

The Managing Radioactive Waste Safely team  
Department of Energy and Climate Change  
55 Whitehall, M07  
London SW1A 2EY  
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**Managing Radioactive Waste Safely: Call for evidence on the Siting Process for a geological Disposal Facility**

I submit some comments on the call for evidence as  
and someone involved in the radioactive waste management issue for over 20 years. I was

I write here though as an individual.

Following the recent decision of Cumbria County Council, I believe that the Government needs to reflect broadly and deeply on the reasons why long term geological disposal of radioactive waste is proving to be so difficult to realise. This is not a problem peculiar to the UK as many countries, notably including the USA and Japan, have also struggled to move their programmes forward effectively. In the developed world only Sweden, Finland and probably France seem to have made serious progress over the last 2 decades, and appear to have good chance of starting actual disposal operations.

Why is this so difficult? Disposal of radioactive waste is a highly technical issue, involving integration of engineering and the natural sciences (notably geology) to develop a system that can manage the waste safely with the risk of harm to the public being reduced to negligible levels. Numerous national and international assessments over the last 4 decades have come to the same conclusion that geological disposal is the best solution both in terms of safety and likely cost. However, the issue is not just technical. Locations have to be identified and in democratic societies communities agree to host the operations. Thus the policy of community volunteerism has been adopted in the UK and several other countries.

While some technical challenges remain, it is the involvement of communities, which has proved to be the major obstacle to developing a successful outcome. Thus community engagement in the process and decision-making is now recognised as critical. This is not the place for an in depth analysis but some of the factors that have led to being unable to persuade communities in the UK include: a history of suspicion of the behaviour of nuclear organisations and sometimes governments; fear of radioactive materials; difficulty in understanding the science involving periods of geological time that are inconceivable to many people; the highly technical character of some aspects of the safety case; well-organised and effective environmental groups who oppose the nuclear industry in general; nimbyism; and ineffective approaches to engagement and dialogue with communities. On the other hand there are positive benefits from communities such as employment and local investment in communities. One can see all these factors in the outcome in Cumbria.

On top of these factors is the failure of politics. A radioactive waste management programme likely requires a few decades to get to the point of placing waste underground and over a century for the operations to be completed. These are time scales that greatly exceed electoral cycles. However, the UK is typical in having policy developed on short time scales where electoral cycles and different political perspectives play a major role. Examples in the UK include: strong lobbying in the 1980's against technically favourable sites in rural Conservative constituencies with the programme being abandoned due to upcoming elections; following the decision by the public enquiry in 1997 to prevent an underground laboratory being developed by Nirex in West Cumbria there was a lack of decision-making as a consequence of the 1997 election; an influential environment minister in the Labour government who was anti-nuclear energy; successive Governments who have tended to procrastinate through either inaction or setting up of panels and committees. With regard to the latter setting up of CoWRM has generally been regarded favourably, especially as its membership reflects that this is not just a technical issue. However, notwithstanding CoWRM's positive role progress has still not been made. Finding the solution to radioactive waste is not a vote-winner and appears to become even lower priority for decision-making and policy development as national elections loom.

A particular problem in the recent West Cumbria case was the absence of effective championing of the case for moving forward into stage 4. While NDA was able to provide information to the communities this was constrained to be passive rather than proactive. The opposition groups were vocal and effective, even though many in the science community were concerned about misinformation of aspects of the science. The information needed for Cumbria County Council to reach an informed and evidence-base decision on stage 4 appears to have been imbalanced.

Taking the above points together I suggest some possible ways forward. First in future interactions with voluntary communities communication of technical and policy needs to be much more effective if the voluntary approach is to succeed. The main sources of technical advice and for information on the process are the RMWD of NDA. They should be able to be more proactive in championing the voluntary process and providing the authoritative information. This should include the ability to challenge the views of independent groups and individuals where appropriate in the same way that independent or outside groups can challenge the NDA. More difficult to address is how to have an environment where qualified and informed voices and truly independent of specialist interest groups (such as environmental groups and industry) can be heard. Examples include HEI researchers and the British Geological Survey. Policy on radioactive waste would benefit from being taken out of the political cycle as far as possible. Establishing cross-party agreement and establishing structures of decision-making that are independent of changes of government and electoral cycles should be considered. If volunteerism does not work then some attention needs to be given to an issue that is of key strategic importance to the UK. Arguably this is at least as important as developing other kinds of critical infrastructure, such as rail links, in the national interest.