill Gas Technical Guidance Note 2004’. These are huge amounts of pollutants and would most definitely have an effect on the surrounding area.

“It is important to note that....the very low levels of Heavy Metals & Dioxins such as PCBs, and PAHS are analysed by the Environment Agency”.

Again Peel are being very unscientific in stating ‘very low levels’. The most polluting plant in the world will be emitting ‘very low levels’. Human toxicity is measured in picograms, and nanograms. To keep on reiterating this comment worries me deeply.

Also “Dioxins such as PCBs and PAHs”. PCBs and PAHs are NOT Dioxins. They are completely separate compounds.

“are analysed by the Environment Agency”. The EA DO NOT analyse test or analyse any pollutant. This will be done by a private company of Peel Energy’s choosing. I am sure the EA would be interested to hear Peel Energy are stating them as their chief testers and analysts.

Peel Energy’s knowledge and understanding of the subject matter leave a lot to be desired. All of the evidence stated above has only come from 3 short documents (2 of which had huge repeated sections). This is from the ‘Technical Manager’. At their very best, the letters and information are naive in their content. Unfortunately due to the status of Peel as a company and the statements made by a ‘Technical Manager’ many individuals may believe the content is true. This is very worrying for me. In fact I would go as far as to say that the criteria in section 3.48 of WID “Management of the Incineration Plant....shall be in the hands of a competent person. This will be demonstrated by...level of personal training...” does not apply in the case of Peel Energy.