

Sirs,

Whilst being a signatory to the NWAA submissions (including our extensive and continuing Issues Register) delivered to DECC in recent times, I would wish to make the following comments, to be incorporated into your public consultations (closing today) on the Disposal of Radioactive Wastes in Geological formations, either shallow (for LLW) or in any proposed deep repository.

I trust that my (hopefully) succinct comments, outwith your structured questions (dealt with elsewhere by NWAA and others) , will be recorded, noted and taken into consideration whenever Government Policy may be further developed.

I comment as:-

- One of the few UK engineering geologists/hydrogeologists (still professionally active and extant) who has worked full-time in another country's programme for characterising potential locations for the deep geological disposal of radioactive wastes (ie. LLW, spent fuel, ILW and HLW)- in AECLs Nuclear Fuel Waste Management Research Program, from 1981 to 1986.
- The hydrogeological expert witness for FoE at the 1995/6 NIREX Longlands Farm Public Inquiry.
- The engineering geologist/hydrogeologist/geotechnical engineering member of the DoE/DEFRA RWMAC Committee (from 1996 to 2004).
- The geological and hydrogeological associate in the NWAA organisation
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 - (But please note that the following comments are made in a personal capacity, based on my own technical experience, and are supplemental to the NWAA submissions and Issues Register, with its recent updates.)

I wish to present the following 6, simple, essentially earth science- related observations and contentions:-

1). No viable, long term excavation, proposed to accept toxic or radioactive wastes as a disposal operation, should be located on, subjected to, or be along the groundwater flow paths of, any high piezometric head regime. (ie. Any Mountainous terrain near to the UK coastline, is an unsafe location; This is regardless of any claims of low intrinsic permeabilities as fracture flow will predominate).

2). No degree of public acceptance, or volunteerism, can make a potentially geotechnically unsuitable site, proposed for radioactive waste disposal, a viable location for radioactive waste disposal, despite any type of reassurances based on "engineered barriers" solutions.

3). Geographic, geologic, geomorphological, geophysical, geochemical and geotechnical suitability should all be priorities- eg. Coastal locations should be excluded, as a matter of course, due to climate change and associated sea level rise, as well as from concerns of catastrophic sea-level related events. (The coastal locations of both the Sellafield and Drigg sites give considerable cause for concern in this regard).

4.) Especially in a UK context, of a small island with a (predominantly) poorly geologically informed general public (as exemplified in the current "fracking debate"), it is my considered opinion, that only with a demonstration facility of a Deep Geological Disposal Vault, combined with full retrievability of placed wastes promised to the local residents, would sufficient long-term public understanding and acceptability be generated. In a UK geologically suitable location, this is an essential Government commitment for any deep radwaste disposal facility to make any progress.

5). It is highly likely, that when a fully independent up-to-date assessment is made of potentially suitable locations for a UK "GDF", that :- (a). either these places will be in publicly/politically unacceptable locations in the South of England (ie. in the post-Triassic argillaceous horizons of the English Midlands, the South East and East Anglia) or (b). They will be in the older more stable crystalline rocks of Scotland and the Borders areas. This also will be, for the foreseeable future, defined as unacceptable locations, in UK terms.

and finally.....

6). When all the above constraints are balanced, with the apparent current proposals to include the disposal of future wastes from a new generation of as-yet unbuilt nuclear power plants, it is, in my professional opinion, a folly of fundamental environmental irresponsibility, to build any new nuclear power stations, until the problems of waste management, safe storage, or even safe disposal of existing "legacy" wastes have been more fully addressed.

No other industry in the UK would be allowed to proceed and grow if such an historic legacy of wastes and environmental threats had not been satisfactorily and safely managed.

I would be happy to amplify any of the issues raised above, further, in a suitable forum for discussion.

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