Dear Frank Lee,

1) **High Hazard**

In my letter to Shaun Gorman, 14 December, I referred to the highly hazardous nature of these radioactive wastes. I stated:

This letter relates mainly to Policy 15, HLW and ILW Disposal, with some implications for Policy 14(Storage), and implies a question mark about whether the whole policy, as drawn up, is “sound”, with particular reference to incorporating the unique issues of a potential permanent national HLW and ILW store or “disposal” facility in a local minerals and waste plan, (particularly in an area whose geology is originally of volcanic origin).

There is one other respect at least in which the Policy is fundamentally unsound, and that is the apparently complete absence of any policy for Hazardous Wastes……

“Hazard” brings us straight to nuclear waste. Much of this is indeed hazardous: the NDA uses this word in the document “The Hazard Indicator; a progress measure of nuclear clean-up”, so there is no reason for Cumbria County Council not to, and it is in fact irresponsible not to do so in the case of much of the contents of the Sellafield site, above all the High Level Liquor tanks.

With regard to hazardous nuclear waste, the hazard resides not only in the waste, but in the potential to become waste – a spent-fuel rod is “hazardous potential waste” even though its owner “has not decided” whether to “reprocess” it or not.

Nowhere in Chapter 8 or in Core Strategy Policies does it mention that that the High-level Waste, Plutonium, Recovered Uranium, and Spent-fuel stored at Sellafield are extremely high-hazard materials, or that reprocessing spent-fuel is a high hazard activity. Yet the NDA has had to cut its Magnox South Decommissioning activities to focus its limited resources on reducing the high hazard potential of Sellafield.

There is European Legislation on Hazardous Wastes referred to in the Appendices (Feb 2008) of the Sustainability Appraisal and these should be referred to. If radioactive wastes have hazardous characteristics (eg explosive, flammable, toxic, carcinogenic, mutagenic, toxic to reproduction , ecotoxic – as in the European list) then they should be described in the MWDF policy as hazardousAlso there is draft European Legislation on RadioactiveWastes and Spent Fuel, referred to.

*Without an appropriate recognition of the highly hazardous nature of these materials, and the processes associated with them, this plan cannot be considered sound. The Council should add wording to clarify that existing facilities are still highly hazardous.*
Add to 8.2, after sentence 1: “The HAL stocks at Sellafield represent the greatest source of hazard and environmental risk on the site. The ILW stocks, much of which are also potentially highly hazardous. . . .

[Sellafield Ltd. state:

“The HAL stocks at Sellafield represent the greatest source of hazard and environmental risk on the site.” (Evidence Base LD 61, page 43)

2) The Necessity of Reducing this hazard.

It is highly detrimental to Cumbria that these hazards, as well as their associated discharges, should remain as a threat to the present and future citizens of Cumbria. Cumbria CC should therefore be actively involved in overseeing this reduction, and seeing that it does not recur. Without this explicit statement the policy will not be sound.

Eg add at start of 8.4

It is essential to the wellbeing of future citizens of Cumbria that the efforts to reduce the high hazards of the Sellafield site continue until the threat is removed.

3) Ensuring that the Hazard is not Reintroduced

Unfortunately Cumbria is not up to speed with the Government’s newbuild plans, although it is aware that it will create a new body of radioactivity 3 times greater than that of existing wastes (8.6). If there is any likelihood of these wastes coming to Cumbria, (and there is a very great likelihood, if the programme is not stopped), then Cumbria County Council should be profoundly concerned.

If Newbuild spent-fuel and waste comes to Cumbria, it will re-introduce a much greater hazard than at present.

Paragraph 8.6 is unsound because it misrepresents and omits significant facts of Government policy and is therefore not founded on a robust and credible evidence base.

a) It states “Government anticipates that if new nuclear power stations are built, their wastes and spent fuel could be accommodated in the same geological disposal facility”.

But Government does not just say “if new nuclear power stations are built” and “could be accommodated.” John Hutton , the then Secretary of State for BERR, stated on June 12, 2008 at a Nuclear Investors Conference:

“Nuclear must be right at the heart of the energy mix in the UK in the future. We will do whatever it takes to clear the path.” [Emphasis added]

Yesterday the Prime Minister said:
The Prime Minister:

20 Oct 2008 : Column 30
“We cannot meet our climate change objectives and achieve energy security and affordability in prices without the use of nuclear power, and the sooner that both Opposition parties realise that, the better for our country.”

And the BERR White Paper on Nuclear Power (2008), which is currently not a Core Document, states:

*The Government considers that it would be technically possible and desirable to dispose of both new and legacy waste in the same geological disposal facilities and that this should be explored through the Managing Radioactive Waste Safely programme.* (p.99) [Emphasis added]

Cumbria has only referred to the possibility of co-disposal (8.6 “could be accommodated”). “Desirability” is a step beyond “possibility”. *It indicates a clear direction and intention of Government, which the Core Strategy Document does not reflect.*

This statement in 8.6 is therefore unsound and should be re-written: *“Government has a firm intention that new nuclear power stations should be built, and considers it both technically possible and desirable that their wastes and spent fuel should be accommodated in the same geological disposal facility”*

b) Furthermore, the Government has also stated that it favours direct disposal of spent fuel in a geological repository:

*Having reviewed the arguments and evidence put forward, and in the absence of any proposals from industry, the Government has concluded that any new nuclear power stations that might be built in the UK should proceed on the basis that spent fuel will not be reprocessed and that plans for, and financing of, waste management should proceed on this basis.* (p.116) [Emphasis added]

This fact is relevant for any proposed repository, and again is not mentioned by Cumbria. This constitutes omission of an important relevant policy statement, and again indicates unsoundness.

Add: *“Government considers that newbuild spent fuel should be directly disposed, not reprocessed”*

c) The third matter of relevance is the time-line:

The “Indicative Pathway to possible New Nuclear Power Stations” on Page 136 of the White Paper shows reactors being constructed from 2013 to 2018, with power being generated from 2018. Elsewhere in the same document the timeframe 2016 – 2022 for “deployment” is used eg on pages 144, 145, 146.
It is the Government’s intention that, if possible, within the lifetime of this MWDF, ie before 2020, *new spent nuclear fuel will be being generated*, which will be destined for a geological repository, whether or not there is a site available for geological disposal.

Cumbria does not seem to be aware of the significance of this fact. Here again the document is unsound.

**Add:** “*Government wishes that newbuild reactors start generating power between 2018 and 2022, ie within the purview of the current MWDF*”

d) This spent fuel will be “high burn-up”. The documents supplied by Areva and Westinghouse (the only two remaining vendors), state that the burn-up of their fuel will be 60,000 MWd/tU. By comparison, Sizewell B PWR fuel has a burn-up of 33,000 MWd/tU. This spent fuel will be hotter, be more hazardous, take longer to decay to levels at which it can be encapsulated even in theory, and is likely to be far more liable to cladding failure and distortion during cooling and transit, making it much more difficult and dangerous to encapsulate in the intended copper canisters of the Swedish type which is the UK Reference Concept. The NDA has not currently stated whether it considers this type of fuel to be “disposable”. I refer you for the details to the documents submitted by Hugh Richards in his representation to Cumbria (ID 484)

The words “High burn-up” and the degree of burn-up (60,000 MWd/tU) are matters of public fact relating to the two reactors that the Government actively desires to see built in Britain, and are of direct relevance to this policy and yet they are not included herein.

The policy is therefore again unsound.

**Add:** “*The two designs remaining in the Generic Design Assessment, the Areva EPR and the Westinghouse AP 1000, both intend to achieve “high burn-ups” of 60,000 MWd/tU (compared with Sizewell B 33,000 MWd/tU)*”

The dangers associated with high burn-up fuel are likewise not mentioned. The document is therefore again unsound.

**Add** “*Cumbria understands that this fact may have implications for the radioactive decay time and heat decay time before any possible encapsulation, and may also make the spent fuel more fragile and subject to distortion. Cumbria awaits further guidance from the NDA and the Regulators on this matter*”

e) What *should* happen is that Cumbria should be able to have confidence in the Environment Agency, who has to authorize the plans for geological disposal, and also has a mandatory duty to sign off the authorisation for the building of a new nuclear power, that until the safety case for Geological Disposal is made and approved (a matter which will take decades), the Environment Agency will not authorize the construction of the power stations. However, we have heard no word from the Environment Agency that
they take this view. They are presumably waiting on the outcome of the NDA’s “disposability” review of newbuild spent fuel. But it is already clear that the research into newbuild spent fuel has not been done, and cannot be done by the NDA’s deadline of first half of 2009.

f) What will happen to this spent-fuel that is being generated by 2020?

Initially it will be stored on site at the power stations, maybe for many years, but it is the eventual intention that it be disposed of to a geological repository.

The most likely place it will end up is in Cumbria.

This is because the unique circumstances of the employment situation of the Sellafield Workforce make it the only place in Britain which is likely to contemplate accepting a repository, in the knowledge that new-build spent-fuel will also be deposited therein.

Cumbria is not displaying awareness to the threat to its long-term future which is clearly demonstrated by my points a-f, nor is taking adequate steps to protect the health and well-being of future Cumbrians, a point also made by Representor ID346 (Balogh).

Yet again the document is unsound – Cumbria should be pro-actively taking steps to protect itself from this long-distance but deadly threat, and this document does not do so. This is because, as I stated at the outset, it is highly detrimental to Cumbria that these hazards should remain as a threat to the present and future citizens of Cumbria, and therefore Cumbria CC should therefore be actively involved in overseeing this reduction, and seeing that it does not recur.

g) In my letter to Shaun Gorman (my original representation 14th December 2007), I anticipated this situation (although I was unaware of the particular dangers of high burn-up fuel at the time). I anticipated a “Worse case scenario” which I restate here in abridged form:

Box 1: A “Worst Case Scenario” (abridged)

- Despite claims that 30% of the UK is geologically potentially suitable for “disposal”, in the event only one community decides to volunteer their site nationally, and that site is in West Cumbria
- There is a strong body of opinion that the geology of that particular site is not suitable, either for ILW alone, or for high-level waste in addition.
- The government wishes to rely on the existence of a repository site in advance of its being volunteered, or in advance of the “point of no return” being reached, or indeed in advance of rock characterisation, or repository construction, in order to enable the immediate licensing of a new reactor programme.
- The government wishes to bury existing high-level waste as well as ILW, and also raises the possibility of also disposing of newbuild spent fuel. HLW and Spent-fuel have a much larger “footprint” than ILW, because they are also heat-generating.

In this eventuality, I stated, Cumbria requires robust policies. The core policy 11 is not sound because it is insufficiently robust to deal with these very likely eventualities. I
“requested detailed additional text reserving the County Council’s position and relating to the CoRWM recommendations” to Policy 15, which is now Core Strategy Policy 11.”

I now wish to revisit this issue, and ask what additional matters need to be added to Core Strategy Policy 11 to make it sound.

h) In responding to this request, which was repeated in my recent representation for the July deadline, the Council Officer states:

(ID465) “no new build wastes would arise within the plan period to 2020. They could be a matter for a review of the MWDF.”

I recommend that additional text refers to the concerns that are expressed.[highlighted in original]

It is however not clear to me that this recommendation has been carried out, or what words it refers to. I presume that it may be the words inserted in 8.6 in red in the post-submission version circulated by the Council. They are better than nothing, but they do not address the points made above re the definiteness of the Government’s proposals.

Cumbria should send a clear signal to Government, via this policy, that although it wishes, and has a clear interest in, the success of the MRWS programme in reducing the existing hazards and burdens already present, this cannot be expected to extend to a willingness to host newbuild wastes in addition.

Therefore Policy 11 should include the following words, which should be appended to the existing text:

Cumbria however wishes to make clear that, that although it wishes for, and has a clear interest in, the success of the MRWS programme in reducing the existing hazards and burdens already present, it can make no commitment to host newbuild wastes, in particular spent-fuel, in view of:

i) the local geology, which is of volcanic origin, being already judged to be complex and probably unsuitable at the Nirex Inquiry;

ii) the timeframe being too short to allow that the “point of no return” for volunteering communities could be anywhere near reached by the Government’s intended deadline of 2022 for the start of new spent-fuel production;

iii) the great dangers, uncertainties and lack of research and experience into the characteristics of high-burn–up spent fuel;

iv) the economic uncertainties about the long-term viability and maintenance of community packages, and the impossibility of guaranteeing long-term funding;

v) the eventuality that other, better placed, communities may not have volunteered, even if a good safety case had been made(currently unknown)

vi) If Cumbria does not make this clear, it might be in the position of being effectively held to ransom for the success or failure of the entire
MRWS programme if other communities do not volunteer. Cumbria is not willing to be put in this position.

I submit the following documents are also relevant and should be added to the Core Document List, for the reasons given:

Government Account of what national policies actually are. Without this information, Cumbria cannot judge whether its policies are "consistent with the latest national policy".

   UK Government has ratified this convention. Includes commitment to IAEA Principles for Radioactive Waste Management, including requirement to avoid “undue burdens” to future generations. UK Government has submitted three-yearly reports on compliance with this convention in 2003 and 2006. On both occasions the IAEA has replied with an additional set of questions, to which answers have been submitted. This expert interrogation of the UK Government Policy may be of use to Cumbria County Council in order to judge "consistency with the latest national policy".
   - UK Country Response to IAEA Joint Convention 2006
   - UK Response to IAEA Questions arising from UK Response 2006
   These Documents all available at:
   http://www-ns.iaea.org/conventions/waste-jointconvention.htm

Phil Davies
21 October 2008